EXPLORING THE RELATIONS OF EMOTIONAL FUNCTIONING TO PSYCHOPATHOLOGY AND AGGRESSION AMONG DELINQUENT BOYS AND GIRLS

by

Lisa H. Robinson

B.A., Simon Fraser University, 1996

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

THE FACULTY OF GRADUATE STUDIES

Department of Educational and Counselling Psychology and Special Education

We accept this thesis as conforming
to the required standard

UNIVERSITY OF BRITISH COLUMBIA

September, 2001

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of EDUCATIONAL + COUNSELLING PSYCHOLOGY + SPECIAL EDUCATION

The University of British Columbia
Vancouver, Canada

Date Sept 20/2001.

ABSTRACT

Research on gender differences in the relation between emotional functioning and psychopathology is scarce, particularly with aggressive and antisocial adolescents. The purpose of the present study was to progress beyond what is already known about juvenile delinquents by delineating the relation of dimensions of emotional functioning (i.e., emotional intelligence and emotional states) to dimensions of psychopathology (i.e., internalizing problems and externalizing problems) and dimensions of aggression (aggression against persons, aggression against property), among delinquent boys and girls.

Forty-four delinquent boys and 40 delinquent girls incarcerated in a youth correctional center participated in the study. All participants were individually administered measures designed to assess emotional intelligence, Positive and Negative Affect states, internalizing and externalizing psychopathology, and aggression.

Results revealed that gender differences in the relation of emotional functioning to psychopathology and aggression are complex. Gender differences were found for internalizing problems, aggression, and negative affect, although not for externalizing problems. Overall, regression analyses revealed that emotional functioning (i.e., emotional intelligence and/or emotional states) was a significant predictor of psychopathology only, for both delinquent boys and girls, although gender differences emerged with regard to the dimension of psychopathology predicted. These results point to the importance of examining gender differences for uncovering potential pathways or vulnerabilities toward maladjustment, and alternatively, toward promoting healthy development.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACKNOWLEDGEMENTS

There are many people who have supported me throughout not only this study, but also graduate school. The support and encouragement came in many forms, from many different people – committee members, family, friends – all of which was invaluable and contributed greatly.

First, I would like to thank my committee – Arleigh Reich, my external committee member, for your thorough review, on-going support (with both Kim and I) and laid-back manner (I'm glad I "seized the moment" and asked you to be on my committee exactly when I did). And to Beth Haverkamp, for your inspiring and challenging questions and suggestions that helped to guide the project to its ultimate fruition – and also for your patience in my efforts to finalize the draft. And especially to my advisor and friend, Kimberly Schonert-Reichl – whether it was "consoling" me on the day 2! computers "packed it in", your time and energy spent teasing apart ideas on the phone as you were "chippin'", or mentoring me in your quintessential professional yet unconditionally supportive way – through your guidance, I have learned a great deal not only about the subject area and how to do research, but also about myself. Thank you for your expertise, support, and friendship.

I would also like to thank my friends – particularly Diane, Gayla, Rob, & David – for caring about my sanity and well-being. Whether it was encouraging me to take time for myself, for "picking up the slack" at various employment positions, and for listening and laughing about everything or nothing at all – thank you guys – I truly wouldn't have enjoyed the process as much without you.

In addition, my parents – all four of them – have, in their own very unique ways, been so incredibly supportive and loving … and yes, the "damn paper is finally finished." I'm glad to have made you all so proud.

Finally, to Steve – you have been here every day, and whether you were making me dinner, rubbing my computer-strained neck, subtly encouraging me to get back to work, or just being there in the next room with your often distracting and always loving presence – this truly would have been a different, and somehow far less complete experience without you. Thank you for your friendship, patience, and love.

Introduction

During the course of the past few decades, developmental psychopathology has emerged as a new science that is the product of various disciplines that had been previously distinct and separate (Cicchetti, 1984, 1990). Developmental psychopathologists strive to engage in a comprehensive evaluation of biological, psychological, social, and cultural processes and to ascertain how these multiple levels of analysis may influence individual differences, the continuity or discontinuity of adaptive or maladaptive behavioral patterns, and the pathways by which these developmental outcomes may be achieved (Cicchetti & Sroufe, 2000). Within the scope of developmental psychopathology, a considerable literature has emerged examining the manner in which development interrelates with psychopathology from a variety of theoretical and empirical perspectives. Nonetheless, empirical analyses of psychopathology from a social-emotional perspective are rare, particularly regarding the emotional states of youth exhibiting emotional and behavioral disorders. Furthermore, much of contemporary theory and research has examined the emotions from a predominately nonpathology perspective (Cicchetti, Ackerman, & Izard, 1995). The dearth of empirical research in this area is particularly significant given that the investigation of emotional functioning has important implications for understanding normal as well as abnormal development (Izard & Harris, 1995).

Once relegated to the back burner of psychological science, emotions are now recognized as an essential area of interdisciplinary investigation. Emotions are internal events that coordinate many psychological subsystems, including physiological responses, cognitions, and conscious awareness (Mayer, Caruso, & Salovey, 2000). One

recent conceptualization of emotional functioning that has only begun to receive empirical attention is emotional intelligence (EI). EI is a multi-dimensional concept defined by Mayer and Salovey (1997) as follows:

> Emotional intelligence involves the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth." (p. 10).

As an evolving concept within the multiple intelligence theories, emotional intelligence is considered to be a set of abilities that are distinct from the verbal-conceptual and visual-spatial abilities that comprise general intelligence (Mayer, Caruso, & Salovey, 1999). The abilities of emotional intelligence are also considered to be related to psychological adaptation (Goleman, 1995; Mayer & Salovey, 1993). The studies that have been completed to date have primarily investigated emotional intelligence in normal adult populations and have focused on psychometric validation and reliability issues. At this time, there have been no published studies investigating the relations between emotional intelligence and psychopathology in adolescence. At a relatively early stage in theoretical development, descriptive knowledge of the emotional intelligence construct is useful for both conceptual refinement and for clinical application.

The purpose of the present research is to extend the research on the relations of emotional functioning to gender, psychopathology, and aggression. More specifically, the aim of the study is to explore the relation of emotional states (Positive and Negative

Affect) and EI, as conceptualized by Mayer and Salovey (1997), to dimensions of psychopathology (i.e., internalizing and externalizing problems) among delinquent boys and girls. A second, related aim is to examine the relation of emotional states and EI to dimensions of aggression (i.e., aggression against property, aggression against persons) within the delinquent subgroup. This is particularly important due to the heterogeneity of delinquents, not only in terms of offending behavior, but also related mental health issues, and corresponding intervention needs. Furthermore, a secondary issue to be examined in the study is gender differences in how psychopathology and aggression are manifested. Given that in the majority of previous studies, investigators have included only delinquent males (Moretti, Lessard, Wiebe, & Reebye, 1996), and the quantity of evidence showing sex differences during this age period (Larson & Lampman-Petraitis, 1989), the proposed study will extend the knowledge base by including both male and female delinquents and comparing them across all constructs examined.

An essential assumption of this project is that individuals differ in how skilled they are at perceiving, understanding, and utilizing affective information, and that a person's "emotional intelligence" contributes substantially to his or her emotional, social, and psychological well-being, and alternatively, to the development of psychopathology and aberrant behavior (Salovey, Bedell, Detweiler, & Mayer, 2000).

What follows is a review of the literature, which is divided into nine sections. The first section is a review of the literature on developmental psychopathology. The purpose of this section is to provide an overview of the characteristics and development of this relatively young theoretical perspective, which will be adhered to in this proposed study. Before looking at the literature specifically related to gender differences in emotional

functioning and psychopathology, the literature review will delineate some of the general issues of the study of emotion, including emotional functioning, specifically, emotional intelligence and emotional states. Each section will include definitions, gender differences and relations to psychopathology, and measurement issues. Following this overview, a brief review of the literature examining psychopathology and delinquency during adolescence is presented. This section reviews the literature examining the rationale for conducting research with young offenders, including a more extensive review of mental health issues within young offender populations. Next, gender differences in psychopathology and delinquency during adolescence will be discussed. This section will be followed by a review of the literature outlining issues pertaining to emotional functioning, psychopathology, and adolescence. Although the concept of emotional intelligence is relatively new and thus unstudied in delinquent populations, research has been conducted with atypical youth investigating single variables included under the multidimensional rubric of EI. A review of some of these single-variable studies is included in this section. Next, a review of the research examining gender differences in the relation of emotional functioning and psychopathology during adolescence is presented. Finally, the chapter concludes with the rationale and significance for the study, including specific research questions.

Developmental Psychopathology

Over the past two decades, the domain of developmental psychopathology has received increasing recognition as a distinct field. As a rapidly emerging scientific discipline, developmental psychopathology is characterized by attempts to understand psychopathology and atypical development from within the framework of normative

developmental psychology (Luthar, 1997). Luthar (1991) discusses the parameters of developmental psychopathology. She suggests that there are four central or defining characteristics of the field: (1) the use of classical developmental theory and research to inform issues of psychopathology, (2) the use of insights from at-risk or atypical populations to increase our understanding of normal developmental processes, (3) integration of developmental and clinical perspectives with those from other scientific disciplines, and (4) the derivation of implications for preventive and therapeutic interventions, and for social policy. What follows is a brief discussion of these points.

Perhaps the most fundamental feature that defines the domain of developmental psychopathology – and that sets it apart from other disciplines – is its integrative nature, where principles from developmental theory are applied in investigating clinical and psychiatric phenomena (Cicchetti, 1993; Rutter & Garmezy, 1983; Zigler & Glick, 1986). In addition, studies within the domain of developmental psychopathology – pathology as well as resiliency – enhance the knowledge of normal development, particularly in the context of individual differences in development and in risk and protective processes associated with different types of outcomes (Luthar, 1993; Masten, Best, & Garmezy, 1990).

In further describing the field of developmental psychopathology, particularly the study of risk and protective factors, Rierdan (1998) identifies two points that are generally accepted: (1) predisposing factors or vulnerabilities lead to maladjustment only with exposure to precipitating factors such as risks or stressors; (2) exposure to risk factors may be mitigated by protective factors, so that maladjustment is avoided. The

movement toward this approach has helped to more the field away from a simple distinction between normality and pathology (Noam, Chandler, & Lalonde, 1995).

Luthar (1997) suggests that multi-disciplinary, multi-contextual strategies are necessary for moving toward the goal of thoroughly understanding the development of psychopathology. Similarly, Miller (1995) enunciated the view that all of the different specialties – ranging from the basic to the applied and from the biological to the social and cultural – are needed to advance our common goal of better understanding human behavior.

A feature of developmental psychopathology emphasized by Luthar and Burack (1997) is that it strives to bridge the, what is often wide, gap between research and the application of knowledge to at-risk populations. For interventions, whether prevention or treatment, to be successful, programs should be based in theory and on empirical research findings. In sum, the principles of developmental psychopathology provide conceptual scaffolding for facilitating a needed multidisciplinary integration, as well as for fostering an increased synergy among basic research, the development of preventive intervention, and the implementation of treatment programs (Cicchetti & Sroufe, 2000).

Overall, there have been many recent advances in the field of developmental psychopathology, particularly in understanding the complexity of causality, the interaction of risk and protective factors, the heterogeneity of disorder, and the importance of developmental processes and mechanism (see Cicchetti & Sroufe, 2000 for a detailed discussion). In a recent special edition of the journal Development and Psychopathology entitled, *Reflecting on the Past and Planning for the Future of Developmental Psychopathology*, Cicchetti and Sroufe (2000) note that, although there is

much research and knowledge to build upon, there are some key areas in which rather little work has been conducted and in which investigations are needed. One such area noted by Cicchetti and Sroufe is that of emotional expression, particularly as it relates to socialization and interpersonal affective relationships. They also suggest that additional research is warranted that focuses on gender differences as they relate to developmental factors. Specifically Cicchetti and Sroufe suggest that research is needed that investigates features of gender differences of internalizing disorders, including features that maintain or deflect individuals from a depressive pathway. Research questions pertaining to issues of emotional functioning, as well as gender differences in psychopathology will be explored in the present investigation.

Rationale for Investigating Social Emotional Functioning Within a Developmental Psychopathology Framework

As the field of developmental psychopathology has matured, the need to more thoroughly understand the relations between different developmental variables to clinical symptoms, syndromes, and disorders, has become increasingly clear (Kovacs, 1989). Indeed, a growing recognition within child and adolescent psychology and psychiatry has emerged that future diagnostic systems will have to take into account the reality that childhood and adolescent disorders occur in the context of changing development tasks and fundamental transformations of cognitive, emotion, and social adaptation (Noam, Paget, Valiant, Boarst & Bartok, 1994). Most empirical studies in the early years of developmental psychopathology have relied on chronological age as an index of development (Noam, 1998; Rierdan & Koff, 1993). Although studies of age and psychopathology are useful, they are also limited in what they provide (Rierdan, 1998).

Noam et al. (1994) suggest that as developmental psychopathology research has expanded and become more complex, the use of chronological age as the critical indicator has been found to be deficient. Wohlwill (1973, cited in Rierdan, 1998) suggested that age is a marker, not a measure of development. Rierdan (1998) suggests that age is global and undifferentiated, a term scarcely more specific that 'etc.' when controlled for in studies of the relationship between other more discrete variables. If the goal of developmental psychopathology is indeed, to explain the development of individual patterns of adaptation and maladaptation, as suggested by Sroufe and Rutter (1984), other variables which would serve as risk or protective factors, such as social-emotional functioning, must be more thoroughly examined.

Although the concept of emotions has been investigated throughout history (Mora & Brand, 1970), the term *social emotional* development was first used in the beginning of the 1980s, when Sroufe used the title "*Socioemotional Development*" to summarize emergent themes in attachment, emotional development, and psychosocial functioning. Nearly twenty years later, it still can be said that empirical analyses of psychopathology from a social emotional perspective are relatively rare, particularly regarding the emotional states of children and youth exhibiting emotional and behavioral disorders. Furthermore, much of contemporary theory and research has examined the emotions from a predominately nonpathology perspective (Cicchetti et al., 1995). The dearth of empirical research in this area is particularly significant given that the investigation of the emotions has important implications for understanding normal as well as abnormal development (Izard & Harris, 1995). As Tomkins (1962) posits, emotion is the

wellspring of human motivation, the "primary provider of blueprints for cognition, decisions and action" (p. 22).

Emotions

A dramatic shift in attitude toward emotions has occurred across the last fifty years, from regarding emotions as disruptive and disorganizing (e.g., Young, 1943) and not suitable as scientific data (Skinner, 1953), to considering them an essential factor in human information processing, communication, and psychotherapy (Safran & Greenberg, 1991). Indeed, basic research in emotion has proliferated over the past decade, and although it is now recognized as an essential aspect of any study of humankind (Lewis & Haviland-Jones, 2000), and a great deal still needs to be learned, a consistent view of emotion has begun to emerge. "Emotion," like the term "cognition" refers to a class of elicitors, behaviors, states, and experiences (Lewis, 2000). Although too detailed for this discussion, there are many differing aspects to emotions with scholars expressing emotions in vastly distinct ways. For example, Lewis (2000) points out that Zajonc (1980) argued that emotions could occur without cognitions, while Lazarus (1982) argued that emotions require cognition. Lewis (2000), in a review article in which he cogently clarifies and points out the issues, suggests that each of the above mentioned authors was describing a different feature of emotional life (in this case emotions as states vs. emotions as experiences).

The investigation of emotional functioning has important implications for understanding normal as well as abnormal development. As Blueler (1924) noted:

> Affectivity... assumes a prominent role in psychopathology generally, even in slight deviations, not only on account of its own morbid manifestations, but even

more because in disturbances in any sphere, it is the affective mechanisms that first create the manifest symptoms. (p. 117)

Cicchetti (1990) suggests that the discussion of developmental psychopathology would be incomplete without considering the role of emotions for three main reasons. First, numerous observers of human behavior have noted that the etiology, symptoms, and course of psychological disorders cannot be fully explained without recourse to emotion concepts. Second, evidence from both normal and abnormal populations suggestions that, although interdependent, the emotions constitute a separate system. Harris (1989) reiterates this notion, suggesting that analyses of the mechanisms, processes, and effects of interaction among the emotions system and the cognitive and action systems are essential to understanding normal and psychopathology development. Third, a growing body of evidence supports the hypothesis that emotions are motivational and hence must be involved in explaining the causes of normal and abnormal behavior.

Salovey et al. (2000), the originators of the terms emotional intelligence, view emotions as encompassing a cognitive component. They suggest that affective phenomena constitute a unique source of information for individuals about their surrounding environment, and this information informs thoughts, actions and subsequent feelings.

Emotional Intelligence

Overview and Definitional Issues

The term "Emotional Intelligence" or "EI" has received much attention and generated much excitement since Salovey and Mayer first introduced the term in 1990. Generally, they have described emotional intelligence as "the ability to perceive and

express emotions, to understand and use them, and to manage emotions so as to foster personal growth" (Salovey et al., 2000, p. 506).

Mayer and Salovey (1997) suggest that understanding the concept of emotional intelligence requires exploring its two component terms, *intelligence* and *emotion.* They rationalize that since the eighteenth century, psychologists have recognized an influential three-part division of the mind into cognition (thought), affect (including emotions), and motivation (or conation). Psychologists, to characterize how well the cognitive sphere functions, typically use the term intelligence. Emotions belong to the second affective sphere of mental functioning, which Mayer and Salovey (1997) suggest include the emotions themselves, moods, evaluations, and other feeling states, including fatigue or energy. Definitions of emotional intelligence, should, in some way connect emotions with intelligence. Mayer and Salovey (1997) also suggest that, as opposed to more general research on affect and cognition, emotional intelligence should refer to heightened emotional or mental abilities.

Barchard (2001) notes that the excitement surrounding Emotional Intelligence seems to come from two sources. First, it may be that Emotional Intelligence is a legitimate cognitive ability, much like Verbal Ability, that has been previously over-looked. Second, a great deal of excitement and interest is due to popularized writings on the subject of Emotional Intelligence, claiming that EI assists in the prediction of success (Bar-On, Brown, Kirkcaldy, & Thome, 2000; Goleman, 1995, 1998; Mehrabian, 2000; Sosik & Megerian, 1999). One example in the media of such a claim was the cover of TIME (1995), which stated "emotional intelligence may be the best predictor of success in life, redefining what it means to be smart."

The concept of emotional intelligence has received considerable attention in recent years, as seen in various books, magazines, and journals. Unfortunately, it seems that within each discussion a different definition is employed or a different claim for its importance is made (Mayer & Salovey, 1997). Emotional intelligence has often been conceptualized (particularly in popular literature) as involving much more than ability at perceiving, assimilating, understanding, and managing emotions (Mayer et al., 2000). These alternative conceptions include not only emotion and intelligence per se, but also motivation, non-ability dispositions and traits, and global personal and social functioning (Bar-On, 1997; Goleman, 1995). Mayer et al. suggest that, "such broadening seems to undercut the utility of the terms under consideration" (p. 268). Although interesting and important, particularly from a psychometric perspective, the debate surrounding the various definitions and conceptualizations of EI are beyond the scope of this discussion. For the purpose of this study, the definition and framework of emotional intelligence, as conceptualized by Mayer, Salovey, and Caruso (1997) as well as their colleagues, will be utilized and relations among dimensions of psychopathology and dimensions of aggression will be explored in delinquent adolescents.

Salovey and Mayer (1990), the originators of the term "Emotional Intelligence", define it as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action (p. 189). In 1997, Mayer and Salovey revised their definition and conceptualization of emotional intelligence and defined emotional intelligence by the specific competencies it encompasses:

> Emotional intelligence involves the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth (p.10).

Their model of emotional intelligence is presented in Table 1.

Table 1.

Dimensions of Mayer and Salovey's Model of Emotional Intelligence

Identifying Emotions (Branch 1)	The ability to perceive emotions in oneself and others, as well as in objects, arts, and events.
Using Emotions (Branch 2)	The ability to generate, use, and feel emotion to communicate feelings, or employ them in thinking and creating.
Understanding Emotions (Branch 3)	The ability to understand emotional information, how emotions combine and progress, and to reason about such emotional meanings.
Managing Emotions (Branch 4)	The ability to regulate emotions in oneself and others so as to promote personal understanding and growth.

Presently, the only maximum performance ability EI measure available for adolescents is the A-MEIS, which is based on Mayer and Salovey's (1997) original definition and conceptualization. A measure based on the revised conceptualization is presently being developed, although not ready for use (Caruso, personal communication, March 12, 2001). As such, for the purpose of this study, the original conceptualization of EI will be utilized.

The term *Emotional Intelligence* implies a cooperative relationship between cognition and emotion, such that one reasons intelligently about feelings and is also able to use one's experience of emotion to improve problem solving and decision-making (Caruso, Van Buren, Mayer, & Salovey, 1999). The ability to be emotionally intelligent is presumed to have important ramifications for one's transactions with the world, including psychological adaptation (Pellitteri, 1999). Four distinct abilities are posited in the model: (1) the ability to perceive and identify emotion in one's self, in others, and in the surrounding environment; (2) the ability to generate and use emotions to assist in thinking (assimilate emotions in thought); (3) the ability to understand emotions intellectually; and (4) the ability to monitor, manage and regulate emotions (Mayer et al, 2000).

In the adult literature, emotional intelligence has been found to be moderately and significantly correlated to measures of general or analytic intelligence, (Mayer et al., 1999); empathy, and significant outcomes on life satisfaction. Emotional intelligence also has moderate correlations with less time spent on physical activities, less reliance on purely logical decisions (Rational Control), great social participation (Relatedness), engaging in "fun" activities (Life Enthusiasm), and engaging in less destructive behavior (Mayer, et al., 1999). Performance on the Multifactor Emotional Intelligence Scale (MEIS), Salovey and Mayer's adult version of the EI measure, was found to be not significantly correlated to a person's mood, as measured by the 16-item Brief Mood Introspection Scale (Mayer, Caruso, Formica, & Salovey, 2000).

Mayer et al. (1999) found gender differences on the MEIS, with adult women performing about a .5 standard deviation higher than men. They state that the fact that

women are slightly superior to men in perceiving emotion has been known for some time, through tests of nonverbal perception, such as the PONS (Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979), as well as through earlier developed tests of emotional intelligence (Mayer & Geher, 1996).

Measurement Issues

Although the construct of emotional intelligence has generated considerable interest, the measurement of it is emerging rather slowly and validity data are especially scarce (Salovey et al., 2000). It will be recalled that emotional intelligence refers to an ability to recognize the meanings of emotions and their relationships and, and to reason and problem-solve on the basis of them (Mayer et al., 1999). Because EI is conceptualized as an ability, Mayer et al. (1999) suggest that it can be assessed most directly by asking a person to solve emotional problems and then evaluating the person's answer against criteria of accuracy (Mayer, DiPaolo, & Salovey, 1990; Mayer & Geher, 1996). It should be noted, however, that EI has been measured in many ways. Some approaches have asked people to self-report their personal beliefs about their emotional intelligence. Mayer and Steves (1994) suggest that test items such as, "I'm in touch with my emotions," or "I am a sensitive person," assess self-understanding. Self-reports of ability and actual ability (as measured by maximum performance ability measures) are only minimally correlated in the intelligence research (Paulhaus, Lysys, & Yik, as cited in Mayer, Caruso, & Salovey, 1999), and that appears to hold in the area of emotional intelligence as well (Davies, Stankov, & Roberts, 1998). Overall, Mayer et al. (1997) suggest that emotional intelligence as a domain of human performance is best studied with ability measures.

Summarizing measurement issues related to emotional and social intelligence, Barchard (2001) reiterates this stance, stating, "self-report measures of emotional and social intelligence (ESI) provide poor measurement of cognitive abilities and that maximum-performance measures are to be preferred" (p.230). Her conclusion is based on the following findings. First, maximum-performance measures are more likely than self-report measures to correlate with other cognitive abilities (Barchard, 2000). Second, Barchard (2001) found that self-report measures of ESI are more likely to correlate with social desirable responding than maximum performance tests, which suggest that self-report measures are either not measuring cognitive abilities or are providing poor measurement. In summary, Barchard (2001) states that maximum performance tests are to be preferred, when attempting to measure cognitive aspects of emotional intelligence. As such, the AMEIS, a maximum performance ability instrument designed to assess emotional intelligence in adolescence was utilized for the present investigation.

Although there is a multitude of EI measures, the ability measure entitled, "The Multifactor Emotional Intelligence Scale" (MEIS) and its successor, the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) represents the culmination of the work by Mayer and Salovey and their colleages. The MEIS has now been administered to a normative sample of 503 adults ranging in age form 17 to 70 years. Scale scores for the four main branches appear to be internally consistent, with Cronbach alphas of .84, .86, .89, and .81, respectively (Mayer, et al., 1999). The adolescent version of the MEIS (A-MEIS) was utilized in the present study because the A-MSCEIS, a revised version of the MEIS with high degree of scale and item overlap (Mayer et al., 1999) has not been completed.

A common question related to the scores of the MEIS and AMEIS is whether there is a "right" way to feel? The obvious answer is no, there is no "right" way to feel, although there are situations where there is a more accurate response to emotional stimuli (Caruso, 1999). For example, consider the ability of *Identifying Emotions*. A given person feels a certain way. Caruso suggests that some people are simply better at determining how a person is feeling, and some are much less accurate in gauging the emotions of others. If someone is feeling happy, and another judges you to be sad, he or she is not being very accurate in accurately identifying emotions.

In the case of *Using Emotions*, if a person cannot generate a certain emotion, he or she will not be able to enter into the task and solve the problem. The assumption is that if one is good at feeling certain emotions, and then if he or she can allow these emotions to assist his/her thinking, the person may be better able to come up with new ideas, generate a feeling of excitement, or motivate others.

Caruso (1999) suggests that *Understanding Emotions* may be the closest of the subtests to a standard ability test. In that task, individuals are asked to define emotion terms, much the same as in a vocabulary test. If, for example, a person thinks that happiness is the result of a loss, then he or she may lack the ability to understand emotions, and as a result, people in general. Likewise, if one is fluent in the "world of emotions", he or she may be more skilled at handling people and emotional situations, with more effective outcomes.

Emotional Intelligence and Adolescence

Although Mayer and Salovey's model of emotional intelligence has been studied empirically in adults since 1990, it has been only recently applied to adolescents

(Caruso, et al., 1999; Mayer et al., 2000; Rubin, 1999; Sullivan, 1999). More specifically, there have been three empirical studies, two of which are unpublished, in which Mayer and Salovey's conceptualization of emotional intelligence and the A-MEIS has been assessed in adolescent samples.

In the first study, described in an unpublished article by Caruso et al. (1999) entitled, *Emotional Intelligence, Empathy, and Analytic Intelligence in Adolescence,* the researchers were interested in determining if Mayer and Salovey's ability model of emotional intelligence would apply reliably to adolescents. The researchers were also interested in investigating whether performance on the emotional intelligence tasks varied with gender or age. Furthermore, the researchers investigated whether individual differences in emotional intelligence were related to differences in analytic intelligence, empathy and personality, and quality of social relationships, measured by a social loneliness scale (Asher, Hymel, & Renshaw, 1984).

In Caruso et al.'s (1999) study, 290 students (115 females, 140 males, and 35 unknown), ranging in age from 11 to 18 participated. As mentioned, the A-MEIS (Mayer, 1997) was used to assess EI. In addition, measures to assess verbal ability, empathy, and social behaviors, as measured by the social loneliness scale (Asher, Hymel, & Renshaw, 1984) were administered.

Findings revealed (a) the subscales and total score on the AMEIS were found to have acceptable reliability (α ranged from .82 to .94); (b) that emotional intelligence was modestly related to empathy and prosocial behavior; (c) that adolescent girls outperformed adolescent boys on all four components of emotional intelligence; and (d) that AMEIS scores and self-reported grades were significantly correlated.

The second study to investigate emotional intelligence in an adolescent sample was described in an article by Mayer, Caruso, and Salovey (2000) entitled, *Emotional Intelligence Meets Traditional Standards for an Intelligence.* The authors stated that for a concept to be considered as intelligence, several standard criteria must be met before it can be considered scientifically legitimate. According to Mayer et al., (2000), the criteria are as follows: (a) the intelligence should be capable of being operationalized as a set of abilities; (b) the intelligence should meet certain correlational criteria – the abilities defined by the intelligence should form a related set (i.e., intercorrelated), and be related to pre-existing intelligences, while also showing some unique variance; and (c) the abilities of the intelligence should develop with age and experience.

For the present study, research findings with regard to the third criteria – that for emotional intelligence to behave, as does a standard intelligence, it should be shown to increase with age (Brown, 1997; Fancher, 1985) will be reviewed. To test whether this occurs, Mayer et al. (2000) took several subsections from their adult emotional intelligence test (MEIS) and administered them to an adolescent sample (ages 12-16). The performance of the adolescents was then compared to the performance of an adult sub sample. The researchers used two samples (younger adolescents and older adolescents), and assessed whether the test could be used and understood by both groups. Mayer et al. (2000) posited that this method provided a challenging test of the developmental hypothesis because proximity in age should yield only small differences in performance between the two groups.

Findings revealed that the adults performed at higher ability levels than did the adolescents. In addition, emotional intelligence in adolescence showed the same

relations to verbal intelligence and empathy as it did in the adult sample. Overall, Mayer et al.'s (2000) findings provided support for their contention that emotional met the third criteria of traditional intelligence.

A third unpublished doctoral dissertation by Rubin (1999) investigated the relations between emotional intelligence and aggression in a sample of 52 urban adolescents attending high school. Rubin collected teacher and peer ratings of aggression and prosocial behavior. The peer ratings included a measure of direct, overt, and relational aggression. Findings revealed that teacher-rated aggression was not significantly related to total AMEIS scores, although the association was in the appropriate direction. Peer-nominated direct and relational aggression, and peer nominated combined aggression were all significantly related to AMEIS. Prosocial behavior, as measured by teacher ratings, was also related to total scores on the AMEIS, but overall AMEIS scores were not significantly related to peer-nominated prosocial behavior. However, the author noted that the correlation was in the appropriate direction. Finally, findings revealed that adolescent scoring higher on EI were less likely to use alcohol or tobacco.

Emotional States

A second form of emotional functioning explored in the present investigation is that of emotional states. In the literature, two independent factors of emotional states – Positive Affect (PA) and Negative Affect (NA) - comprise the dominant dimensions of emotional experience, both in English and in a number of other languages (Watson, Clark & Tellegen, 1984; Zevon & Tellegen, 1982). NA and PA are basic dimensions of mood, but they also help to organize and intergrate an array of related phenomena (Watson,

1988). PA reflects the extent to which a person feels enthusiastic, active and alert. High PA is a state of high energy, full concentration, and pleasurable engagement, whereas low PA is characterized by sadness and lethargy. In contrast, NA is a general dimension of subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness, with low NA being a state of calmness and serenity (Watson, Clark, & Tellegen, 1988).

Although these two factors represent affective state dimensions, Tellegen (1985) suggests that they are also related to corresponding affective trait dimensions of positive and negative emotionality, including individual differences in positive and negative emotional reactivity. Generally, negative emotions – when extreme, prolonged, or contextually inappropriate – produce grave problems for individuals and society, including phobias and anxiety disorders, aggression and violence, depression and suicide, eating disorders and sexual dysfunction, and a host of stress-related physical disorders. Positive emotions do, at times, pose problems as well, particularly in the case of mania (Fredrickson & Branigan, 2001).

PA has been found to promote creativity and flexibility in problem solving and negotiation, as well as both efficiency and thoroughness in decision making, and other indicators of improved thinking (Isen, 2000). These effects have been found in a wide range of setting and populations, ranging from young adolescents (e.g., Green & Noice, 1988), to behavior or adults in professional vocations (e.g., Estrada, Isen, & Young, 1997). Furthermore, findings from recent studies in the coping literature are finding that even when people must cope with adverse events, positive affect is helpful, facilitating effective coping and reducing defensiveness (e.g., Aspinwall, 1998). Generally, NA is

related to a very general and pervasive dimension of distress, and is seen in the areas of stress, health and psychopathology (Watson & Clark, 1984). NA – but not PA – is related to self-reported stress and poor coping mechanisms (Kanner, Coyne, Schaefer & Lazarus, 1981), and frequency of self-reported unpleasant events (Stone, 1981). In contrast, PA, -- but not NA – is related to social activity, physical activity, satisfaction, and frequency of pleasant events (Clark & Watson, 1986, 1988). A more thorough review of the literature on emotional states and psychopathology is presented in a later section of this review.

For the purpose of this study, it was thought that for a more complete "picture" to emerge regarding the emotional functioning of delinquents, a more multicomponent model should be utilized. It is hypothesized that gathering emotional state information from the youth, will add additional information about the functions of emotion, particularly as it relates to psychopathology, than using an emotional intelligence measure for adolescents alone.

Measurement Issues

For the purpose of this proposed study, the Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988) will be used to measure feeling states in adolescents. The measure was developed in response to findings of research studies on the structure of affect that suggested that there are two dominant dimensions – Positive and Negative affect. These dimensions appear as the first two factors in factor analyses of self-rated mood and as the first two dimensions in multidimensional scaling of facial expressions or mood terms (Watson, Clark, & Tellegen, 1984; Zevon & Tellegen, 1982). Upon summarizing the relevant evidence, Watson and Tellegen (1985) presented a basic,

consensual two-factor model. The authors suggest that although the terms Positive Affect and Negative Affect might suggest that these two mood factors are opposites (that is strongly negatively correlated), they have in fact emerged as highly distinctive dimensions that can be represented as orthogonal dimensions in factor analytic studies of affect.

Numerous PA and NA scales have been developed and empirically tested. Watson et al. (1988) reviewed the literature on the various affect scales and concluded that anomalous and inconsistent findings have been reported when comparing the various measures. They report evidence that although there are many possible explanations for the inconsistencies, the most plausible is that the various scales themselves are unreliable and invalid. Watson et al. (1988) concluded that there was a need for reliable and valid PA and NA scales that are brief and easy to administer, thus the PANAS was developed.

When developing the PANAS, norms were collected on first year university undergraduates, on a non-student adult sample, and on a psychiatric inpatient sample. Significantly, Watson et al. (1988) found significant group differences for NA, with psychiatric patients considerably higher ($M = 26.6$) and more variable ($SD = 9.2$) than the normative group ($M = 18.1$, $SD = 5.9$). Since the PANAS was first developed, it has been used to assess emotional state in numerous investigations with varied populations, ranging from non-clinical "normalized" samples of adults, adolescents, and children to inpatient populations of all ages (Crook, Beaver, & Bell, 1998; Daleiden, Chorpita & Lu, 2000; Kuiper, McKee, Kazarian, & Olinger, 2000; Watson, 1988).

Emotional States and the Study of Psychopathology

Kring (2000) posits that researchers interested in understanding and specifying the role of emotion disturbances in the development of psychopathology should measure multiple dimensions of emotion. Recently, psychopathology researchers have taken advantage of the methodological advancements made by basic emotion researchers and have incorporated measures into the study of different psychopathological disturbances (Kring & Bachorowski, 1999). Reliable self-report measures of the broad dimensions of affect (i.e., emotional states) have been developed and utilized in studies examining emotion in both normal and clinical samples.

For the most part, empirical studies have explored the relation of PA and NA scales to state anxiety, depression, and general psychological distress (Tellegen, 1985; Watson & Clark, 1984). In addition, Watson et al. (1988) have examined the relation of the PANAS scales in relation to a number of commonly used measures of psychopathology including the Hopkins Symptom Checklist (HSCL; Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974), the Beck Depression Inventory (BDI: Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and the State-Trait Anxiety Inventory State Anxiety Scale (A-State; Spielberger, Gorsuch, & Lushene, 1970). Results reveal that the PANAS taps many of the same constructs as these measures. For example, it appears that the HSCL is largely a measure of NA. In terms of the Becks Depression Inventory, Watson et al. (1988) found that although the BDI is substantially correlated the PANAS NA scale, using the PANAS added some information, indicating that depressive symptomatology was affectively complex. It seems that researchers interested in

studying internalizing disorders might want to use the PANAS scales as a compliment to more traditional psychopathology measures.

Watson, Clark, and Carey (1988) explored the role of NA and PA in two specific internalizing disorders, anxiety and depression. They found that, as expected, NA was broadly correlated with symptoms and diagnoses of both anxiety and depression. According to the authors, NA seems to be a diffuse index of psychological distress that can be expected to differentiate most patient groups from a normalized population, although it did not seem to effectively distinguish specific types of psychiatric disorder from one another. The PA factor, in contrast, was found to be related primarily to symptoms and diagnoses of depression. Although PA's contribution to the prediction of the depressive diagnoses was smaller than that of NA, at the symptom level, NA and PA were comparably related to depression. As depression appears to be an affectively complex combination of high NA and low PA, the authors suggest that the differential measurement of depression might be improved if the PA component were examined.

The PANAS also has been used to assess emotional states in children and adolescents and found to be reliable and valid (e.g., Chorpita, Daleiden, Moffitt, Yim & Umemoto, 2000; Daleiden, et al., 2000). In terms of psychopathology and adolescence, Sanders (2000) found a strong positive relation between internalizing symptoms and negative affectivity, and a moderate negative relationship between internalizing symptoms and positive affectivity. Sanders, however, did not find gender differences in positive and negative affect with the PANAS. Crook et al., (1998) also found the PANAS valid in differentiating anxiety and depression in children.

Although a thorough search of the extant research revealed no studies in which the PANAS has been used to explore Negative and Positive Affect in a young offender population, it was expected in the present investigation that the PANAS would provide important information regarding the role that emotions play with regard to psychopathology and aggression among delinquents. Despite the fact that the literature on positive and negative emotions seems to have focused solely on examining internalizing disorders, examining the manner in which these dimensions of emotion associate with disturbances of a more externalizing nature will provide a needed addition to the existing literature. In addition, it will hopefully be fruitful to compare the PANAS to youth diagnosed with externalizing disorders and internalizing disorders.

Psychopathology, Delinquency, and Adolescence

This section consists of a brief review of the research as it pertains to psychopathology and adolescence. There exists a range of problems behaviors that are often researched and reported from different disciplines, such as Criminology, Psychiatry and Psychiatry. As such, this section will include research on psychological constructs, such as conduct disorder, research on young offenders and delinquency, and research examining mental health issues within young offender populations.

Over the past 10 to 15 years, there has been a dramatic increase in the attention paid to period of adolescence (Eccles et al., 1993). Few developmental periods are characterized by so many changes at so many different levels – pubertal development, social and cognitive development, sexuality, roles, and peer and family relationships. With rapid change comes a heightened potential for both positive and negative outcomes. Although most individuals pass through this developmental period without excessively

high levels of stress and dysfunction, many adolescents do experience difficulty during this period. Epidemiological research in both the United States and elsewhere suggest that about 20% of adolescents manifest diagnosable disorders (Ebata, Peterson, & Conger, 1990).

In a similar vain, Larson and Ham (1993) note that, although the majority of adolescents do not experience what Hall (1904) and Freud (1946) conceptualized as personality disequilibrium, the onset of adolescence is associated with (a) more frequent negative affect among many adolescents (see Larson & Lampman-Petraitis, 1989; Rutter, 1980), which are more pronounced for girls than boys (Larson & Ham, 1993) and (b) increased rates of behavioral and psychological problems for some adolescents (Rutter, 1989). Eccles and her colleagues (1993) point out that the nature and pace of these developmental changes that occur in adolescence renders this age period an ideal focus for the study of human development.

Studying developmental factors is essential for an understanding of psychopathology (Ebata et al., 1990). More specifically, understanding the processes underlying adaptive and maladaptive pathways at different stages of development is essential to the study of etiology and intervention of psychopathology. For example, Werner and Smith (1982) found that constitutional factors (e.g., temperament) played major roles in outcomes early in development; that school and cognitive factors were keys to adjustment during middle childhood; and that interpersonal as well as "self" factors were involved with adjustment during adolescence.

Young Offenders and Psychopathology

Throughout this paper, the terms delinquents and young offenders will be used synonymously, with the terms implying that, at least for the participants in the present study, that the adolescent has been arrested and charged with committing an offence under the jurisdiction of the Youth Offenders Act (YOA) (1985). The terms delinquent has been used for years, and under the Juvenile Delinquents Act (1908), the precursor to the YOA, a young person could be charged with a status offence (e.g., truancy, sexual promiscuity) and labeled "delinquent". The YOA does not include status offences, so today, when the term "delinquent" is used, it implies that the youth is formally involved in the criminal justice system (YOA, 1985).

There are important reasons for investigating delinquent children and adolescents. First, youthful offenders pose a serious social problem. There is evidence indicating that, although the overall crime rate is dropping in Canada and the United States, it continues to rise among the adolescents committing violent crimes. In Canada, for example, between the period of 1991 to 1997, the charge rate for young people dropped from 643 to 495 per 10,000 youth in the population – a 23% decrease, mostly in property crimes (Hendrick, Kowalski, Stevenson, & Tufts, 1998). However, the rate of young people charged with violent crimes increased over this same period from 83 to 91 per 10,000 (Hendrick et al., 1998). Even more alarming is that there are enormous short and long-term costs associated with children and adolescents who commit crimes, particularly violent acts. These costs are economic as well as emotional/psychological and are incurred by the individual victims, families, schools, communities, as well as by the children and adolescents themselves.

Despite the statistics, juvenile crime ignites in people a level of disbelief, moral outrage and confusion that few other issues do. Indeed, juvenile crime, particularly acts of violence committed by youth, is presently a "hot" topic. And although the media often "sensationalizes" crime stories, there have been many very real acts of violence committed by adolescents in the recent past that have brought this issue to the forefront. Indeed, reminders of the Rena Virk case in British Columbia (Canada Press, March 8, 2000), the Columbine School massacre, various home invasions, the shooting at Taber (CBC online, May 3, 1999), as well as "evidence" of the effects of violence such as the many recent adolescent suicides resulting from bullying, invoke emotions vast and varied. The questions that follow are often, "Why did these tragedies happen? Who were these young who acted so violently? Why did they do this?" And for those who research or work with serious and violent juvenile offenders and adolescent exhibiting emotional and behavioral disorders, the one fact that is known is that these answers are not easily or simply answered.

Beyond the statistics and moral outrage, another strong rationale for studying childhood and adolescent antisocial behaviors are the findings that antisocial behavior in childhood often lays the foundation for a durable pattern of criminality, and that the older the child is at the time we reach him or her, the less likely we are to be able to modify the behavior (Loeber, Farrington, & Waschbusch, 1998). Indeed, behaviors used to measure aggression and antisocial behavior show considerable stability across the lifespan, rivaling intelligence for trait like stability (Farrington, 1997; Olweus, 1979).

A thorough understanding of antisocial behavior as well as the psychopathologies that underlie the behavior requires research advancements at many levels of analysis,

including individual attributes, situational factors, contextual influences as well as a realization of the interplay among these factors (see Loeber & Farrington, 1998). One issue that has emerged in recent years is the need to incorporate developmental questions into theories of delinquent behavior. Although there is a large developmental literature on problem behavior in children and adolescence, the developmental literature, criminal justice, and mental health literatures have evolved separately (Guerra, 1996), with little overlap. Guerra (1996) also recommends that it is important to further study how risk and protective factors and accompanying developmental processes vary as a function of gender, culture, and social class.

In discussing the investigation of problem behaviors in adolescence, Cohen and Strayer (1996) suggest that comparing groups of youth identified as "delinquents" or having "behavioral problems" may be inadequate as these groups are highly heterogeneous, with many individual differences. Indeed, delinquency is reflective of various types of difficulty – the only mandatory "common bond" is that the youth has been charged with a criminal offence, under the Young Offenders Act. Alternatively, they suggest discriminating based on a psychosocial diagnostic construct, such as conduct disorder. Specifically, Cohen and Strayer state:

> In contrast to the legally defined criteria of delinquency, indicating criminality of whatever kind, conduct disorder is a psychological diagnostic category that includes behaviors that may or may not also be defined as criminal. (p. 989).

Thus, in the present investigation, two dimensions of psychopathology -- internalizing and externalizing symtomatology -- as measured by a psychological diagnostic screening

measure, will be examined, in conjunction with dimensions of aggression, to more clearly differentiate individual and group differences.

Mental Health Problems and Incarcerated Youth

The knowledge base concerning the mental health needs of youth in correctional institutions has, historically, been limited (Davis, 2000), and the extent to which there is an overlap between serious juvenile offending and mental health problems is not known (Huizinga & Jakob-Chien, 1998). Given the public and practical interest in the potential relations between serious crime and mental health problems, it is surprising that there is very little empirical knowledge about the co-occurrence of serious and violent offending and mental health problems in juvenile populations. A recent issue of the *Archives of General Psychiatry* (June, 1996), in which the entire issue is dedicated to the topic, demonstrates evidence for the increased interest in the co-occurrence of serious and violent offending and mental health issues. Unfortunately, a focus on mental health issues and juvenile offenders is not evident. Significantly, even less is known about gender differences and mental health issues within the juvenile justice system. What is generally understood, however, is that youth in the juvenile justice system have seriously unmet mental health needs.

Findings in the research area of mental health problems in serious juvenile offenders, support the notion that habitual repeat offenders generally exhibit mental health issues (Davis, 2000). Huizinga & Jakob-Chien (1998), reporting findings from the Denver Youth Survey (Huizinga, Esbensen, & Weiher, 1991) investigated the extent of mental health problems in male and female juvenile offenders ages 13, 15, and 17. The researchers used self-report delinquency measures to identify serious violent, serious

nonviolent, minor delinquents and nondelinquent individuals. Parent reports of each participants'mental health problems were obtained using the Child Behavior Checklist (CBCL) (Achenbach & Edelbrock, 1983). As expected, significant group differences were found with the serious violent offenders scoring significantly higher on externalizing symptoms and aggressive behaviors for both boys and girls, although differences in the prevalence of most other psychological problems were between nondelinquents and delinquents. Furthermore, with the exception of the externalizing and aggressive behaviors, roughly about one third of the serious or serious violent offenders displayed high levels of other psychological problem, including internalizing, attention and thought disorders. Huizinga et al. (1998) summarizes in the findings by stating that, although a sizable proportion of the sample exhibited mental health problems, it would nevertheless by incorrect to characterize the group of serious or serious violent offenders as having psychological problems. Although both males and females participated in the study, the main purpose of the study was to differentiate between seriousness of offender among adolescents, as opposed to specific gender differences, and as such, gender differences were not discussed.

The paucity of research examining mental health problems among delinquent youth has been noted in recent years. For instance, Otto, Greenstein, and Friedman (1992), who reviewed the past thirty years of research literature addressing the mental health needs of youth with mental disorders in the juvenile justice system state that this subject has been given scant attention. The research that does exist indicates that youth held in correctional facilities exhibit significant emotional problems and are more similar than dissimilar to youth in psychiatric treatment settings, with aggression being the major

discriminating variable for confinement (Davis, Bean, Schumacher, & Stringer, 1991). Otto et al. (1992), in their review of the research concerning the prevalence of emotional disorders in the juvenile justice system, reported that whereas the general population's prevalence rate for mental disorders among youth ranges to a high of 22 percent, the rate of mental disorder in the juvenile justice samples is considerably higher. They found that between 20 and 60 percent of incarcerated youth were found to have a conduct disorder, as well as attention deficit disorders and mood disorders.

Davis et al. (1991) also investigated a sample of youth incarcerated in the Ohio Department of Youth Services. These researchers utilized a variety of measures, including record reviews, standardized measures, including the Youth Self-Report (Achenbach, 1991), the Children's Brief Psychiatric Rating scale, and clinical interviews by psychiatrists and psychologists. Findings revealed that a 32 percent prevalence rate of major affective disorders among the participants, with a significant subpopulation (21 percent) evidencing symptoms of depression prior to incarceration. Similar to the prevalence found in other sample, a significant number of youth (66 percent) had a history of substance abuse with 46 percent reporting a history of alcohol abuse. In addition, 19 percent were found to exhibit attention deficit hyperactivity disorder, 17 percent were seen as evidencing a developing personality disorder, another 17 percent were seen as having learning difficulties, and six percent were given a diagnosis of anxiety disorder. Fourteen percent of Davis et al.'s (1991) sample displayed active suicidal behavior and 21 percent had reported suicidal threats in the past. Nearly 20 percent had at least one psychiatric hospitalization prior to incarceration and many youth were found to have multiple diagnoses.

In sum, there exists a paucity of research examining the nature and prevalence of mental health problems among youth in the juvenile justice system. More data are clearly needed so that appropriate interventions can be designed and implemented. The present research project will address the need for research in this area by examining dimensions of psychopathology and aggression in a sample of serious juvenile offenders.

Gender Differences in Psychopathology and Delinquency During Adolescence

As above, this section will review research pertaining to gender differences in psychopathology as well as delinquency. Although gender differences in child and adult disturbance and symptomatology has been extensively examined, gender differences in adolescent disturbance have been virtually ignored (Schonert-Reichl & Offer, 1992). Eme (1980) suggests that researchers may have overlooked examining gender differences in adolescent symptoms, in part, because they believe that these differences were the same as those exhibited in adulthood, and therefore, did not merit further examination. The literature that does exist however, points to the significant changes in symptomatology that occur for boys and girls during adolescence. Rutter and Garmezy (1983) indicate that the incidence of behavioral and psychological difficulties increases during adolescence, and significant gender differences become apparent. In stressing the importance of studying gender differences in relation to psychopathology, Schonert-Reichl and Offer (1992) point out that prior to the onset of puberty, girls are mentally healthier than boys, whereas after adolescence, this is reversed. Furthermore, adolescent males and females differ in the types of symptoms they exhibit, with girls generally expressing their disturbance in terms of more internalized disorders and boys expressing

their disturbance in an externalized manner (Gjerde, Block, & Block, 1988; Leadbeater, Blatt, & Quinlan, 1995).

Until recently, theory and research on conduct disorder (Moretti, 1996), offending patterns (Mears & Ploeger, 1998), incarceration rates (Lenssen, Doreleijers, van Dijk & Hartman, 2000), and risk factors for adolescent violent (Saner & Ellickson, 1996) have focused almost exclusively on boys. On one hand, this focus is justified given the consistent finding that conduct disorder is diagnosed approximatley three times more frequently in boys than in girls (Riffel & Ozgood, 1992; see Zoccolillo, 1993 for review) and the offending and incarceration rates of adolescent males far exceeds that of females at every age, within all racial or ethnic groups (Steffensmeier & Allan, 1995; Wilson & Herrnstein, 1985). On the other hand, there is an increasing recogition that a substantial number of girls do indeed develop conduct disorder, and in fact, it is the second most common psychiatric disorder found in girls (Zoccolillo, 1993). Furthermore, girls diagnosed with conduct disorder appear to be parallel boys in the development of adverse outcomes in early adulthood such as antisocial personality disorder, substance use, involvement in unstable and violent romantic relationship, and dependence of social services (Bardone, Moffitt, Capsi, Dickson, & Silva, 1996). Research also shows that aggressive behavior is as stable in girls as it is for boys (Cairns, Cairns, Neckerman, Ferguson, & Gariepy, 1989). Furthermore, as evidence in the popular press and news accounts, there is increasing concern about escalating levels of aggression in females.

Although in Canada, violent crime continues to be a predominately male rather than female phenomenon, the rate of women charged with violent crime in Canada increased 553% between 1962 and 1989 compared to an increase of 207% for men

(Campbell, 1990; as cited in Moretti et al., 1996). Similarly, the rate of change for minor assault by Canadian female adolescents increased 128% between 1986 and 1989 compared to an increase of 78% for male adolescents during that period (Conway, 1992; as cited in Moretti, 1996, unpublished). More recently, Dobb and Sprott (1998) report that between 1991 and 1995 the rate of charges for assault with a weapon or assault causing bodily harm increased approximately 20% for females compared to a slight decrease for males.

Perhaps the most striking rationale for a call for increased attention to gender differences in aggression and psychopathology is the evidence that, although there is debate whether girls develop more psychiatric symptoms than do boys or vice versa (see Schonert-Reichl & Offer, 1992 for a review), when girls develop disorders, they tend to develop more severe forms of pathology. Moretti et al. (1996) hypothesized two possible interpretations for this finding. First, it could be that girls present with more severe conduct disorder than boys do both in terms of the type and frequency of symptoms. She concludes, however, that this hypothesis is not consistent with evidence showing that girls with CD often display less aggressive symptoms than do boys (for exceptions, however, see Robins, 1986; Webster-Stratton, 1996). Instead, despite the fact that few studies have examined gender differences in general or specific patterns of comorbidity associated with conduct disorder, Moretti et al. (1996) suggests that gender differences exist in the scope of psychopathology that accompanies conduct disorder in girls. More specifically, citing findings from Zoccolillo (1992) and Loeber and Keenen (1994), Moretti et al. (1996), state that the existing literature generally supports the hypothesis that females are more likely to suffer from comorbid conditions of attention-

deficit hyperactivity disorder, anxiety disorder, depression and substance use disorder than were their male conuterparts, and that the risk for comorbidity of conduct disorder with depression increases for girls as they approach adolescence, while this risk decreases for males.

Indeed, it is becoming commonly accepted that adolescent girls develop and display more internalizing symptoms (including depression) more frequently than do adolescent boys, and that the gender difference that emerges by age 14 to 15 years appears to persist into adulthood (Leadbeater, Blatt, Quinlan, 1995; Petersen, Compas & Brooks-Gunn, 1992; Peterson, Kennedy, & Sullivan, 1991). The significance of this gender differences becomes more striking when it is acknowledged that adolescents who have comorbid disorders or symptoms (internalizing and externalizing) display the most severe symptoms than each of pure affective and conduct disordered youth exhibit independently, thus presenting a profile of youths who typically are both more symptomatic and demonstrate higher levels of psychopathology (Noam et al., 1994).

Despite the research that has shown the quality and quantity of gender differences in adolescence generally, explanations for these gender differences have not been as forthcoming (Leadbeater Blatt, & Quinlan, 1995). In addition, less is known about gender differences, including comorbity of symptoms, for aggressive delinquents within the forensic system.

Even if there is an acknowledgment that crime statistics reflect influences such as detection, reporting of criminal activity, social economic status and related legal opportunities, and the fact that conduct disorder and delinquency are not perfectly overlapping populations (Cohen & Strayer, 1996), it is still the case that research on

aggression has consistently focused on males and neglected these problems on girls. This is evidence in the lack of substantial information on gender differences in the recent edited volume by Loeber and Farrington (1998) entitled, *Serious and Violent Juvenile Offenders*. As stated in the volume, all areas of criminological research will benefit from greater attentiveness to the effects of gender differences (Hawkins, Laub & Lauritsen, 1998). Clearly there are gaps in the research and a need exists to incorporate empirical research on not only gender differences in aggression and related psychopathology, but also the possible mechanisms that exasperate or abate the development of psychopathology.

Similarly, Schonert-Reichl and Offer (1992) comment that the examination of gender differences in adolescent symptomatology is just beginning and that studies of gender differences may greatly expand our knowledge of not only the developmental period of adolescence, but also possible provide possible insight into the development of psychopathologies across gender. Only then, will effective prevention and intervention strategies be developed that are appropriate and effective for both adolescent males and females. Overall, it is imperative that to understand the etiology and correlates of psychopathology in adolescents, gender differences must be taken into account. For the purpose of this study, the role of emotional functioning in the development of psychopathology and aggression for both male and female adolescents was of primary interest. What follows is a brief overview of the literature outlining emotional functioning, gender differences and psychopathology.

Social Emotional Functioning and Psychopathology During Adolescence

Adolescence is characterized by the emergence of new mental capabilities that allow the adolescent to consider possibilities and alternatives (Inhelder & Piaget, 1958; as cited in Schonert-Reichl & Offer, 1992). These changing mental capabilities also influence adolescents' impressions and perceptions of their social and emotional realm. As adolescents differ in their physical maturity, so to do they differ in their social emotional and social-cognitive abilities, with some adolescents developing advanced and complex emotional functioning, while other adolescents remain delayed and less developed.

In general, researchers interested in developmental psychopathology have focused attention on social cognitive and social emotional functioning because findings have revealed that aggressive, oppositional children are characterized by a tendency to act on their negative impulses, often without apparent attention or regard to any effects upon the well-being of others (Hastings, Zahn-Waxler, Robinson, Usher, & Bridges, 2000). Overall, deficits in social emotional and social-cognitive constructs such as empathy, perspective taking, moral reasoning and remorse are recognized as common in children with disruptive behavior disorders. Perhaps because of the marked stability of externalizing problems over the life span (Olweus, 1979), it has been suggested that lower empathy and related social emotional and social cognitive abilities, such as moral reasoning and perspective taking are characteristics of antisocial individuals (Chandler & Moran, 1990; Cohen & Strayer, 1996; Hastings et al., 2000; Miller & Eisenberg, 1988; Schonert-Reichl, 1993). For instance there appears to be a relation between dispositional empathy and aggression, although evidence of a link between situational empathic

responding and aggression is weak. Eisenberg (2000) suggests that one of the reasons for the relation between dispositional empathy-related responding and low aggression may be the link between empathy and social competence, as empathy and sympathy have been considered a component of social competence. Similarly, measures of global empathy have shown modest positive correlations with various measures of social competence (Eisenberg & Miller, 1987). In sum, children who experience sympathy and empathy in social interactions or are dispositionally empathetic are likely to behave in socially competent ways – with the opposite (i.e., low dispositional empathy, more socially incompetent) also being true.

Dodge (1986) also has found that aggressive children and adolescents possess deficiencies in one or more levels of social information processing – a model of competent social responding that include a sequence of cognitive steps that are thought to be necessary for a child to reactive appropriately and competently (i.e., nonaggressively) to a social situation or stimulus. Relatedly, Slaby and Guerra (1988) found that aggressive adolescents sought less information than nonaggressive peers before deciding that someone was "out to get them", thus displaying deficits in social-cognitive functioning (Dodge, 1986).

Dimensions of Emotional Intelligence Related to Young Offenders and Adolescent Psychopathology

There exists several reasons for the importance of examining the multidimensional construct of emotional intelligence in relation to psychopathology and aggression among male and female delinquents. Although the term "emotional intelligence" is relatively new, with research not yet having examined EI within a

population of delinquents, the underlying constructs that fit under the "umbrella" of EI have been studied in samples from both normal and non-normative groups. These previous studies, however, that have investigated the relations of social-emotional and social-cognitive functioning to psychopathology and delinquency have examined the constructs in isolation.

Before reviewing some of these single variable studies fit under the rubric of EI, a rationale for investigating multiple dimensions of social emotional variables, such as EI, with delinquents is put forth.

Chandler & Moran (1990), in a study investigating the relation between moral thought and moral action, suggest that one of the main problems that has plagued almost all of the research efforts examining moral reasoning in behaviorally disordered is that the investigations have been single variable studies in which research attention was artificially restricted to one or another of morality's several interdependent aspects. They state that this makes it difficult to trace out the interrelations that must hold between the multiple determinants of all morally relevant action. They suggest that the result of this trend toward overspecialization has been "a patchwork of often isolated findings that actively resist efforts to reassemble them into some more integrated picture..."(p. 228). In response to the problem of restricted scope, Chandler and Moran (1990) designed their study to be more multidimensional by utilizing a battery of six different measures relevant to moral functioning.

They suggest that the result of this trend toward overspecialization has been "a patchwork of often isolated findings that actively resist efforts to reassemble them into some more integrated picture..."(p. 228). In response to the problem of restricted scope,

Chandler and Moran (1990) designed their study to be more multidimensional by utilizing a battery of six different measures relevant to moral functioning.

A similar framework and subsequent justification is being put forth here: the multidimensional nature of emotional intelligence (and in conjunction with emotional states), as utilized in this study, may allow for adolescent's emotional functioning to be portrayed in a more integrative manner than in past research, and that this conceptualization may provide additional information, and perhaps resemble a more complete portrait of the relations of emotional functioning to psychopathology, and aggression. Moreover, by including boys and girls in the present study, the findings will not only extend beyond single variable studies of emotional functioning, but also provide important information regarding gender differences in the nature of the relation among dimensions of emotional functioning and dimensions of psychopathology and aggression in delinquents.

As stated above, although emotional intelligence has not been empirically investigated in a sample of antisocial adolescents, or adolescents with emotional and behavioral disorders, research has been conducted exploring the relation of concepts included under the multidimensional construct of emotional intelligence. Recall the four branches/dimensions: 1) Identifying Emotions -- the ability to perceive emotions in oneself and others, as well as in objects, arts, and events; 2) Using Emotions -- the ability to generate, use, and feel emotion to communicate feelings, or employ them in thinking and creating; 3) Understanding Emotions -- the ability to understand emotional information, how emotions combine and progress, and to reason about such emotional

meanings; 4) Managing Emotions -- the ability to regulate emotions in oneself and others so as to promote personal understanding and growth.

The four branches are arranged from more basic psychological processes to higher, more psychologically integrated processes. For example, the lower level branch concerns the (relatively) simple abilities of perceiving and expressing emotion. In contrast, the highest branch or dimension concerns the conscious, reflective regulation of emotion (Mayer & Salovey, 1997). What follows is a review of the research that has examined constructs that correspond to each of the four branches/dimensions of EI among adolescents who have been labeled in the literature as delinquent, at-risk, antisocial, deviant, emotional and/or behaviorally disordered, or psychiatrically hospitalized. As gender differences were of interest for the present investigation, when findings regarding differences between boys and girls were examined in the literature being reviewed, they were presented.

Identifying Emotions.

The lowest, most basic branch concerns the accuracy with which individuals can identify emotions and emotional content, and is referred as Identifying Emotions. Included within this branch are a number of abilities, including (a) the ability to identify emotions in other people, (2) to express emotions accurately, and to express needs related to those feelings, and (3) the ability to discriminate between accurate and inaccurate, or honest versus dishonest expressions of feeling (Mayer & Salovey, 1997).

Alexithymia, a term that refers to the absence of words for emotion (Sifneos, 1967) fits within this branch. The alexithymia construct was formulated by Signeos (1967) to classify a cluster of affective and cognitive characteristics observed in patients

with psychosomatic diseases. Literally translated, alexithymia means "no words for feelings" and connotes a lack of ability to identify and verbalize an awareness of affect (Taylor, Bagby, & Parker, 1991). It is based on the theoretical view that alexithymia reflects a deficit in one's personality such that one has an inability to regulate affect – to cognitively process, monitor, and modulate emotions (Parker, Bagby, & Taylor, 1989; Sifneos, 1988). Alexithymics seem unable to identify and/or distinguish between their emotions. It is said that they use vague words when referring to affect, and are generally not able to describe their feelings and inner experiences (Linden, Lenz, & Stossel, 1996). Alexithymics may occasionally show intense or violent outbursts of emotional behavior, such as crying or rage, but they remain unaware of the underlying feelings being expressed (Krystal, 1979).

Although the term alexithymia was coined in the early 1970s, because the majority of research was published in psychiatric publications, the research has not been easily accessible to mainstream psychologists (Linden et al., 1996). As such, the construct is treated as relatively new. This condition has been associated with a lack of psychological mindedness (Taylor, 1995) and has been implicated as responsible for poor outcome in psychotherapy (Krystal, 1979). More related to this discussion, alexithymia has more recently been a focus of clinical attention with an assumption that deficits in the ability to identify emotions contributing to psychopathologies in some way.

Although alexithymia was not specifically examined in the present investigation, previous research examining this construct will be reviewed because of its relevance in describing the way in which difficulties in identifying emotions are associated with

psychopathology. Overall, there have been a handful of studies investigating the relations between alexithymia and various psychopathologies..

The majority of studies have looked at the relations between alexithymia and various problem behaviors, such as eating disorders, substance abuse, as well as diagnoses, such as depression, anxiety, and Axis II psychopathologies in adults (see Lane et al., 1990; Linden et al., 1996; Sexton et al, 1998). There have been a few studies investigating alexithymia in adult offenders, as well as in adolescents identified with a psychopathology or behavioral difficulty. Louth, Hare and Linden (1998), for example, investigated the relations between alexithymia and psychopathy in 37 female inmates of a medium-security prison. The extent of psychopathology and alexithymia were assessed with the Hare Psychopathic Checklist – Revised (PCL-R) and the Toronto Alexithymia Scale (TAS). Results revealed that the correlation between PCL-R and TAS total scores were not significant, but the socially deviant impulsive factor of the PCL-R significantly correlated with the TAS items that reflect inability to discriminate feelings and bodily sensations. Both psychopathy and alexithymia were associated with a history of violence. The authors concluded that despite several similarities between the construct, psychopathy and alexithymia appeared to be different clinical constructs.

In another study that examined alexithymia in an offending population, Hudson et al. (1993) wanted to determine whether violent and sex offenders had difficulty in correctly identifying emotions. In Study 1, 21 convicted male sex offenders and four other male prisoners were asked to identify the emotional states displayed in 36 slides of adult faces. In Study 2, 20 male child molesters and 20 male controls were asked to identify the emotional states depicted in line drawings of child and adult faces.

Emotional states represented were surprise, fear, disgust, anger, happiness, and sadness. Findings revealed that violent non-sex offenders were the most emotionally sensitive and the most accurate at identifying the emotional states of others, while sex offenders displayed the least sensitivity to emotional stimuli. Contrary to the authors' expectations, child molesters did not display greater deficits judging the emotions of children relative to their judgment of adults, but they showed relative deficits in emotional recognition when compared with non-sex offenders.

Alexithymia has also been studied in adolescent clinical populations. Greenberg (1999) explored the relation between alexithymia and eating disorders in a sample of eating disordered adolescents attending a day treatment program and a non-clinical control group. Findings revealed that the adolescents who were identified with anorexia nervosa scored significantly higher on a measure of alexithymia in comparison to adolescents in the control group. The adolescents in the anorexic group also showed less spontaneous expression of inner cognitive and affective experience than the adolescents in the normal control group.

Chinet et al. (1998) examined the link between alexithymia and addictive behaviors, such as drug abuse and eating disorders. The sample was comprised of 80 adolescent and young women with eating disorders, 107 adolescents and young women with drug abuse, and 121 controls matched for age, gender, and SES. Participants ranged in age from14 to 25 years. Results revealed that alexithymia was correlated significantly with depressive mood, age, and SES. When controlling for depressive mood, no significant differences were found on alexithymia between the females with eating disorders, the females who were drug abusers, and the control group. Thus, according to

these results, the authors concluded that alexithymia does not seem to be a specific, unconfounded risk factor for addictive behavior.

As can be surmised, there have been only a small number of empirical studies exploring the relation between the identification of emotions or deficits therein and psychopathology in adolescents. Given this, in addition to the varying conclusions on the relations of alexithymia and psychopathology in the studies that have been completed, additional research is required to clarify the role of the ability to successful identify emotions as it relates to psychological and behavioral dysfunction. There seems to be some relation between the ability to identify emotions and psychopathology, although the exact role of emotional identification in the development of problem behavior, such as psychopathology and aggression, remains unclear.

Using Emotions.

The next branch in Salovey and Mayer's model of EI is *Using Emotions*, which they also have called Emotion's Facilitation of Thinking. This branch concerns emotion acting on intelligence – it describes emotional events that assist intellectual processing. Inherent to this branch is the ability to generate emotions "on demand" so that they can be better understood. Mayer and Salovey (1997) suggest that when a person is asked, "How does the character in a story feel," or when deciding how another person feels, individuals may generate the feelings within themselves so as to put themselves in the other's place. This permits a real-time inspection of the feelings and its characteristics. Developmentally, the ability to generate feelings assists with planning – the more accurate and realistic the feelings are generated, felt, manipulated and examined, the more it can help the individual choose a behavioral course (Mayer & Salovey, 1997).

Emotionality may also help people consider multiple perspectives, as well as the notion that a range of moods may assist in considering possibilities, which can be an advantage in conditions of uncertainty.

The literature exploring social cognition and psychopathology/adjustment in adolescence fits under the branch of *Using Emotions* and as such, research examining this dimension in relation to psychopathology and aggression in adolescent boys and girls will be reviewed next. Inspired by the cognitive direction of research on adult adjustment and the extension of cognitive-developmental inquiry to social domains, some have suggested that social cognition may modify risk for psychopathology (Beardsless, Schultz, & Selman, 1987; Garmezy, 1987). Indeed, there have been several studies that have demonstrated an association between social cognitive skills and child adjustment (Dodge, Pettit, McClaskey, & Brown, 1986; Selman, 1980). In particular, poor social cognitive skills have been linked with aggression and peer rejection, two of the most consistent behavioral precursors of adult psychopathology (Downey & Walker, 1989).

Downey and Walker (1989) investigated the relations of two risk factors, maltreatment and parental psychopathology, and their co occurrence to the social cognitive skills and adjustment among children. The authors focused on two aspects of social cognition that have shown to relate to aggression and peer rejection on: interpersonal problem-solving competency (IPSC) and attributional and aggressive response bias. IPSC refers to the ability to construct effective solutions to interpersonal problems. Attributional bias refers to a tendency to attribute hostile intent to the perpetrator of aversive experiences even when the underlying intent is ambiguous. An aggressive response bias refers to a tendency to respond aggressively following aversive

experiences, regardless of the perpetrator's intent (Downey & Walker, 1989). Dodge and his colleagues (Dodge & Frame, 1982; Dodge et al., 1986) have shown that such biases are common in aggressive and rejected children.

To assess IPSC, children were asked to imagine confronting two interpersonal problems. For each problem, the children were asked, "What are all the possible ways to solve this problem? And "What might happen with each solution?" To measure attributional and response biases, children were presented with three hypothetical situations involving an aversive outcome that was linked to ambiguous behavior on the part of a peer. Participants were read each story and asked to imagine themselves in the situation that the story depicted. Next, they were asked the following two questions: "Why do you think (the event) happened to you?" and "What would you do if (the event) really happened to you?" Questions were intended to assess (a) the extent to which the child attributed hostile intent to the peer involved in the aversive event (attributional bias) and (b) the aggressiveness of the child's proposed response (aggressive response bias).

Results revealed that children with high levels of IPSC and older children without a hostile attributional or an aggressive response bias were better adjusted. These children were less aggressive and less likely to experience peer rejection. Downey and Walker (1989) also found that maltreatment, but not parental psychopathology, increased the risk of child maladjustment, specifically, aggression and peer rejection. The authors stated that their findings suggest that the specific social cognitive constructs that they investigated have the potential to modify risk for maladjustment in both high-risk and comparison children.

Understanding Emotions.

Empathy and perspective taking are two constructs that correspond to the branch Understanding Emotions and as such, the literature in this area will be reviewed. Empathy and perspective taking have been defined in many ways, although most researchers agree that inherent in the constructs is the joint operation of both affective and cognitive responsiveness (Feshbach, 1975; Hoffman, 1983, as cited in Cohen & Strayer, 1996). Empathy and perspective taking have been classified more generally as social role taking, but have been classified into two discreet, but related concepts: affective role-taking and cognitive-role taking (Kaplan & Arbuthnot, 1985). Some researchers classify affective role taking as empathy and cognitive role taking as perspective taking. Other researchers, such as Cohen and Strayer (1996), assume empathy to encompass both the affective and cognitive components.

Deficiencies in empathy, defined broadly as understanding and sharing in another's emotional state or context (Eisenberg & Strayer, 1987), have long been considered characteristics of aggressive and antisocial individuals (Cleckley, 1964; Hare, 1980). Deficits in empathy and remorse are recognized as common in children and adolescents with disruptive behavior problems (American Psychiatric Association, 1994). Similar assumptions are held in regard to perspective taking. Indeed, interest in the study of social-role taking has been spurred, in part, by research findings suggesting that empathy and perspective-taking act as significant antecedents to altruistic and helping behavior (Eisenberg et al., 1987). Some researchers have suggested that deficiencies in empathy and perspective taking function as among the most significant contributors to delinquent activity in adolescence (Hogan, 1973; Kaplan & Arbuthnot, 1985).

Cohen and Strayer (1996) report that despite differences across studies in types of measures, methods, and populations, there is a positive relation between empathy and prosocial and socially competent behavior (Eisenberg & Miller, 1987), with lower empathy associated with a negative relation between antisocial and aggressive behaviors (Miller & Eisenberg, 1988). Cohen and Strayer (1996) state that some researchers have reported significantly lower levels of self-reported empathy in aggressive compared with non-aggressive delinquent adolescents (Ellis, 1982), which would suggest heterogeneity among delinquents. Indeed, Elaschuk (1998) found that young offenders who self-reported crimes against persons were lower in empathy than young offenders who reported crimes against property

Ellis (1982) investigated the role of empathy in the relation to antisocial and aggressive delinquent behavior. In his study, 331 delinquent males and 64 non-delinquent controls between the ages of 12 and 18 participated. The delinquent participants were divided into groups along two factors: "subgroup" of delinquency and type of aggression. The subgroup of delinquency was determined through the use of Quay's typology (Quay & Parsons, 1971), which resulted in three groups of delinquents: 137 psychopathic delinquents, 94 neurotic, and 100 subcultural delinquents. Type of aggression for all participants was determined by identifying the charges on record for each delinquent (i.e., aggression against persons, aggression against property). Based on their charges, delinquent participants were classified as either nonaggressive (n=81), aggressive against persons (n=159), or aggressive-against property (n = 91). All participants were assessed for level of empathy using Hogan's Empathy Questionnaire (1969).

Results revealed that delinquents were significantly delayed or arrested in the development of empathy as compared to non-delinquents. Differences also emerged among delinquent subgroups -- the neurotic delinquents scored significantly lower than the psychopathic delinquents, who in turn, scored lower than the subcultural delinquents. In addition, although the aggressive-against-person delinquents were slightly lower in empathy than the aggressive-against-property delinquents, these differences were not significant. Ellis argues that his results highlight the significance of empathy as an inhibitor of aggression.

More recently, Schonert-Reichl (1993) explored empathy and social competence in a group of adolescents classified as behaviorally disorders. A sample of 39 adolescents with behavioral disorders between the ages of 14 and 19 years were matched with 39 non-disordered adolescents. To measure their social competence, participants' extracurricular participation, amount of contact with peers, number of close friends, and quality of relationships was assessed. Schonert-Reichl used the QMEE (Mehrabian & Epstein, 1972) to assess empathy as another dimension of social competency, citing evidence, which suggests, "empathy plays a significant role in enhancing or diminishing the quality of one's social relationships" (p. 191).

It was hypothesized that disordered adolescents would be lower than their age-matched peers in both empathy and other areas of social competency. Results supported this hypothesis, indicating that adolescents with behavioral disorders had lower levels of empathy, participated in fewer extracurricular activities, had less frequent contracts with friends, and had lower quality relationships than their non-disordered peers. Overall these findings were in concert with the Schonert-Reichl's (1993) hypothesis that, due to

deficits in social skills and related competences, deviant youth experience poor interpersonal relationships.

In another study examining empathy in adolescents with conduct problems, Cohen and Strayer (1996), suggested that, because of the psychological heterogeneity of delinquents, research using this legal classification may be an inadequate discriminator of individual differences. In contrast to the legally defined criteria of delinquency, they suggested that a psychosocial construct may be more useful than delinquency, particularly to psychologists interested in empathy assessment. They put forth five hypotheses regarding differences in empathy between conduct-disordered and comparison youth. Specifically, they hypothesized that (a) overall empathy would be lower among conduct-disordered (CD) youth than comparison youth, (b) antisocial and maladjusted attitudes would correlate inversely with empathic responding, (c) the affective component of empathy in particular would be lower among CD youth, (d) the cognitive component of empathy, as measured by the correct identification of another's emotion, would be lower among CD youth than a youth in a comparison group, and finally, (e) the cognitive component of empathy, as measured by personal attributions, perspective-taking, and imaginal involvement would be lower in adolescents in the CD group when compared to adolescents in the non-CD group.

Results revealed support for all five hypotheses. Specifically, overall empathy was lower among CD youth than among comparisons, and was found to be inversely related to aggressive and antisocial attitudes for all participants tested. With respect to affective empathy, CD youth reported fewer concordant emotional responses to people on videotaped vignettes than did their non-CD disordered peers. Further, the CD group

scored significantly lower than the non-disordered group on both the Empathy Index and Empathic Concern Scale of the Interpersonal Reactivity Index (IRI) (Davis, 1983). Cognitively, CD adolescents reported fewer correct identifications of people on videotaped vignettes, lower mean levels of cognitive attributions for their own responsive emotions, and lower scores on the perspective-taking scale of the IRI in comparison to non-CD youth. The authors also reported significant gender differences, with girls scoring higher on self-report measures of empathy and emotional responsiveness than boys across both the CD and non-CD group. However, no gender differences were found on the cognitive scores of the IRI, or the cognitive component of the Emotional Continuum (EC) (Strayer, 1993), implicating only the affective component of empathy in gender differences. The authors concluded that, while the present findings identify several areas of deficiency in the processing of empathic responses of CD youth, further research is necessary to clarify developmental factors contributing to group differences.

Managing Emotions.

The highest branch in Mayer and Salovey's 1997 model is Managing Emotions, also referred to by Mayer and Salovey (1997) as Reflective Regulation of Emotions to Promote Emotional and Intellectual Growth. This branch includes openness to feelings; the ability to reflectively engage or detach from an emotion depending upon its judged informativeness or utility; ability to reflectively monitor emotions in relation to oneself and others, such as recognizing how clear, typical, influential, or reasonable they are; and the ability to manage emotion in oneself and others by moderating negative emotions and enhancing pleasant ones, without repressing or exaggerating information they may convey. For the purpose of this review, moral reasoning and moral behavior, as well as

emotional regulation are seen as dimensions of Managing Emotions, and hence, research examining these constructs in relation to adolescents categorized as either antisocial or delinquent will be reviewed. In addition, one study was found which examined the relations of social intelligence to aggression in adolescence. Social intelligence involves the ability to act wisely in social situations, and as such, the study will be discussed in this section.

There has been an abundance of research investigating moral reasoning, particularly with the goal of identifying an association between moral reasoning and moral behavior. Not surprising, many researchers have examined this link by comparing moral reasoning among groups whose behavior is atypical, such as young offenders, or what the literature often refers to as delinquents. The assumption is that moral reasoning is delayed in light of their antisocial behavior (Blasi, 1980; Jurkovic, 1980). Generally, the findings have provided theoretical support for the claim that atypical or antisocial youth exhibit more immature forms of moral reasoning than do typical youth (e.g., Chandler & Moran, 1990; Lee & Prentice, 1988; Trevethan & Walker, 1989). For example, in Blasi's (1980) review of the research, he found that in 10 of the 15 studies reviewed, delinquents functioned at lower stages of moral reasoning than non-delinquents. In her review of the literature on morality and conduct disorders, Smetana (1990) came to a similar conclusion.

Chandler and Moran (1990) explored the relations between moral development and psychopathology in a group of 60 juvenile delinquents and 20 non-delinquent controls. The authors intent was to assemble a more inclusive portrait of the moral functioning of delinquents by creating a more systematic measure of delinquency, along

with a broader measure of moral functioning, than had previously been attempted. To accomplish this, they assessed seven dimensions of moral functioning: social conventional understanding (Turiel, 1978), interpersonal awareness (Selman, 1980), moral reasoning maturity (Colby & Kohlberg, 1987), socialization, autonomy, and empathy (Hogan, 1969), and psychopathy (Hare, 1985). The results indicated that, in comparison to the non-delinquents, delinquents scored lower on every dimension measured. The authors commented that these results suggest an "across-the-board deficit in moral maturity for the delinquent participants" (Chandler & Moran, 1990, p.242).

Some researchers have also suggested that, because delinquents are not a homogeneous group, in order to attain a more thorough understanding of the developmental lags, the heterogeneous element needs to be considered. To this end, Trevethan and Walker (1989) conducted a study that examined moral reasoning among delinquent subgroups. The purpose of their study was to investigate differences in hypothetical and real-life moral reasoning in a group of delinquents and nondelinquents. Using the Psychopathic Check-List (Hare, 1980, 1985) 44 youth between the ages of 15 and 18 were classified as psychopathic delinquents ($\underline{n} = 14$), delinquent ($\underline{n} = 15$), or normal ($\underline{n} = 15$). Hypothetical moral reasoning was assessed through the use of two dilemmas from the Moral Judgment Interview (MJI; Colby & Kohlberg, 1987). Real-life moral reasoning was measured by having participants recall and discuss a moral dilemma that they had experienced personally.

Results revealed significant differences among the groups and between the types of dilemmas. Specifically, it was found that normal youth attained an overall moral reasoning level greater than either the psychopathic or delinquent adolescents. Further,

all groups scored lower on the real-life moral reasoning dilemmas than on the hypothetical dilemmas. No significant differences emerged between the psychopaths and the delinquents although, psychopaths were found to orient more to egoistic concerns than did delinquents when discussing real-life dilemmas. Nor did the results indicate that incarcerated youth displayed greater disparities between their real-life and hypothetical moral reasoning than normal youth. The authors concluded that hypothetical dilemmas might elicit an individual's level of moral reasoning competence, whereas real-life dilemmas may assess a person's level of moral reasoning performance (Trevethan & Walker, 1989). Overall, it appears that moral reasoning can differentiate those youths who have committed antisocial, criminal acts, which, by virtue of breaking a societal law, are immoral, from normal adolescents.

Research examining emotional regulation and dysregulation, in relation to aggression in children and adolescence have found that children who are both aggressive and rejected often appear at greater risk for negative social outcomes than are children who are only aggressive (Coie et al., 1996; Dodge, 1993). Research reveals that aggressive boys who become rejected are more likely than accepted-aggressive boys to show multi-problem profiles that include disorganized and dysregulated behaviors as well as aggression (Bierman et al., 1993; Pope, Bierman, & Mumma, 1991). These findings have led investigators to explore mechanisms that might account for the peer rejection and subsequent high risk for long-term social maladjustment of some aggressive children. To this end, in their study examining the relations of aggression and emotional dysregulation to the peer problems and antisocial behavior, Pope and Bierman (1999) examined the relative roles of aggressive behavior and a pattern of behavior thought to

reflect difficulties regulation negative emotions (irritability, inattention, negative affectivity, low frustration tolerance, and immaturity) in the prediction of adolescent peer problems and antisocial behavior.

Perhaps this group of children is at higher risk for peer rejection and long-term social maladaptation because they have more behavioral problems. Researchers such as Pope and Bierman (1999) however, wondered whether the quality, as opposed to quantity, of the behavioral dysfunction was important. Perhaps it provides a marker of social-emotional capabilities that affect the process of social adaptation over time. The rationale for this hypothesis was that recent developmental models seem to be suggesting that the pattern of behavior problems displayed by many aggressive-rejected children (inattention, negative affectivity, and angry reactivity), may indicate deficiencies in the developmental capability to regulate negative affective effectively in the context of interpersonal interactions (Garber & Dodge, 1991). Effective emotional regulation is not evidenced simply by the lack of negative behaviors (e.g., aggression), but instead by the individual's capacity to respond flexibly and strategically in emotionally arousing situations (Thompson, 1993, 1994).

Results of Pope and Bierman's (1999) study indicated that the pattern of irritable and inattentive behaviors (dysregulated behaviors) investigated played a role in predicting the stability and severity of elementary school peer-relations problems and adolescent social maladjustment. Although aggressive and withdrawn behaviors showed stability and made contributions to peer difficulties in elementary school and in adolescence, the developmental risks for social maladjustment were greatest for boys who showed problems that included irritable-inattentive behaviors during elementary

school. Boys who were aggressive in elementary school, but did not exhibit irritable-inattentive behaviors, did not show the same difficulties gaining acceptance by peers, although they did continue to behave aggressively. Indeed Quay (1979) characterized the dimension of inattention-immaturity (dysregulation in the Pope & Bierman, 1999 study) as representative of a "poorly developed behavioral repertoire and an inability to come to grips with environmental demands" (p. 19).

As it pertains to the present investigation, it should also be noted that Pope and Bierman (1999) suggested that the pattern of irritable-inattentive behaviors that characterizes dysregulation of emotion in children and adolescents is characteristics of those children and adolescents who show comorbid patterns of externalizing and internalizing problems. Children and adolescents who exhibited this comorbid pattern of disorders had more severe and stable patterns of dysfunction than did individuals exhibiting either externalizing or internalizing symptomology alone. The authors suggested that these findings could be a result of core deficits in emotion and cognitive regulation.

Kaukiainen et al. (1999) examined the relations among social intelligence, empathy, and three types of aggression (indirect, verbal, physical) in 274 girls and 252 boys who were ages 10, 12, and 14 at the time of the study. Although this study examined social intelligence (defined as the ability to understand others and the ability to act wisely in social situations, Walker & Foley, 1973) as the social-cognitive factor, this study was included in the review because social intelligence and emotionally intelligence are conceptually related (Barchard, 2001). Results revealed that indirect aggression was significantly and positively correlated with social intelligence for boys and girls in every

age group studied. Physical and verbal forms of aggression had almost zero correlation to social intelligence. Kaukiainen et al. suggested that their findings were in accord with developmental theory that has suggested that indirect aggression requires more social intelligence than direct forms of aggression

Gender Differences in the Relation of Emotional Functioning to Psychopathology During Adolescence

As can be seen from the above review, a vast literature exists examining the relations between social emotional functioning and problem behavior in adolescence. In contrast, research on gender differences in social emotional functioning is relatively scant. For example, although the recent *Handbook of Child Psychology* (1997) includes a chapter on social cognition (Flavel & Miller, 1997), the topic of gender differences is not discussed. That being said, recent years have seen more attention being focused on gender differences in social emotional and social cognitive functioning, particularly as recent studies in the field of developmental psychopathology have found that gender differences exist in both the manner in which psychopathology is manifested as well as its social cognitive concomitants (Rogers, 1998).

For example, in a recent review on empathy and sympathy, Eisenberg (2000), states that the issue of gender differences is more complex than the stereotype that women and girls are more empathetic than men and boys, with findings varying depending on the definition and measure used. Lennon and Eisenberg (1987), for example, found large differences favoring females when empathy was measured by self-report only, especially for questionnaire measures. Similarly, Eisenberg and Fabes (1998), in a recent meta-analysis reviewing gender differences in empathy-related

responding, found that the gender differences found was relatively largely for self-report studies, moderate for observational measures, and nonsignificant for nonverbal facial and physiological measures. In addition, gender differences in self-reported empathy/sympathy increased with mean age of the sample. Eisenberg (2000) suggests that the extent to which the gender difference in self-reported empathy-related responding reflects a true gender difference rather than the desire to conform to gender stereotypes is unclear at this time.

In terms of gender differences and psychopathology, it appears that adolescent girls in comparison to adolescent boys with clinical diagnoses score higher on measures assessing social-cognitive and social-emotional abilities, such as moral-reasoning (Schonert, 1992) and ego development (Paget, Noam, & Borst, 1990). Research has also shown that girls score higher on self-reported empathy, perspective taking (Schonert-Reichl & Beaudoin, 1998; Hoffman, 1977), altruism (Krebs, 1975), and the decoding of visual and auditory cues (Hall, 1978). Similarly, in a recent study exploring the viability of measuring emotional intelligence adolescence, Caruso (1999) found that girls outperformed adolescent boys on all components of EI when measured as an ability.

Unfortunately, developing complex social emotional abilities have been found to contribute to depression and social withdrawal among adolescents with internalized symptoms, while undeveloped social emotional abilities are related to externalizing disorders, suggesting that higher, more complex development does not innoculate against psychopathology. Refuting the simplistic developmental approach that higher levels of development are "better" (in terms of adjustment and mental health), Noam and his colleagues (Borst, Noam, & Bartok, 1991; Noam et al., 1994; Noam, Kilburn, & Ammen-

Elkins, 1989) have found that more externalizing behaviors are significantly associated with lower levels of social-cognitive development. Findings have also revealed that the more "mature" adolescents, in terms of advanced socail emotional development also were diagnosed with internalizing disorders such as depression and anxiety significantly more often than the adolescents who were not as developed in terms of social emotional functioning. In sum, Borst et al. (1991) found that with increasing developmental complexity, psychopathology becomes more internalized, experienced more in psychological than in physical terms, and less action-oriented. Noam (1992) summarizes years of research stating that findings support the notion that, "maturation of developmental capacities does not necessarily lead to better adjustment but may, in fact, lead to different, maybe even greater, vulnerabilities, especially internalizing disorders such as suicidality and affective disorders"(p. 683). Overall, research findings in this constructivist developmental psychopathology tradition suggest that there is a need to view developmental delay not only as a risk factor, but also as a protective factor.

In sum, research on gender differences in the relation between of social emotional functioning and psychopathology is scarce, particularly with aggressive and antisocial youth. Additional research seems warranted in order to further understand the relations among these constructs, possibly providing a window into the origins of psychopathology and aggression.

Rationale and Significance of the Study

As can be surmised from the preceding review, the research and theory in the area of emotional functioning may provide useful constructs for delineating the processes that mediate the development of psychopathology and aggression among male and female

delinquents. Indeed, a better appreciation of the role of emotional functioning will contribute to our understanding of developmental psychopathology. Although researchers have found links between maladjustment and deficits in a variety of dimensions of social-emotional and social-cognitive functioning, such as empathy and moral reasoning (e.g., Cohen & Strayer, 1996; Schonert-Reichl & Cantor, 1991; Trevethan & Walker, 1989), few studies have examined multiple dimensions of emotional functioning in relation to psychopathology and aggression in a singular study (see Chandler and Moran, 1990, for an exception). That is, the majority of previous studies investigating the relation of emotional functioning to psychopathology and delinquency have examined the social emotional constructs in isolation. As such, one of the purposes of the present investigation was to enhance the study of social-emotional functioning in atypical adolescents by examining multiple dimensions of emotional functioning, specifically by examining EI in delinquents. Emotional intelligence, as conceptualized by Mayer and Salovey (1997) is multidimensional in nature and as such, examining the several interdependent aspects of EI may provide additional information regarding the development of psychopathology.

A similar rationale is provided by Chandler and Moran (1990), who, in investigating the relation between moral thought and moral action, stated that one of the main problems that has plagued almost all of the research efforts examining moral reasoning in behaviorally disordered youth is that the investigations have been single variable studies in which research attention was artificially restricted to one or another of morality's several interdependent aspects. They state that this makes it difficult to trace out the interrelations that must hold between the multiple determinants of all morally

relevant action. They suggest that the result of this trend toward overspecialization has been "a patchwork of often isolated findings that actively resist efforts to reassemble them into some more integrated picture..."(p. 228). In response to the problem of restricted scope, Chandler and Moran (1990) designed their study to be more multidimensional by utilizing a battery of six different measures relevant to moral functioning.

A similar framework and subsequent justification is being put forth here: the multidimensional nature of emotional intelligence (and in conjunction with emotional states), as conceptualized in this study, may allow for delinquents' emotional functioning to be portrayed in a more integrative manner than in past research, and that this conceptualization may provide additional information regarding gender differences in the relation of emotional functioning to psychopathology and aggression. A further rationale for utilizing a multidimensional conceptualization of emotional functioning comes from prominent emotions scholars who have suggested that researchers interested in specifying the nature of emotion disturbances in psychopathology ought to measure more than one component of emotion (Kring, 2001; Kring, & Bachorowski, 1999; Kring, Alpert, Neale, & Harvey, 1994). As such, for the purpose of this study, the multicomponent concept of emotional intelligence -- a recent conceptualization of emotional functioning that has only begun to receive research attention -- was used in conjunction with a well respected and reliable self-report measure of the broad dimensions of emotional states to comprise a general "emotional functioning". Furthermore, given the recent excitement that emotional intelligence has generated, and the paucity of research examining gender differences in emotional functioning among delinquents, an examination of the way in

which EI is associated with emotional states as well as its relation to psychopathology and aggression is timely.

The present investigation also extends existing research by specifically examining gender differences within a delinquent population. Because delinquency is a homogeneous descriptor representing a heterogeneous group of adolescents both in terms of mental health issues and offending pattern, examining the relation of emotional intelligence and emotional states to dimensions of psychopathology (internalizing and externalizing problems) and nature and frequency of offending (aggression against persons, aggression against property) will elucidate some possible underlying mechanisms that contribute to the development of psychopathology and provide an important addition to existing research.

Furthermore, because both theory and research suggest that gender differences exist in relation to aggression (Moretti et al., 1996), and in prevalence rates for internalizing and externalizing problems behaviors (e.g., Scaramella, Conger, & Simons, 1999), combined with the fact that there is scant empirical literature investigating gender differences among delinquents (Zoccolillo, 1993) the present results will provide much needed information. Moreover, the increasing concern regarding escalating levels of aggression in female adolescents (Cairns et al., 1989), the resulting consequence of custodial sentences (Lenssen et al., 2000), and the dearth of empirical research in this area served as impetus for including females in the sample and comparing them to boys.

The present investigation has both theoretical and practical implications. At a theoretical level, such information can provide a better understanding of the processes or

mechanisms underlying gender differences in emotion functioning by examining them when they have gone awry. At a practical level, there are enormous short and long-term costs associated with adolescents who are committing antisocial acts and/or have developed psychological maladjustments. These costs are economic as well as emotional/psychological and are incurred by families, schools, communities, as well as by the children themselves. It is hoped that the data obtained in this research will be used not only to provide recommendations to those who live and work with delinquent youth, but also to guide programmatic and social policy initiatives promoting healthy development throughout the lifespan.

In sum, the overarching purpose of this research was to progress beyond what is already known about juvenile delinquents by delineating the relation of emotional functioning (emotional intelligence and emotional states) to psychopathology (internalizing and externalizing problems) and aggression (against persons, against property) among delinquent boys and girls.

The following hypotheses and research questions provided the focus to this study:

Preliminary Hypotheses – Gender Differences in Psychopathology and Aggression.

1. Because a large majority of the research in the area of psychopathology has found that girls exhibit more internalizing problems than do boys, whereas boys exhibit more externalizing problems than do girls (e.g., Schonert-Riechl & Beaudoin, 1998) it is hypothesized that girls will report more internalizing problems and boys will report more externalizing problems. In addition, as much of the literature on gender differences in aggression finds that boys report more aggression than girls (Elliott, Ageton, Huizinga, Knowles, & Canter, 1983; Elliot,

Huizinga, & Morse, 1987) it is hypothesized that boys will report a higher frequency of aggression – both in terms of aggression against persons and aggression against property.

2. Because the externalizing dimension of the YSR and the SRDS-A tap similar constructs, it is hypothesized that externalizing problems will be positively correlated with all dimensions of aggression for both genders. As the research on the relation of internalizing problems to aggression is mixed, with some studies reported negative correlations or lack or relations (e.g., Farrington, 1989) with other studies reporting positive relations between internalizing problems and aggression (Loeber, Farrington, Stouthamer, & Van-Kammen, 1998) no specific hypotheses are put forth regarding the relation of internalizing disorder to aggression.

Primary Hypotheses – Gender Differences in Emotional Functioning and the Relation of Emotional Functioning to Psychopathology and Aggression.

3. It is hypothesized that delinquent girls will outperform boys on EI. Although few studies exist examining gender differences in EI, the studies that do exist (e.g., Caruso et al., 1999; Mayer et al., 1999) have found that both adolescent girls and adult women outperform men on maximum performance ability measures of EI.
4. It is hypothesized that delinquent girls will report more negative affect than will boys. This gender difference is expected given that previous research on negative affect has indicated that girls report more negative affect than boys (Fujita, Diener, & Sandvik, 1991; Joiner & Blalock, 1995; Manolis, 1999). In contrast, it is expected that the boys will report more positive affect than the girls.

5. What is the nature of the relation between emotional intelligence and emotional state for delinquent males and females? Are the relations different for males and females? These questions were posed because no research exists examining the relation of EI to emotional states in adolescents, or in particular, delinquent population, no specific hypothesis is put forth regarding the nature of the relation of EI and emotional states.
6. Although no empirical studies exist investigating the relations of EI and psychopathology, researchers examining emotional functioning during adolescence have found positive associations between functioning and adjustment (e.g., Downey & Walker, 1989; Lenhart & Rabiner, 1995; Lochman & Dodge, 1994). As such, it is hypothesized that emotional functioning will predict psychopathology. Specifically, higher levels of (EI) will be associated with lower levels of self-reported psychopathology and higher levels of NA will be associated with higher levels of psychopathology in both male and female delinquents
7. Similar to the above prediction, it is hypothesized that emotional functioning will predict aggression. That is, boys and girls with higher EI will exhibit less aggression. Research and theory suggests that aggressive adolescents are significantly lower in comparison to nonaggressive adolescents across a number of social emotional variables (Lochman and Dodge, 1994).

Methods

Participants

The total sample for this study consisted of 44 adolescent boys and 40 adolescent girls incarcerated at a correctional facility in a large western Canadian city. Typically, classification to a custody facility is a result of a youth being deemed by the courts to be a risk to society, due to the severity of the crime he/she committed, the frequency of offending, and the moral outrage in society toward the particular crime at the time of the adjudication (Chandler & Moran, 1990). The official maximum capacity of the facility is 125, based on one bed per youth, including both "secure" custody (e.g., more structured limits on movement within the facility) and "open" custody (e.g., less secure limits on daily activities. Of the youth incarcerated at any given time, the majority are males (approximately 85-90%). In the present study, all boys were drawn from closed custody, and 35 of the girls were drawn from closed custody.

All of the youth who were invited to participate in the study did so. As there were significantly fewer girls than boys incarcerated at the facility, each girl admitted to the facility was invited to participate in the study. As much as possible, an attempt was made to draw upon boys who were similar in age to the girl participants. These procedures were constrained by the demands and limitations of data collection within a secure custody correctional facility. The officer in charge of the facility dictated, to a large degree, the living units from which participants could be sampled. Moreover, the times of data collection were contingent on the larger operating schedule of the institution, which

included schooling, programming, meals, visits, medications, court, and other "unscheduled" events often resulting from disruptive behavior.

With regard to the ethnicity of the sample, the participants were categorized into seven general cultural categories according to the specific ethnic origin with which they identified. Terminologies for all ethnic variations presented to the participants were selected in accordance with Census Canada classification (Statistics Canada, 1996). The resulting ethnic categories included: European-Caucasian, Aboriginal, South Asian, South East Asian, Hispanic/South American, Mixed Ethnicity, and "Other". Those classified as European-Caucasian indicated their ethnic background as Polish, Ukrainian, Greek, German, French, Italian, Dutch, Scottish, Portuguese, British, Jewish, or Irish, exclusively or in combination with one another. Participants classified as Aboriginal indicated either Native and/or Metis (person of European and North American Indian ancestry). Participants who selected their ethnic origin as East Indian, Pakistani, Fijian, or Sri Lankan were categorized as South Asian. Delinquents who identified their ethnic origin as Chinese, Korean, Vietnamese, Japanese, or Filipino were considered South East Asian. Hispanic/South American youth were categorized as South American. Those adolescents who identified themselves as belonging to more than one distinct ethnic group were considered to be of "mixed ethnicity" and all other minority ethnic populations were considered as "other". Examples of "mixed" ethnicity included: South American and Caucasian; Caucasian, Native, and Black; Native, South East Asian; Native and Caucasian. The two individuals who reported their ethnicity as "other" were Iranian.

Descriptions of the males and females are discussed, in turn, below.

Male Delinquents

Delinquent males ranged in age from 13.90 to 19.35 years, with a mean age of 16.71 years (SD = 1.36). With regard to ethnicity of the male delinquent sample, 21 (47.7%) were European-Caucasian, six were of Aboriginal decent (13.6%), and 17 (38.6%) were "mixed" or "other", including South Asian, South East Asian, Hispanic/South American, and Iranian.

Of the 44 males who participated in the study, 30 were able to provide information regarding their father's level of education and 31 provided information regarding their mother's level of education (31.8% did not know father's educational level; 29.5% did not know mother's educational level). Specifically, 11 (25%) of the delinquent males who knew the level of their father's education reported that their fathers had some high schooling, and 12 (27.3%) reported that their fathers had graduated from high school only. Further, one (2.3%) reported that his father had attended a vocational or technical college, while three (6.8%) reported that their fathers had acquired some college. Lastly, none of the adolescents reported that their fathers had graduated from university, although three (6.8%) reported that their fathers had attended graduate school.

With regard to mother's educational level, nine (20.5%) delinquent males reported that their mothers had only some high schooling, while nine (20.5%) reported that their mothers had graduated high school only. Further, four (9.1%) reported that their mothers had acquired some academic college, five (11.4%) reported that their mothers had graduated from university, and four (9.1%) reported that their mothers had attended graduate school.

With regard to family composition, thirty percent of the delinquent boys reported living in two-parent homes (i.e., 14% in biologically intact families, 16% blended families), 41% reported living in single-parent homes, 18% reported living with adults other than their parents (e.g., grandparents, foster parents), 5% reported living on their own, and 7% reported being homeless. For a delinquent to be categorized as "homeless", he or she had to have reported no fixed address at the time of the research study. Reasons for being homeless included being kicked-out of their family homes (biological or foster), and/or having ran from another facility or treatment center, or their residence.

As it was of preliminary interest to investigate the family background, questions pertaining to foster-care were posed. No distinction was made between youth who were permanent or temporary wards of the state. Sixty-eight percent of the males sampled reported that they had lived in foster care one or more times in their lives, with 22.7% of those reporting one or two placements, 15.9% reporting three to five placements, 4.5% reporting six to ten placements, and 25% reporting that they had lived in more than ten different foster homes.

Verbal ability test scores, as measured by the Quick Word Test (QWT; Borgatta & Corsini, 1960), ranged from 6 to 20, with a mean of 11.93 (SD = 3.32).

Female Delinquents

The 40 female delinquent participants ranged in age from 13.18 to 19.15 years, with a mean age of 16.41 years (SD = 1.31). With regard to ethnicity, 13 (32.5%) identified themselves as European-Caucasian, 12 (30%) as Aboriginal (including Metis), and 15 (37.5%) as "mixed" or "other" ethnicity.

Of the female delinquents 27 (68%) were able to provide information regarding their father's level of education. Nine (22.5%) of them reported that their fathers had only some high school, and 7 (17.5%) reported that their fathers had graduated high school only. Further, one (2.5%) reported that her father had attended a vocational or technical school, while six (15%) reported that their fathers had acquired some academic college. Lastly, three (7.5%) delinquent female adolescents reported that their fathers had graduated university, and one (2.5%) reported that her father had attended graduate school. With regard to mother's level of education, 33 (83%) of the females in the sample were able to provide information. Specifically, 13 (32.5%) reported that their mothers had only some high schooling, while 13 (32.5%) reported that of their mothers had graduated from high school. Further, one (2.5%) reported that her mother had attended vocational or technical school, while five reported that their mothers had attended some academic college, and one (2.5%) of the females reported that her mother had graduated from university. Finally, none of the female delinquents reported that their mothers had attended graduate school.

With regard to family composition, 13% percent of the female delinquents reported living in a two-parent home (i.e., 8% in biologically intact families, 5% in blended families), 28% reported living in single-parent homes, 33% reported living with adults other than their parents, 5% reported living on their own, and 13% reported being homeless. Ten percent of the female adolescents sampled endorsed two or more items when asked with whom they live.

Seventy-three percent of the delinquent girls sampled reported living in foster care at some point, with 15% of those girls reporting that they had resided in 1 to 2

placements, 20% reporting in 3-5 placements, 8% reporting residing in 6 to 10 placements, and 30% reporting that they had resided in more than 10 foster homes.

Verbal ability scores, as obtained by the QWT (Borgatta & Corsini, 1960), ranged from 6 to 17, with a mean score of 12.38 (SD = 3.04).

Gender Differences in Age, Ethnicity, Social-Demographic Variables, and Verbal Ability

As previously mentioned, efforts were made to select delinquents for participation in the present study so that the girls and boys would be similar on relevant social-demographic variables. Analyses indicated that the boys and girls did not differ significantly in age, t (84) = 1.05, p = ns, or racial composition $\chi 2$= (6, N = 84) = 7.22, p = ns.

Delinquent boys and girls were also compared across other various socio-demographic variables. Analyses revealed that boys and girls were not significantly different from one another with regard to father's level of education, $\chi 2$ (6, N = 84) = 6.38, p = ns, and mother's level of education, $\chi 2$ (6, N = 84) = 10.87, p = ns. In addition, no differences were found between delinquent boys and girls with regard to whether or not they had been in a foster home placement, $\chi 2$ (1, N = 84) = .19, p = ns, nor the number of foster home placements, $\chi 2$ (4, N = 84) = 1.48, p = ns. Furthermore, no differences were found between the delinquent boys and girls with regard to family composition, $\chi 2$ (10, N = 84) = 14.18, p = ns.

With regard to verbal ability, an independent sample t-test revealed that scores of the male and female delinquents, as measured by the QWT (Borgatta, 1960), were not significantly different from one another, t (82) = -.64, p = ns.

Measures

Demographic Information (Appendix A)

A questionnaire was designed to gather information concerning the delinquent's age, gender, ethnicity, and family background, including, parents occupation, level of education, and family composition.

Verbal Ability (Appendix B)

A measure of verbal ability was included in the study because emotional intelligence has been found to be related to – but still independent of – verbal intelligence, (Mayer, et al., 1999). As such, including a measure of verbal competency was deemed important, particularly as differences on verbal intelligence, could, if not controlled for, be a potential confound. The QWT is a self-report measure comprised of 100 items that is designed to assess vocabulary skills of adolescence and adults. For the present study, a shortened version of the QWT (50 item) was utilized as previous researchers have noted the difficulty of maintaining adolescent interest in completing the longer version (Carlo, Eisenberg, & Knight, 1992). Research on the QWT has found this shortened version to be as equally reliable as the full version (Borgatta & Corsini, 1960). Participants receive a score based on the number of correct responses, ranging from a score of 0 (no correct responses) to a score of 50 (all responses correct).

Emotional Intelligence (Appendix C)

EI was assessed via the Adolescent Multifactor Emotional Intelligence Scale (AMEIS; Mayer, et al., 1997), which is based upon an EI test (the Multifactor Emotional Intelligence Scale, or MEIS) developed by Mayer, Salovey, and Caruso (1997; see also Mayer et al., 1999).

Mayer and Salovey's conceptualization of EI has four dimensions: 1) Identifying Emotions; 2) Using Emotions; 3) Understanding Emotions; and 4) Managing Emotions. The AMEIS consists of seven separate subtests, as the subtest "Music" is no longer in use (Mayer, et al., 1997). Five of the subtests - Faces, Designs, Synesthesia, Blends and Perspectives – were drawn from the MEIS (adult version), in some cases selecting only those items deemed appropriate for an adolescent population. The Stories task included one new item specifically designed for use with an adolescent population. The seventh task, Managing Emotions, used the same format utilized in the MEIS, but with different items more suitable for adolescents. The tasks on the AMEIS break down into each of the four dimensions as discussed above. For the purpose of this research study, as time constraints and participants' attention span were issues, a shortened version of the AMEIS was used. Five of the seven tasks were included, with all of the branches being represented -- two tasks from branch 1, and 1 each from the remaining 3 branches.

Branch 1 – Identifying Emotions.

Faces Task

In the Faces task, the participant is presented with a color photo of 8 difference people's faces. The participant is instructed to indicate the emotions present in the face using a 5-point "Definitely Not Present" – "Definitely Present" rating scale. Six emotion terms are included for each face (anger, sadness, happiness, disgust, fear, surprise) and the participant is asked to indicate the extent to which the emotions are present in each of the eight faces (for a total of 48 items).

Stories Task

The Stories task includes three brief vignettes that the participant reads and then indicates the emotions the person telling the story was feeling at the time. Two of the stories used were selected from the MEIS and one was obtained from an 11 year-old for use in the AMEIS. Seven emotions are included for each story that represented a range of emotions; the participant is asked to indicate the extent to which they think the emotion is present or not present in the story (a total of 21 items).

Branch 2 – Using Emotions – Emotional Facilitation.

Synesthesia Task

The synesthesia task asks participants to judge the similarity between an emotional feeling, such as love, and other internal experiences, such as temperatures and tastes. The idea is that such internal comparisons indicate that emotions are only sensed and perceived, but also processed in some meanginful way. This task requires that the participant imagine an event that would make them feel a certain way. Then, keeping that event and feeling in mind, they are asked to answer 10 semantic-differential scales, such as warm-cold, sharp-dull. For example, one item asks the participant to imagine a situation in the future that would make them feel a little happy. Then, the participant rates their feelings on the semantic differential scales, such as warm-cold and bright-dim. Six events are presented, for a total of 60 items.

Branch 3 – Understanding Emotions.

Perspectives Task

The Perspectives task includes two items from the adult MEIS. This task describes an event from two perspectives, and then asks the participant to indicate how

likely it was for each of the two main characters in the story to feel. Two stories are employed, and five possible reactions are rated for the story from each of the two perspectives, for a total of 20 items. An example of this item type is as follows: *John tells his friend Bill that he doesn't want to be friends anymore with him. Indicate how likely it would be for John to experience these emotions: Jealous or mad toward Bill; Just the same as always. Indicate how likely it would be for Bill to experience these: Frustrated toward John; Surprised about John.* (Each response is rated on a 5-point scale -- "Extremely Unlikely" to "Extremely Likely").

Branch 4 – Managing Emotions.

Managing Task

The Managing task consists of six scenarios that present participants with a hypothetical situation. They are asked to rate the effectiveness of each of four possible alternative actions using a 5-point scale ("Bad thing to do/Extremely ineffective" to "Good thing to do/Extremely effective"). An example of a Managing item follows: *"You were hanging out talking with a bunch of people at school when one of your friends, not a best friend; insulted you in front of everyone else. It was a real put—down and there was no warning that your friend was upset with you. What do you do?"* There are four responses:

- He/she made me very angry and really embarrassed It would be best to say to him/her how upset I was.
- Hey, this stuff doesn't bother me. It's just not worth it. I'd go and play a game or something.

- That would be too much for me. I'd probably just insult him/her back, or say to him/her that he/she was being a real jerk.
- My friend must be upset at something that either I did, or happened to them. I'd probably ignore the outburst right now and talk to my friend later.

This sub-test has 24 items.

Scoring of the AMEIS.

The AMEIS yields the following scores:

- Total Emotional Intelligence
- Identifying Emotions
- Using Emotions
- Understanding Emotions
- Managing Emotions

Each of the tasks of the AMEIS corresponds to one of the four branches, according to Mayer and Salovey's (1997) model. Each subtest is independent of the others, and as such, it is possible to only use the subcomponents of interest.

Mayer et al. (1999) suggest that emotional intelligence depends on the idea that certain emotional problems have answers that can be judged correct and incorrect and state that there are three options for scoring: consensus scoring, expert scoring, and target scoring. Consensus scoring, which is recommended by Mayer et al. (1999; Mayer, Salovey, Caruso, & Sitarenios, 2001), reflects the degree to which the individual agrees with the response of the general group. Thus, if 10% of the norm group selected option 1 "No anger" for an item, the subject would obtain a score of .10 for selecting 1; if 28% of the norm group selected option 2, then the individual would obtain a score of .28 for

selecting 2. Consensus scoring utilizes the participant's responses to compute the proportion of participants who select each possible response (Barchard, 2001). In addition, various psychometric studies have shown that consensus scoring appears to be the single best scoring method (e.g., Legree, 1995, Mayer & Geher, 1996), and as such Mayer et al. (1999) recommend the use of consensus scoring. Accordingly, consensus scoring was utilized in the present investigation. It should be noted that the group from which the consensus scoring for the AMEIS (as utilized in the present study) was based consisted of 290 adolescents (115 females, 140 males, 35 unknown), ranging in age from 11 to 18, from a predominantly upper middle class Caucasian community in a northeastern State (Caruso et al., 1999). It should be noted that in a personal communication with Caruso (September 17, 2001), I asked how confident the authors of the AMEIS felt about the norming group – i.e., the 290 adolescents on whom the consensus scoring was based. Caruso responded by stating that, "once you get 20 to 50 people they tend to converge on a "good" answer, so n = 290 is pretty good." Caruso also commented that although the sample was mostly white and wealthy, it has been used in inner-city school districts with very good results.

Roberts, Zeidner, and Matthews (2001) have questioned whether emotional intelligence measures some form of conformity rather than a real intelligence, particularly when normative scoring systems based on consensus are used. They also express concern over the lack of convergence between expert and consensus scored dimensions (i.e., r = .26). Mayer et al. (2001) address these concerns by presenting psychometric findings from more recent studies. For example, at the time of the first paper on the MEIS, Mayer et al. (1999) argued that expert scoring and consensus scoring converged to

some degree, and that because the general group consensus appeared more reliable, and yielded better test factor structure, it should be employed. At that time, the expert scoring was based on two experts, and was not intended as a final expert criterion. Indeed, Legree (1995) has noted that individual experts are typically unreliable and that as experts are aggregated they might be expected to approach the general consensus (cited in Mayer et al., 2001).

More recently, Mayer et al. (2001) have presented findings from their new test of emotional intelligence, the MSCEIT, based on two large sample psychometric studies. The MSCEIT is an ability scale that used tasks similar to those of the MEIS and the AMEIS to measure the four branches or dimensions of emotional intelligence. Rather than use the two authors of the scale as experts, however, Mayer et al. asked 21 members of the International Society of Research in Emotion (ISRE) to answer the MSCEIT questions. They then scored the MSCEIT according to an expert-consensus criterion, based on the proportion of experts from ISRE who answered each item in a particular way. When over 2000 participants' scores on the MSCEIT were calculated by general or expert consensus scoring, the intercorrelation between the two sets of scores was $r = .98$, which is significantly above the $r = .26$ reported in the early studies. In summary, although Mayer et al. (1999) recommended the use of consensus scoring, more recent psychometric findings point to the issue that both members of the general population and emotions experts converge to something quite close to the same answers as to the emotions in a face, or the meaning of an emotion.

Scores for each of the sub-tests are the mean correct responses. The AMEIS subtest scores were then converted to Z-scores, and these Z-scores were combined to create branch scores. That is, the Faces and Stories tasks were combined to create an Identifying Emotions branch score, and the Perspectives task was used to form an Understanding Emotions branch score. The Synethesia and managing tasks reported the Using and Managing Emotions branches, respectively. Then, all task Z-score tasks were combined to form a total AMEIS score.

In one of the few available research reports that used the AMEIS, Caruso et al. (1999) report means, standard deviations, and internal consistency for each of the emotional intelligence tasks, as well as the branch and total scores, using consensus scoring. As the AMEIS has been utilized on so few occasions, a comparison was made between Caruso et al.'s reported statistics and those found in the present investigation. The internal consistencies reported by Caruso et al. (1999) for the tasks range from .59 to .94, with only one below .70. Specifically, Caruso et al. (1999) reported the following internal consistencies on the four dimensions: Identifying Emotions, $\alpha = .93$; Using Emotions, $\alpha = .89$; Understanding Emotions, $\alpha = .82$; and Managing Emotions, $\alpha = .85$. In the present investigation, the internal consistency for each dimension, using consensus scoring, was as follows: Identifying Emotions, $\alpha = .79$; Using Emotions, $\alpha = .83$; Understanding Emotions, $\alpha = .69$; Managing Emotions, $\alpha = .20$; and total AMEIS reliability $\alpha = .87$.

Because the internal consistency for Managing Emotions was found to be low, this subscale was excluded from subsequent analyses. Please see the Discussion for a

detailed discussion of the issues pertaining to the poor internal consistency found for this subscale.

Emotional States (Appendix D)

To measure emotional states in the present investigation, the PANAS, a 20-item scale that has been found to be internally consistent, and have good convergent and discriminant correlations with lengthier measures of the underlying mood factors (Kring, 2001; Watson et al., 1988). Two subscales comprise the PANAS: a Positive Affect (PA) subscale and a Negative Affect (NA) subscale. The 10 descriptors for the PA scale are: attentive, interested, alert, excited, enthusiastic, inspired, proud, determined, strong, and active. The 10 descriptors for the NA scale are: distressed, upset, hostile, irritable (angry), scared, afraid (fearful), ashamed, guilty, nervous, and jittery. Watson et al. (1988) state that, although the terms Positive Affect and Negative Affect might suggest that these two mood factors are opposites (i.e., strongly negatively correlated), they have in fact emerged as highly distinctive dimensions that can be meaningfully represented as orthogonal in factor analytic studies of affect.

To complete the PANAS, participants are asked to rate, on a 5-point scale, the extent to which they had experienced each mood state during a specified time period. The points of the scale are labeled *"very slightly or not at all"*, *"a little"*, *"moderately"*, *"quite a bit"*, and *"very much"*. Several choices are put forth regarding temporal instructions. Participants can be asked to rate how they felt (a) right now, (b) today, (c) during the past few days, (d) during the past week, (e) during the past few weeks, (f) during the past year, and (g) in general, that is "on average". When the NA and PA stability values were compared at each rated time frame, no significant differences were

found, although the retest stability tends to increase as the rate time frame lengthens (Watson et al., 1988). For the purpose of this proposed study, the time period of "in general, that is on average" was used. It should be noted that the PANAS takes approximately five minutes to complete.

Watson et al. (1988) report that the internal consistency alphas are all acceptably high, ranging from .86 to .90 for the PA and from .84 to .87 for the NA dimension. Watson et al. (1988) also state that the reliability of the scales is not affected by the time instructions used. They also report high test-retest reliability (.81 for the NA and .79 for PA). The correlation between the NA and PA scales is low, ranging from -.09 to -.27 (for a psychiatric sample), and as such, the two scales share approximately 1% to 5% of their variance. These discriminate values indicate quasi-independence; a feature that the authors suggest is substantially lower than those of many other short PA and NA scales. The authors also suggest that the PANAS scales exhibit a significant level of stability in every time period. These results reflect the strong dispositional component of affect. That is, even momentary moods are, to a certain extent, reflections of one's general affective level (Watson & Clark, 1984).

For the present investigation, internal consistencies were as follows: Positive Affect, $\alpha = .78$, and Negative Affect, $\alpha = .81$.

Psychopathology (Appendix E)

Psychopathology includes a range of internalizing, externalizing, and co-morbid symptoms and behavior. In the present investigation, the Youth Self-Report (YSR; Achenbach, 1991), a standardized self-report instrument designed to measure psychological symptoms, behavior problems, as well as social and academic

competencies in children and youth between the ages of 11 and 18 years old, was utilized.

For the purpose of the present investigation, only the problem behavior portion of the YSR was included. This portion consists of 119 items (i.e., 16 socially desirable items and 103 problem behavior items). Adolescents are asked to repond to each item using a 0-1-2 scoring system (0 = "not true"; 1 = "somewhat or sometimes true"; 2 = "very true or often true"). Scores derived from the problem items of the YSR include a Total Problems score, subscale scores for Internalizing and Externalizing problems and Problem Syndrome scale scores. The YSR provides separate profiles for boys and girls to allow for comparisons between other populations of the same age and gender.

The problem syndrome scales include Withdrawn (7 items), Somatic Complaints (9 items), Anxious/Depressed (16 items), Delinquent Behavior (11 items), Aggressive Behavior (19 items), Social Problems (8 items), Thought Problems (7 items), Attention Problems (9 items), and Other Problems (20 items). Items from the scales for Withdrawn, Somatic Complaints and Anxious/Depressed comprise the Internalizing subscale (31 items), with scores ranging from 0 to 62. One item appearing on two of the syndrome scales is counted only once in the Internalizing score. Items from the syndrome scales for Delinquent Behavior and Aggressive Behavior comprise the Externalizing subscale (30 items), with scores ranging from 0 to 60. The Total Problems score is derived from ratings on 101 problem items with scores ranging from 0 to 202. The problem scales of the YSR have been used in research to discriminate between normal and populations based on T scores. Achenbach (1991) provides tables to convert

raw scores for the Internalizing, Externalizing, and Total Problems scales to T scores. Overall, higher scores indicate a greater number of self-reported problem behaviors.

Extensive documentation for the reliability and validity of the YSR measure has been provided (see Achenbach, 1991). Cronbach's alphas reported separately for the Total Problem scales in demographically matched referred and nonreferred male and female samples were .95. Test-retest reliabilities over a 7-day period were reported as .70 in a sample of 11 to 14 year olds and .91 for 15 to 18 year olds. In terms of criterion-related validity, the YSR scores discriminate between demographically matched clinical referred and nonreferred youths that indicate normal, borderline, and clinical ranges.

In the present study, internal consistencies for the scales were as follows: Internalizing problems, $\alpha = .83$; Externalizing problems, $\alpha = .88$; and Total Problems, $\alpha = .94$. Reliabilities were also calculated for each measure separately by males and females, and found to be comparable to each other. Thus, for parsimony, only total group alpha coefficients are reported.

Aggression (Appendix F)

Aggression was assessed using a modified version of the Self-Reported Delinquency Scale-Arnold (SRDS-A; Arnold, 1965). Designed to measure the frequency of offenses relating to attacks against persons and attacks against property, the SRDS-A is a 21-item self-report measure consisting of three subscales: attacks-against-persons, vandalism, and theft. The subscales are comprised of items describing particular "delinquent" activities. Respondents are requested to read each item and indicate the number of times they have performed the act during the past 6 months. Following the work of Elaschuk (1998), a modified version of the SRDS-A was utilized in the present

investigation. Elaschuk modified the SRDS-A by adding five questions to the aggression against persons subscale and changing the frequency of the response options in order to provide a more comprehensive representation of the frequency with which offenses were committed.

Elaschuk (1998) noted that several factors were considered in her decision to modify the SRDS-A. One principal concern involved the year in which the SRDS-A was initially developed. That is, there was a concern that the offenses listed on the 1965 version of the SRDS-A were not reflective of the types of offenses committed in 1997. Indeed, some research suggests that the types of offenses committed by youth have changed considerably over the last couple decades (Riffel & Ozgood, 1992; Rutter & Giller, 1983). Given the dated nature of the measure, it was determined that the existing questions did not adequately depict the types of crime in which youth today participate, particularly in terms of violent offenses committed against others. Indeed, Arnold (1965) reported that in his investigations, the attacks-against-persons subscale appeared to measure "antisocial behavior which is less serious than the crimes normally called attacks against persons" (p. 64). Thus, Elaschuk adapted this subscale to include questions aimed at determining whether acts of physical aggression were perpetrated against others. Questions were drawn from the Provincial Resource Program's Young Offender Profile (Riffel & Ozgood, 1992), which provides an indication of the nature of delinquent crime. Five items were added in order to balance the number of items in each scale (e.g., 13 items each), for a total of 26 items.

Elaschuk (1998) also deemed it necessary to adapt scoring procedures of the SRDS-A to provide a wider range of responses than that available from original scoring

methods. In the original scoring procedures, each item received a score of 0 or 1 based on the alternative chosen (i.e., response of never receives a 0, all other responses receive 1). This method does not provide a clear portrayal of the frequency with which various types of crime are committed. Thus, responses were scored from 0 (never) to 4 (more than 10 times). As in the original scoring version, two global scores are computed from SRDS-A responses; a high score on the aggression against persons subscale indicates a high frequency of aggression against others (i.e., aggression against persons), while high scores on the crimes against property scales suggest tendencies to commit crimes against property in terms of increased activities involving damage and theft (i.e., aggression against property).

Previous research reported satisfactory construct validity and internal consistency reliability of the SRDS-A (Brodsky & Smitherman, 1983). Arnold (1965) demonstrated internal consistency estimates of .89, .91, and .94 for the attacks-against-persons, vandalism, and theft subscales, respectively. Internal consistency reliabilities of .94 for the attacks-against-persons subscale, .92 for the vandalism subscale, and .93 for the theft subscale have also been reported by Liska (1974).[1]

Thus, in the present study, there were two indices of self-reported delinquency—aggression against persons and aggression against property. Cronbach's alphas for the modified measure used by Elaschuk (1998) were α = .94 for the aggression against persons, and α = .91 for aggression against property.

---

[1] Recall that for the modified measure, the vandalism and theft subscales were collapsed to produce a global score representative of aggression-against-property.

Cronbach's alphas for the modified measure used in this study are as follows: $\alpha = .90$ for the attacks-against-persons subscale, $\alpha = .89$ for the aggression against property subscale & $\alpha = .94$ for the SRDS-A total score.

Procedures

Prior to commencing data collection, approval from the administration at the correctional institution was granted for the principal investigator and a research assistant to collect data. Because institutional consent was granted, parental permission was not needed from the legal guardians of the youth serving a custodial sentence. As previously mentioned, as there was a shortage of adolescent females in the custodial institution at any given time, all of the females incarcerated in the facility during the data collection period (May – July 2001) were invited to participate and did so. Males were selected, in part, to resemble the females in terms of age. Each youth who was invited to participate was seen individually in a quiet room in the institution and given a brief description of the study and the procedures to be used. He/she was told that the information obtained during the research was confidential in nature (e.g., the information will not be available for court, in his/her medical file, or be available to correctional staff.) He/she was also explained the limits of confidentiality – i.e., legal duty to intervene if he or she states the intention of harming someone else or themselves. As the principal investigator was employed at the facility as a Psychology Intern, the adolescents participating in the study were also told that the research project was distinct and removed from her role assumed as an employee.

Prior to completing the questionnaire, the youth were asked to sign an assent form indicating their agreement. Measures were completed in single sessions lasting from 45-

75 minutes. The rationale for individual administration of the correctional sample was that the reading level of many of the youth was below the norm for their age. In addition, many of the youth have behavioral difficulties that make sitting and completing a lengthy task alone, rather arduous. To avoid any of these difficulties, it was decided that instructions and individual questions on the questionnaire were to be read to the incarcerated youth. During data collection, there were a few adolescents who wanted to complete the questionnaire alone, stating privacy and individual competency as their reasons. Those adolescents' who participated were offered "snacks", consisting mainly of treats that were not available in the facility.

The questionnaires were administered in the following order: 1) Demographic Questionnaire; 2) Quick Word Test (Borgatta, 1960); 3) Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1984); 4) The Adolescent Multifactor Emotional Intelligence Scale (Mayer, Salovey, & Caruso, 1997); 5) The Self-Reported Delinquency Scale-Arnold (Arnold, 1965); & 6) The Youth Self-Report (Achenbach, 1991). The author conducted 75 of the interviews and the trained research volunteer conducted 10.

Results

Results of this research are divided into five sections. The first section includes a description of the results of preliminary analyses that examined gender differences in psychopathology and aggression. In the second section, intercorrelations among dimensions of psychopathology and dimensions of aggression are presented. In the third section, analyses that examined gender differences in emotional functioning (i.e., emotional intelligence, emotional states) are described. The fourth section presents intercorrelations among the emotional functioning variables by gender. Finally, analyses examining the relation of emotional functioning to dimensions of psychopathology and dimensions of aggression by gender are delineated.

In accord with previous investigations examining social-emotional functioning in groups identified as conduct disordered or delinquent, in the present study, age and verbal ability were controlled. Researchers examining social cognition have noted the importance of controlling for factors thought to be important correlates of social cognitive functioning (e.g., Chandler, 1973; Chandler & Moran, 1990; Larson 1989; Lee & Prentice, 1988). Larson and Ham (1993), for example, found that negative affect increases as adolescents get older. Because verbal ability may mediate social cognition and vary with age (i.e., function of development), it was important to include verbal ability (as measured by the Quick Word Test), and age as covariates in all analyses examining gender differences to rule out the possibility that group differences on the social cognitive variables were due solely to differences in verbal ability or age.

Preliminary Analyses

Data Screening

Prior to the statistical analyses, data were screened using the procedure outlined by Tabechnick and Fidell (1989). SPSS frequencies were used to check on accuracy of data entry, missing, values, and normality of distributions, including outliers. Analyses revealed one case as a univariate outlier. As noted by Stevens (1992) and others (e.g., Tabachnick & Fidell, 1989), in samples with more than 100 cases, a few standardized scores in excess of ± 3.00 can be expected simply by chance. Thus, the case with an outlier was retained for all data analyses.

Gender Differences in Psychopathology and Aggression

Recall that the first research question was whether there were differences between male and female delinquents in psychopathology and aggression. These analyses were deemed important because one of the more controversial issues for both mental health diagnoses and problem behaviors across development has been that of gender differences (Hartung & Widiger, 1998). In addition, in the developmental psychopathology literature, theory and research on delinquents has focused almost exclusively on boys (Moretti et al., 1996).

The purpose of examining self-reports of psychopathology, assessed via the YSR (Achenbach, 1991), was to explore levels of self-assessed psychopathology, as well as to examine the relation of emotional functioning to psychopathology in both male and female adolescent delinquents. Cohen and Strayer (1996) suggest that, when comparing youth on social cognitive variables, it is important to study psychological traits, as opposed to delinquency. They reason that delinquency is an inadequate discriminator for

psychological research as it is a legal, not a psychological category reflecting various types of difficulties. As such, the YSR, a measure designed to assess psychopathology, was used. The YSR manual (Achenbach, 1991) provides cut off scores for distinguishing between adolescents who are within the clinical range on internalizing, externalizing, and total problem scores, and those who are not. Scores in the clinical range are >90th percentile, whereas scores in the borderline range from the 83rd to the 90th percentile. As can be seen in Figure 1, the majority of boys and girls who participated in the present investigation scored above the clinical cut-off for internalizing, externalizing, and total problems. Specifically, in terms of internalizing symptoms, 21 (48%) of the boys and 27 (68%) of the girls scored in the clinical range according to Achenbach's (1991) YSR criteria. For externalizing symptoms, 39 (89%) of the boys and 38 (95%) of the girls scored within the clinical range. In terms of total problem score, 33 (75%) of the boys and 35 (88%) of the girls scored within the clinical range. See Figure 1 for a graphic comparison of adolescent boys and girls on externalizing, internalizing, and total problems. Overall, the psychopathology scores (total and dimensional) provided evidence as to the high level of psychopathology, beyond the legal label "delinquent", for the participants in this study.

Means, standard deviations, ranges, and F statistics of self-reported psychopathology for male and female delinquents can be seen in Table 2. Gender differences were examined in a series of one-way analyses of covariance (ANCOVAs), with verbal ability and age as covariates. Internalizing symptoms, externalizing symptoms, and total problems served as the dependent variables. Results revealed significant gender differences, with the girls scoring significantly higher than the boys on

internalizing symptomatology and the total problem score. Gender differences did not emerge with regard to externalizing problems.

Means, standard deviations, ranges, and F statistics of self-reported aggression for male and female delinquents can also be seen in Table 2. Gender differences were examined in a series of one-way analyses of covariance (ANCOVAs), with verbal ability and age as covariates. Aggression against persons, aggression against property, and total aggression scores served as the dependent variables. Results revealed significant gender differences, with the boys scoring significantly higher than the girls on aggression against persons, aggression against property, and total aggression.

In summary, when compared to the standardized norms for each measure, scores for boys and girls in this sample are well above the clinical cut-point for externalizing (89% of the boys and 95% of the girls), internalizing (48% of boys and 68% of the girls), and total problem score (75% of the boys and 88% of the girls). Girls scored higher on all dimensions of psychopathology, with gender differences on internalizing problems and total problems reaching significance.

Table 2

Means, Standard Deviations, Ranges, and F Statistics for Psychopathology and Aggression Variables for Delinquent Boys and Girls

	Boys			Girls			
Measures	M	SD	Range	M	SD	Range	F
Psychopathology							
Internalizing	18.84	10.06	0-39	26.95	11.43	7-54	11.64**
Externalizing	31.66	10.96	3-55	31.70	9.44	12-50	.04
Total Problems	79.14	30.84	20-147	92.80	29.44	39-166	3.72*
Aggression							
Against Persons	43.23	11.39	24-65	38.08	13.23	15-65	3.80*
Against. Property	37.75	13.04	16-65	32.95	13.04	14-59	3.38[t]
Total Aggression	80.98	22.65	41-130	71.03	24.77	29-124	4.09*

[t] = $p<.10$, * = $p<.05$, ** = $p<.01$; $n = 44$ for boys and $n = 40$ for girls.

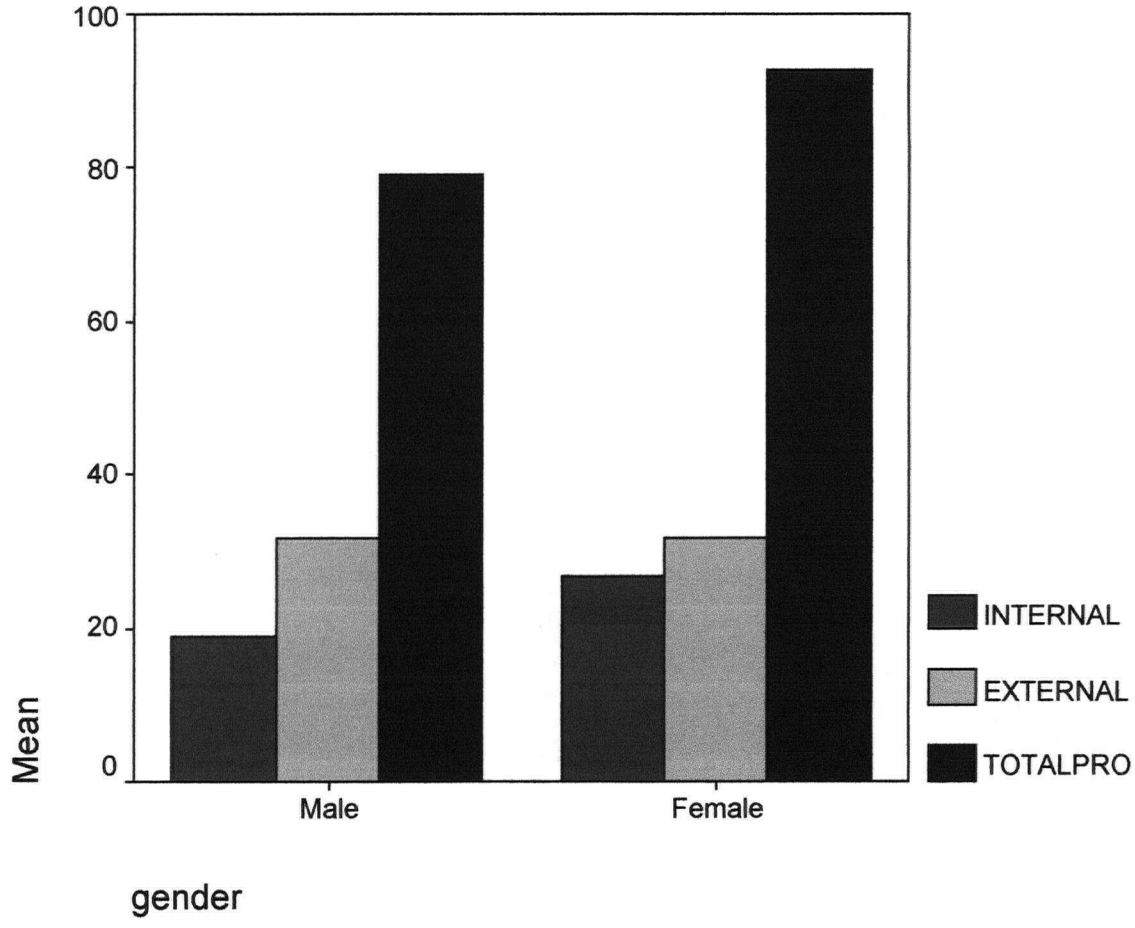


Figure 1. Mean Scores for Internalizing, Externalizing, and Total Problems Scales of the YSR for Adolescent Boys (n = 44) and Girls (n = 40).

Clinical cut off Scores for Internalizing = 17 for males and 22 for females

Clinical cut off Scores for Externalizing = 19 for males and 17 for females

Clinical cut off Scores for Total Problem Score = 54 for males and 57 for females

Correlations Among Dimensions of Psychopathology and Dimensions of Aggression

Recall that the second research question was to examine the nature of the relations among dimensions of psychopathology and dimensions of aggression for delinquent boys and girls. As such, the purpose of this section is to present the intercorrelations among dimensions of psychopathology and dimensions of aggression. Pearson product-moment correlations were calculated to examine the relations among dimensions of aggression (i.e., aggression against persons, aggression against property, total aggression) and dimensions of psychopathology (internalizing, externalizing, total problems). See Table 3.

Table 3.

Correlations Among Psychopathology and Aggression Variables for Delinquent Boys and Girls

Measures	1	2	3	4	5	6
1. Internalizing	-	.66**	.92**	32*	.30*	.33*
2. Externalizing	.49**	-	.86**	.69**	.55**	.66**
3. Total Problem	.89**	.79**	-	.53**	.45**	.53**
4. Agg. Persons	-.01	.52**	.27	-	.72**	.92**
5. Agg. Property	.13	.41**	.28	.78**	-	.94**
6. Total Aggression	.07	.49**	.29	.94**	.94**	-

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

Note. Correlations for girls are below the diagonal and correlations for boys are above the diagonal.

As can be seen in Table 3, correlations were in the expected direction. That is, dimensions of psychopathology (internalizing, externalizing, total problems) were significantly correlated to one another; as well as all dimensions of aggression were significantly correlated, both for boys and for girls. With regard to the relation of psychopathology to dimensions of aggression, externalizing symptoms were significantly and positively related to all types of aggression, for both boys and girls. For boys only, internalizing symptoms were related positively and significantly to aggression against persons, aggression against property, and total aggression. As well, for boys only, total problem scores were significantly related to aggression against persons, aggression against property and total aggression.

In sum, analyses of the relations among dimensions of psychopathology and aggression revealed that for both boys and girls, externalizing problems were related to all dimensions of aggression. Gender differences were found when analyzing the relation of internalizing symptoms to aggression: for boys only, internalizing problems were related positively and significantly to all dimensions of aggression.

Primary Analyses

Gender Differences in Emotional Functioning

Recall that one of the primary research questions of this investigation was concerned with determining whether delinquent boys and girls would differ in their emotional functioning -- namely, emotional intelligence and emotional states. In the following section, results of analyses examining gender differences on the variables of emotional intelligence and emotional states are presented.

Table 4 presents the means, standard deviations, and range of scores for the males and females on the emotional functioning variables. First, to test whether gender differences exist in emotional intelligence, a multiple analysis of covariance (MANCOVA) was conducted, with dimensions of emotional intelligence (i.e., identifying emotions, using emotions, understanding emotions) serving as the dependent variables and gender as the independent variable. Age and verbal ability served as covariates. Results of this analysis revealed that, despite girls scoring higher on 2 of the 3 AMEIS dimensions and total AMEIS score, these differences did not reach significance. Next, to examine whether gender differences exist in total emotional intelligence, an analysis of covariance (ANCOVA) was conducted with the total score from the emotional intelligence measure (i.e., the AMEIS) serving as the dependent variable and gender as the independent variable. Again, verbal ability and age served as covariates. Results of this analysis revealed no significant gender difference on total score from the emotional intelligence measure.

To examine gender differences on emotional states two one-way ANCOVAs were conducted. For each analysis, affect (positive or negative) served as the dependent variable and gender served as an independent variable. As with previous analyses, age and verbal ability were covaried. As can be seen in Table 4, results indicated significant gender differences on Negative Affect, with girls scoring significantly higher than boys.

In summary, there were no significant gender differences found on emotional intelligence. In terms of affect, girls scored significantly higher on negative affect than did boys, although no significant gender difference emerged for positive affect.

Table 4

Means, Standard Deviations, Ranges, and F Scores of Social Emotional Variables for Adolescent Boys and Girls Covarying for Age and Verbal Ability

	Boys			Girls			
Measure	M	SD	Range	M	SD	Range	F
AMEIS							
Identifying	12.83	1.38	8.81-15.45	12.74	1.74	7.91-15.26	.15
Using	15.94	2.61	10.77-20.85	16.13	2.37	11.11-20.54	.15
Understanding	5.43	1.37	2.61-7.96	5.63	1.29	3.03-7.72	.60
Total AMEIS	39.07	4.42	30.87-47.45	39.52	4.22	28.22-47.60	.23
PANAS							
Positive Affect	32.36	6.60	10-42	30.60	6.35	19-43	1.42
Negative Affect	22.93	6.16	11-41	27.38	7.17	14-50	9.12*

* $p < .05$

Interrcorrelations Among Emotional Variables

The purpose of this section is to present the intercorrelations among the social emotional variables examined in this study (i.e., emotional intelligence utilizing the AMEIS, and positive and negative affect, utilizing the PANAS). It will be recalled that another question addressed in this study was concerned with examining the nature of the relations among the various dimensions of emotional functioning for each gender.

Table 5.

Correlations for Emotional Functioning Variables for Delinquent Boys and Girls

Measure	1	2	3	4	5	6
1. EI Total Score	-	.62**	.90**	.72**	.17	.34*
2. Identifying	.77**	-	.33*	.24	-.08	.05
3. Using	.85**	.47**	-	.52**	.23	.37*
4. Understanding	.61**	.34*	.28	-	.13	.23
5. Positive Affect	-.05	-.08	-.14	.29	-	.04
6. Negative Affect	-.23	-.07	-.36*	.01	-.04	-

p , .05, ** p < .01

Note. Correlations for girls are below the diagonal and correlations for boys are above the diagonal.

As can be seen in Table 5, the dimensions of the AMEIS (identifying, using, and understanding) were significantly and positively related to the total AMEIS score, for both boys and girls. Consistent with previous research (Watson et al., 1988), correlations between positive and negative affect were not significant for either boys or girls. With regard to relations of positive and negative affect to dimensions of emotional intelligence no significant correlations emerged for either boys or girls between positive affect and all dimensions of EI. Correlations between negative affect and emotional intelligence, however, revealed a different pattern. For boys only, negative affect was positively and significantly related to total AMEIS score and the Using Emotions subscale of the

AMEIS. In contrast, the dimension of Using Emotions was negatively and significantly related to negative affect for girls. It is interesting to note that most of the correlations between negative affect and emotional intelligence were in the negative direction for girls, whereas all of the correlations were in the positive direction for boys.

Relations of Emotional Functioning to Psychopathology and Aggression

The purpose of this section is twofold: 1) to present correlations between dimensions of emotional functioning (i.e., emotional intelligence, positive and negative affect) and psychopathology (i.e., internalizing problems, externalizing problems, total problems); and 2) to present correlations between emotional functioning and self-reported aggression (i.e., aggression against persons, aggression against property; total aggression). It should be noted that consistent with previous analyses, all correlations were computed controlling for both age and verbal ability.

As can be seen in Table 6, no significant relations emerged between dimensions of emotional intelligence (Identifying Emotions, Using Emotions, Understanding Emotions, total AMEIS) and dimensions of psychopathology (internalizing, externalizing, total problem score) for delinquent boys and girls. For boys only, significant correlations were found between negative affect and all dimensions of psychopathology. For girls, there were significant correlations between negative affect and positive affect and internalizing problems, as well as a significant relation of negative affect to total problems. No other correlations reached statistical significance.

Correlations between dimensions of emotional functioning and dimensions of aggression are presented in Table 7. For boys only, significant negative correlations were found between Understanding Emotions and all forms of aggressions (aggression against

persons, aggression against property, total aggression). As well, for boys only, the correlations between the score for EI and aggression against persons and total aggression approached significance. No other significant correlations emerged.

Table 6

Correlations Between Social Emotional Functioning (Emotional Intelligence; Positive and Negative Affect) and Psychopathology for Delinquent Adolescent Boys and Girls

Emotional Functioning Variables	Boys			Girls		
	INT	EXT	TOTAL	INT	EXT	TOTAL
AMEIS						
Identifying	-.06	-.06	-.13	-.10	-.05	-.13
Using	.07	-.21	-.09	-.13	-.03	-.10
Understanding	.04	-.20	-.13	.03	.10	.04
Total Score	.05	-.20	-.13	-.12	-.03	-.10
PANAS						
Positive Affect	-.20	.09	-.15	-.28^{t}	-.03	-.15
Negative Affect	.63**	.33*	.57**	.49**	.23	.42**

$^{t}p < .10$, $*p < .05$, $**p < .01$

Note. INT = Internalizing Symptoms; EXT = Externalizing Symptoms; TOTAL = Total Problem Score.

Table 7.

Correlations Between Social Emotional Functioning (Emotional Intelligence; Positive and Negative Affect) and Aggression for Delinquent Adolescent Boys and Girls

	Boys			Girls		
Social Emotional Variables	PERS	PROP	TOTAL	PERS	PROP	TOTAL
AMEIS						
Identifying	-.02	-.04	-.04	-.00	-.14	-.08
Using	-.21	-.14	-.19	-.04	-.09	-.07
Understanding	-.42**	-.33*	-.40**	.05	.08	.07
Total Score	-.26^{t}	-.21	-.25^{t}	-.03	-.12	-.08
PANAS						
Positive Affect	.08	.02	.06	.17	.15	.17
Negative Affect	.15	-.05	.05	.10	.01	.06

^{t}p , < .10, *p < .05, **p < .01

Note. PERS = Aggression against Persons; PROP = Aggression against Property; TOTAL = Total Aggression.

Predicting Dimensions of Psychopathology and Dimensions of Aggression from Emotional Functioning

A series of hierarchical regressions were conducted to obtain a more comprehensive picture of the association between self-reported psychopathology and aggressive behavior and emotional functioning. It will be recalled that one major goal of the present investigation was to determine the extent to which emotional intelligence and positive and negative affect predict psychopathology and aggression. To examine these relations, six separate hierarchical multiple regressions were computed in which internalizing problems, externalizing problems, total problems score, aggression against persons, aggression against property, and total aggression score served as the dependent variables in each regression. Total emotional intelligence score (AMEIS) and positive and negative affect scores served as predictor variables.[2] For all analyses, verbal ability and age were entered first in order to control for these variables. Separate analyses were computed for boys and girls.

The hierarchical multiple regression procedure was chosen because is allows entry of variables and to determine the unique contributions of the independent variables (Tabachnick & Fidell, 1989). For each hierarchical regression analyses, the predictors were entered into the analyses in the following way.

---

[2]Only the total EI score was included in the regression because of the small sample size as well as concerns about multicollinearity.

In Step 1, verbal ability and age were entered first. The hierarchical approach was used to statistically control for verbal ability and age in assessing the relations of the emotional variables to the dependent variables beyond that of verbal ability and age (Cohen & Cohen, 1983). As previously stated, theoretically, age and verbal ability may reflect developmental differences in adolescent characteristics during a time when emotional functioning is developing (Chandler & Moran, 1990). Thus, it was of interest to determine the unique contribution of emotional intelligence and positive and negative affect after controlling for variance associated with adolescents' verbal ability and age.

Next, AMEIS total score and positive and negative affect scores were entered as a block in Step 2. As noted by Pedhazur (1982), interrelations among the independent variables (i.e., multicollinearity) may pose difficulties in regression analyses. It was not believed that the emotional variables utilized in the present investigation were highly correlated, and tolerance levels confirmed this.

Predicting Psychopathology.

As can be seen in Table 8, for boys, results from the hierarchical regression analyses predicting dimensions of psychopathology indicated that, after controlling for age and verbal ability, EI total score and emotional states contributed significantly to the prediction of all dimensions of psychopathology. Specifically, the model accounted for 54% of the variance in internalizing problem behaviors, 41% of the variance in externalizing problem behaviors, and 55% of the variance in total problem behaviors. Inspection of the standardized beta weights revealed that emotional states (positive and negative affect) were significant predictors of internalizing problems for boys. For

externalizing problems and total problems, total EI score and negative affect emerged as significant predictors.

The regression analyses for girls resulted in somewhat different findings. As can be seen in Table 9, results indicated that, after controlling for the variance associated with age and verbal ability, the models predicting internalizing problems and total problems emerged as significant predictors. Specifically, the model predicting internalizing problems accounted for 35% of the variance, and the model predicting total problems accounted for 25% of the variance. The model predicting externalizing problems accounted for 9% of the variance and did not reach significance. Inspection of the standardized beta weights revealed that, similar to the findings for the boys, the emotional states variables were significant contributors to the model for internalizing problems. With regard to the prediction of total problems, the standardized beta weights revealed that negative affect was the only significant contributor to the model.

Predicting Aggression

A series of hierarchical multiple regression analyses were conducted to examine the manner in which emotional functioning predicted dimensions of aggression for delinquent boys and for delinquent girls. Dimensions of aggression served as the dependent variables and total EI score and emotional states served as the predictors. Once again, age and verbal ability were entered in Step 1 in order to control for the variance associated with these potential confounds. Analyses were conducted separately for boys and for girls. As can be seen in Table 10, for boys, results from the hierarchical regression analyses predicting aggression indicated that, after controlling for the variance

associated with age and verbal ability, emotional intelligence and affect did not significantly predict aggression.

The regression model resulted in similar non-significant findings for the girls. As can be seen in Table 11, results from the hierarchical regression analyses predicting aggression indicated that, after controlling for variance associated with age and verbal ability, the models were not significant in predicting all dimensions of aggression. An examination of standardized beta weights revealed that not one of the emotional functioning variables were found to be significant predictors in the model.

Table 5

Summary of Hierarchical Multiple Regression Analysis Predicting Psychopathology for Boys

Male

	Internalizing				Externalizing				Total			
	β	R^2change	R^2	Fchange	β	R^2change	R^2	Fchange	β	R^2change	R^2	Fchange
Step 1		**.15**	**.15**	**3.67***		**.24**	**.24**	**6.51****		**.21**	**.21**	**5.53****
Age	.01				-.14				-.04			
Verbal Ability	.32**				.47**				.45**			
Step 2		**.39**	**.54**	**10.54****		**.17**	**.41**	**3.51****		**.34**	**.55**	**9.56****
AMEIS	-.12				-.33*				-.30*			
Positive Affect	-.19*				.11				-.12			
Negative Affect	.63**				.38**				.60**			
Total Model			**F (5, 43) = 8.82****				**F (5, 43) = 5.18****				**F (5, 43) = 9.33****	

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

Table 6

Summary of Hierarchical Multiple Regression Analysis Predicting Psychopathology for Girls

Female

	Internalizing				Externalizing				Total			
	β	R^2change	R^2	Fchange	β	R^2change	R^2	Fchange	β	R^2change	R^2	Fchange
Step 1		**.06**	**.06**	**1.25**		**.03**	**.03**	**.66**		**.06**	**.06**	**1.67**
Age	.23				.06				.17			
Verbal Ability	-.16				-.19				-.21			
Step 2		**.29**	**.35**	**5.07****		**.05**	**.09**	**.67**		**.19**	**.25**	**2.84***
AMEIS	-.02				.03				-.01			
Positive Affect	-.26*				-.02				-.14			
Negative Affect	.47**				.24				.411**			
Total Model			**F (5, 39) = 3.71****				**F (5, 39) = .66**				**F (5, 39) = 2.24***	

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

Table 7

Summary of Hierarchical Multiple Regression Analysis Predicting Aggression for Boys

Male

	Aggression against Persons				Aggression against Property				Total Aggression			
	β	R^2change	R^2	Fchange	β	R^2change	R^2	Fchange	β	R^2change	R^2	Fchange
Step 1		**.07**	**.07**	**1.6**		**.13**	**.13**	**3.0***		**.11**	**.11**	**2.5***
Age	-.21				-.31*				-.31*			
Verbal Ability	.17				.17				.13			
Step 2		**.13**	**.20**	**2.03**		**.04**	**.17**	**1.59**		**.08**	**.19**	**1.21**
AMEIS	-.37*				-.23				-.32*			
Positive Affect	.11				.04				.08			
Negative Affect	.25				.01				.13			
Total Model		**F (5, 43) = 1.91**				**F (5, 43) = 1.51**					**F (5, 43) = 1.76**	

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

Table 8

Summary of Hierarchical Multiple Regression Analysis Predicting Aggression for Girls

Female

	Aggression against Persons				Aggression against Property				Total Aggression			
	β	R^2change	R^2	F	β	R2change	R2	F	β	R2change	R2	F
Step 1		**.03**	**.03**	**.61**		**.01**	**.01**	**.24**		**.02**	**.02**	**.46**
Age	.16				.10				.14			
Verbal Ability	-.12				-.07				-.10			
Step 2		**.04**	**.07**	**.50**		**.03**	**.05**	**.40**		**.04**	**.06**	**.42**
AMEIS	.01				-.11				-.06			
Positive Affect	.18				.14				.17			
Negative Affect	.11				-.02				.05			
Total Model			**F (5, 39) = .53**				**F (5, 39) = .33**				**F (5, 39) = .43**	

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

Discussion

This study explored multiple dimensions of emotional functioning – emotional intelligence and emotional states – in relation to psychopathology and aggression among delinquent boys and girls. Specifically, the investigation examined the extent to which emotional intelligence and emotional states contribute to the prediction of dimensions of psychopathology and dimensions of aggression. The overall rationale for examining emotional functioning within a delinquent sample was to fill a gap in the field of developmental psychopathology by examining possible mechanisms that may lead adolescents toward maladaptation, and alternatively, to uncover pathways that lead to resiliency.

Recent years have seen increased research attention on gender differences in social emotional and social cognitive functioning, particularly as studies have found that gender differences exist in both the manner in which psychopathology is manifested as well as its social cognitive concomitants (Rogers, 1998). Empirical investigations of gender differences of these constructs in delinquent and atypical populations are very limited, particularly because most studies have used males exclusively as participants (e.g., Dunn, Lochman, & Colder, 1997; Trevethan & Walker, 1989). The main reasons for the lack of focus on girls is that, quite simply, there are more males than females in settings such as correctional institutions (Lenssen et al., 2000), where adolescents exhibiting psychopathology and aggression are found. This rationale though, is problematic, as existing data on the development of aggression in girls suggests that, as is the case with boys, it is unlikely that aggressive girls will grow out of their problems (Huesmann et al., 1984; Cote, Zozzolillo, Tremblay, Nagin, & Vitaro, 2001) and the

aggression in girls constitutes a long term and significant social concern, particularly as they become the mothers of the next generation and a potential pivotal point in the intergenerational transmission of aggression (Pepler & Sedighdeilami, 1998), attention to this population is warranted. Research identifying developmental pathways that lead toward, or alternatively, away from psychopathology and aggression in girls, is essential for designing and implementing effective prevention and treatment for girls who are suffering from psychopathology and displaying aggressive behaviors.

This chapter will discuss the findings of the present investigation in three sections. The first section includes a summary and a discussion of the findings concerning each of the research questions and hypotheses put forth is this investigation. The discussion of the findings is organized into three subsections. First, results from preliminary analyses regarding gender differences in psychopathology and aggression will be discussed. Next, the focus will shift to a discussion of whether gender differences exist in emotional functioning -- emotional intelligence and emotional states. This will be followed by a discussion of the relation of emotional functioning to psychopathology and aggression in delinquent girls and boys. In the second section, considerations of the strengths and limitations of the study are delineated. In the final section, a discussion of the implications for interventions and future research concerning emotional functioning, psychopathology, and aggression are presented.

Discussion of Findings

Gender Differences in Psychopathology and Aggression

One issue examined in the present investigation concerned whether male and female delinquents would differ in both the quality and quantity of psychopathology and

aggression. Rationale for these analyses emerged from a recent dissatisfaction among researchers who have commented that the majority of studies of antisocial behavior and aggression in adolescence have focused on boys, whereas little attention has been directed to the risks and long-term consequences for antisocial behavior for girls (Pepler & Sedighdeilami, 1998). Furthermore, theory and research on gender differences examining the manner in which psychological factors contribute to antisocial and aggressive adolescent has been scarce (Cote et al., 2001; Moretti et al., 1996; Saner & Ellickson, 1996). Indeed, Hartung and Widiger (1998) state that research on conduct disorder has been confined largely to boys. They suggest that confining such research largely to boys can contribute to an inaccurate (e.g., male-biased) description of disorder that can, in turn, affect future diagnosis. As such, more research is required to identify the developmental pathways of antisocial behavior and aggression for girls, particularly as they differ or converge to boys. Moreover, in a discussion of the importance of examining gender differences, Luthar, Cushing, and Rounsaville (1996) suggest that, in-depth scrutiny of adolescents' antisocial behaviors can potentially be highly informative in understanding gender differences in global psychosocial and emotional impairment. It was therefore the aim of the present study to fill this gap in the extant literature by investigating gender differences in dimensions of psychopathology and dimensions of aggression.

In addition, one of the goals of this investigation was to examine differences in psychopathology and aggression among delinquent boys and delinquent girls, and in doing so, acknowledging the importance of moving beyond the legal label "delinquency" and toward more psychologically diagnostic categories (Cohen & Strayer, 1996).

The findings of the present investigation are in accord with those of other researchers with regard to gender differences in internalizing problems (Moretti et al., 1996; Petersen et al., 1992). Specifically, as predicted, girls, in contrast to boys, reported higher levels of internalizing symptoms.

Research findings on gender differences in externalizing patterns, however, were not consistent with previous research indicating that boys score significantly higher than girls on externalizing problem (Schonert-Reichl & Beaudoin, 1998). Indeed, among non-clinical samples, research consistently reveals that gender differences emerge in the rate of aggressive behaviors (Maccoby & Jacklin, 1974). This difference widens across adolescents as adolescent girls outgrow their tendency toward oppositional behavior at an earlier age than do boys (Richman, Stevenson, & Graham, 1982). In addition, research findings point to gender differences in self-reported serious violent offending in the general population with boys outnumbering girls sixfold at age 18 (Elliot, Huizinga, & Morse, 1987). Moreover, many more boys than girls are incarcerated in detention centers because of the frequency and nature of the crimes they commit (Lenssen et al., 2000). In the present sample, this was illustrated, with approximately 80% of the custodial institution comprised of males.

The picture changes however, when boys and girls from clinical samples are examined with regard to externalizing problems. In the present investigation, gender differences were not found for self-reported externalizing problems. Although empirical studies examining gender differences within clinical populations are scarce, results in the present investigation converge with those of previous research (e.g., Moretti et al., 1996; Robins, 1986; Webster-Stratton, 1996). Specifically, in clinical samples, girls who reach

the threshold for the diagnosis of conduct disorder and externalizing behaviors, show symptoms that are more similar than different from those found in boys. Moretti et al. (1996), for example, found that when using a psychological diagnostic measure, girls clinically referred for externalizing problems were no less likely than boys to be involved in physical fighting as well as involved in other aggressive and violent behaviors, such as mugging, cruelty to others, and use of weapon.

In terms of gender differences and aggression, findings were mixed in the present investigation. In contrast to the findings regarding externalizing problems in which no differences were found between delinquent boys and girls, gender differences were found when assessing dimensions of aggression. Specifically, gender differences were found for the dimension "aggression against persons" with boys reporting significantly more aggression on this dimension. These findings are consistent with findings reported in studies of clinical samples of adolescents (Barton, Rey, Simpson, & Denshire, 2001; Lahey et al., 1994; Lenseen et al., 2000) that indicate that male adolescents report more aggression than do their female counterparts.

Nevertheless, taken together, the results of the present investigation might appear, at first glance, to be inconsistent with regard to gender differences in antisocial behavior. That is, on the one hand, delinquent boys reported significantly more aggressive behavior than did delinquent girls, and, on the other hand, delinquent boys and girls did not differ significantly on self-reports of externalizing problems. The results of the present investigation are, in fact consistent with results from a meta-analysis conducted by Zoccolillo, (1993), in which he noted that findings regarding gender differences in antisocial behavior among males and females are not ubiquitous or clear. Beyond

differences in serious antisocial behavior, the findings of gender differences seem to vary from study to study, depending on the level of antisocial behavior and the reporting agent (Dishion, French, & Patterson, 1995).

It will be recalled on the aggression scale the delinquent adolescents were asked to indicate the frequency of criminal acts within the past six months – (e.g., Broken into somebody's house without their permission; Got into a fight with another person where you used a weapon of any kind to hurt them) – whereas on the externalizing subscale of the YSR, delinquent adolescents were asked to respond less in terms of legally defined crimes, and more in terms of psychological factors that assessed a range of antisocial symptoms, such as indirect aggression. Research suggests that although boys are more physically aggressive, girls use more indirect aggression (Pepler & Sedighdeilami, 1998). Given that the aggression measure did not directly assess indirect aggression, the result that boys indicated a greater number of aggressive criminal acts than the girls is not surprising.

These results point to the importance of considering the differences in the form of antisocial behavior when assessing aggression and antisocial behavior among boys and girls. In addition, the results from the present investigation point to the necessity of examining gender differences in antisocial behaviors in both typical and atypical populations. That is, much of the literature on gender differences in aggression is conducted with typical samples, where pervasive gender differences are found for aggressive and antisocial behaviors. When reviewing literature within atypical populations, results are often difficult to compare as the terms delinquent, antisocial, aggressive, oppositional, and conduct disordered are used interchangeable.

Summary.

As there is a dearth of research exploring gender differences within clinical populations, the present findings contribute to the discussion at a general level by comparing delinquent boys and girls across dimensions of psychopathology and aggression. Although complex, results from the present study converge with existing research suggesting that within clinical populations, girls and boys are more similar than different in terms of externalizing psychopathology. The lack of gender differences in externalizing symptoms in clinical samples compared to typical samples has been debated in the literature, with little agreement. One explanation is that because more adolescent boys than girls exhibit externalizing disorders in the general population, a greater proportion of boys than girls become involved with the juvenile courts, and subsequently incarcerated in custodial and clinical settings for externalizing problems. Synder, Dishion, & Patterson (1986), for example, found that in adolescence, the gender difference in juvenile court appearances is at least fourfold in terms of the ratio of boys to girls. The gender difference in self-reported delinquent acts as assessed in the National Youth Survey is threefold (Elliott, Ageton, Huizinga, Knowles, & Canter, 1983), with the gender differences in self-reported serious violent offending being sixfold at age 18 (boys vs. girls) (Elliot, Huizinga, & Morse, 1987). In the present investigation, it was the case that incarcerated boys far outnumbered girls at a rate of nearly 4:1. It could be said that the girls who are incarcerated in secure custodial facilities are very atypical compared to other girls, and are presumably the most aggressive in terms of antisocial behavior. Perhaps at this clinical level, gender differences are subsumed by the severity of the

externalizing symptoms and antisocial behavior and that these females exhibit behaviors more common in males than their female peers.

As predicted, although the expression of externalizing problems was found to be comparable in girls and boys, there were significant differences between delinquent girls and boys with girls reporting greater internalizing problems than boys. Furthermore, although not examined in the results, further analyses revealed that girls were more likely to be classified as comorbid, that is, exhibiting both clinical levels of internalizing and externalizing problems, than were boys. Indeed, 27 of the 40 girls (68%) were classified as comorbid, whereas 21 of the 44 boys (48%) of the boys in the present study were classified as comorbid. These results are in concert with extant research findings (Eme, 1992; Loeber and Keenan, 1994; Moretti et al., 1996; Zahn-Waxler, Cole, Richardson, Friedman, Michel, & Belouad, 1994) and add to the growing documentation of gender differences in the extent of comorbidity. In addition, these results suggest that that when psychopathology is identified in females they are more likely to exhibit a wider range of pathology than their male counterparts. The clinical implications are also important to note -- that when adolescent girls are referred for externalizing problems, they are more likely to have a wider range of clinical needs than are adolescent boys and thus require different treatment than their non-comorbid peers.

A more thorough discussion of the nature of the relations among these variables will be discussed in the following section.

Relations Among Dimensions of Psychopathology and Dimensions of Aggression in Male and Female Delinquents

Another question addressed in the study concerned the nature of the relations among dimensions of psychopathology and dimensions of aggression in male and female delinquents. These analyses were conducted for two reasons: 1) because the dimensions of aggression measure and the externalizing problems measure were conceptually similar, examining the relations of these measures to one another was a way of testing measurement issues; 2) to assess the role that psychopathology plays in the frequency of aggressive acts reported by delinquent boys and girls.

As expected, externalizing symptoms were related to all dimensions of aggression both for boys and for girls. If these dimensions were found not related, questions regarding the reliability and validity of the measures would be posed. As such, these results confirm that the measures were reliable, and that although related, the aggression measure and the externalizing measure were not assessing redundant constructs.

One gender difference emerged when examining the intercorrelations among psychopathology and aggression. For boys only, internalizing symptoms were found to be related to aggressive, although for girls, virtually no relations between internalizing and aggression were found. These gender differences suggest the expression of disorder may vary by gender. That is, for the present sample, the developmental pathways toward aggression and delinquent behavior, as opposed to psychological dimensions of externalizing, differ for boys and girls.

Past research on the role of internalizing disorders and aggression is mixed. For example, it is generally found that characteristics inherent to internalizing disorders are

found to be slightly negatively correlated (Mitchell & Rose, 1979), or unrelated to later violent and aggression (Farrington, 1989). In contrast, there is some evidence that aggressive children are rejected by individuals around them and become socially isolated and subsequently commit more aggressive acts (Dishion, Patterson, Stoolmiller, & Skinner, 1991). In fact, Huizinga and Jakob-Chien (1998), in a meta analyses of risk factors to violence, found that for adolescents ages 12-14, lack of social ties was one of the strongest predictors of aggression and violence.

More recently, Loeber, Farrington, Stouthamer, and Van-Kammen (1998) found that internalizing and externalizing problems were consistently related. Specifically, they found that depressed mood, but not shy/withdrawn behavior, was related to delinquency, including substance abuse. Similarly, Blatt, Hart, Quinlan, and Leadbeater (1993) found that for both adolescent boys and girls, self-critical dysphoria added significantly to the explained variance of externalizing disorders, specifically delinquency and aggression. Although research in this area is scant, the present findings are also in concert with past research suggesting that for delinquent girls and boys, psychopathology is manifested differently, and that to understand the pathways toward antisocial behavior and aggression, gender must be taken into account.

Gender Differences in Emotional Functioning Among Delinquents

Researchers who have examined multiple dimensions of social cognition have been able to assemble a more inclusive portrait of development across a variety of domains of social cognitive functioning among both adjusted and maladjusted youth (e.g., Chandler & Moran, 1990; Lee & Prentice, 1988; Trevethan, & Walker, 1989). Similarly, it has been suggested that researchers interested in specifying the nature of

emotion disturbances in psychopathology ought to measure more than one component of emotion (Kring, 2001). Moreover, Rutter (1989) has noted that the search for such interactive processes is critical in understanding the buffering effects involved in resiliency. In a similar vein, it was the author's intent in the present investigation to provide a comprehensive portrayal of the emotional functioning of delinquent boys and girls by utilizing a multidimensional conceptualization of emotional functioning.

Theories of social-emotional development, including Salovey and Mayer's (1997) conceptualization of EI, have found that development is limited partly by an individual's level of cognitive development. EI has found to be moderately related to general or analytic intelligence (Mayer et al., 1999). Although cognitive development was not directly examined in the present study, results of verbal ability measured by the Quick Word Test (Borgatta & Corsinsi, 1960) revealed no significant differences between male and female delinquents. That is, male and female delinquents were functioning at similar levels of verbal ability. In addition, although no significant gender differences were found for verbal ability, to eliminate possible moderating factors, both verbal ability and age were controlled for in analyses in the present investigation.

A central question that provided the focus to this study was whether there would be gender differences in the delinquents' level of emotional intelligence and emotional states. Most published studies in this area of delinquency have been conducted with males only; thus gender differences among delinquents often have not been examined. In their classic essay on gender differences, Maccoby and Jacklin (1974) argued that gender-role socialization practices might lead to gender differences in aggression and related forms of antisocial behaviors. Recall that although only a handful of empirical

studies have investigated emotional intelligence, particularly as conceptualized in the present investigation, fewer have used adolescents as participants, and none of this previous research has been conducted with delinquent populations.

Given the relatively recent development of the measure of EI for adolescents, only three studies have been conducted using the AMEIS. In two of these three studies, gender differences were examined. In both of these studies, girls outperformed boys on all dimensions of emotional intelligence (Caruso et al., 1999; Mayer et al., 1999). Gender differences have also been consistently found for adults, with women scoring higher than men on the Salovey and Mayer's 1997 ability measure of EI (Mayer et al., 1999). The fact that women are slightly superior to men in perceiving emotion has been known for some time, through tests of nonverbal perceptions (that include emotion) such as the Profile of Nonverbal States (Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979), as well as through earlier-developed tests of emotional intelligence (Mayer & Geyer, 1996).

Although only a handful of studies have examined emotional functioning with the newly created measure of EI, past studies have investigated gender differences in single variables inherent within EI. Overall, gender differences are often found when examining social emotional and social cognitive functioning. For example, gender differences have been found for empathy (Lennon & Eisenberg, 1987; Schonert-Reichl & Beaudoin, 1998), perspective taking (Schonert-Reichl & Beaudoin, 1998; Hoffman, 1977), moral reasoning (Schonert-Reichl, 1992), ego development (Paget, Noam, & Borst, 1990), and prosocial reasoning (Carlo & Koller, 1998; Eisenberg, Miller, Shell, McNalley, & Shea, 1991).

Results from the present investigation were found to be inconsistent with the majority of past research. That is, contrary to the hypothesis, despite the girls scoring higher on 3 of the 4 dimensions and on total emotional intelligence score, the differences were minimal and failed to reach statistical significance.

A few potential explanations for these unexpected results are put forth. Gender differences found on social emotional and social cognitive variables in past studies have, for the most part, been based on self-report measures. With regard to empathy, one component of EI, Eisenberg and Fabes (1998) suggest that gender differences vary depending on the definition and measure used. For example, a recent meta-analysis conducted by Eisenberg (2000), examining empathy-related responding found that the large gender differences found were primarily for self-report studies, while the differences were moderate for observational measures, and nonsignificant for nonverbal facial and physiological measures. Perhaps the lack of gender differences found in the present investigation is a result of the type of measure used – that of a maximum performance ability measure, as opposed to a self-report questionnaire. Although this explanation is supported by research, the fact that gender differences have been found when using Salovey and Mayer's (1997) maximum performance ability measure, in typical adults and adolescents, suggests that other factors may have contributed to the lack of significant differences between the boys and girls on EI.

Gender Differences in Emotional States

The second emotional functioning variable examined in the present study was emotional states. Recall that one of the research questions was whether gender differences would exist in emotional states – Positive and Negative Affect – within

delinquents. As predicted, results revealed significant gender differences for negative affect, with girls reporting more Negative Affect than boys. Past research findings on gender differences in Negative Affect are mixed, although it can be said that the majority of studies have found that females report more negative affect than males (Fujita, Diener, & Sandvik, 1991; Joiner & Blalock, 1995; Manolis, 1999). As predicted, given that the girls in the present investigation reported more internalizing disorders, including anxiety and depression, it is not surprising that they also reported higher negative affect than did the boys.

Relations Among Dimensions of Emotional Intelligence and Dimensions of Emotional States

One of the purposes of this study was to examine interrelations among various dimensions of emotional functioning in delinquent boys and girls. An examination of links among dimensions of social-emotional functioning is important for increasing understanding of developmental processes and mechanisms (Cicchetti, 1990, 1993; Noam et al., 1995). As expected, all dimensions of EI were positively related to total EI for both boys and girls. As found in previous research (Watson et al., 1988), the dimensions of Positive and Negative affect were found not to be related.

Relations of dimensions of emotional intelligence to dimensions of emotional states were also examined, with no gender differences emerging between Positive Affect and any of the dimensions of EI, including total score. The relations of Negative Affect to EI, however, revealed a different pattern. For boys only, higher Negative Affect was related positively to total emotional intelligence, as well as the dimension Using Emotions. That is, boys who reported higher negative affect, performed better on the

measure of EI with regard to the total score and the dimensions of Using Emotions. In contrast, the dimension "Using Emotions", was negatively and significantly related to negative affect for girls. That is, girls who performed well on Using Emotions, reported lower negative affect. It is interesting to note that most of the correlations between Negative Affect and emotional intelligence were in the negative direction for girls, whereas all of the correlations were in the positive direction for boys.

One possible explanation for the different findings for boys and girls comes from Noam (1992) who suggests that with increased developmental complexity, psychopathology becomes more internalized. That is, Noam et al. (1994) has found with increasing social emotional and social cognitive development, adolescents become more vulnerable to more internalizing problems, such as depression and suicidal ideations. This line of reasoning is one explanation for the finding in the present study that boys who perform higher on EI also report higher negative affect. The Using Emotions dimension of EI asks adolescents to indicate, "How does the character in a story feel"? Mayer et al. (1999) reason that when deciding how another person feels, individuals may generate the feelings within themselves so as to put themselves in the other's place. It follows that the boys who reported higher negative affect are also the same boys who are who are more "sensitive" and thoughtful in terms of how others feel, thus more emotionally intelligent. The findings for girls though, that higher EI was associated with lower NA, does not fit with this explanation. In a comparable study examining the relation of social cognition to psychopathology in adolescents, Robinson and Schonert-Reichl (2001) found similar gender differences: for boys only, introspectiveness and empathy were positively related to depression. Overall, relations between gender,

psychopathology and social emotional/social-cognitive functioning are complex – high levels of functioning do not necessarily indicate more positive adjustment for boys, although these variables do not seem as important in the prediction of psychopathology and aggression for girls.

These findings are not in accord with those of another investigation, which explored relations of emotional intelligence (as measured by the MEIS) to mood in typical adults. Specifically, Mayer, Caruso, Formica, and Salovey (2000) found no significant relations between EI and self-reported mood. Perhaps, as no studies have investigated the relations of EI to mood or affect states in an atypical population, the relation between emotional states to EI may, in fact, be related within an atypical sample. Nonetheless, differing patterns among dimensions of emotional intelligence and emotional states in boys and girls point to the necessity of examining multiple dimensions of emotional functioning when assessing development and adjustment.

Gender Differences in the Relation of Emotional Functioning to Psychopathology and Aggression in Delinquents

Researchers examining social emotional and social cognitive functioning during adolescence have found positive associations between social emotional functioning and psychosocial adjustment (e.g., Downey & Walker, 1989; Lenhart & Rabiner, 1995; Lochman & Dodge, 1994). For example, Lenhart and Rabiner (1995) found that adolescents who were more skilled in social problem-solving were rated as less aggressive by their teachers and rated themselves as lower on problem behaviors in comparison to adolescents less skilled in social problem solving. Lochman and Dodge (1994) found severely aggressive and moderately aggressive adolescents to be

significantly lower than nonaggressive adolescents across a number of social emotional and social cognitive variables (i.e., perceptions of social cues, social problem solving, self-perceptions, outcome expectations). Moreover, their results indicated that the degree of social cognitive deficit was influenced by the severity of maladjustment. That is, the greatest social cognitive deficits were found among the severely aggressive group, followed by the moderately aggressive group, with the highest level of social cognitive functioning found among the nonaggressive group of adolescents. Nevertheless, research on gender differences in the relation of emotional functioning to psychopathology and aggression, particularly delinquent/atypical adolescents is limited.

Given these issues, it will be recalled that one of the main interests in this study was to examine the nature of the relation of dimensions of emotional functioning to dimensions of psychopathology and aggression, for delinquent boys and girls. In this section, a discussion of the results are divided into three sections: 1) relations of dimensions of emotional intelligence to dimensions of psychopathology and aggression for delinquent boys and girls, 2) relations of emotional states to dimensions of psychopathology and aggression for delinquent boys and girls, 3) the prediction of psychopathology and aggression in delinquent boys and girls from dimensions of emotional functioning.

Relations of Emotional Intelligence to Psychopathology and Aggression.

Correlational analyses failed to reveal significant relations between emotional intelligence and psychopathology for either delinquent boys or girls. This was the case for dimensions of EI as well as dimensions of psychopathology. Nevertheless, when considering the relation between EI (as total score) and dimensions of psychopathology,

the total score of EI emerged as a significant negative predictor for externalizing behavior as well as total problem score for the delinquent boys. That is, for boys only, low performance on EI predicted higher levels of externalizing behaviors and total problem behaviors after taking into account both age and verbal ability. In contrast, EI was not found to be a significant predictor of psychopathology for girls.

Correlational analyses revealed that the dimension Understanding Emotions and total EI score were related significantly and negatively to all dimensions of aggression, for boys only. That is, boys who performed better on EI reported less aggression than the boys who performed poorly on the EI measure. There were no significant relations found between EI and aggression for girls. Similar results were found for the hierarchical multiple regressions. Specifically, after taking into account age and verbal ability, EI significantly predicted aggression against persons and total aggression for delinquent boys only. The results of the study are similar to those found by Rubin (1999), in which urban adolescent boys' peer-nominated direct and relational aggression, and peer-nominated total aggression were found to be significantly and negatively related to their total EI score as assessed via the AMEIS. It should be noted, however, that Rubin (1999) did not include adolescent girls in his study. Thus, a comparison between findings for girls in the present study and Rubin's findings cannot be done. Overall, the findings in the present study indicating significant relations of EI to aggression against persons for boys supports recent studies that have emphasized the role of social cognitive and social emotional factors as regulators and control mechanisms of aggressive behavior. In reverse, social-cognitive abilities have been seen as antecedents of good social adjustment and prosocial behavior (Kaukiainen et al., 1999).

Other possible reasons exist for the absence of significant findings for girls regarding the relation of EI to psychopathology and aggression. For instance, perhaps different variables, other than EI not included in the present investigation contribute to delinquent girls self-reported psychopathology and aggression. Certainly, some recent research examining gender differences in the prediction of depressive symptoms supports this contention. For instance, Leadbeater, Blatt & Quinlan (1995), report that adolescent girls show great depressive vulnerabilities and greater reactivity to stressful events involving others than do adolescent boys. These findings point to the role of interpersonal interactions and positive friendship quality in moderating psychopathology for girls. Furthermore, other factors, such as family and socialization issues (Cohen & Strayer, 1996), or maltreatment (Downey & Walker, 1989) have been found to increase the risk of aggression and psychopathology, and as such, for the delinquent girls in the present study, these variables may have been found to be significant predictors of psychopathology and aggression. Additional research on gender differences in delinquent populations would be beneficial in clarifying these issues.

Relation of Emotional States to Psychopathology, and Aggression.

Unlike emotional intelligence, correlational analyses revealed significant relations between emotional states – Negative and Positive Affect -- and psychopathology. Not surprisingly, for girls, positive affect was found to be negatively related to internalizing problems. That is, girls who reported lower Positive Affect were more likely to report higher levels of internalizing symptoms. Literature on Positive Affect has revealed that the loss of pleasurable engagement (low PA) is a critical factor in predicting depression (Watson, Clark & Carey, 1988). No significant correlations were found between Positive

Affect and internalizing for boys, although the relations were in the same direction as for the girls. Hierarchical regression analyses revealed that Positive Affect remained a significant independent predictor of self-reported internalizing problems for girls even after taking into account age and verbal ability. Positive affect also emerged as a significant predictor of internalizing problems for boys as well.

Correlational analyses also revealed several significant positive relations between negative affect and dimensions of psychopathology. For both delinquent boys and girls, negative affect was positively related to internalizing problems and total problems, and for boys only, negative affect was positively related to externalizing problems. The significant positive relations between internalizing and negative affect was expected and is consistent with past research (Huebner & Dew, 1995; MacLeod, Byrne, & Valentine, 1996; Watson et al., 1988). Furthermore, hierarchical regression analyses revealed a similar pattern, with negative affect significantly predicting internalizing symptoms and total problem score for both boys and girls. For boys only, negative affect predicted externalizing symptoms, with higher negative affect predicting more externalizing problems.

In terms of negative affect, the gender difference in relation of negative affect and externalizing problems implies that the role of negative affect in relation to externalizing symptoms may be different for delinquent boys and girls. For the boys in this study, negative affect (e.g., fear, anxiety, hostility, scorn, sadness, disgust, loneliness) was related to both internalizing and externalizing symptoms, while for delinquent girls, these factors were only related to internalizing. This perhaps, suggests that, when anxious and sad, delinquent girls, to a lesser extent than delinquent boys, display outwardly

delinquent and aggressive behaviors, when measured by the YSR. These findings converge with past research that suggests, that there are gender differences in the expression of emotion. That is, when boys experience depressive symptoms, they are more likely than girls to externalize their feelings (Gjerde, Block, & Block, 1988).

In terms of aggression, no significant relations were found between Positive and Negative Affect and aggression for either boys or girls. The finding that Negative Affect was not predictive of aggression for delinquent males, whereas it predicted externalizing symptoms points to the notion that the YSR and the aggression measure (SRDS-A) were not tapping redundant concepts. As it is, the finding that Negative Affect does not seem to be predictive in aggression, as measured by the SRDS-A, whereas negative affect was predictive of externalizing problems, as measured by the YSR, for both delinquent boys and girls, is less surprising when one considers that the PANAS is more a measure of psychopathology than of actual behavioral manifestations.

In summary, the aim of this study was to assess the role of emotional functioning in the prediction of psychopathology and aggression for delinquent boys both boys and girls. The hierarchical multiple regressions revealed that emotional functioning was a significant predictor of psychopathology for both delinquent boys and girls, although gender differences emerged with regard to the dimension of psychopathology predicted. For boys, emotional functioning was predictive of all dimensions of psychopathology, whereas for girls, emotional functioning was found to be predictive of internalizing and total problems. In terms of aggression, as a total model, emotional functioning was not found to predict aggression for either gender.

The significant gender difference that emerged with regard to the prediction of externalizing problems is one that is worthy of further exploration. It is interesting to note that both EI and Negative Affect were significant predictors of externalizing problems for delinquent boys only. Clearly, these results provide support for the notion that gender differences exist in social emotional functioning and its developmental concomitants, in this case emotional intelligence and emotional states in relation to dimensions of psychopathology. These findings point to the importance of examining gender differences for uncovering potential pathways or vulnerabilities toward maladjustment, and alternatively, toward promoting healthy development.

With regard to emotional intelligence, the finding indicating a negative relation between EI and externalizing behaviors for males is in concert with those of past research indicating a negative association between social emotional and social cognitive reasoning and problem behaviors among adolescents. Indeed, past research findings indicate that there exists a wide range of social-cognitive and social emotional processes that are distorted, delayed or deficient for aggressive adolescent boys (e.g., Chandler & Morgan, 1990; Cohen & Strayer, 1996; Dunn et al., 1997; Leadbeater et al., 1995; Lochman & Dodge, 1994; Trevethan & Walker, 1989). The findings regarding the relation of social emotional functioning to psychopathology and aggression for girls, is less clear (Slaby & Guerra, 1988). Past research, as well as the findings in the present study which found that boys with higher EI reported greater externalizing problems and aggression, raise the possibility that emotional factors, such as EI, may serve to differentiate and stabilize an individual's use of aggression in social situations. These findings also have implications for intervention, particularly if emotional functioning is seen as potentially changeable,

thereby modifying beliefs related to delinquents' development of psychopathology and use of aggression.

Strengths and Limitations of the Study

Several strengths exist in this study. First, this study examined a relatively unexplored topic, that of emotional functioning in a delinquent population. Moreover, this study was the first of its kind to examine Mayer and Salovey's (1997) conceptualization and measurement of emotional intelligence in relation to delinquency. Second, this study provides an important addition to the extant literature on delinquents via its inclusion of delinquent girls. This allowed for analyses of gender differences on emotional functioning, psychopathology, and aggression for delinquent boys and girls. Such examinations of gender are relatively rare in the research, and according Slaby and Guerra (1988), are critical for unraveling the complex interactions among gender, emotional functioning, and antisocial behavior. Third, a diagnostic measure -- the YSR -- was included to assess psychopathology in the delinquents. This measure was included not only because differences in dimensions of psychopathology were of empirical interest, but also because Cohen and Strayer (1996) persuasively argue that psychosocial diagnostic constructs may be more useful than delinquency, a legal classification, that represents heterogeneous behaviors that include a variety of psychopathologies.

A fourth strength of this study was that multiple dimensions of emotional functioning were examined. It has been suggested that researchers interested in specifying the nature of emotion disturbances in psychopathology ought to measure more than one component of emotion (Kring, 2001). This paper contributes to the literature by not only investigating the emotions from a nonpathology perspective, but by also

investigating multiple dimensions of emotional functioning in relation to psychopathology and aggression. Fifth, the researcher had excellent cooperation and participation of the participants in the study – which may have benefited from the fact that, as the researcher was an employee at the custody facility, the majority of the participants had known the researcher prior to the study, and felt comfortable with her. Finally, a maximum performance ability measure of emotional intelligence, in contrast to a self-report measure, was utilized. Because EI is conceptualized as an ability, Mayer et al. (1999) suggest that it can be assessed most directly by asking a person to solve emotional problems and then evaluating the person's answer against criteria of accuracy (Mayer, et al., 1990; Mayer & Geher, 1996). In a recent review of psychometric issues related to EI, Barchard (2001) found that self-report measures of EI are more likely to correlate with social desirable responding, which suggest that self-report measures are either not measuring cognitive abilities or are providing poor measurement.

Nevertheless, the relative strengths of the study also brought limitations, and as such, results of this study must be interpreted cautiously. In particular, although the research sought to "forge new ground" by utilizing the AMEIS for the first time with delinquent/clinical adolescent, measurement issues were uncovered. Specifically, as mentioned, the dimension "Managing Emotions" had poor internal consistency – so low in fact, that for EI dimension analyses, "Managing" was not included. In exploring potential reasons for the low internal consistency found on the Managing subscale, Caruso (August 16, 2001, personal communication) suggested several possible reasons that emerged in the present investigation. One explanation for the poor internal consistency may be that the perspectives task from the Managing Emotions subscale was

not suitable for young offenders. That is, for the perspectives task, participants were asked to respond to a scenario by indicating how "effective" or "good" an action was. Unlike the other tasks, which asked the participants to indicate what a third person may be thinking, the choice for the perspectives task asked the youth to "read about a situation involving another person or involving you", and indicate how "effective or good each action listed for that story would be." Throughout the data collection process, many adolescents commented that they did not perceive any of the choices to be valid for them. When I asked them what they would do, their action choice was generally more antisocial and aggressive than the choices provides (i.e., "I'd beat the shit out of guy if he said that to me"). As such, the choices they endorsed may not have been consistent with the dimensions where they did not have to indicate what they personally would do, or within dimensions when an "antisocial" response was not one of the options.

To further explore this dimension, Caruso (August 16, 2001, personal communication) ran response frequencies for his "typical" adolescent sample (Caruso et al., 1999) and for the delinquents in the present investigation. What follows is a description regarding how the typical and delinquent samples endorsed one of the scenarios, (one which included an antisocial response), from the perspectives task on the Managing dimension presented on the AMEIS. The participant was asked:

> *You were hanging out talking with a bunch of people at school when one of your friends, not a best friend, insulted you in front of everyone else. It was a real put-down and there was no warning that your friend was upset with you. What do you do?*

The participant is then asked to each respond, on a scale of 1 to 5, with one being a "bad or extremely ineffective thing to do" and 5 being a "good thing or extremely effective thing to do". Following is one of the four responses (the most antisocial response) to the above question:

> *That would be too much for me. I'd probably just insult him/her back, or say to him/her that he/she was being a real jerk.*

For the "That would be too much" statement, responses for the delinquents fell into the following response types: Seven percent of the sample endorsed "one" – "ineffective thing to do"; 10 percent of the sample endorsed "2"; 20 percent of the sample endorsed "3"; 25 percent of the sample endorsed "4"; and 38 percent of the sample endorsed "5" – meaning that they thought it was an extremely effective thing to do.

In contrast, in Caruso et al.'s (1999) normal sample, adolescents answered in the following manner when asked to indicate how effective or ineffective the "antisocial" choice was: 28 percent of the sample endorsed "1" – "ineffective thing to do"; 22 percent of the sample endorsed "2"; 16 percent of the sample endorsed "3"; 17 percent of the sample endorsed "4"; and 17 percent of the sample endorsed "5" – meaning that they thought it was an extremely ineffective thing to do – that it they perceive it to be a "bad" option.

As can be surmised, the two groups responded opposite to each other, with the delinquents being more likely to rate high an "antisocial" solution to managing their emotions and the "normal" adolescent more likely to rate an antisocial choice as ineffective. Upon looking at the very different responses of the two groups, Caruso (August 16, 2001, personal communication) stated, " What it means is that perhaps your

folks were very different than ours, and that they could not respond to our actions in a consistent manner? It is very striking that some of the effectiveness ratings were so very different."

Another explanation to the low internal consistency for the Managing subscale of the AMEIS may be due to the participants' inability to understand this particular task, (although this was not the most conceptually or verbally challenging task). Specifically, they might not have been able to discern the nature of the task. Caruso (August 18, 2001, personal communication) noted that, as the measure has not been used with atypical populations, it is likely that measurement issues will continue to emerge, which will add to the discussion and future modifications. Clearly, additional research within a delinquent/clinical population is needed to clarify these issues regarding the measurement of EI.

A second limitation of the study regards the procedure. For the majority of the delinquents the questionnaires were read out loud to them by the researcher as they followed along with their own copy. This was done to minimize problems with responding and discrepancies due to reading ability, and to some extent, attention problems. This procedure also was done in an attempt to ensure that all questionnaire items were completed in order to reduce the possibility of missing data. Nonetheless, approximately 10% of the delinquents requested to complete the questionnaire by themselves and not have the researcher read the items on the questionnaires out loud. As confidentiality of responses was an issue for some of the youth, as long as it was apparent that reading level was not an issue, the adolescents were granted their request. The discrepancy in procedure then, presents possible confounds. A third related limitation,

although also noted as a strength, is that because the researcher was an employee at the facility and had known the participants prior to data collection, this existing relationship may have added a potential bias. For example, one possibility is that even though the delinquents were informed that the role of researcher was "distinct and removed" from any role as an employee at the facility, it is possible that the delinquents did not truly believe that I would not share any of the information with the mental health team at the facility. It is possible that this may have resulted in the participants not answering the questions as accurately as possible for fear that their personal opinions and abilities would be shared with people with whom they had not agreed.

A fourth limitation is related to the aggression measure utilized in the study. The Self-Report Delinquency Scale measures primarily overt/direct aggression, which some would argue, is not comprehensive in the types of aggression exhibited by girls. Kaukiainen et al. (1999) point to some possible explanations for the lack of a significant relation between EI and aggression for girls. They investigated relations of social intelligence and empathy to three types of aggression – indirect aggression (also referred to as relational aggression; Crick & Grotpeter, 1995), verbal aggression and physical aggression in adolescents. Findings revealed that indirect aggression was related positively and significantly to social intelligence, in every age group examined. Direct forms of aggression, either verbal or physical, were not associated with social intelligence. Recall that in the present investigation, the aggression scale predominantly measured overt, direct aggression. Perhaps, as hypothesized by Kaukiainen et al. (1999), social and emotional intelligence influence good social adjustment, but may also be used to harm others for hostile purposes. That is, perhaps social intelligence should be

regarded as a neutral tool, which may be used for both prosocial and antisocial purposes. Whereas empathy is characterized by sensitivity toward the feelings of other, social intelligence, in contrast, may be applied also without emotions, in a "cold-hearted" manner. The demands on the situation, and aspects of other social-emotional functioning, such as empathy and moral standards, determine the goals for which a person will use his or her social or emotional intelligence (Kaukiainen et al., 1999). The most obvious example would be a psychopath, who may be emotionally intelligent, but cruel and deceitful in the use of his or her abilities.

As well, because the study was correlational rather than longitudinal, the results cannot be interpreted to imply causation. In several relationships, the reverse causal sequence may be possible (Cohen & Strayer, 1996). For example, it may be the case that participation in aggressive and antisocial acts inhibits opportunities for emotionally intelligence responding. Moreover, both low levels of EI and aggressive attitudes and impulses may evolve from similar sources and therefore develop contemporaneously (Cohen & Strayer, 1996).

These considerations, as well as the relatively small number of participants, limit the generalizability of the findings. Clearly, further research is warranted. Still, the results of this study extend prior research by contributing new and valuable information regarding gender differences in the relation of emotional functioning to psychopathology, and aggression in delinquent boys and girls.

Implications for Treatment Interventions and Future Research

Empirical inquiry into developmental antecedents of psychopathology and aggression can have substantial implications for treatment planning (Luthar, Cushing, &

Rounsaville, 1996). Indeed, in many psychopathologies, one or more components of emotional processing are impaired in some respect. These deficits can occur, for instance, in the perception, experience, intensity, or display of emotions (Kring, 2001).

If affective and cognitive based emotional functioning truly help buffer overt antisocial temptations and influences as some research suggests (Gibbs, Arnold, Ahlborn, & Cheesman, 1984), then interventions designed to facilitate healthy emotional functioning would be especially useful for delinquent and aggressive youth. If, in contrast, as Kaukiainen et al. (1999) suggest, higher levels of social and emotional intelligence are related to indirect aggression, policy and program planners should bear in mind the implications of these findings when designing intervention strategies. Given that delinquency and antisocial behavior are some of the most noted variables responsible for atypical adult adjustment in both males and females, it is hoped that the present findings elucidating the role of emotional functioning in the development of psychopathology will be used not only to provide recommendations to those who live and work with atypical children and youth, but also to guide programmatic and social policy initiatives promoting healthy development throughout the lifespan. Nevertheless, before the designation and implementation of effective interventions, further research is needed that considers some of the limitations of this study. Furthermore, further research should examine variables, such as maltreatment, sexual abuse, family relations, the role of foster care, and importance of peer relations, to name a few, not specifically examined in this study.

The present findings indicate that the role that emotional functioning plays in the development of psychopathology and aggression is a complex one. Furthermore, this

study points to the emerging view that that gender differences in the nature of the relation of emotional functioning to psychopathology and aggression is complex. Recall, for example, that gender differences were found in the relation of emotional intelligence to aggression for boys only, with emotional intelligence, or lack thereof, being predictive of problem behaviors. Given recent findings that point to the importance of expanding definitions of aggression to include behaviors that typically comprise girls' aggression, including indirect/relational aggression (Bjorkvist, Osterman, & Kaukiainen, 1992), aggression directed at peer relationships (Crick & Grotpeter, 1993), and aggression directed at damaging self-esteem and/or social status (Galen & Underwood, 1997), future research should include such gender-sensitive measures of aggression in order to elucidate the role of emotional intelligence in the prediction of aggression. The aggression measure used in the present investigation was not capturing the complete scope of female aggression. Furthermore, perhaps different variables not explicitly addressed in this study, such as race/ethnicity, family composition, sexual abuse, and/or extent of foster care, to name a few, were contributing to the delinquents' psychopathology and aggression, and would explain, for example, the lack of findings when predicting psychopathology and aggression from emotional intelligence with the girls. Additional research on gender differences in delinquent populations would be beneficial in clarifying these issues.

Finally, because age differences were not specifically examined because of the limited size of the sample for difference age groups, no conclusions can be put forth. Although an arduous undertaking, longitudinal research examining the developmental trajectory of emotional functioning in relation to its role in leading to or away from

psychopathology and/or antisocial behavior across childhood and adolescence would shed light on gender specific developmental pathways and thus perhaps identify critical phases when intervention strategies may results in the desistance of problem behaviors.

References

Achenbach, T. M. (1991). Manual for the Youth Self-Report and 1991 Profile. Burlington, VT: University of Vermont Department of Psychiatry.

Allen, J. P., Leadbeater, B.J., & Aber, J. L. (1994). The development of problem behavior syndromes in at-risk adolescents. Development and Psychopathology, 6, 323-342.

American Psychiatric Association (1994). Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Washington DC: APA.

Arnold, W. R. (1965). Continuities in research: Scaling delinquent behavior. Social Problems, 13, 59-66.

Asher, S. R., Hymel, S., & Renshaw, P. D. (1984). Loneliness in children. Child Development, 55, 1457-1464.

Aspinwall, L. G. (1998). Rethinking the role of positive affect in self-regulation. Motivation and Emotion, 22(1), 1-32.

Barchard, K. A. (2001). Emotional and social intelligence: Examining its place in the nomological network. Unpublished doctoral dissertation. University of British Columbia, Vancouver, Canada.

Bardone, A. M., Moffitt, T. E., Capsi, A., Dickson, N., & Silva, P. A. (1996). Adult mental health and social outcomes of adolescent girls with depression and conduct disorder. Development and Psychopathology, 8, 811-829.

Bar-On, R. (1997). EQ-I: Baron Emotional Quotient Inventory, Technical Manual. Toronto, ON: Multi-Health Systems.

Bar-On,R., Brown,J. M., Kirkcaldy, B. D., & Thome, E. P. (2000). Emotional expression and implications for occupational stress; An application of the Emotional Quotient Inventory (EQ-i). Personality-and-Individual-Differences, 28(6), 1107-1118

Barton, G., Rey, J. M., Simpson, P., & Denshire, E. (2001). Patterns of critical incidents and their effect on outcome in an adolescent inpatient service. Australian and New Zealand Journal of Psychiatry, 35(2), 155-159.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.

Bierman, K. L., Smoot, D. L., & Aumiller, K. (1993). Characteristics of aggressive-rejected, aggressive (nonrejected), and rejected (nonaggressive) boys. Child Development, 64, 139-151.

Bjorkvist, K., Osterman, K., & Kaukiainen, A. (1992). The development of direct and indirect aggressive strategies in males and females. In K. Bjorkqvist & P. Niemela (Eds.), Of mice and women: Aspects of female aggression (pp. 51-64). Orlando: Academic Press.

Blasi, A. (1980). Bridging moral cognition and moral action: A critical review of the literature. Psychological Bulletin, 88, 1-45.

Blatt, S. J., Hart, B., Quinlan, D. M., & Leadbeater, B., et al. (1993). Interpersonal and self-critical dysphoria and behavior problems in adolescence. Journal of Youth and Adolescence, 22(3), 253-269.

Blueler, E. (1924). Textbook of psychiatry. New York: The Macmillan Company.

Borgatta, E. P., & Corsini, R. J. (1960). The Quick Word Test. Journal of Educational Research, 54, 15-20.

Borst, S.R., Noam, G.G., & Bartok, J.A. (1991). Adolescent suicidiality: A clinical-developmental approach. Journal of the American Academy of Child and Adolescent Psychiatry, 30, 796-803.

Brodsky, S. L., & Smitherman, H. (1983). Handbook of scales for research in crime and delinquency (pp. 241-245). New York: Plenum.

Brody, L. R. (1999). Gender, emotion, and the family. Cambridge MA: Harvard University Press.

CBC News Online. Tragedy in Taber. May 3, 1999. www.cbc.ca/news.

Cairns, R. B., Cairns, B. D., Neckerman, H. J., Ferguson, L.L., & Gariepy, J. (1989). Growth and aggression: I. Childhood to early adolescence. Developmental Psychology, 25, 320-330.

Campbell, G. (1990). Women and crime. Juristat Service Bulletin, 10(20), 1-14.

Canadian Press. Crown: Teen Beat Rina Virk. March 9, 2000. www.canoe.ca/news.

Carlo, G., Eisenberg, N., & Knight, G. P. (1992). An objective measure of adolescents' prosocial moral reasoning. Journal of Research on Adolescence, 2, 331-349.

Carlo, G., Koller, S., & Eisenberg, N. (1998). Prosocial moral reasoning in institutionalized delinquent, orphaned, and noninstitutionalized Brazilian adolescents. Journal of Adolescent Research, 13(4), 363-376.

Caruso, D. R. (1999). Multifactor Emotional Intelligence Scale. Overview and Summary of Measure. Unpublished training material.

Caruso, D.R., Van Buren, A,. Mayer, J.D., & Salovey, P. (1999). Emotional Intelligence, Empathy and Analytic Intelligence in Adolescents. Unpublished ms.

Chandler, M., & Moran, T. (1990). Psychopathy and moral development: A comparative study of delinquent and nondelinquent youth. Development and Psychopathology, 2, 227-246.

Cicchetti, D. (1984). The emergence of developmental psychopathology. Child Development, 55(1), 1-7.

Cicchetti (1990). A historical perspective on the discripline of developmental psychopathology. In J. Rolf, A. Masten, D. Cicchetti, K. Nuechterlein, & W. Weintraub (Eds.), Risk and protective factors in the development of psychopathology (pp. 2-28). New York: Cambridge University Press.

Cicchetti, D. (1993). Developmental psychopathology: Reactions, reflections, projections. Developmental Review, 13, 471-502.

Cicchetti, D., Ackerman, B. P., & Izard, C. E. (1995). Emotions and emotion regulation in developmental psychopathology. Development and Psychopathology, 7, 1-10.

Cicchetti, D., & Sroufe, A. (2000). The past as prologue to the future: The times, they've been a-changin'. Development and Psychopathology, 12, 255-264.

Chinet, L., Bolognini, M., Plancherel, B., Stephan, P., & Halfon, O. (1998). Is alexithymia a typical characteristic of addictive behaviors in adolescents and young adults? Swiss Journal of Psychology, 57(3), 145-152.

Chorpita, B. F., Daleiden, E. L., Moffitt, C., Yim, L., & Umemoto, L. A. (2000). Assessment of tripartite factors of emotion in children and adolescents I: Structural validity and normative data of an affect and arousal scale. Journal of Psychopathology and Behavioral Assessment, 22(2), 141-160.

Cleckley, H. (1976). The mask of sanity (5th ed.). St. Louis MO: Mosby.

Cohen, J., & Cohen, P. (1983). Applied multiple regression/correlation analysis for the behavioural sciences (2nd ed.). Hillsdale, NJ: Erlbaum.

Cohen, D., & Strayer, J. (1996). Empathy in conduct-disordered and comparison youth. Developmental Psychology, 22, 988-998.

Coie, J. D., Terry, R., Lenox, K., Lochman, J.E., & Hyman, C. (1995). Childhood peer rejection and aggression as predictors of stable patterns of adolescent disorder. Development and Psychopathology, 7, 697-713.

Colby A., & Kohlberg, L. (1987). The measurement of moral judgment: Vol. 1. Theoretical foundations and research validation. Cambridge, England: Cambridge University Press.

Conway, J. (1992). Youth Court Statistics 1991-1992 Highlights. Juristat Service Bulletin, 12(16), 1-14.

Cote, S., Zozzolillo, M., Tremblay, R. E., Nagin, D. S., & Vitaro, F. (2001). Predicting girls' conduct disorder in adolescence from childhood trajectories of disruptive behaviors. Journal of the American Academy of Adolescent Psychiatry, 40(6), 678-684.

Crick, N & Grotpeter, J. (1995). Relational aggression, gender, and social-psychological adjustment. Child Development, 66, 710-722.

Crook, K., Beaver, B., & Bell, M. (1998). Anxiety and depression in children: A preliminary examination of the utility of the PANAS-C. Journal of Psychopathology and Behavioral Assessment, 20(4), 333-350.

Daleiden, E., Chorpita, B., & Lu, W. (2000). Assessment of tripartite of emotion in children and adolescents II: Concurrent validity of the affect and arousal scales for children. Journal of Psychopathology and Behavioral Assessment, 22(2), 161-182.

Davies, M., Stankov, L., & Roberts, R. (1998). Emotional intelligence: In search of an elusive construct. Journal of Personality and Social Psychology, 75(4), 989-1015.

Davis, D. L. (2000). The aggressive adolescent: Clinical and forensic issues. Binghamton: Haworth Press.

Davis, D. L., Bean, G. L., Schumacher, J. E., & Stringer, T. L. (1991). Prevalence of emotional disorders in a juvenile justice institutional population. American Journal of Forensic psychology, 9(1), 5-17.

Derogatis, L. R., Lipman, R. S., Covi, L. & Rickels, K. (1971). Neurotic symptom dimensions: As perceived by psychiatrists and patients of various social classes. Archives of General Psychiatry, 24(5), 454-464.

Dishion, T. J., French, D. C., & Patterson, G. R. (1995). The development and ecology of antisocial behavior. In D. Cicchetti & D. J. Cohen (Eds.), Developmental psychopathology (pp. 421-471). New York: Wiley.

Dishion, T. J., Patterson, G.R., Stoolmiller, M., & Skinner, M. L. (1991). Family school and behavioral antecedents to early adolescent involvement with antisocial peers. Developmental Psychology, 27(1), 172-180.

Dobb, A. N., & Sprott, J. B., (1998). Is the "quality" of youth violence becoming more serious? Canadian Journal of Criminology, 40, 185-194.

Dodge, K. A. (1986). A social informational processing model of social competence in children. In M. Perlmetter (Ed.), Minnesota Symposia on Child Psychology, Vol. 18, (pp. 1-34). Hillsdale, NJ: Lawrence Erlbaum Associates.

Dodge, K. A. (1993). Social-cognitive mechanisms in the development of conduct disorder and depression. Annual Review of Psychology, 44, 559-584.

Dodge, K. A., & Frame, C. L. (1982). Social cognitive biases and deficits in aggressive boys. Child Development, 53, 629-635.

Dodge, K. A., Pettit, G.S., McClaskey, C.L., & Brown, M. M. (1986). Social competence in children. Monographs of Society for Research in Child Development, 51(2, Serial No. 213).

Downey, G., & Walker, E. (1989). Social cognition and children at risk for psychopathology. Developmental Psychology, 25(5), 835-845.

Dunn, S. E., Lochman, J. E., & Colder, C. R. (1997). Social problem-solving skills in boys with conduct and oppositional defiant disorders. Aggressive Behavior, 23, 457-469.

Ebata, A.T., Peterson, A.C., & Conger, J.J. (1990). The development of psychopathology in adolescence. In J. Rolf, A.S. Masten, D. Cicchetti, K.H. Nuechterlein, & S. Weintrat's (Eds.), Risk and Protective Factors in the Development of Psychopathology (pp. 308-333). New York: Cambridge University Press.

Eccles, J. Midgley, C., Wigfield, A., Buchanan, C., Reuman, D., Flanagan, C., & Mac Iver, D. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. American Psychologist, 48(2), 90-101.

Eisenberg (2000). Empathy and sympathy. In M Lewis & J. M. Haviland-Jones, (Eds), Handbook of emotions, second edition, (pp. 677-691). New York: Guilford Press.

Eisenberg, N., Fabes, R. A., Carlo, G., & Karbon, M. (1992). Emotional responsivity to others: Behavioral correlates and socialization antecedents. New Directions for Child Development, 55, 57-73.

Eisenberg, N., & Miller, P. (1987). The relation of empathy to prosocial and related behaviors. Psychological Bulletin, 101, 91-119.

Eisenberg, N., Miller, P., Shell, R., McNalley, S., & Shea, C. (1991). Prosocial development in adolescence: A longitudinal study. Developmental Psychology, 27, 849-857.

Eisenberg, N., Shell, R., Pasternack, J., Beller, R., Lennon, R., & Mathy, R. (1987). Prosocial development in middle childhood: A longitudinal study. Developmental Psychology, 23, 712-718.

Eisenberg, N., & Strayer, J. (1987). Critical issues in the study of empathy. In N. Eisenberg and J. Strayer (Eds.), Empathy and its development (pp. 3-13). Cambridge, England: Cambridge University Press.

Elaschuk, C. (1998). Prosocial moral reasoning, empathy, perspective-taking, and social behavior: A comparative study of delinquent and nondelinquent youth. Unpublished master's thesis, University of British Columbia, Vancouver, British Columbia, Canada.

Elliott, D. S., Ageton, S., Huizinga, D., Knowles, B., & Canter, R. (1983). The prevalence and incidence of delinquent behavior: 1976-1980. Bolder CO: Behavioral Research Institute.

Elliot, D. S., Huizinga, D., & Morse, B. J. (1987). Self-reported violent offending: A descriptive analysis of juvenile violent offenders and their offending careers. Journal of Interpersonal Violence, 1, 472-514.

Ellis, P. L. (1982). Empathy: A factor in antisocial behavior. Journal of Abnormal Child Psychology, 10, 123-134.

Eme, R. F. (1980). Sex differences in childhood psychopathology: A review. Psychological Bulletin, 83, 574-595.

Eme, R. F. (1992). Selective female affliction in the developmental disorders of childhood: A literature review. Journal of Clinical Child Psychology, 21, 354-364.

Estrada, C., Isen, A. M., & Young, M. J. (1997). Positive affect facilitates integration of information and decreases anchoring in reasoning among physicians. Organizational Behavioral and Human Decision Processes, 72, 117-135.

Fancher, R. E. (1985). Spearman's original computation of g: A model for Burt? British Journal of Psychology, 76(3), 341-352.

Farrington, D. P. (1989). Early predictors of adolescent aggression and adult violence. Violence and Victims, 4, 79-100.

Farrington, D. P. (1997). Early prediction of violent and nonviolent youthful offending. European Journal on Criminal Policy and Research, 5, 51-66.

Feshbach, N. D. (1975). Empathy in children: Some theoretical and empirical considerations. Counseling Psychologist, 5(2), 25-30.

Fisher, C. D., & Ashkanasy, N. M. (2000). The emerging role of emotions in work life: An introduction. Journal of Organizational Behavior, 21, 123-129.

Flavel, J. H., & Miller, P. (1998). Social cognition. In W. Damon (Series Ed), Handbook of child psychology: Vol 3, (pp. 851-898). NY: Wiley.

Fredrickson, B. L., & Branigan, B. (2001). Positive emotions. In T. Mayne & G Bonanno (Eds.), Emotions: Current issues and future directions, (pp.123-151). NY: Guildford Press.

Freud, A. (1946). Adolescence. Psychoanalytic Study of the Child, 13, 255-278.

Fujita, F., Diener, E., & Sandvik, E. (1991). Gender differences in negative affect and well-being: The case for emotional intensity. Journal of Personality and Social Psychology, 61(3), 427-434.

Galen, B. R., & Underwood, M. K. (1997). A developmental investigation of social aggression among children. Developmental Psychology, 34(4), 589-600.

Garmezy, N. (1983). Stressors of childhood. In N. Garmezy and M. Rutter (Eds.), Stress, coping, and development in children. New York: McGraw-Hill.

Gibbs, J. C., Arnold, K. D., Ahlborn, H. H., & Cheesman, F. L. (1984). Facilitation of sociomoral reasoning in delinquency. Journal of Consulting and Clinical Psychology, 52, 37-45.

Gjerde, P. F., Block, J., & Block, J. (1988). Depressive symptoms and personality during late adolescence: Gender differences in the externalization-internalization of symptom expression. Journal of Abnormal Psychology, 97(4), 475-486.

Goleman, D. (1995). Emotional intelligence. New York: Bantam Books.

Goleman, D. (1998). Working with emotional intelligence. New York: Bantam Books.

Green, T., & Noice, H. (1988). Influence of positive affect upon creative thinking and problem solving in children. Psychological Reports, 63(3), 895-898.

Guerra, N. (1996). Serious and violent juvenile offenders: Gaps in knowledge and research priorities. In R. Loeber and D. Farrington's (Eds.), Serious and violent juvenile offenders (pp. 13-29). London: Sage Publications.

Hall, S. G. (1908). A glance at the phyletic background of genetic psychology. American Journal of Psychology, 19(2), 149-212.

Hall, J. A. (1978). Gender effects in decoding nonverbal cues. Psychological Bulletin, 85, 845-857.

Hall, J. A. & Halberstadt, A. G. (1994). "Subordination" and sensitivity to nonverbal cues: A case of married working women. Sex Role, 31(3-4), 149-165.

Hare, R. D. (1980). A research scale for the assessment of psychopathy in criminal populations. Personality and Individual Differences, 1, 111-117.

Hare, R. D. (1985). Comparison of procedures for the assessment of psychopathy. Journal of Consulting and Clinical Psychology, 53, 7-16.

Harris, P. L. (1989). Children and emotion: The development of psychological understanding. Oxford: Blackwell.

Hartung, C. M., & Widiger, T. A. (1998). Gender differences in the diagnosis of mental disorders: Conclusions and controversies of the DSM-IV. Psychological Bulletin, 123(3), 260-278.

Hastings, P. D., Zahn-Waxler, C., Robinson, J., Usher, B., & Bridges, D. (2000). The development of concern for others in children with behavior problems. Developmental Psychology, 36(5), 531-546.

Hawkins, D., Laub, J., & Lauritsen, J. (1998). Race, ethnicity, and serious juvenile offending. In R. Loeber and D. Farrington's (Eds.), Serious and violent juvenile offenders (pp. 30-46). London: Sage Publications

Hendrick, D., Kowalski, M., Stevenson, K., & Tufts, J. (1998). A Profile of Youth Justice in Canada. Statistics Canada.

Hoffman, M. L. (1982). The development of prosocial motivation: Empathy and guilt. In N. Eisenberg (Ed.), The development of prosocial behavior (pp. 281-313). New York: Academic Press.

Hogan, R. (1969). Development of an empathy scale. Journal of Consulting and Clinical Psychology, 33, 307-316.

Hogan, R. (1973). Moral conduct and moral character: A psychological perspective. Psychological Bulletin, 79, 217-232.

Hudson, S. M., Marshall, W. L., Wales, D., McDonald, E., et al. (1993). Emotional recognition skills of sex offenders. Annuals of Sex Research, 6(3), 199-211.

Huebner, E. S., & Dew, T. (1995). Preliminary validation of the positive and negative affect schedule with adolescents. Journal of Psychoeducational Assessment, 13(3), 286-293.

Huesmann, L. R., Eron, L.D., Lefkowitz, M. M., & Walder, L. O. (1984). Stability of aggression over time and generations. Developmental Psychology, 20, 1120-1134.

Huizinga, D., Esbensen, F., & Weiher, A.W. (1991). Are there multiple paths to delinquency? Journal of Criminal Law and Criminology, 82, 83-118.

Huizinga, D., & Jakob-Chien, C. (1998). In R. Loeber and D. Farrington's (Eds.), Serious and violent juvenile offenders (pp. 47-67). London, Sage Publications.

Inhelder, B., & Piaget, J. (1958). The growth of logical thinking from childhood to adolescence. A. Parsons & S. Milgrim (Trans.). New York: Basic Books. (Original work published 1955).

Isen, A. M., (2000). Positive affect and decision making. In M Lewis & J. M. Haviland-Jones, (Eds), Handbook of emotions, second edition (417-435). New York: Guilford Press

Izard, C. E., & Harris, P. (1995). Emotional development and developmental psychopathology. In D. Cicchetti & D. J. Cohen (Eds.), Developmental psychopathology, Vol. 1: Theory and method. New York: Wiley/

Joiner, T. E., & Blalock, J. A. (1995). Gender differences in depression: The role of anxiety and generalized negative affect. Sex Roles, 33(1-2), 93-108.

Jurkovic, G. J. (1980). The juvenile delinquent as a moral philosopher: A structural-developmental perspective. Psychological Bulletin, 88(3), 709-727.

Kaplan, P. J. & Arbuthnot, J. (1985). Affective role-taking and cognitive empathy in delinquent and non-delinquent youth. Adolescence, 20, 323-333.

Kaukiainen, A., Bjorkqvist, K., Lagerspetz, K., Osterman, K, Salmivalli, C., et al. (1999). The relationships between social intelligence, empathy, and three types of aggression. Aggressive Behavior, 25, 81-89.

Kovacs, M. (1989). Affective disorders in children and adolescents. American Psychologist, 44, 209-215.

Krebs, D. (1975). Empathy and altruism. Journal of Personality and Social Psychology, 32, 1124-1146.

Kring (2000). Emotion and psychopathology. In R. Mayne & G Bonanno (Eds.), Emotions: Current issues and future directions, (pp.337-360). New York: Guilford Press.

Kring, A. M., Alpert, M., Neale, J. M., & Harvey, P. D. (1994). A multichannel, multimethod assessment of affective flattening in schizophrenia. Psychiatry Research, 54, 211-222.

Kring, A. M., & Bachorowski, J. (1999). Emotions and psychopathology. Cognition and Emotion, 13(5), 575-599.

Krystal, H, (1979). Alexithymia and psychopatherapy. American Journal of Psychotherapy, 33, 17-31.

Kuiper, N. A. McKee, M., Kazarian, S. S. & Olinger, J. L. (2000). Social perceptions in psychiatric inpatients: Relations to positive and negative affect labels. Personality and Individual Differences, 29(3), 479-493.

Lahey, B. B., Applegate, B., Greenhill, L., McBurnett, K., Garfinkel, B., Newcorn, J., Jensen, P., Richters, J., Hynd, G. H., Ollendick, T., Barkley, R., Hart, E. L., Perez, D., Waldman, I., & Shaffer, D. (1994). DSM-IV field trials for oppositional defiant disorder and conduct disorder in children and adolescents. American Journal of Psychiatry, 151, 1163-1171.

Lane, R. D., Merikangas, K. R., Schwartz, G. E., Huang, S. S. et al. (1990). Inverse relationship between defensiveness and lifetime prevalence of psychiatric disorder. American Journal of Psychiatry, 147(5), 573-578.

Larson, R., & Ham, M. (1993). Stress and "storm and stress" in early adolescence: The relationship of negative events with dysphoric affect. Developmental Psychology, 29 (1), 130-140.

Larson, R. (1989). Beeping children and adolescents: A method for studying time use and daily experience. Journal of Youth and Adolescence, 18, 511-530.

Larson, R., & Lampman-Petraitis, C. (1989). Daily emotional states as reported by children and adolescents. Child Development, 60, 1250-1260.

Lazarus, R. S. (1982). Thoughts on the relations between emotion and cognition. American Psychologist, 37, 1019-1024.

Leadbeater, B.J. Blatt, S.J. & Quinlan, D.M. (1995). Gender-linked vulnerabilities to depressive symptoms, stress and problem behaviors in adolescents. Journal of Research on Adolescence, 5(1), 1-29.

Lee, M., & Prentice, N. M. (1988). Interrelations of empathy, cognition, and moral reasoning with dimensions of juvenile delinquency. Journal of Abnormal Child Psychology, 16, 127-139.

Legree, P. J. (1995). Evidence for an oblique social intelligence factor established with a likert-based testing procedure. Intelligence, 21, 247-266.

Lenhart, L. A., & Rabiner, D. L. (1995). An integrative approach to the study of social competence in adolescence. Development and Psychopathology, 7(3), 543-561.

Lennon, R., & Eisenberg, N. (1987). Gender and age differences in empaty and sympathy. In N. Eisenberg & J. Strayer (Eds.), Empathy and its development (pp. 195-217). Cambridge, England: Cambridge University Press.

Lenssen, S. A., T. A. H., Doreleijers., van Dijk, M. E., & Hartman, C. A. (2000). Girls in detention: What are their characteristics? A project to explore and document the character of this target group and the significant ways in which it differs from one consisting of boys. Journal of Adolescence, 23, 287-303.

Lewis, M. (2000). The emergence of human emotions. In M Lewis & J. M. Haviland-Jones, (Eds), Handbook of emotions, second edition, (pp. 265-280). New York: Guilford Press.

Lewis, M., & Haviland-Jones, J. (2000). Handbook of emotions, second edition. New York: Guilford Press.

Liau, Al. K., Barriga, A. Q., & Gibbs, J. (1998). Relations between self-serving cognitive distortions and overt vs. covert antisocial behavior in adolescents. Aggressive Behavior, 24, 335-346.

Linden, W., Lenz, J., & Stossel, C. (1996). Alexithymia, Defensiveness, and cardiovascular reactivity to stress. Journal of Psychosomatic Research, 41, 575-583.

Liska, A. E. (1974). Causal structures underlying the relationship between delinquent involvement and delinquent peers. Sociology and Social Research, 59, 23-26.

Lochman, J. E., & Dodge, D. A. (1994). Social-cognitive processes of severely violent, moderately aggressive and non-aggressive boys. Journal of Consulting and Clinical Psychology, 62(2), 366-374.

Loeber, R., & Farrington, D. (Eds.), (1998). Serious and violent juvenile offenders. London: Sage Publications.

Loeber, R., & Farrington, D. (Eds.), (1998). Serious and violent juvenile offenders. London: Sage Publications.

Loeber, R., Farrington, D. P., Stouthamer, L., & Van-Kammen, W. B. (1998). Multiple risk factors for multiproblem boys: Co-occurrence of delinquency, substance use, attention deficit, conduct problems, physical aggression, covert behavior, depression mood, and shy/withdrawn behavior. In R. Jessor (Ed.), New perspectives on adolescent risk behavior (pp. 564-575). New York: Cambridge University press.

Loeber, R., Farrington, D., & Waschbusch, D. (1998). Serious and violent juvenile offenders. In R. Loeber and D. Farrington's (Eds.), Serious and violent juvenile offenders (pp. 13-29). London: Sage Publications.

Loeber, R., & Keenen, K. (1994). Interaction between conduct disorder and its comorbid conditions: Effects of age and gender. Clinical Psychology Review, 14, 497-523.

Luthar, S. S. (1991). Vulnerability and resilience: A study of high-risk adolescents. Child Development, 62, 600-616.

Luthar, S. (1997). Sociodemographic disadvantage and psychosocial adjustment: Perspectives from developmental psychopathology. In Luthar, Suniya S. (Ed); Burack, Jacob A. (Ed); Developmental psychopathology: Perspectives on adjustment, risk, and disorder. (pp. 459-485). New York, NY, US: Cambridge University Press; New York

Luthar, S., & Burack, J. (1997). Introduction. In Luthar, Suniya S. (Ed); Burack, Jacob A. (Ed); Developmental psychopathology: Perspectives on adjustment, risk, and disorder. (pp. 459-485). New York, NY, US: Cambridge University Press; New York

Luthar, S., Cushing, G., & Rounsaville, B. J. (1996). Gender differences among opioid abusers: Pathways to disorder and profiles of psychopathology. Drug and Alcohol Dependence, 43, 179-189.

Luthar, S., & Zigler, E. (1992). Intelligence and social competence among high-risk adolescents. Development and Psychopathology, 4(2), 287-299.

MacLeod, A. K., Byrne, A., & Valentine, J. D. (1996). Affect, emotional disorder, and future directed thinking. Cognition and Emotion, 10(1), 69-85.

Maccoby, E. E., & Jacklin, C. N. (1974). The psychology of sex differences. Stanford, CA: Stanford University Press.

Manolis, M. B. (1999). The roles of gender and negative affect in peer interactions of young adolescents. Unpublished dissertation.

Mayer, J. D., Caruso, D. R., Formica, S., & Salovey, P. (2000). Unpublished manuscript. (MCFS).

Mayer, J.D., Caruso, D.R., Salovey, P. (1999). Emotional intelligence meets standards for a traditional intelligence. Intelligence, 27, 267-298.

Mayer, J. D., Caruso, D. R., & Salovey, P. (2000). Emotional intelligence meets traditional standards for an intelligence. Intelligence, 27, 267-298.

Mayer, J. D., DiPaolo, M., & Salovey, P. (1990). Perceiving the affective content in ambiguous stimuli: A component of emotional intelligence. Journal of Personality Assessment, 50, 772-781.

Mayer, J. D., & Geher, G. (1996). Emotional intelligence and the identification of emotion. Intelligence, 22, 89-113.

Mayer, J. D., & Salovey, P. (1993). The intelligence of emotional intelligence. Intelligence, 17, 17-433-442.

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P Salovey & D Sluyter's (Eds.), Emotional development and emotional intelligence: Educational implications (pp. 3-31). New York: Basic Books.

Mayer, J. D., Salovey, P., & Caruso, D. R. (1997). Emotional IQ test. [CD-ROM]. Needham, MA: Virtual Knowledge [Producer and Distribut].

Mayer, J. D., Salovey, P., & Caruso, D. R. (1997). Adolescent multifactor emotional intelligence scale. Available from the authors.

Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G. (2001). Emotional intelligence as a standard intelligence. (Under review).

Mayer, J. D., & Stevens, A. (1994). An emerging understanding of the reflective (meta-) experience of mood. Journal of Research in Personality, 28, 351-373.

Mears, D. P., & Ploeger, M., et al. (1998). Explaining the gender gap in delinquency: Peer influence and moral evaluations of behavior. Sex Differences, 35(3), 251-267.

Mehrabian, A. (2000). Beyond IQ: Broad-based measurement of individual success potential or "emotional intelligence". Genetic, social, and General psychology Monographs, 126(2), 133-239.

Mehrabian, A., & Epstein, W. A. (1972). A measure of emotional empathy. Journal of Personality, 40, 523-543.

Miller, P., & Eisenberg, N. (1988). The relation of empathy to aggressive and externalizing/antisocial behavior. Psychological Bulletin, 103, 324-344.

Mora, G., & Brand, J. (1970). Psychiatry and its history. Springfield, IL: Charles C. Thomas.

Moretti, M., Lessard, J., Wiebe, V., & Reebye, P. (1996). Comorbidity in adolescents with conduct disorder: The gender paradox. Unpublished manuscript.

Noam, G.G. (1998). Solving the ego development – mental health riddle. In P.M. Westenberg, A. Blasi, & L. Cohn's (Eds.), Personality Development (pp. 271-295). New Jersey: Erlbaum.

Noam, G.G. (1992). Development as the aim of clinical intervention. Development and Psychopathology, 4, 679-696.

Noam, G.G., Chandler, M., & LaLonde, C. (1995). Clinical-developmental psychology: Constructivism and social cognition in the study of psychological dysfunction. In D. Cicchetti & D.J. Cohen (Eds.), Developmental psychopathology: Theory and methods (Vol.1, pp. 424-464). New York: Wiley.

Noam, G. G., Kilburn, D., & Ammen-Elkins, G. (1989). Adolescent development and psychiatric symptomatology. McLean Hospital Report, 4, 89-102.

Noam, G.G., Paget, K., Valiant, G., Borst, S., & Bartok, J. (1994). Conduct and affective disorders in developmental perspective: A systematic study of adolescent psychopathology. Development and Psychopathology, 6, 519-532.

Olweus, D. (1979). Stability of aggressive reaction patterns in males: A review. Psychological Bulletin, 86, 852-875.

Otto, R. K., Greenstein, J.J., and Friedman, R. M. (1992). Prevalence of mental disorders in the juvenile justice system. In J. J. Cocozza (Eds.), Responding to the mental health needs of youth in the juvenile justice system (pp.7-26). Seattle, WA: The National Coalition for the Mentally Ill in the Criminal Justice System.

Paget, K. F., Noam, G. G., & Borst, S. R., & Bartok, J. (1990). Ego development, psychiatric diagnoses, and gender in adolescence: A developmental psychopathology study. Paper presented at the meeting of the American Psychological Society, Dallas.

Parker, J. D., Bagby, R. M., & Taylor, G. J. (1989). Toronto Alexithymia Scale, EPQ and self-report measures of somatic complaints. Personality and Individual Differences, 10. 599-604.

Paulhaus, D. L., Lysy, D. C., & Yik, M. S. M. (1998). Self-report measures of intelligence: Are they useful as proxy IQ tests? Journal of Personality, 66, 525-554.

Pedhazur, E. J. (1982). Multiple regression in behavioral research (2nd ed.). New York: Holt, Rinehart & Winston.

Pellitteri, J. (1999). The relationship between emotional intelligence, cognitive reasoning, and defense mechanisms. Unpublished doctoral dissertation. New York University, New York.

Pepler, D. J., & Sedighdeilami, F. (1998). Aggressive girls in Canada. Working paper series for Human Resources Development Canada. (W-98-30E).

Petersen, A. C., Compas, B. E., & Brooks-Gunn, J. (1992). Depression in adolescence: Current knowledge, research directions, and implications or programs and policy. Working Paper for the Carnegie Council on Adolescent.

Peterson, A. C., Kennedy, R. E., & Sullivan, P. (1991). Coping with adolescence. In M. E., Colten & S. Gore (Eds.), Adolescent stress: Causes and consequences (pp. 93-110). Hawthorne, NY: Aldine de Gruyter.

Pope, A. W., & Bierman, K. L. (1999). Predicting adolescent peer problems and antisocial activities: The relative roles of aggression and dysregulation. Developmental Psychology, 35(2), 335-346.

Pope, A. W., Bierman, K. L., & Mumma, G. H. (1991). Aggression, hyperactivity, and inattention-immaturity: Behavioral dimensions associated with peer rejection in elementary school boys. Developmental Psychology, 27, 663-671.

Quay, H. C., & Parsons, L. B. (1971). The differential behavioral classification of the juvenile offender (2nd ed.). Washington, DC: Bureau of Prisons, US Department of Justice.

Richman, N., Stevenson, J., & Graham, P. J. (1982). Preschool to school: A behavioral study. London: Academic Press.

Rierdan, J. (1998). Ego development, pubertal development and depressive symptoms in adolescent girls. In P.M. Westenberg, A. Blasi, & L. Cohn's (Eds.), Personality Development (pp. 253-269). New Jersey: Erlbaum.

Rierdan, J., & Koff, E. (1993). Developmental variables in relation to depressive symptoms in adolescent girls. Development and Psychopathology, 5, 485-496.

Riffel, E., & Ozgood, B. (1992). [Provincial resource program's profile of the young offender]. Unpublished raw data.

Robins, L. N. (1986). Conduct Disorder. Journal of Child Psychology and Psychiatry, 32, 193-212.

Robinson, L. H., & Schonert-Reichl, K. A. (2001). Gender differences in the relation of social cognition to psychopathology during adolescence. Paper presented at the bi-annual meeting of the Jean Piaget Society, Berkley, California.

Rogers, A.G. (1998). Understanding changes in girls' relationships and in ego development: Three studies of adolescent girls. In P.M. Westenberg, A. Blasi, & L. Cohn's (Eds.), Personality Development (pp. 253-269). New Jersey: Erlbaum.

Rosenthal, R., Hall, J. A., DiMatteo, M. R., Rogers, P., & Archer, D. (1979). Sensitivity to nonverbal communication: A profile approach to the measurement of individual differences. Baltimore: John Hopkins University Press.

Rubin, M. M. (1999). Emotional intelligence and its role in mitigating aggression: A correlational study of the relationship between emotional intelligence and aggression in urban adolescents. Unpublished doctoral dissertation, Immaculata College, Immaculata, PA.

Rutter, M. (1980). Changing youth in a changing society. Cambridge, MA: Harvard University Press.

Rutter, M. (1989). Pathways from childhood to adult life. Journal of Child Psychology and Psychiatry, 30, 25-31.

Rutter, M & Garmezy, N. (1983). Developmental Psychopathology. In Mussen's Handbook of Child Psychology, E. M. Hetherington (Sec Ed.), Socialization, personality and social development, Vol. 4 (pp. 775-911). New York: John Wiley & Sons.

Rutter, M., & Giller, H. (1983). Juvenile delinquency: Trends and perspectives. Harmondsworth: Penguin.

Safran, J. D., & Greenberg, L., S. (Eds.). (1991). Emotions, psychotherapy, and change. New York: Guilford Press.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. Intelligence, 9(3), 185-211.

Salovey, P., Bedell, B., Detweiler, J., & Mayer, J. (2000). In M Lewis & J. M. Haviland-Jones, (Eds), Handbook of emotions, second edition (504-522). New York: Guilford Press.

Saner, H., & Ellickson, P. (1996). Concurrent risk factors for adolescent violence. Journal of Adolescent Health, 19, 94-103.

Schonert, K. A., & Cantor, G. (1991). Moral reasoning in behaviorally disordered adolescents from alternative and traditional high schools. Behavioral Disorders, 17, 23-35.

Schonert-Reichl, K. A. (1993). Empathy and social relationships in adolescents with behavioral disorders. Behavioral Disorders, 18, 189-204.

Schonert-Reichl, K. A. (1994). The interrelations of moral reasoning, empathy, and age among adolescents with behavioral disorders. B. C. Journal of Special Education, 18, 248-262.

Schonert-Reichl, K. A., & Beaudoin, K. A. (1998). Social cognitive development and psychopathology during adolescence. In R. Muuss & H. Porton's (Eds.), Adolescent behavior and society: A book of readings (pp. 368-375). New York: McGraw-Hill.

Schonert-Reichl, K.A., & Offer, D. (1992). Gender differences in adolescent symptoms. In B. Lahey & A. Kazdin's (Eds.), Advances in Clinical Psychology, Volume 14. New York: Plenum.

Selman, R. L. (1981). The development of interpersonal competence: The role of understanding in conduct. Developmental Review, 1, 401-422.

Sexton, M. C., Sunday, S. R., Hurt, S., & Halmi, K. A. (1998). The relationship between alexithymia, depressin, and Axis II psychopathology in eating disorder inpatients. International Journal of Eating Disorders, 23(3), 277-286.

Sifneos, P. E. (1967). The prevalence of alexithymic characteristics in psychosomatic patients. Psychotherapy and Psychosomatics, 22, 255-262.

Sifneos, P. E. (1988). Alexithymia and its relationship to hemispheric specialization, affect, and creativity. Psychiatric Clinics of North America, 11(3), 287-292.

Skinner, B. F. (1953). Science and human behavior. New York: Macmillan.

Slaby, G. R., & Guerra, N. G. (1988). Cognitive mediators of aggression in adolescent offenders, 1: assessment. Developmental Psychology, 24, 580-588.

Smetana, J. G. (1990). Morality and conduct disorders. In M. Lewis & S. M. Miller (Eds.), Handbook of developmental psychopathology (pp.157-178). New York: Plenum.

Snyder, J., Dision, T. J., & Patterons, G. R. (1986). Determinants and consequences of associated with deviant peers during preadolescence and adolescence. Journal of Early Adolescence, 6, 29-43.

Solicitor General of Canada. (1986). The Young Offenders Act: Highlights. Ottawa: Supply and Services Canada.

Sosik, J. J., & Megerian, L. E. (1999). Understanding leader emotional intelligence and performance: The role of self-other agreement of transformational leadership perceptions. Group and Organization Management, 24(3), 367-390.

Strayer, J. (1993). Children's concordant emotions and cognitions in response to observed emotions. Child Development, 64, 188-201.

Steffensmeier, D., & Allan, E. A. (1995). Age-inequality and property crime: The effects of age-linked stratification and status-attainment processes on patterns of criminality across the life course. In J. Hagan & R. D. Peterson (Eds.), Crime and inequality (pp. 95-115). Stanford, CA: Stanford University Press.

Stevens, J. (1992). Applied multivariate statistics for the social sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Sullivan, A. K. (1999). The emotional intelligence scale for children. Unpublished dissertation.

Synder, H. N., Sickmund, M., & Poe-Yamagata, E. (1996). Juvenile offenders and victims: 1996 update of violence. Bureau of Justice Statistics, Sourcebook of Criminal Justice Statistics 1996 (pp.1-32). Washington, DC: US Depatment of Justice, Office of Juvenile Justice and Delinquency Prevention.

Tabechnick, B., & Fidell, L. S. (1989). Using multivariate statistics (2nd ed.). New York: Harper-Collins.

Taylor, G. J. (1994). The alexithymia construct: Conceptualization, validation, and relationship with basic dimensions of personality. New Trends in Experimental and Clinical Psychiatry, 10(2), 61-74.

Taylor, G. J., Bagby, R. M., & Parker, J. D. (1991). The alexithymia construct: A potential paradigm for psychosomatic medicine. Psychosomatics, 32(2), 153-164.

Tellegen, A. (1985). Structures of mood and personality and their relevance to assessing anxiety, with an emphasis on self-report. In A. H. Tuma & J. D. Maser (Eds.), Anxiety and the anxiety disorders (pp. 681-706). Hillsdale, NJ: Erlbaum.

TIME. (October 2, 1995). [Cover]. New York: Time Warner.

Tomkins, S. (1962). Affect, imagery, consciousness: Vol. I. The positive affects. Berlin: Springer.

Trevethan, S., & Walker, L. (1989). Hypothetical versus real-life moral reasoning among psychopathic and delinquent youth. Development and Psychopathology, 1(2), 91-103.

Turiel, E. (1978). A comparative analysis of moral knowledge and moral judgment in males and females. Journal of Personality, 44(2), 195-208.

Viemero, V. (1992). Antecedents of the development of adolescent antisocial and criminal behavior. In A. Fraczek & H. Zumkley (Eds.), Socialization and Aggression (pp. 171-185). Berlin: Springer-Verlag.

Watson, D. (1988). Intraindividual and interindividual analyses of positive and negative affect: Their relation to health complaints, perceived stress, and daily activities. Journal of Personality and Social Psychology, 54(6), 1020-1030.

Watson, D., & Clark, L. A. (1984). Negative Affectivity: The disposition to experience aversive emotional states. Psychological Bulletin, 96, 465-490.

Watson, D., Clark, L. A., & Carey, G. (1988). Positive and negative affectivity and their relation to anxiety and depressive disorders. Journal of Abnormal psychology, 97(3), 346-353.

Watson, D., Clark, L. A., & Tellegen, A. (1984). Cross-cultural convergence in the structure of mood: A Japanese replication and a comparison with U.S. findings. Journal of Personality and Social Psychology, 47, 127-144.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of Positive and Negative Affect: The PANAS Scales. Journal of Personality and Social Psychology, 54, 1063-1070.

Walker, R. E., & Foley, J. M. (1973). Social intelligence: Its history and measurement. Psychological Reports, 33, 839-864.

Webster-Stratton, C. (1996). Early-onset conduct problems: Does gender make a difference? Journal of Consulting and Clinical Psychology, 64, 540-551.

Werner, E.E. & Smith, R.S. (1982). Vulnerable but invincible: A longitudinal study of resilient children and youth. New York: McGraw-Hill.

Wilson, J. Q., & Herrnstein, R. J. (1985). Crime and human nature. New York: Simon and Schuster.

Wohlwill, J. F. (1973). The study of behavioral development. New York: Academic Press.

Young, P. T. (1943). Emotion in man and animal; its nature and relation to attitude and motive. NY: Wiley.

Zahn-Waxler, C., Cole, P. M., Richardson, D. T., Friedman, R. J., Michel, M. K., & Belouad, F. (1994). Social problem solving in disruptive preschool children: Reactions to hypothetical situations of conflict and distress. Merrill-Palmer Quarterly, 40, 98-119.

Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. American Psychologist, 35(2), 151-175.

Zevon, M. A., & Tellegen, A. (1982). The structure of mood change: An idiographic/nomothetic analysis. Journal of Personality and Social Psychology, 43(1), 111-122.

Zigler E., & Glick, M. (1986). Premorbid social competence and psychiatric outcome in male and female nonschizophrenic patients. Journal of consulting and Clinical Psychology, 54(3), 402-403.

Zoccolillo, M. (1993). Gender and the development of conduct disorder. Development and Psychopathology, 5, 65-78.

Appendix A

Demographic Questionnaire

TELL US ABOUT YOURSELF

We are interested in learning a little bit about your background. Please follow the directions carefully and answer **ALL** of the questions. *** Remember, your answers will remain private and will only be seen by the researcher***

1. Are you male or female? **(CHECK ONE)** _ Male _____ Female

2. How old are you? _____(Years)

3. What is your birthdate? _____/_____/_____
   (Month) (Day) (Year)

4. What grade are you in this year? _____

5. Which of these adults do you live with most of the time?

_____ Both my parents
_____ My mother only
_____ My father only
_____ Both my parents (2 houses) – they are divorced and have joint custody
_____ My mother and stepfather
_____ My father and stepmother
_____ Grandmother and/or Grandfather
_____ other adults (For example, aunt, foster care, uncle, mom's boyfriend etc.)
Please explain:_____
_____ No place to live right now.

6. Have you ever lived in foster care? _____Yes _____No

If yes, how many different placements (different people / families) have you lived with?

_____1-2
_____3-5
_____6-10
_____10+

7. Are the natural parents who gave birth to you:

_____ still married and living together
_____ separated or divorced
_____ one or both of your natural parents has died (indicate who): _____
_____ natural parents were never married

8. How many older and younger brothers and sisters do you have? **(Indicate a number for each)**

_____ Older brother(s)
_____ Younger brother(s)
_____ Older sister(s)
_____ Younger sister(s)

How many older and young step-brothers and sisters do you have?
_____ Older step-brother(s)
_____ Young step-brother(s)
_____ Older step-sister(s)
_____ Younger step-sister(s)

9. How much education does your father (stepfather, male guardian) have? **(Check one)**

_____ some high school
_____ graduated from high school
_____ vocational or technical school
_____ some college
_____ graduated from university
_____ attended graduate school (for example, to be doctor, lawyer or teacher)
_____ don't know

10. What is your father's (or male guardian's) job? **(DESCRIBE THE KIND OF WORK HE DOES. PLEASE BE SPECIFIC)**

_____

11. How much education does your mother (stepmother, female guardian) have? **(Check One)**

_____ some high school
_____ graduated from high school
_____ vocational or technical school
_____ some college
_____ graduated from university
_____ attended graduate school (for example, to be doctor, lawyer or teacher)
_____ don't know

12. What is your mother's (or female guardian's) job? **(DESCRIBE THE KIND OF WORK SHE DOES. PLEASE BE SPECIFIC)**

_____

13. How do you describe yourself in terms of cultural or ethnic heritage? **(Check One). If you are of mixed heritage, check "other" and explain in the space provided.**

___ Canadian	___ East Indian	___ French
___ Native / Aboriginal	___ German	___ Scottish
___ Metis	___ Dutch	___ Portuguese
___ Italian	___ Persian	___ Jewish
___ Ukrainian	___ British	___ Filipino
___ Greek	___ Hispanic	___ Chinese
___ Irish	___ Japanese	___ American
___ Vietnamese	___ Polish	

___ Other ethnic or cultural group(s), please specify: _____

___ I do not belong to an ethnic or cultural group

14. How comfortable do you feel reading English (circle one)

NOT AT ALL OMFORTABLE		***SOMEWHAT COMFORTABLE***		***VERY COMFORTABLE***
1	2	3	4	5

15. What language(s) do you speak at home? _____

16. Where were you born? (Name Country) _____

If you were born outside of Canada how many years have you lived in Canada? _____

17. Have you ever been arrested and convicted of a crime? **(Check One).**

_____ Yes

_____ No

Appendix B

Quick Word Test (QWT; Borgatta and Corsini, 1960)

Directions: From the four choices given for each question, circle the word that means the same as the first word. If you do not know the answer, GUESS. Work quickly and ANSWER ALL THE QUESTIONS.

EXAMPLE:

happy	dull	seam	glad	fast

1. nouch	sack	lean	flag	toss	**26. rouse**	bird	wood	wake	fall
2. drink	wink	rain	tope	edge	**27. agile**	teen	leap	deft	reed
3. frizz	cool	sear	hall	haul	**28. shore**	bank	true	land	trim
4. hasty	tart	mean	rash	rich	**29. orbit**	site	chew	herb	path
5. stout	tall	bold	ugly	mete	**30. adorn**	gold	gild	gilt	barb
6. strip	peel	cash	rope	hula	**31. rhyme**	hoar	skin	song	poem
7. newel	post	raid	ally	moan	**32. sober**	weep	wash	dirk	cool
8. salve	salt	work	find	ease	**33. aloft**	cool	high	room	barn
9. rinse	soap	wash	soar	dash	**34. right**	turn	true	road	hand
10. watch	tick	bolt	tend	grab	**35. check**	book	menu	curb	toss
11. pluck	bite	drum	fowl	pick	**36. rivet**	flow	tray	bolt	part
12. eject	emit	cart	oust	rush	**37. haunt**	lair	hush	wild	home
13. jetty	pier	tide	crag	fast	**38. spawn**	eggs	loan	yard	bold
14. relic	lean	bite	hang	ruin	**39. weary**	pine	mesh	lime	tire
15. order	cash	beat	rank	send	**40. knave**	apse	ship	mall	jack
16. teepee	tent	warm	swim	riot	**41. dwarf**	pier	spin	tree	runt
17. ashen	pale	coal	dark	sick	**42. incur**	dose	wolf	meet	hurt
18. alibi	read	true	base	plea	**43. sieve**	many	sift	rain	surf
19. booth	pick	shed	twin	lave	**44. humid**	damp	male	plot	mist
20. suave	oily	leak	hero	prig	**45. evade**	foil	raid	sway	trim
21. noose	hand	loop	nose	flay	**46. strut**	step	cord	play	twig
22. mince	step	cake	chop	meat	**47. chill**	drag	lean	ague	felt
23. admit	gate	send	omit	avow	**48. guise**	male	rope	fast	form
24. imply	hint	joke	flat	full	**49. lunge**	jerk	leap	pull	pass
25. maize	stun	game	trap	corn	**50. drill**	bore	work	push	dell

Appendix C

Adolescent Multifactor Emotional Intelligence Scale (AMEIS; Mayer, Salovey, & Caruso, 1997)

MULTIFACTOR EMOTIONAL INTELLIGENCE SCALE / Student Version

(Ver 3.0)

Please attach this cover sheet to all copies of the MEIS™.)

INSTRUCTIONS

There are several different parts to this research survey. Each part has its own instructions. Try your best, but don't spend too much time answering these questions. Unless the instructions say otherwise, there is no single correct answer for these problems. Use your judgment, make your best guesses, and have fun with this!

SECTION 1, PART 1

Instructions **- In this part, you will see a face. Look at it and then indicate the feelings in the face. You will indicate the emotions which you believe are in each face using the terms below. You may select any of the five boxes, for EACH emotion.**

Here is an example:

	NOT PRESENT				*DEFINITELY PRESENT*
Anger	1	2	3	4	5
Sadness	1	2	3	4	5
Happiness	1	2	3	4	5
Disgust	1	2	3	4	5
Fear	1	2	3	4	5
Surprise	1	2	3	4	5

This is a *happy* face, so you would say "5" to happiness. Now, using the ***Pictures Booklet***, rate each Face on **EACH** emotion. Do the best you can and have fun with the questions. Please CIRCLE your answers.

Please look at **FACE 1** and indicate the feeling in the face – please indicate a rating for EVERY EMOTION

	NOT PRESENT				DEFINITELY PRESENT
Anger	1	2	3	4	5
Sadness	1	2	3	4	5
Happiness	1	2	3	4	5
Disgust	1	2	3	4	5
Fear	1	2	3	4	5
Surprise	1	2	3	4	5

Please look at **FACE 2** and indicate the feeling in the face – please indicate a rating for EVERY EMOTION

	NOT PRESENT				DEFINITELY PRESENT
Anger	1	2	3	4	5
Sadness	1	2	3	4	5
Happiness	1	2	3	4	5
Disgust	1	2	3	4	5
Fear	1	2	3	4	5
Surprise	1	2	3	4	5

Please look at **FACE 3** and indicate the feeling in the face – please indicate a rating for EVERY EMOTION

	NOT PRESENT				DEFINITELY PRESENT
Anger	1	2	3	4	5
Sadness	1	2	3	4	5
Happiness	1	2	3	4	5
Disgust	1	2	3	4	5
Fear	1	2	3	4	5
Surprise	1	2	3	4	5

Please look at **FACE 4** and indicate the feeling in the face – please indicate a rating for EVERY EMOTION

	NOT PRESENT				DEFINITELY PRESENT
Anger	1	2	3	4	5
Sadness	1	2	3	4	5
Happiness	1	2	3	4	5
Disgust	1	2	3	4	5
Fear	1	2	3	4	5
Surprise	1	2	3	4	5

Please look at **FACE 5** and indicate the feeling in the face – please indicate a rating for EVERY EMOTION

	NOT PRESENT				DEFINITELY PRESENT
Anger	1	2	3	4	5
Sadness	1	2	3	4	5
Happiness	1	2	3	4	5
Disgust	1	2	3	4	5
Fear	1	2	3	4	5
Surprise	1	2	3	4	5

Please look at **FACE 6** and indicate the feeling in the face – please indicate a rating for EVERY EMOTION

	NOT PRESENT				DEFINITELY PRESENT
Anger	1	2	3	4	5
Sadness	1	2	3	4	5
Happiness	1	2	3	4	5
Disgust	1	2	3	4	5
Fear	1	2	3	4	5
Surprise	1	2	3	4	5

Please look at **FACE 7** and indicate the feeling in the face – please indicate a rating for EVERY EMOTION

	NOT PRESENT				DEFINITELY PRESENT
Anger	1	2	3	4	5
Sadness	1	2	3	4	5
Happiness	1	2	3	4	5
Disgust	1	2	3	4	5
Fear	1	2	3	4	5
Surprise	1	2	3	4	5

Please look at **FACE 8** and indicate the feeling in the face – please indicate a rating for EVERY EMOTION

	NOT PRESENT				DEFINITELY PRESENT
Anger	1	2	3	4	5
Sadness	1	2	3	4	5
Happiness	1	2	3	4	5
Disgust	1	2	3	4	5

Fear	1	2	3	4	5
Surprise	1	2	3	4	5

SECTION 1, PART 4

INSTRUCTIONS: **In this section, you will read a brief story. After you read the story, you will indicate how the person in the story is feeling.**

You will indicate the emotions, which are present in each story. You may select any of the five boxes, for <u>EACH</u> emotion. EACH STORY LISTS DIFFERENT EMOTIONS.

1. *This story comes from a middle-aged man.* It was my birthday a few days ago. I just got off the phone with a good friend of mine and we got to talking about age, getting old and our dreams. He made me feel good by reminding me of all the positive stuff which has been going on in my life and how I actually have been living some of my dreams. A few years ago, things were more difficult and I was going through many changes in my life. So, I'm just thinking about what he said, and realizing that I've worked very hard to get where I am right now. And I like where I am, I like it a lot. ***Indicate the emotions the person telling the story was feeling – INDICATE A RATING FOR EVERY EMOTION.***

	NOT PRESENT				*DEFINITELY PRESENT*
Envious	1	2	3	4	5
Lively	1	2	3	4	5
Ashamed	1	2	3	4	5
Calm	1	2	3	4	5
Accepting	1	2	3	4	5
Energetic	1	2	3	4	5
Happy	1	2	3	4	5

2. *This story comes from a 64 year old woman.* I visit my mother regularly even though I find the visits very difficult. Any attempt to talk to my mother is frustrating because she is not logical and is also very stubborn. She is very depressed but will not change anything. I never did get along with her and I am resentful that I have to spend time with her. Today, I visited my grandchildren who have been sick. I very much enjoy being with my grandchildren. But I get upset because my daughter's house is so disorganized, and she gets harried and impatient with the children. *Indicate the emotions the person telling the story was feeling:* ***Indicate a rating for every emotion***

	NOT PRESENT				DEFINITELY PRESENT
Ashamed	1	2	3	4	5
Accepting	1	2	3	4	5
Fearful	1	2	3	4	5
Depressed	1	2	3	4	5
Frustrated	1	2	3	4	5
Loving	1	2	3	4	5
Sad	1	2	3	4	5

3. *This story comes from an 11 year old girl.* I don't feel like practicing the violin. My dad said that I have to, but then he asked me to do something else. That's good, because I hate to practice. I'll do the other chore my dad asked me to do so that I can delay practicing. My brother plays piano but my parents don't make him practice like I have to. **INDICATE A RATING FOR EVERY EMOTION.**

	NOT PRESENT				DEFINITELY PRESENT
Angry	1	2	3	4	5
Happy	1	2	3	4	5
Fearful	1	2	3	4	5
Surprised	1	2	3	4	5
Sad	1	2	3	4	5
Jealous	1	2	3	4	5
Ashamed	1	2	3	4	5

SECTION 1, PART 5

Instructions **- For this part, you create a mild emotion, which you then use to solve problems. The goal is NOT to generate strong emotions. You will be asked to imagine an event in the future that could make you feel a certain way. Then, while you are feeling that way, you will rate your feelings. Here is an example:**

Imagine something that might happen to you in the future that would make you feel a little happy. Imagine this happiness until you feel it mildly. Don't go overboard: just imagine enough to feel a little happy. Think about how you would feel by checking the appropriate box for each term.

People who are **happy** <u>may</u> indicate their feelings something like this:

WARM	1	2	3	4	5	COLD
BRIGHT	1	2	3	4	5	DIM

NOW YOU TRY:

For each of the following problems, indicate how you would feel on <u>EVERY</u> rating. Put an X in the box to show your answers. If you have problems doing this, then just answer the questions as you think you would if you could really imagine the feeling. Try your best. Just imagine the feeling and then answer the questions.

1. Imagine an event that could make you feel somewhat **jealous**. Imagine this event until you feel mildly jealous. Now, describe your feelings on **<u>EACH</u>** of the following by putting an X in the appropriate box. **INDICATE A RATING FOR EVERY TERM!**

warm	1	2	3	4	5	cold

dark	1	2	3	4	5	light
low	1	2	3	4	5	high
orange	1	2	3	4	5	blue
fast	1	2	3	4	5	slow
sharp	1	2	3	4	5	dull
pleasant	1	2	3	4	5	unpleasant
good	1	2	3	4	5	bad
sweet	1	2	3	4	5	sour
yellow	1	2	3	4	5	purple

2. Imagine an event that could make you feel somewhat **embarrassed**. Imagine this event until you feel mildly embarrassed. Now, describe your feelings on **EACH** of the following by putting an X in the appropriate box. **INDICATE A RATIG FOR EVERY TERM!**

warm	1	2	3	4	5	cold
dark	1	2	3	4	5	light
low	1	2	3	4	5	high
orange	1	2	3	4	5	blue
fast	1	2	3	4	5	slow
sharp	1	2	3	4	5	dull
pleasant	1	2	3	4	5	unpleasant
good	1	2	3	4	5	bad
sweet	1	2	3	4	5	sour
yellow	1	2	3	4	5	purple

3. Imagine an event that could make you feel **content and satisfied**. Imagine this event until you feel content and satisfied. Now, describe your feelings on **EACH** of the following by putting an X in the appropriate box. **INDICATE A RATING FOR EVERY TERM!**

warm	1	2	3	4	5	cold
dark	1	2	3	4	5	light

low	1	2	3	4	5	high
orange	1	2	3	4	5	blue
fast	1	2	3	4	5	slow
sharp	1	2	3	4	5	dull
pleasant	1	2	3	4	5	unpleasant
good	1	2	3	4	5	bad
sweet	1	2	3	4	5	sour
yellow	1	2	3	4	5	purple

4. Imagine an event that could make you feel somewhat **nervous**. Imagine this event until you feel mildly nervous. Now, describe your feelings on **EACH** of the following by putting an X in the appropriate box. **INDICATE A RATING FOR EVERY TERM!**

warm	1	2	3	4	5	cold
dark	1	2	3	4	5	light
low	1	2	3	4	5	high
orange	1	2	3	4	5	blue
fast	1	2	3	4	5	slow
sharp	1	2	3	4	5	dull
pleasant	1	2	3	4	5	unpleasant
good	1	2	3	4	5	bad
sweet	1	2	3	4	5	sour
yellow	1	2	3	4	5	purple

5. Imagine an event that could make you feel **both somewhat surprised and somewhat displeased**. Imagine this event until you feel somewhat surprised and displeased. Now, describe your feelings on **EACH** of the following by putting an X in the appropriate box. **INDICATE A RATING FOR EVERY TERM!**

warm	1	2	3	4	5	cold
dark	1	2	3	4	5	light

low	1	2	3	4	5	high
orange	1	2	3	4	5	blue
fast	1	2	3	4	5	slow
sharp	1	2	3	4	5	dull
pleasant	1	2	3	4	5	unpleasant
good	1	2	3	4	5	bad
sweet	1	2	3	4	5	sour
yellow	1	2	3	4	5	purple

6. Imagine an event that could make you feel both **proud and calm.** Imagine this event until you feel both proud and calm. Now, describe your feelings on **EACH** of the following by putting an X in the appropriate box. **INDICATE A RATING FOR EVERY TERM!**

warm	1	2	3	4	5	cold
dark	1	2	3	4	5	light
low	1	2	3	4	5	high
orange	1	2	3	4	5	blue
fast	1	2	3	4	5	slow
sharp	1	2	3	4	5	dull
pleasant	1	2	3	4	5	unpleasant
good	1	2	3	4	5	bad
sweet	1	2	3	4	5	sour
yellow	1	2	3	4	5	purple

SECTION 1, PART 6

***Instructions* - You will see a story about two people. Then, you will be asked to indicate how the two people would feel. Try this example:**

John tells his friend Bill that he doesn't want to be friends anymore. Indicate how likely it would be for John and Bill to experience these emotions:

John may feel this way:

	EXTREMELY UNLIKELY				EXTREMELY LIKELY
Jealous or mad toward Bill	1	2	3	4	5
Just the same as always	1	2	3	4	5

Bill may feel this way:

	EXTREMELY UNLIKELY				EXTREMELY LIKELY
Frustrated toward John	1	2	3	4	5
Surprised about John	1	2	3	4	5

Now, you do these problems:

1. A dog is chasing sticks outside when he runs out in the street and gets hit by a car. The driver stops when the owner dashes over to check on the dog.

How would the owner of the dog feel? Rate **EVERY** answer by circling a number.

EXTREMELY	EXTREMELY UNLIKELY				LIKELY
ashamed about not being able to have better trained the dog	1	2	3	4	5
angry at themselves for their own carelessness	1	2	3	4	5
relieved that the dog, and not they, were hit	1	2	3	4	5
Challenged to protect other dogs from mishaps	1	2	3	4	5
angry at the dog for getting hurt	1	2	3	4	5

How would the driver of the car feel? Rate **EVERY** answer.

EXTREMELY	EXTREMELY UNLIKELY				LIKELY
Relief that it is only a dog	1	2	3	4	5
Afraid of what the owner might think of him or her	1	2	3	4	5
Happy that the car is old and that the damage doesn't make too much of a difference	1	2	3	4	5
Guilty for not being a more cautious driver	1	2	3	4	5
angry at the owner for allowing the dog to run loose	1	2	3	4	5

2. A 5 year old child is playing at the local park. When the parent looks up from her book, she notices several older children picking on her child. She runs over, scolds the other children and leads her child away. The parent of one of the older children is looking on.

How would the parent of the younger child feel? Rate **EVERY** answer by circling a number.

EXTREMELY UNLIKELY					*EXTREMELY LIKELY*
Embarrassed for her self that her child didn't handle the situation	1	2	3	4	5
Worried about what the other parent thinks of her	1	2	3	4	5
Angry at the older children	1	2	3	4	5
Angry at her own child for bothering her	1	2	3	4	5
Embarrassed for her child	1	2	3	4	5

How would the parent of the other child feel? Rate **EVERY** answer.

EXTREMELY UNLIKELY					*EXTREMELY LIKELY*
Embarrassed that her child had to be scolded	1	2	3	4	5
Worried that she can't control her child	1	2	3	4	5
Afraid of the way her child behaves	1	2	3	4	5
Proud that her child is strong and more independent than the young child	1	2	3	4	5
Angry at the other parent for yelling and making a fuss about ordinary childhood behavior	1	2	3	4	5

SECTION 1, PART 7

Instructions **- You will read about a situation involving another person or involving you. Your job is to indicate how effective or good each action listed for that story would be. For each action, CIRCLE the number which shows how bad or good the action is.**

1. You were hanging out talking with a bunch of people at school when one of your friends, not a best friend, insulted you in front of everyone else. It was a real put-down and there was no warning that your friend was upset with you. What do you do?

He/she made me very angry and really embarrassed. It would be best to say to him/her how upset I was.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIV
1	2	3	4	5

Hey, this stuff doesn't bother me. It's just not worth it. I'd go and play a game or something.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIV
1	2	3	4	5

That would be too much for me. I'd probably just insult him/her back, or say to him/her that he/she was being a real jerk.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

My friend must be upset at something that either I did, or happened to them. I'd probably ignore the outburst right now and talk to my friend later.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

2. You studied for a long time before the test. You studied on your own, but you also studied with a group of friends. You spent a whole lot of your time helping one friend in particular. The teacher just posted the grades for the test. You look down the list and find that the friend you spent so much time helping got an A, one of the highest grades. Your grade was B-, in the bottom half of the class.

That's the way things go at times. There isn't much to do, the test is over, so I would just forget about it and maybe call a friend or watch TV.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

I would be mad at myself for not doing better on the test but happy for my friend.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

I would be upset, and a little jealous. I'd think about why I didn't do as well as I thought I would and maybe talk to my teacher about it.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

This is really unfair. My friend could have cheated, and if they didn't they cheated me by making me spend time with them when I should have been studying myself.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

3. You want to listen to some music in your room, but you can't find the new tape you bought the other day. You spend about 30 minutes searching through your room, and you are positive that you had left the tape out on your shelf. Walking by your brother or sister's room, you see the tape on their bed. Just the other day, you had asked that your room be off-limits and that your stuff shouldn't be touched. Now, it's probably too late to listen to the music anyway.

I would be very mad and would tell them how angry I was. Maybe they were trying to get me, so I'd try and stay calm about it but still let them know how much time I wasted because of them.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

What a brat to do that, again! I would just storm in, grab the tape, and let them know how mad I was and then I'd get them in trouble with my parents.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

This would be really annoying. What a waste of time! After telling them off, I'd tell them that they better not to it again or they'll get into serious trouble.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

After getting the tape back, I'd go into my room and just blast the music.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

4. You're on the phone talking to a friend when your mother comes into your room. She looks pretty mad and starts to yell at you about how you never listen to her. Then, she says that you are not allowed to use the phone for three days. When you ask why, she says that you were supposed to clean up the mess you made on the kitchen table. You did clean it up, but unknown to you, a sibling took all of the stuff out of closet and made a huge mess.

This is just another day, and I wouldn't really think about this right now. It really is not worth the bother. Maybe I would just call my friend back.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

Maybe they had a bad day and that's why they were so mean and short-tempered. So, I'd go and tell them how I felt about what they said.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

That would be really mean of my parent. Maybe I would just sort of yell back at them or even not say anything at all.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

It would be so unfair of them, and it makes me really angry to be accused of this. So, I'd tell them what happened and say how upset I was.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

5. The class was reviewing last night's homework when the teacher looks down at one of the other student's paper. The teacher picks up the paper, examines it, and then rips it up in front of the whole class. The teacher says that the handwriting was illegible, that the student didn't show their work, and that this was totally unacceptable. After class, the student comes up to you to ask you what to do.

They must feel really hurt or embarrassed. I would tell them how upsetting it must have been and say how sorry I am that this happened to them.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

I'd tell them that this could happen to anyone and that they shouldn't lose sleep over the dumb thing the teacher did. I'd also say that the teacher is a jerk and it shouldn't bother you.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

I would tell them how unfair and frustrated the teacher must have been to do that, and would ask them how they feel about it now. Then, I'd help them figure out what to do.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

I'd see if they would want to go somewhere to have some fun. I can't solve their problem, so that would be the best thing I could do for them.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

6. There is going to be a party in a few weeks, and a lot of kids have been invited. It will be a real blast and you are looking forward to going. You call a friend to ask if they want to get a ride with you to the party. Your friend doesn't say anything for a few seconds, and then blurts out that they aren't going to the party. When you ask why, they say because they weren't invited. What do you do?

This is a really tough situation, but it's an honest mistake so it's best for me not to interfere in this problem. I would just not say much and then change the subject to something else.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

This stuff happens all the time. It isn't my problem. I would see if they just wanted to hang out or have some fun.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

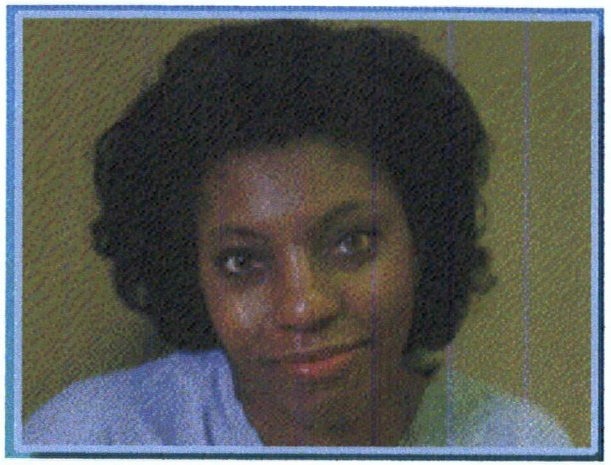
This is embarrassing for me, so I'd apologize right away.

BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

I just hurt their feelings and did a dumb thing. I'd get them to talk about how they feel, and say I was sorry.

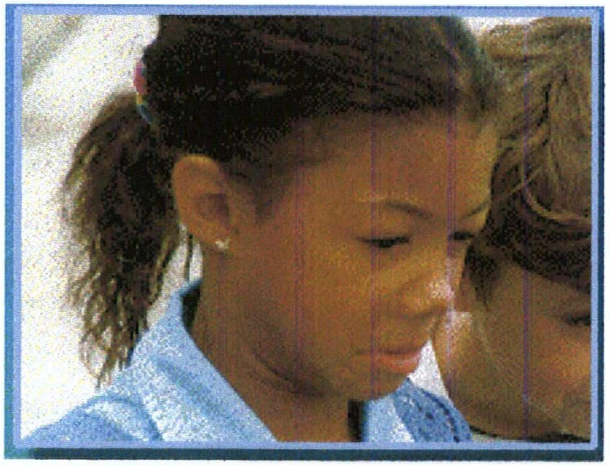
BAD THING TO DO OR EXTREMELY INEFFECTIVE				GOOD THING TO DO OR EXTREMELY EFFECTIVE
1	2	3	4	5

Branch 1 - Identify Emotions - Faces Task

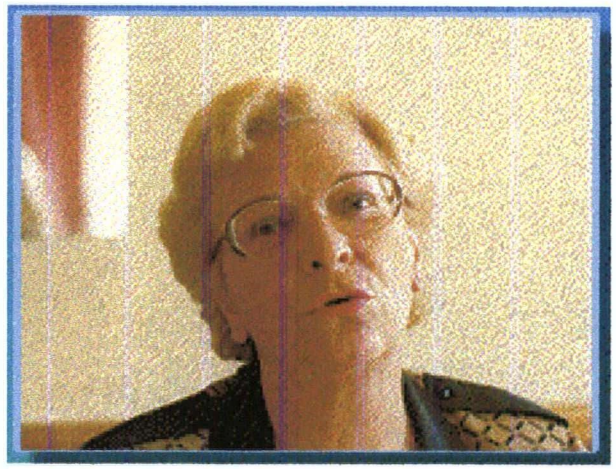


1

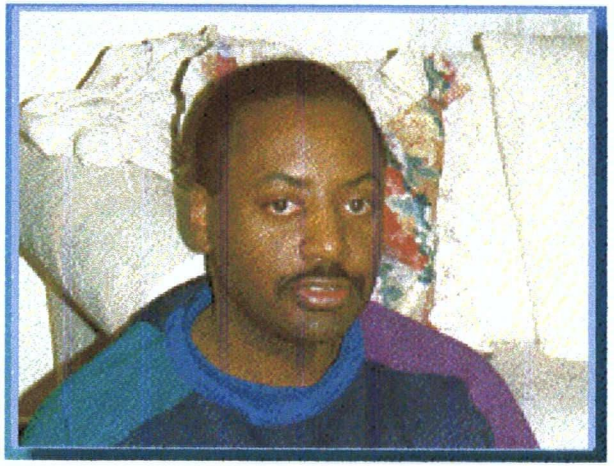
2



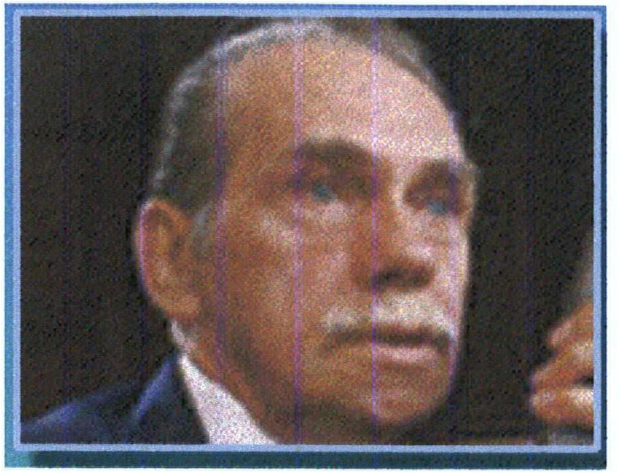
3



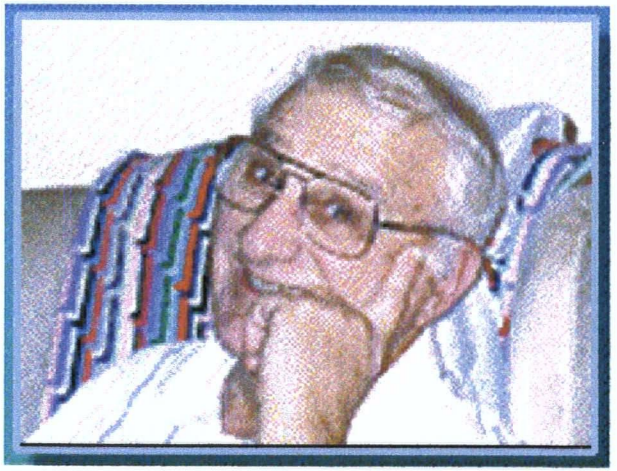
4



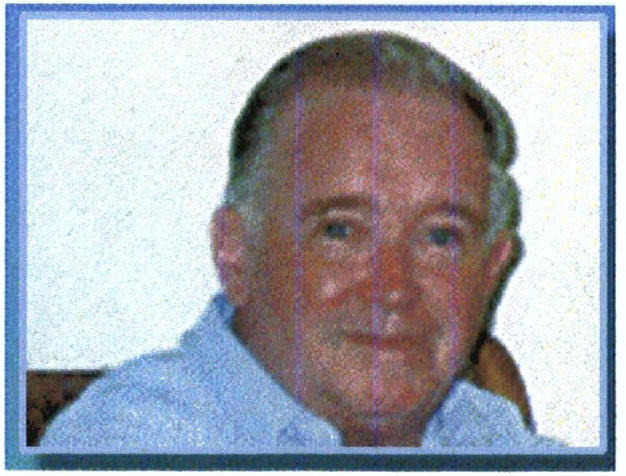
5



6



7



8

Appendix D

Positive and Negative Affectivity Schedule (PANAS; Watson, Clark, & Tellegen, 1988)

This scale consists of a number of words that describe different feelings and emotions. **Indicate to what extent you generally feel this way, that is, how you feel on average.** Read each item and circle the number that most applies to you. Please provide a response for each emotion.

	VERY SLIGHTLY OR NOT AT ALL	A LITTLE	MODERATELY	QUITE A BIT	EXTREMELY
Interested	1	2	3	4	5
Distressed	1	2	3	4	5
Excited	1	2	3	4	5
Upset	1	2	3	4	5
Strong	1	2	3	4	5
Guilty	1	2	3	4	5
Scared	1	2	3	4	5
Hostile	1	2	3	4	5
Enthusiastic	1	2	3	4	5
Proud	1	2	3	4	5
Irritable	1	2	3	4	5
Alert	1	2	3	4	5
Ashamed	1	2	3	4	5
Inspired	1	2	3	4	5
Nervous	1	2	3	4	5
Determined	1	2	3	4	5
Attentive	1	2	3	4	5
Jittery	1	2	3	4	5
Active	1	2	3	4	5
Afraid	1	2	3	4	5

Appendix E

Youth Self-Report (YSR; Achenbach, 1991)

is available from University of Toronto Press, Inc.,

5201 Dufferin Street, North York, Ontario, Canada, M3H 5T8

Appendix F

Self-Reported Delinquency Scale (SRDS-A; Arnold, 1965)

For this part, circle the statement that tells whether you have participated in a certain activity DURING THE LAST SIX MONTHS, "none of the time", "one or two times", "three or four times", "five to ten times", or "more than ten times". READ EACH SENTENCE CAREFULLY. Answer honestly. Thank you.

1. Walked on some grass, yards, or fields where you weren't suppose to walk	None	1 or 2 times	3 or 4 times	5 to 10 times	More than 10
2. Marked with a pen, pencil, knife or chalk on walls, sidewalks, or desks	None	1 or 2 times	3 or 4 times	5 to 10 times	More than 10
3. Threw eggs, tomatoes, garbage or anything else like this at any person, house, or building	None	1 or 2 times	3 or 4 times	5 to 10 times	More than 10
4. Broke some windows on purpose	None	1 or 2 times	3 or 4 times	5 to 10 times	More than 10
5. Broken down anything such as fences, a flower bed, or a clothes line	None	1 or 2 times	3 or 4 times	5 to 10 times	More than 10
6. Put paint on anything you weren't suppose to be putting paint on – (graffiti)	None	1 or 2 times	3 or 4 times	5 to 10 times	More than 10
7. Broken out any light bulbs on the street or elsewhere	None	1 or 2 times	3 or 4 times	5 to 10 times	More than 10
8. Let the air out of somebody's tires	None	1 or 2 times	3 or 4 times	5 to 10 times	More than 10

9. Taken little things (worth less than $25) that you were not suppose to take	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
10. Taken things from somebody else's desk or locker at school that the person would not want you to take	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
11. Taken things of value (between $25 and $250) that you were not suppose to take	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
12. Taken a car for a ride without the owner's permission	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
13. Taken things of large value (over $250)	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
14. Disobeyed your parents	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
15. Purposely did mean things to someone to get back at them for something they had done to you	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
16. Had a fight with one other person in which you hit each other or wrestled	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
17. Disobeyed teachers, school officials, or other adults who told you what to do	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**

18. Defied your parents' authority to their face	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
19. Made anonymous phone calls just to annoy the people you were calling	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
20. Beat up anybody in a fight	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
21. Signed somebody else's name other than your own name as an excuse for absence from school	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
22. Got into a fight with another person where you used a weapon of any kind to hurt them	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
23. Used a weapon of any kind in order to make someone do what you wanted them to do	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
24. Broke into somebody's house without their permission (B&E)	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
25. Picked on someone else by teasing them, threatening them, or pushing them around	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**
26. Disobeyed, lied to, or ran from the police in order to avoid getting into trouble for something	**None**	**1 or 2 times**	**3 or 4 times**	**5 to 10 times**	**More than 10**

Appendix G

Delinquent Recruitment Letter

Department of Educational and Counselling Psychology, and Special Education
Faculty of Education
2125 Main Mall
Vancouver, B.C. Canada V6T 1Z4

Main Office
Tel: (604) 822-8229
Fax: (604) 822-3302

Program Areas

Special Education

School Psychology

Measurement, Evaluation & Research Methodology

Human Learning, Development, & Instruction

Counselling Psychology
Tel: (604) 822-5259
Fax: (604) 822-2328

You have been invited to be a participant in a research project that we are conducting at the Burnaby Youth Secure Custody Centre, entitled "Understanding Adolescents' Emotions". Lisa Robinson and Kimberly Schonert-Reichl from the University of British Columbia are organizing this study. The purpose of this study is to investigate the relation of adolescents' understanding of emotions to how they feel about themselves and other psychological characteristics, in youth ages 13-17.

Since there is very little on this topic from Canadian adolescents, your participation in this study can help us better understand the needs of other Canadian youth.

If you decide to participate in this study, you will be asked to fill out a set of questionnaires that will take you approximately 45-55 minutes to complete. One of the questionnaires will ask you about your background, such as your living arrangements and family background. The others questionnaires will ask you questions about how you would feel in certain scenarios, about some of your activities, and how you feel about yourself. There are no right or wrong answers to any of the questionnaires; the only answers we are looking for are your honest ones.

Your name will not be recorded anywhere on the questionnaire, so all of your answers will be completely confidential. This means that your answers will **not** be available to anyone – not the correctional staff, the courts, mental health team, your parents or other residents. It is important to note however, that although your specific answers will not be available to anyone, they may exhibit levels of well-being that warrant further investigation. If this is the case, and you are not already seeing someone from the Mental Health Team for support, your name will be referred for follow-up. You will only have to see someone from the Mental Health Team if they believe you are a danger to yourself (i.e., suicidal).

You may choose not to answer any question, as well as refuse to participate or withdraw from the study at any time. If this is your choice, there will be absolutely no penalty – you will not be affected in any way.

To thank you for participating, you will be offered candy, snacks and pop upon completion of the questionnaire. I hope you agree to participate!

Sincerely,

Lisa Robinson & Kimberly Schonert-Reichl

Appendix H

Delinquent Assent Form

Appendix I

Questionnaire Cover Page

Thank you for agreeing to participate in this UBC research project!

To make sure that your answers remain confidential, please do not write your name anywhere on the survey package. Instead, please look for your name on the class list provided in this package. Write the identification number located beside your name on the front of the large envelope that this package came in. Only this identification number will be kept with your answers to this survey. Your name will NOT be written anywhere in this package, so no one but the researcher will know who answered the questions.

All of the questions will ask you to choose a response. For example, you might be asked to respond to a question such as the following:

John tells his friend Bill that he doesn't want to be friends anymore. Indicate how likely it would be for John to experience these emotions:

John may feel this way:

	EXTREMELY UNLIKELY				*EXTREMELY LIKELY*
Jealous or mad toward Bill	1	2	3	4	5
Just the same as always	1	2	3	4	5

Here is another, different example of the type of question you will see:

To what extent do you generally feel:

	NOT AT ALL	A LITTLE	MODERATELY	QUITE A BIT	EXTREMELY
Happy	1	2	3	4	5

NOTE:

- You can mark your answer by either placing a cross over the number, by circling it, or by marking it with a check as shown above.
- Select Only ONE answer per question and be sure that you indicate a rating or choice for every question.
- If you do not understand a question, please ask for help
- Please DO NOT skip any questions. Answer each question as best as you can.

There are no **RIGHT or WRONG** answers, and all of your responses will remain **confidential**. So, be as honest and as accurate as you can in answering each question

THANK YOU AGAIN FOR PARTICIPATING & HAVE A GREAT DAY!