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Emotional Intelligence And Its Effect On Juvenile Delinquency

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EMOTIONAL INTELLIGENCE AND ITS EFFECT ON JUVENILE DELINQUENCY

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ABSTRACT

Understanding the role that emotional intelligence plays in the life of an adolescent is paramount in trying to ascertain success in life. As outlined by Salovey and Mayer (1990), emotional intelligence is broken into four subscales: perceiving, facilitating, understanding, and managing emotions. This study examines the impact that overall emotional intelligence, and each subscale of emotional intelligence, has on juvenile deviant behavior in one Utah school district. Using secondary data received from Lance (2003), 152 high school students, ages 14 to 18, were surveyed using three different questionnaires: a demographic survey, the Emotional Intelligence Inventory, and the Normative Deviancy Scale.

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CHAPTER 1

INTRODUCTION

Intelligence is the ability to utilize critical thinking to understand and react both on an environmental and situational level. However, understanding the emotional element of intellectual knowledge is crucial in trying to comprehend why youths commit delinquent acts. Also known as emotional intelligence (EI), Goleman (1995) recognizes that the decision-making ability of juvenile delinquents and adult criminals is hampered by their unhealthy emotional choices and poor emotional regulation. From basic childhood reactions, to adult social skills, emotions not only play an active role in individualistic self-regulation, but also alexithymia (inability to identify and describe emotions in self), emotional regulation, impulsivity, and social interactions (Goleman, 1995; Salovey & Mayer, 1990). According to Goleman (1995), "emotional lessons we learn as children at home and at school shape the emotional circuits" (p. xiii) and are the basis of emotional intelligence (EI).

Research on emotions has been around since the early 20th Century (Izard, 1994); however, the study of emotional intelligence did not surface until 1990. The study of EI has only recently surfaced as a means to understand risk behaviors, both in juveniles and adults. The relationship between emotions and juvenile delinquency, although scarce, has been debated in previous research. Results from these studies indicate that as some branch of emotional control decreases, delinquency increases (Bacon, Burak, & Rann, 2014; Elias & Weisberg, 2000; Mayer, Caruso, Salovey & Sitarenios, 2001; Moriarty, Stough, Tidmarsh, Eger, & Dennison, 2001;

Pihet, Combremont, Suter, & Stephan, 2012; Tapia, 2001; Zimmermann, 2006). Likewise, researchers have failed to take into account the entire spectrum of emotional intelligence, instead focusing on only one or two facets of EI, such as alexithymia, emotional regulation, or impulsivity. It is because of these findings, which demonstrate a negative relationship between some unhealthy emotional aspect and delinquency that more research needs to be done. However, very few studies have examined the role of EI as a full scale (all four subscales combined) and how it relates to overall deviance, as well as how each different subscale of EI interacts with separate elements of delinquency. The current research examines the role of EI in its entirety, as well as its separate subscales (see below), and their relationship to several different categories of juvenile delinquency (assault, vandalism, theft, alcohol and drug use, school misconduct, and general deviance). For this study, the EII is used to measure emotional intelligence and compare this to deviancy using the Normative Deviancy Scale (NDS).

In its design, emotional intelligence contains four subscales: perceiving emotions, facilitating thought, understanding emotions, and managing emotions (Mayer & Salovey, 1997). This original concept had been incorporated into the Emotional Intelligence Inventory (EII) (see Appendix D) designed by Acker et al. (1996), and then reformatted by Tapia and Burry-Stok (1998) (as cited in Tapia, 2001). Like the original EI theory, the EII utilizes four factors in determining overall EI: empathy (perception and expression of emotion), handling relationships (facilitation of thought), utilization of feelings (understanding emotions), and self-control (reflective emotional regulation).

The NDS, designed by Vazsonyi and Pickering (2000), measures both status and delinquent offenses (Lance, 2003). The NDS contains seven subscales, each measuring a different aspect of deviant behavior: vandalism, alcohol use, drug use, school misconduct,

general deviance, theft, and assault (see Appendix G). For this study, the EII and NDS categorizations will be used to examine the relationship between emotional intelligence and delinquency.

This paper further examines juvenile trends as outlined by the *National Center for Juvenile Justice,* and defines both juvenile status offenses and delinquency. The role of emotions in decision-making is explored and how EI affects attitudes, behaviors, achievements, delinquency, tobacco, alcohol, and drug use. In addition, the definition of EI, and the subsequent four subscales and measurements are explained. The way that emotions interact with delinquency in previous research is delineated and examined.

This current research utilizes a secondary data set to examine the relationship between the EII, the EII subscales, and he NDS. Data were obtained Lance's (2003) study examining the relationship between emotional intelligence and adolescent behavior. Using a convenience sample of 152 high school students in one Utah school district, Lance (2003) asked two research questions:

1. Is there a relationship between emotional intelligence and juvenile delinquency as measured by the Emotional Intelligence Inventory and Normative Deviancy Scale?
2. Is emotional intelligence related to specific forms of deviancy (e.g., vandalism, alcohol, drugs, school misconduct, general deviance, theft, and assault? (pp. 4-5)

Results from Lance's (2003) study found one significant negative correlation between self-control and vandalism, general deviance, and assault, thus indicating that as self-control increases, these types of deviant acts decrease. No other significant relationships were found; however, Lance (2003) discusses there was a small negative correlation between empathy and

deviancy, as well as a small positive correlation between utilization of feelings and deviancy that should be examined more fully.

While Lance's (2003) research filled a gap in the literature by using school aged population, her research failed to fully examine the role of EI and delinquency when controlling for sex, age, race, parental marital status, grade, school, and previous detainment for delinquent offenses. In addition, Lance (2003) did not examine any predictors of who is sent to detention. As demonstrated in previous literature, some of these characteristics have been shown to predict deviant behavior, thus worthy of further examination. Lauritsen (1998) postulates that as age increases, criminality increases, particularly ages 11 to 21. In addition, gender showed a relationship to deviant attitudes from early adolescence to age 17, thus as males age from pre-teen to late teens their deviant attitudes increase. Klein, Forehand, Armistead, and Long (1997) found one of the strongest predictors in criminality to be parents' marital relations. In that, deviancy increases in children who live in single parent homes. However, Siegel and Senna (1988) discuss research which shows failure at school is one of the strongest predictors of delinquency. Cernkovich and Giordano (1992) found that race and gender show a significant negative relationship with both school attachment and school commitment, thus as school commitment and attachment increase for black males, deviancy decreases. They also found a significant positive relationship with African-American males and school involvement, stating that as involvement in sports and other school activities increases, so too does delinquency (Cernkovich & Giordano, 1992, p. 278). As to predictors of detention, Frazier and Bishop (1985) found that both age and the sex of the person are significant predictors on who is sent to detention while Leiber and Fox (2005) discovered that African-American males have an increased likelihood of going to detention than do their white counterparts.

CHAPTER 2

LITERATURE REVIEW

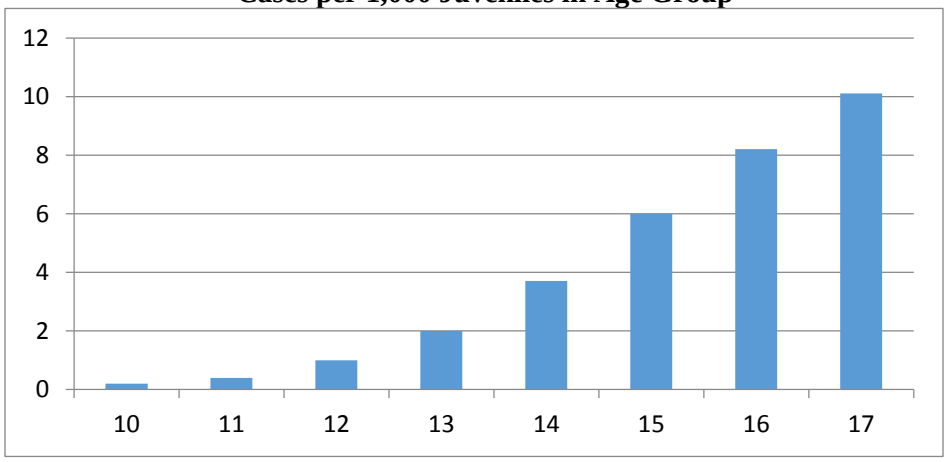
To date, little research examining the effect of emotional intelligence (EI) on deviant behavior has been conducted. Results from these studies suggests that as emotional intelligent increases delinquency decreases (Bacon et al., 2014; Elias & Weissberg, 2000; Moriarty et al., 2001; Pihet et al., 2012; Tapia, 2001; Zimmermann, 2006). Some research has looked at how EI influences the decision-making process of juveniles and increases their chance of engaging in deviant, delinquent, or criminal behavior (Goleman, 1995; Izard, 1994; Mayer & Cobb, 2000; Mayer, Salovey, & Caruso, 2000); however, most of these studies fail to observe EI as a whole, or to examine the entire spectrum of deviance, instead only focusing on limited deviant behavior. This literature review examines trends in juvenile delinquency and the role of emotions in decision-making, as well as defining EI and its components (perceiving emotions, facilitation of thought, understanding emotions, and managing emotions), how EI interacts with delinquency and drug use, limitations of previous research and the secondary data, and closes with the purpose of this study and the research questions.

Juvenile Deviant Behavior and Trends

In the United States, individuals typically under the age of 18 (17 in 11 states and 16 in two other states) that violate the law are considered either status offenders or delinquents (Hockenberry & Puzzanchesa, 2014). The seriousness can range from status offenses (acts that would be legal if the person was an adult: truancy, runaway, possession of tobacco or alcohol) to

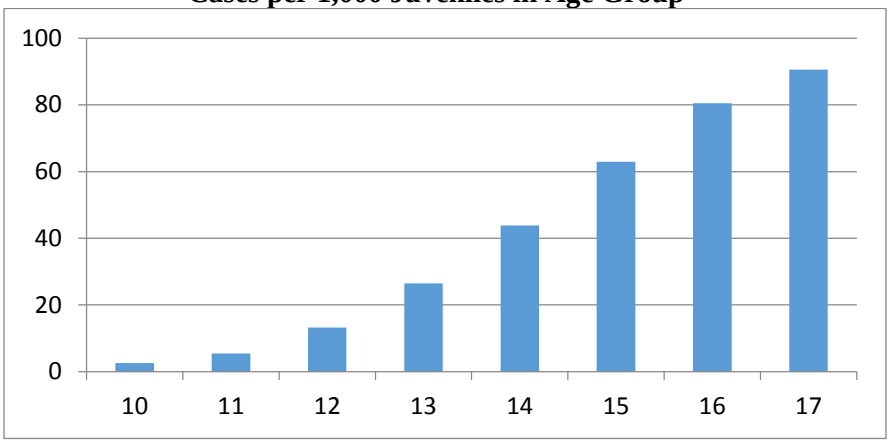
more serious delinquent offenses (acts that if an adult committed the act it would be considered a criminal act), such as theft, robbery, assault, rape, and murder (Bourduin & Henggeler, 1980). In 2011, juvenile courts handled nearly one and a quarter million delinquent cases (Hockenberry & Puzzanchesa, 2014, p. 6). Overall this is an increase of 7% from 1985; however, between 1997 and 2011the delinquency caseloads dropped by 34%. Additionally, in 2011 juvenile courts "formally disposed of an estimated 116,200 status offense cases" (Hockenberry & Puzzanchesa, 2014, p. 66). Like the delinquency cases, status offenses have witnessed an overall decrease since the mid-1990s (from 125,000 cases to around 120,000 cases). Truancy was the only status offense to see an overall increase in the 16 year span (1995-2011). In terms of offenders' age, the older the juvenile, the more likely the juvenile was to engage in both status offenses (see Figure 1) and delinquency (see Figure 2).

Figure 1: 2011 Status Offense Case Rates Increase with Age of Juvenile
Cases per 1,000 Juveniles in Age Group



(Hockenberry and Puzzanchesa, 2014, p. 68)

Figure 2: 2011 Delinquency Case Rates Increase with Age of Juvenile Cases per 1,000 Juveniles in Age Group



(Hockenberry and Puzzanchesa, 2014, p. 10)

However, because not all juveniles who participate in status offenses or delinquent, unlawful behavior are caught, juvenile arrest records underestimate the actual number of juvenile status offenders or juvenile delinquents. In addition to these, other illicit behaviors, such as unscrupulous attitudes, disrespect towards parents or teachers, or engaging in early unhealthy sexual relations, increases the number of juveniles participating in deviant behavior. While impossible to track the exact amount of risky behaviors committed in a year, it can be estimated that the number of deviant acts are much higher when these aberrant behaviors are taken into consideration (Abram et al., 2013; Hockenberry & Puzzanchesa, 2014).

Abram et al. (2013) conducted a 3-year longitudinal study of 1,653 juveniles, to measure the overall functional self-harm and emotional impairment of youths at the Cook County Juvenile Detention Center in Chicago, IL. This research showed that one in every five youth had marked impairment (Abram et al., 2013, p. 1). Coinciding with Hockenberry and Puzzanchesa's (2014) findings that deviant behavior increases as the juvenile ages (see Figure 1), Abram (2013) found that "youth continue to be substantially impaired in their day-to-day functioning as they age" (p. 2). In addition to age, Abram et al. (2013) utilized a Child and

Adolescent Functional Assessment Scale (CAFAS) to determine the impaired functioning area of juveniles. This consisted of eight domains: school/work, home, communities, behavior toward others, moods/emotions, self-harm, substance abuse, and thinking. Their findings revealed the highest impairment was found in school/work (a little over 31%) and community (more than 51%). At nearly 28%, substance abuse was next followed by over 9% impairment in behavior toward others; seven percent were impaired in the home; two percent were found to have moods/emotion impairment; and less than one percent showed both self-harm and thinking impairment. Important to this study was the finding that after detention youths who were "detained seemed to struggle to occupy age-appropriate social, occupational, and/or interpersonal roles" (Abram et al., 2013, p. 6).

According to the Federal Interagency Forum on Child and Family Statistics (2005), "good emotional and behavioral health enhances a child's sense of well-being, leads to satisfying social relationships at home and with peers, and leads to achievement of full academic potential" (p. 62). This research goes on to postulate that these difficulties may continue throughout the child's growth and can lead to lasting impairment. Finkelhor, Turner, Hamby, and Ormrod (2011) found that emotional problems are the leading pathway to increasing risky behavior for children10 years and younger (p. 7). Coupled with the findings of Hockenberry and Puzzanchesa (2014) and Abram et al. (2013) that show deviant behavior seems to increase with the age of the juvenile, it can be reasoned that "early" emotional impairments may lead to future deviant behavior.

Role of Emotions in Decision-Making

According to Goleman (1995), the word emotion derives from the Latin verb "to move" (p. 6). Emotions are what give meaning to our lives. Goleman (1995) goes on to state that the

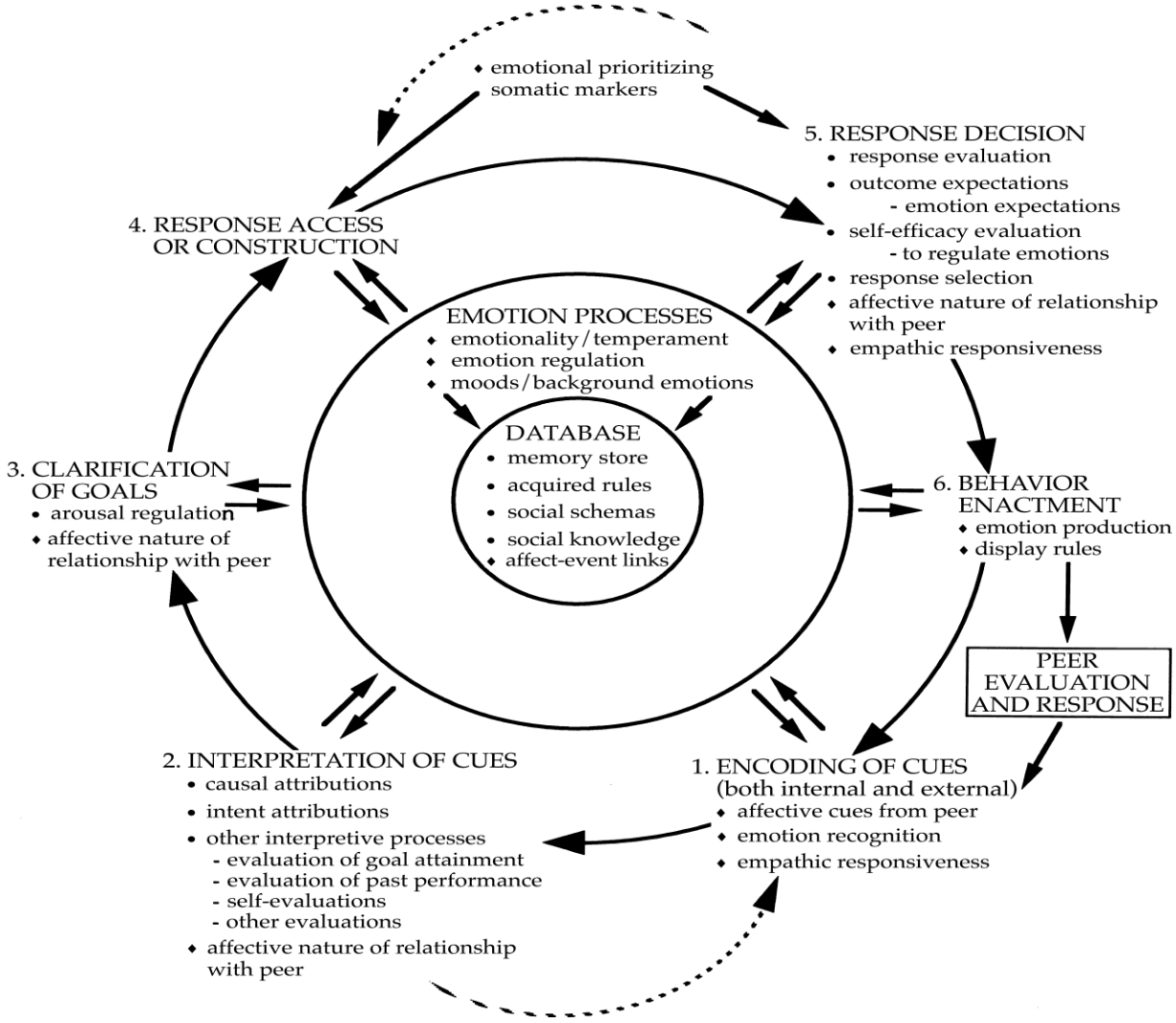
greatest influence in our lives is the ability to handle frustrations, control emotions, and to get along with other people. Izard (1994) stated that "emotion is about motivation, cognition about knowledge" (p. 204). However, the way we assimilate knowledge is interconnected to an emotional stimulus.

Emotions are recognized as one of the main fundamental classes of mental operations (Mayer et al., 2000), and, because of this, the interaction between emotions and critical thinking need not be ignored. The harmony between motivation, emotions, and cognition is vital in areas of life. These include ambitioned emotions for "hunger, thirst, need for social contact, and sexual desire" (Mayer et al., 2001, p. 397). However, emotions are also the primary response in anger.

Some research has looked at the interdependence of emotion and cognition in the decision-making process (Chauhan & Chauhan, 2007; Horodecka & Martowska, 2013; Hubbard, Ross, & Busby, 2004; Mayer, Salovey, & Caruso, 2004; Mayer & Geher, 1996; Shahhosseini, Silong, & Ismaill, 2013; Tapia, 2001; Virk, 2011). While logic and reason are considered objective processes, emotions are subjective. This leads to emotional responses being confused with irrationality. Emotions may be seen as a productive, healthy response mechanism, but they can also be supreme sources of decisional errors in thinking and reactions. Yochelson and Samenow (1976) identified "automatic errors" (p. 359) in criminal thinking patterns which are aligned with behavior associated with poor emotional reactions. Emotions, when extreme, negative, or damaging, can be problems for the individual (Chauhan & Chauhan, 2007). The ability to balance between critical thinking and emotional responses can sometimes be hard for an adult, let alone a juvenile.

According to Kring (2001), “emotions compromise multiple components” (p. 338). In Figure 3, Lemerise and Arsenio (2000) discuss the emotional process that entails both individual cognition and the social integration. Step one portrays the combination that individuals undergo to encode both emotional and situational signs and step two details how stimuli is interpreted. Lemerise and Arsenio (2000) further discuss how “encoding and interpretation can be influenced by mood, level of arousal, or by discrete emotions” (p. 112). Step three considers the role of emotions in the clarification of goals. Step four and five discuss the response generation, evaluation, and decision-making abilities. The valence and intensity with how emotions are experienced and perceived plays heavily into how emotions are individually regulated (Lemerise & Arsenio, 2000). The final step (six) is where the person acts out on the process of emotional regulation or emotional production. All six steps have a give-and-take relationship with the individual’s “inner database” of emotional perception, knowledge, and background.

Figure 3: Individual Cognition and Social Integration Model



(Lemerise and Arsenio, 2000, p. 113)

Lemerise and Arsenio (2000) found that individuals who are poor at regulating emotions will demonstrate low informational processing. This is supported in a study by Horodecka and Martowska (2013) that found individuals who are more pro-social show a higher level of emotional regulation. Therefore, the higher level of ability that an individual possesses and demonstrates in critical decision-making skills is directly aligned with the ability to process and regulate the emotional stimuli that the individual encounters in everyday life.

Elias and Weissberg (2000) argue that children learn to deal with feelings, maintain self-control, and communicate effectively through emotions. All of these areas fall under the sphere of EI. Their study considers the issues that teenagers undergo in the maturing process and how this affects their social environment: school (teachers and peers), family and peer social relationships, community, and personal self. These authors also discuss how, in recent years, school health educators have recognized the importance of individual "decision making, problem solving, and communication as part of school health-based prevention programs aimed at reducing high-risk health behaviors" (Elias & Weissberg, 2000, p. 186) in youths. The Collaborative to Advance Social and Emotional Learning (CASEL) has outlined essential social and emotional skills, all of which fall under Mayer and Salovey's (1997) four branches of emotional intelligence theory. These essential skills defined by CASEL include: the ability to communicate effectively, ability to work well with others, appropriate self-expression and emotional self-control, empathy, self-awareness and optimism, and the capability of goal planning (Elias & Weissberg, 2000).

Goleman (1995) outlines three factors that are harmful to adolescents' prosocial behavior. First Goleman (1995) discusses how rudeness, irresponsible behavior, and violence plague schools and other social outlets. Second, he claims that scientists have shown links between high EI and prosocial behavior. Third, that EI is a higher predictor of life success than the intelligence quotient (IQ). All three deal with EI and the capability of youths to utilize this as a developed skill, rather than to hamper their life success. He further stresses to educators that teaching these skills to youths will help them succeed in life. Yet, almost 20 years later the educational system has failed to enact a workable program(s) that teaches these fundamental social skills that may decrease juvenile deviant behavior.

The influence of EI on the educational outcomes of youth, combined with the research that indicates EI can influence the decision-making capabilities of adolescents, reveals great potential for further exploration in this area. Emotional intelligence research has shown that poor EI can lead to unhealthy lifestyles, which includes poor attitudes and behaviors, such as the use of tobacco, alcohol, and drugs by juveniles and adults. In addition, studies that have found negative correlations between emotions and delinquency should be an impetus for further research. The emotional perception, knowledge, and regulation, as well as problem solving skills, are the basis of the emotional intelligence theory outlined by Salovey and Mayer (1990).

Emotional Intelligence Theory Defined

Although emotions have always been considered to part of the maturation process, emotional intelligence (EI) was first brought to public awareness when Salovey and Mayer (1990) created the emotional intelligence theory. Three years later, Salovey, Hsee, and Mayer (1993) argued that the impact of EI is overlooked, yet plays a prominent role in shaping the overall intelligence of juveniles. Goleman (1995) went on to suggest that EI is the best predictor to success in life. According to Mayer and Salovey (1997), EI is "the ability to perceive emotions and emotional knowledge and to reflectively regulate emotions so as to promote emotional and intellectual growth" (p. 5). In addition, Bar-On (1997) identified EI as an assortment of "noncognitive capabilities, competencies and skill that influence one's ability to succeed in coping with environmental demands and pressures" (p. 14). Three years later this definition would be expanded to include EI as an ability to recognize the meaning of emotions and their relationships to problem solve (Mayer, Caruso, & Salovey, 2000). Currently, EI consists of four branches: perceiving emotions, facilitation of thought, understanding emotions, and managing emotions (see Table 1).

Table 1: Overview of the Four Branch Model of Emotional Intelligence, with a Focus on its Relation to Intelligence and Personality

Branch	Description of Measure	Relation to Intelligence and Personality
1. Perceiving Emotion	Ability to identify emotions in faces, pictures	Inputs information to intelligence
2. Facilitating Thought with Emotion	Ability to harness emotional information and directionality to enhance thinking	Calibrates and adjusts thinking so that cognitive tasks make use of emotional information
3. Understanding Emotions	Ability to comprehend emotional information about relationships, transitions from one emotion to another, linguistic information about emotions	Central locus of abstract processing and reasoning about emotions and emotional information
4. Managing Emotion	Ability to manage emotions and emotional relationships for personal and interpersonal growth	Interface with personality and personal goals

(Mayer, Caruso, Salovey, & Sitarenios, 2001)

Mayer et al. (2000) are accredited with developing the EI measurement. These authors stated that in order for any intelligence to be deemed a "true intelligence" (p. 269) it must meet rigorous standards. Through the creation of the Multifactor Emotional Intelligence Scale (MEIS), they were able to measure the conceptual, correlational, and developmental aspects of intelligence. The MEIS divides the overall performance criteria into three groups. The first group measures the mental performance; the second group describes empirical standards; the third criteria states that "intelligence develops with age and experience and is based on work by Benet and Simon" (Mayer et al., 2000, p. 270) in the early 20th Century.

The MEIS consists of 12 tests that are separated into four branches of emotions: perceiving emotions (four tests), assimilating emotions (two tests), understanding emotions (four tests), and managing emotions (two tests). Branch one (perceiving emotions) measures the emotional responses to faces, music, designs, and stories. Branch two (assimilating emotions) contains two tests and examines judgments and feelings. Branch three (understanding emotions)

"blends, progressions, and transitions between and among emotions" (Mayer et al., 2000, p. 273). Branch four examines the emotional management of self and others.

Mayer et al. (2000) conducted two studies to see if EI meets the criteria for a separate intelligence. The MEIS was utilized to measure EI and see if it meets the three levels of criteria. The first study consisted of 503 adults and the second study consisted of 229 adolescents. The results, backed by the criterion measures, show that EI does meet the "criteria for standard intelligence" (Mayer et al., 2000, p. 267).

Based on the development of EI by Salovey and Mayer (1990), and the re-evaluations by Salovey et al. (1993), Mayer and Salovey (1997), and Bar-On (1997), other researchers have developed tests that examine the role EI plays in adjustment to life. One in particular is the Emotional Intelligence Inventory (EII), designed by Tapia and Burry-Stock (1998) (as cited in Tapia, 2001, p. 354) and revised in Tapia (2001).

Developed from the original EI research conducted by Salovey and Mayer (1990) and Mayer and Salovey (1997), the EII first consisted of a 45-item scale to measure EI (Tapia, 2001). However, upon conducting two studies, Tapia (2001) found during the analysis of the first study that in order to reach a higher Cronbach coefficient α, four of the items needed to be deleted, thus resulting in a 41-item scale (see Appendix D). Like the theory revised by Mayer and Salovey (1997), Tapia and Burry-Stock (1998) (as cited in Tapia, 2001) and Tapia (2001) both use four factors in measuring EI: perceiving emotions (empathy), assimilating or facilitating emotions (handling relationships), understanding emotions (utilization of feelings), and managing emotions (self-control or emotional regulation).

Both studies conducted by Tapia (2001) examined the relationship between EI and delinquency and included participants from a college prep high school in Mexico City, Mexico.

The first study consisted of 111 sophomores, juniors, and seniors, both male (70) and female (41) subjects. After a one month interval, 60 of the original 111 participants were given the 41-item inventory (see Appendix D). Using a Pearson correlation coefficient to measure reliability, Tapia (2001) found that the inventory scores and the four subscale scores produced acceptable reliability (p. 359). Tapia (2001) also found that the scores for the EII resulted in "reliability for research" (p. 362).

During the second study, Tapia (2001) used the same 41-item inventory to survey 319 high school juniors and seniors. Males made up 162 of the participants, while females accounted for the remaining 157 subjects. Using a "construction process relating the items to the components of emotional intelligence described by Salovey and Mayer (1990; Mayer & Salovey, 1997)" (Tapia, 2001, p. 360), content validity was achieved.

Components of Emotional Intelligence

Emotional intelligence is part of a traditional intelligence's give and take relationship where one's cognitive structures abstractly reasons with emotions while the emotional system enhances or weakens cognitive capabilities (Goleman, 1995; Mayer et al., 2001). This interaction between how an individual feels and how the same person allows this to control thoughts and actions is the basis of EI. All four branches interact with one another and, as the individual matures, these outlets help shape the person's communications, relations, behaviors, and attitudes in life.

Perceiving Emotions

This branch reflects "the capacity to recognize emotion on others' facial and postural expressions" (Mayer et al., 2004, p. 199). It involves nonverbal awareness and the ability to identify emotions in faces, music, design, and other communication networks. However, as

Salovey and Grewal (2005) discuss, this branch is the basis of all other emotional processing and includes "the ability to identify one's own emotions" (p. 281), as well as emotions in others.

Emotional Facilitation of Thought

This subdivision of EI deals with the aptitude to assist thinking (Chauhan & Chauhan, 2007; Mayer et al., 2004). It encompasses the "feeling" component and discusses the presence of distinguishing physiological signs of emotions. It also allows the individual to develop a knowledge, or mental base, about experiences where other intelligence is able to draw from and direct planning in one's life (Goleman, 1995; Mayer et al. 2004).

Understanding Emotions

According to Mayer et al. (2004), branch three is where the ability to analyze emotions by understanding trends and outcomes exist. Problem solving and being able to formulate healthy decision-making responses lie within this outlet. Concession of thoughts and understanding how emotions relate to language are essential in this perspective. Within this branch lies the ability to perceive and value complex relationships amid emotions (Salovey & Grewal, 2005).

Managing Emotions

Within this framework, emotional management involves the "individual's goals, self-knowledge, and social awareness" (Chauhan & Chauhan, 2007, p. 221). It is the highest of the four branches and significantly involves the personality, which allows it to be influential in the social environment and personal reasoning ability of an individual. Acting as the chief division of EI, it is where the process of managing emotions interplays with situations and expressing emotions in a healthy or unhealthy context (Mayer & Salovey, 1997).

Emotions and Emotional Intelligence Interact with Delinquency

Research investigating the link between low EI and juvenile delinquency is terse, yet there are studies that have shown correlations between some features of emotions or EI and delinquent or risk taking behavior. Mayer et al. (2001) state that "higher emotional intelligence may predict reduced levels of problem behavior" (p. 240). While there is not a lot of research in this area, some researchers have looked at correlations between delinquency and certain emotional aspects or EI scores (Bacon et al., 2014; Moriarty et al., 2001; Pihet et al., 2012; Tapia, 2001; Zimmermann, 2006).

Moriarty et al. (2001) studied adolescent male sex offenders in Australia who were outpatients in a Male Adolescent Programme for Positive Sexuality (MAPPS). These researchers used four different tests to examine the emotional stability of 15 male juvenile sex offenders, ages 14 to 17, in comparison to the control group of 49 non-offenders of the same age group. The five tests consisted of the Trait Meta Model Scale (TMMS), which was designed to measure youths ability to deal with emotions, the Revised Toronto Alexithymia Scale (TAS-20), which measures the ability to perceive emotions in others, the Inventory of Interpersonal Problems (IIP-32) which measures emotions regarding interpersonal relationships, and the Interpersonal Reactivity index (IRI), which was designed by Davis to measure empathy (Moriatry et al., 2001).

According to Moriarty et al. (2001), these juvenile sex offenders scored lower when compared to the control group on the TMMS and the ability to clarify feelings and moods. In regards to the TAS scores, these researchers found no significant difference between sex offenders and non-offenders in the ability to identify feelings, describe feelings, or in external oriented thinking. The IIP-32 test showed the most significant difference between male sex

offenders and non-offenders. Within the realm of this test, sex offenders found it more difficult to be sociable, assertive, and supportive, yet scored higher on aggression and openness, and lower on empathy and dependence. Conversely, when given the IPI test, the sex offenders scored lower on all four scales (fantasy, perspective-taking, empathy, and personal distress), yet the authors found the difference insignificant in comparison to the non-offenders. Overall, Moriarty et al. (2001) discovered that juvenile sex offenders have a more inefficient ability in "experiencing and expressing emotions" (p. 749) when compared to non-offenders.

Pihet et al. (2012) examined 80 male juveniles, ages 13 to 19 in Switzerland. This included males from three leisure centers and two juvenile institutions. Using six different methods, these researchers measured delinquency, non-verbal intellectual efficacy, impulsivity, alexithymia (inability to identify and describe emotions in the self), constructive thinking, and substance abuse. Overall, Pihet et al. (2012) found that minor offenses are correlated to poor emotional regulation and serious offenses are related to thinking errors. Substance abuse was highly correlated to both minor and serious delinquency and showed a substance abuse range between 50% to 80% (Pihet et al., 2012, p. 432), yet these authors failed to examine any direct link between emotional regulation and substance abuse.

Zimmermann (2006) conducted a study of male adolescents ranging in age from 14 to 18. The research examined the correlation between alexithymia and delinquency. Employing 36 juvenile offenders, and a control group of 46 non-offenders, Zimmermann (2006) used the 20-item TAS-20 to measure alexithymia, the Revised Children's Manifest Anxiety Scale (R-CMAS) for anxiety level, the Liste d'Adjectifs Bipolaires et an Echelles de Likert (LABEL) to measure personality, and demographic variables. The results showed that over 47% of the delinquent

group scored higher on alexithymia than did the control group (21.7%), thus indicating that juvenile offenders have less ability to construct words for their feelings and to identify emotions.

Bacon et al. (2014) used trait emotional intelligence (trait EI) to explore the correlation between some EI components and juvenile delinquency. Trait EI involves emotional regulation and empathy and how they are associated with positive outcomes and well-being. As defined by Bacon et al. (2014), trait EI "is a constellation of affect-related personality facets, reflecting the ability to experience, attend to, identify, understand and utilise [sic] personal emotions and those of others" (p. 673). The study consisted of 96 undergraduate students (48 males and 48 females) under the age of 25 raised in the United Kingdom. The results showed the delinquent behavior was positively associated with sensation seeking. In addition, a negative correlation was produced between males who scored low on trait EI and delinquency; that is, as trait EI decreased, delinquency increased. Table 2 shows the correlations between measures for both males and females in relation to delinquent behavior (DB), trait EI, sensation seeking (SS), disinhibition (DIS), boredom susceptibility (BS), thrill and adventure seeking (TAS), and excitement seeking (ES).

Table 2: Correlations between Measures for Males and Females in Relation to Delinquency and Emotional Attributes

	trait EI	SS total	DIS	BS	TAS	ES
DB						
Males	-0.53**	0.54**	0.68**	0.53**	0.09	0.31*
Females	0.52**	0.57**	0.43**	0.33*	0.35*	0.54**
Trait EI						
Males	--	-.10	–.51**	–.26	.19	.05
Females	--	.46**	.27	.07	.23	.48*

* $p < 0.05$ level
** $p < .01$ level

Notes: DB = delinquent behavior; trait EI = trait emotional intelligence; SS = sensations seeking; DIS = disinhibition; BS = boredom susceptibility; TAS = thrill and adventure seeking; ES = excitement seeking (Bacon et al., 2014)

According to Bacon et al. (2014), males exhibited a substantially higher negative correlation between trait EI and delinquent behavior. In addition, trait EI in males, when correlated against sensation seeking, disinhibition, and boredom susceptibility, all showed negative correlations, thus revealing that males are more likely to adopt risky behaviors than females.

Lance (2003) states that previous research has failed to correlate "the ability to identify and understand emotions with deviant behavior" (p. 72). However, Lance (2003) did find that a small negative correlation exists between EI and deviancy, yet did not find a substantial negative correlation between low EI scores and deviant behavior. In reference to each of the four subscales of EI, this study discovered the following: the perception and appraisal of emotions do not demonstrate a significant relationship to deviant behavior, facilitation of thought does show a slight negative correlation with deviancy, understanding emotions has no significant difference in relation to deviant behavior, and there is a small negative correlation between managing emotions and deviancy, yet it is not statistically significant. Lance (2003) specifies that interpretations of her results should "be made with caution" (p. 72) and attributes this to the weak outcomes between emotional intelligence and deviant behavior.

Emotional Intelligence and Drug/Alcohol Use

Other hazardous behaviors involve the use of drugs and alcohol. Coelho (2012) postulates that the use of illegal drugs and alcohol continue to plague health concerns in the United States and lead to an increasing use of substance abuse problems. Mayer et al. (2001) state that high levels of EI may correlate to "reduced drug use and interpersonal violence" (p. 240). Over the past decade, very few studies have examined the role that EI plays in drug use and addiction, both with juveniles and adults (Claros & Sharma 2012; Coelho, 2012; Schutte,

Malouff, & Hine, 2011; Trinidad, Unger, Chou, & Johnson, 2005**)**. This includes tobacco, illicit drugs, and alcohol use.

Coelho (2012) states that EI encompasses both the emotional and social learning capabilities to either promote healthy living or promote poor life choices. High EI integrates with adolescent development to reduce "risk factors and assists in fostering protective mechanisms for positive adjustment" (Coelho, 2012, p. 2). Furthermore, lower EI scores predicts youths' poor coping skill potential and increases the adoption of risky behaviors, which include both the use of alcohol and illicit drugs.

Claros and Sharma (2012) utilized a correlation analysis to examine the relationship between EI and tobacco, alcohol, and marijuana use. Their sample consisted of 199 college students ranging in age from 18 to 20. Males made up the majority of the study (119 or 59.8%), while females represented 40.2% (80). Emotional intelligence was measured by using the Schutte Self Report Survey (SSRI) which was designed from the Mayer and Salovey (1990) model of EI. The results showed that low EI scores resulted in an increase in unsafe behaviors, in particular the use of marijuana. In addition, all four branches of EI (perceiving, facilitating, understanding, and managing emotions) showed a negative correlation with both alcohol and marijuana use.

Schutte et al. (2011) surveyed 100 Australian undergraduate university students. Of the 100 participants, 69 were females, 30 were males, and one participant's gender was unknown. The average age was 30.5 years of age. The results showed that both lower ability EI and lower trait EI "were associated with more heavy episodic drinking and more alcohol-related problems" (Schutte et al., 2011, p. 260). However, the outcomes revealed that older participants had a negative correlation between ability and trait EI and alcohol problems; in that, older participants

showed a higher level of ability and trait EI and a decrease in heavy drinking and overall alcohol problems when compared to younger participants.

Trinidad et al. (2005) found that low EI was correlated with an increase in tobacco use by adolescents. Due to the enormous changes that youths undergo, the likelihood of experimenting with risky behaviors is increased (Trinidad et al., 2005, p. 1698). Coupled with low EI, the prevalence of adolescent health related risk behaviors may drastically increase. Trinidad et al. (2005) surveyed 416 sixth-graders in a public school system in Los Angeles, CA, with an average age of 11.3. A little over 50% were male and the remaining participants were females. Two tests were given to the participants. The first was a survey on tobacco related risk factors, and the second EI survey was given a few weeks later. Both the perceived peer attitudes about smoking, as well as the use of cigarettes showed a negative correlation to EI (Trinidad et al. 2005, p. 1701).

Limitations of Previous Studies

While a number of weaknesses exist in the previous literature, two key shortcomings have been identified and addressed in the present study: First, not using the full EI scale; and second, research has focused heavily on adult populations verses adolescents. The most notable limitation is the failure to utilize the full scale of EI when assessing the relationship between EI and deviant behavior, instead only concentrating on certain aspects or components of EI.

For example, Moriarty et al. (2001) examined how emotions are intertwined with adolescent sex offenders and compared the findings of this group to a control group of non-offenders. The researchers did not utilize a full EI scale to compare to overall deviance, but rather they were only concerned with the relationship of aggression, feelings (perceiving emotions in others, interpersonal relationships, and empathy), and impulsivity to sex offending.

Thus, the sample was not random, but specifically selected to measure sex offenders in comparison to non-offenders.

Pihet et al. (2012) measured substance abuse in relation to delinquency, non-verbal intellectual efficacy, impulsivity, alexithymia, and constructive thinking. While these variables all have a few principles of emotions, by not utilizing an EI survey, the authors failed to take into consideration the overall role of EI and how it relates to both delinquency and substance abuse. These researchers were more concerned with impulsivity, feelings, and cognitive coping skills rather than the role of EI and how it relates to either substance abuse or delinquent offending.

Like the two studies mentioned above, Zimmermann (2006) failed to consider the complete role of EI and how it relates to delinquents and non-delinquents. The main concern of this study was the role that alexithymia and family structure played in relation to delinquency. In doing so, Zimmermann (2006) only considered one aspect of EI – the ability to identify emotions.

Bacon et al. (2014) examined the role of trait EI, thus, like the aforementioned studies, this research failed to examine the entire spectrum of EI. In doing so, the authors disregarded other aspects of EI and the part they may play in delinquency. Furthermore, this study focused on emotional regulation and empathy, thus only examining two of the four subscales of EI. In addition, Bacon et al. (2014) failed to state the delinquent behavior components used for this study.

The second key limitation of previous works is that studies did not survey adolescents, but rather examined older participants and how drug and alcohol use was marginalized by EI. For example, Claros and Sharma (2012) only surveyed college students between the ages of 18 to 20. In addition, this study limited the number of variables to the use of alcohol and drug in

regards to EI. Schutte et al. (2012) surveyed college students with a mean age of 30.5, and while the results did show that as EI increased, alcohol problems decreased, that is all this study examined. It did not take into consideration other issues or variables, like age or sex, that may play a role in the abuse of alcohol. In the same sense, Trinidad et al. (2005) only concerned their study with the perception and use of tobacco. This research did survey youths, but failed to consider any other variable than EI, that may disclose why participants have an attitude favorable to tobacco use or to using tobacco.

Limitations of Secondary Data

The current research utilizes a secondary data set from Lance (2003). That study consisted of 152 juvenile participants, ages 14 to 18, in one Utah school district. Using Tapia's (2001) study, Lance (2003) tested EI levels of the participants by using the Emotional Intelligence Inventory (EII) (see Appendix D) and its four subscales (see Appendix E). Both of the samples for Tapia's (2001) studies were from an accredited bilingual college preparatory school in Mexico, whereas Lance's (2003) subjects were from three high schools in one Utah school district in the United States (grades 9 through 12). The original EII that Tapia (2001) utilized for her first study was developed by Tapia and Burry-Stock (1998) (as cited in Tapia, 2001). This original EII consisted of a 45-item survey to measure EI. However, Tapia (2001) found that an item-deletion process was required to raise the Cronbach coefficient α (.82). In doing this, Tapia (2001) discovered that four of the original 45 items needed to be deleted, which increased the α to .83. This 41-item measurement (see Appendix D) is the EII that Tapia (2001) used for the second study of 319 juvenile participants and that Lance (2003) used for the Utah study of 152 participants. Furthermore, Tapia (2001) conducted a factor analysis to see which of the 41 items belonged to which factor (subscale) of EI.

According to Lance (2003), Tapia was contacted to explain which of the 41 items of the EII belonged under which subscale:

> The researcher contacted Tapia to clarify what test items belonged under each subscale. Tapia said to use the order found in the second study, which is what the researcher used. Alpha coefficients using the items as outlined in Tapia's second study revealed low estimates of internal consistency. The EII did not work as Tapia said it would because using her subscale order resulted in weak internal consistency. (Lance, 2003, p. 54)

However, a review of Lance's (2003) study revealed that the four subscales used in her project (see Appendix E) consisted of only 32 items instead of Tapia's 41 items. Lance (2003) does not state why the items were removed from the original 41-item scale. Thus, issues of validity and reliability arise. Differences in the sample sizes may create another limitation. Tapia (2001) included more than twice as many participants as Lance (2003). This may have created a limitation as to the validity and overall reliability of Lance's (2003) study. In addition, Tapia's (2001) study used an accredited bilingual college preparatory school, and Lance (2003) conducted research from three traditional American high schools. Differences in these populations arise because of self-determination, which has been shown to have a positive effect on EI and deviant behavior (Coelho, 2012; Goleman, 1995). Individuals who demonstrate higher levels of self-determination, and seem to be in control of their lives, have higher emotional intelligence, prosocial behavioral skills, and refrain from delinquent behavior. Because of these limitations a new reliability analysis should be conducted to determine the appropriateness of the individual item inclusion in the subscales. A Cronbach coefficient alpha, as well as scree plot and factor analysis will be run to determine appropriateness.

Two additional limitations were found in Lance's (2003) study that will be addressed in the current research. First, Lance (203) did not include demographic or control variables in her analysis. Second, the study did not examine the relationship between the individuals who have been incarcerated in a juvenile detention center in comparison to those participants who had not been help in a detention facility.

Purpose Statement/Research Questions

The undertaking of this current study is not to replicate the same research put forth by Lance (2003). Instead, this study will re-analyze Lance's (2003) data using more higher ordered statistics to discover why the findings showed weaker Cronbach coefficient alphas than Tapia's (2001) original work. Lance (2003) states that "the EII did not work as Tapia said it would because using her subscale order resulted in weak internal consistency" (p. 54). However, Tapia (2001) states "this study was limited to one special young population, so it is quite possible that different populations will not yield the same results" (p. 363). Further, in reference to the EEI, Tapia (2001) stated "the scale may be used to provide assessment of emotional intelligence" (p. 363).

Lance's (2003) findings showed that one of the four subscales of EI (empathy) displayed the highest coefficient alpha and was the same as Tapia's (2001) second study alpha at .74 (see Table 3). Handling relationships showed a lower coefficient (.63) than Tapia's (2001) second study of .75. Utilization of feelings revealed a lower coefficient (.65) when compared to Tapia's (2001) second study, which showed a .70 coefficient alpha. Self-control displayed the lowest of the four subscale comparisons at .48, compared to Tapia's (2001) second study of .67.

Table 3: Cronbach Coefficient α of Four EI Subscales in Three Studies

Subscale	α		
	Tapia (2001) 1st study	Tapia (2001) 2nd study	Lance (2003)
Empathy	.73	.74	.74
Handling relationships	.77	.75	.63
Utilization of Feelings	.70	.70	.65
Self-Control	.55	.67	.48

(Tapia, 2001; Lance, 2003)

However, because Lance (2003) did not run a reliability analysis to discern which of the 41 items to use, as well as a factor analysis to see which of these items went with each subscale, this may have been a reason for the discrepancies.

For this research, a reliability analysis will be performed to see which of the original 41 items of the EII scale will be used as an overall variable of EI. As Tapia (2001) discovered in the first study, some items may need to be removed. In addition, a scree plot and factor analysis will be executed to see how many subscales should be utilized and which of the remaining 41 items (after the reliability analysis) belong to each subscale.

Furthermore, a reliability analysis, and a factor analysis, will also be completed on the NDS (see Appendix F) to see which items of the NDS go with which subscale (see Appendix G). A scree plot will also be administered to if there is the same number of factors (subscales) as outlined by Lance (2003).

Lance's (2003) study consisted of two main research questions and four subscale questions:

1. Is there a relationship between emotional intelligence and juvenile delinquency as measured by the Emotional Intelligence Inventory and Normative Deviancy Scale?
    a. Is there a relation between the emotional intelligence aspect of perception and appraisal and juvenile delinquency?

   b. Is there a relation between the emotional intelligence aspect of emotional facilitation of thinking and juvenile delinquency?
   c. Is there a relation between the emotional intelligence aspect of understanding emotions and juvenile delinquency?
   d. Is there a relation between the emotional intelligence aspect of management of emotions and juvenile delinquency?
2. Is emotional intelligence related to specific aspects of deviancy (e.g., vandalism, alcohol, drugs, school misconduct, general deviance, theft, and assault? (pp. 4-5)

For the purpose of this study, these questions have been reworded:

1. What is the relationship between emotional intelligence and juvenile delinquency as measured by the Emotional Intelligence Inventory and Normative Deviancy Scale?
2. What is the relation between the four subscales of emotional intelligence (empathy, handling relationships, utilization of feelings, and self-control) and juvenile delinquency?

In addition to answering the above questions, four new questions will also be examined:

3. What is the relationship between emotional intelligence and juvenile delinquency as measured by the Emotional Intelligence Inventory and Normative Deviancy Scale when comparing the juveniles who have served time in detention to those youths who have not been incarcerated in juvenile detention when controlling for six variables (age, sex, white v. non-white, married v. non-married, grade, and school)?
4. What is the relationship between the level of emotional intelligence and overall deviance when controlling for age?

   a. What is the relation between the four subscales of emotional intelligence (empathy, handling relationships, utilization of feelings, and self-control) when controlling for age?

5. What is the relationship between gender and emotional intelligence scores?
6. What is the relationship between the level of emotional intelligence and overall juvenile delinquency when controlling for parental marital status?

CHAPTER 3

METHODS

For this research, secondary data is utilized to examine the relationship between emotional intelligence (EI) and juvenile delinquency. Approval by the IRB was granted for this study on April 7, 2015 (see Appendix H). This secondary data was obtained through an SPSS file via e-mail from Jennifer Lance see (Appendix A). Approval by the IRB was granted to Lance (2003) on September 27, 2002 (see Appendix B) and approval was given by the associate superintendent of the Cache County School District on September 18, 2002, as well as all the principals of the three schools in October 2002 (see Appendix C). Participants completed three surveys: a demographic questionnaire (see Appendix D), an Emotional Intelligence Inventory (EII) (see Appendix D), and the Normative Deviancy Scale (NDS) (see Appendix E). The demographic factors will be used as control variables.

The Data Source

The analyses in this study are based on data originally collected by Jennifer Lance in 2002 in one Utah school district in Cache County. This district included three different high schools: Sky View, Cache High, and North Cache (Lance, 2003). The appropriateness of participant selection was determined through consultation with principals and differed by the school. At Cache High, the entire student body was asked to participate. At Sky View, initially 10^{th} and 11^{th} grade History and Geography classes as well as a 12^{th} grade psychology class were asked. For North Cache, a 9^{th} grade English class was asked to participate.

To encourage student participation, Sky View and North Cache schools allowed the researcher to address the classes concerning the research project. However, at Cache High, Lance (2003) was unable to address the classes, but instead attended a faculty meeting and presented the research study to the school's faculty. The faculty then explained the research to the respective classes and handed out the consent forms.

Participants for all three schools were each given two parental consent forms: one for the parents' personal files and the other to be returned the day the survey was to be taken, which was one week from the day that the students were introduced to the study. For their involvement, the researcher gave a candy bar to every participant who returned a consent form and the teachers gave extra credit for participants in their respective classes. Surveys were administered to all students who returned consent forms during the selected core classes.

Surveys were distributed to the participants or faculty by the researcher and research assistants. Each participant was given a writing utensil, survey, and an envelope. The envelope was given to ensure confidentiality and allowed each participant to seal the envelope upon completion of the questionnaire. A collection box was placed in each classroom for the participant to drop the sealed envelope into once the survey was completed. Each class of participants was given the same written instructions:

> 'Directions: This inventory consists of statements about your feelings towards societal, personal, and emotional issues. There are no correct or incorrect responses. Read each item carefully. Think briefly about how you regard each statement. Use the following 5-point scale to respond to each item' (Tapia, 1998). After you finish the first page, front and back, turn to the second page and fill out the survey about deviant behavior. All information will remain confidential. Please do not put your name on this

> questionnaire. After you are finished completing your questionnaire please seal them in the provided envelope and place it into the ballot box provided by the researcher. Thank you for your participation in this study. (Lance, 2003, pp. 51-52)

In four of the six resource classes, a teacher, the researcher and two student aides helped many of these participants interpret and comprehend the questionnaires; however, the other resource class, as well as all the other classes at the three schools did not need any help (Lance, 2003, p. 53). During the first data collection effort, a total of 123 usable surveys were returned.

Because of concern over the insufficient number of respondents, a second data collection was sought, "especially of more deviant youths" (Lance, 2003, p. 52). According to Lance (2003), she approached the principal of Sky View seeking permission to add six resource classes (five Math and one English) to the study because "more resource students have been in juvenile detention than other students" (p. 53). Of the 60 consent forms that were handed out to students in these resource classes, a total of 29 were returned, thus raising the total number of participants to 152.

Of the 287 students who were given consent forms, only 152 actually returned the forms and participated in the study (47% response rate). The majority of the participants were from Sky View (94 or 62%), with the remaining subjects coming from Cache High (35 or 23%) and North Cache (23 or 15%).

Independent Variables

Measures of Emotional Intelligence

The measures used by Lance (2003) to evaluate emotional intelligence were borrowed from Tapia and Burry-Stock's (1998) study (as cited in Tapia, 2001). Designed by Tapia and Burry-Stock (1998) (as cited by Tapia, 2001), this inventory originally consisted of 45-items;

however, for Tapia's (2001) study, eight items had an item-to-total correlations less than .20. Because of this, Tapia (2001) performed additional item-to-correlation analysis and dropped one item at a time until the change in variance was not significant and the Cronbach coefficient α reached a .83.

Using the 41-item survey (see Table 4), Tapia (2001) performed a second study which consisted of 319 students from a private college prep high school in Mexico City, Mexico. This revealed a Cronbach coefficient α of .81, which Tapia (2001) recommends is consistent enough to use. This 41-item inventory (Table 4; Appendix D) is the EII survey used by Lance (2003) for her study of 152 high school participants.

This is a self-report survey and taken anonymously. The general goal of the EII is to measure the overall emotional intelligence of the individual. It is used to understand the emotional relationships that individuals undergo in their intrapersonal, interpersonal and immediate environments. The responses are tallied using a five-point Likert scale for each question: 1-Never like me, 2-Occasionally like me, 3-Sometimes like me, 4-Frequently like me, 5-Always like me.

Table 4: Emotional Intelligence Inventory (Full Scale)

Emotional Intelligence Inventory
1) I sympathize with other people when they have problems.
2) I go out of my way to help someone in need.
3) Overt human suffering makes me feel uncomfortable.
4) I can tell when other people's feelings are hurt.
5) I am uncomfortable when someone is making fun of another person.
6) I am sympathetic with a nervous speaker.
7) I feel hurt when someone has taken advantage of a less fortunate person.
8) When someone is annoying me, I stop to think about the other person's situation rather than losing my temper.
9) When I've offended someone, I aware of it almost immediately.
10) In most cases I give people a second chance.
11) I feel moved to intervene when someone is abusing a helpless animal.
12) Criticism is difficult for me to accept.
13) There are times when I let a problem work itself out by waiting.
14) It is too stressful to stop unwanted personal habits such as overeating, smoking, nail biting.
15) I get emotionally bothered when I am exposed to an upsetting TV show, movie, or book.
16) Having car trouble causes me to feel stressful.
17) Being expected to take charge of a group activity is upsetting to me.
18) I lose control when I do not win a sporting contest.
19) Traffic jams cause me to lose control.
20) Most people feel comfortable talking to me about their personal feelings.
21) People enjoy spending time with me.
22) I can be assertive and forceful in situations where others are trying to take advantage of me.
23) It is easy for me to openly express warm and loving feelings towards others.
24) I avoid responsibility whenever I can.
25) My moods are easily influenced by those around me.
26) I am aware of even subtle feelings as I have them.
27) When I am angry, I express my feelings in a way that deals well with the situation.
28) I am able to express my feelings without hurting others.
29) I understand why I react the way I do in situations.
30) I think about how I can improve my relationships with those I love.
31) I think about how I can improve my relationships with those people that I don't get along with.
32) I think about why I don't like a person.
33) When someone makes me uncomfortable, I think about why I am uncomfortable.
34) I tend to procrastinate.
35) I use my feelings to help make decisions.
36) I can delay gratification (to wait for something better rather that get immediately what you want) in pursuit of my goals.
37) When I am anxious about a challenge, I can still prepare for it.
38) I can soothe or contain distressing feelings so they don't keep me from doing things I need to do.
39) I find that setbacks and disappointments are lessons learned.
40) I am able to stay motivated when things do not go well.
41) I keep myself focused on my goals.

Lance (2003)

According to Lance (2003), the EII used by Tapia (2001) for the second study of 319 participants is broken into four subscale groups, each measuring a different emotional aspect: Table 5 - empathy (perception, appraisal, expression of emotion), Table 6 - handling relationships (emotional facilitation of thinking), Table 7 - utilization of feelings (understanding and analyzing

emotions, employing emotional knowledge), and Table 8- self-control (reflective regulation of emotions) (see Appendix E).

Table 5: Empathy

Empathy (Perception, Appraisal, Expression of Emotion)
1) I sympathize with other people when they have problems.
2) I go out of my way to help someone in need.
4) I can tell when other people's feelings are hurt.
5) I am uncomfortable when someone is making fun of another person.
6) I am sympathetic with a nervous speaker.
7) I feel hurt when someone has taken advantage of a less fortunate person.
9) When I've offended someone, I am aware of it almost immediately.
20) Most people feel comfortable talking to me about their personal feelings.
21) People enjoy spending time with me.
27) When I am angry, I express my feelings in a way that deals well with the situation.
28) I am able to express my feelings without hurting others.

Lance (2003)

Table 6: Handling Relationships

Handling Relationships (Emotional Facilitation of Thinking)
8) When someone is annoying me, I stop to think about the other person's situation rather than losing my temper.
10) In most cases I give people a second chance.
15) I get emotionally bothered when I am exposed to an upsetting TV show, movie, or book.
26) I am aware of even subtle feelings as I have them.
31) I think about how I can improve my relationships with those people that I don't get along with.
32) I think about why I don't like a person.
33) When someone makes me feel uncomfortable, I think about why I am uncomfortable.

Lance (2003)

Table 7: Utilization of Feelings

Utilization of Feelings (Understanding and Analyzing Emotions, Employing Emotional Knowledge)
11) I feel moved to intervene when someone is abusing a helpless animal.
22) I can be assertive and forceful in situations where others are trying to take advantage of me.
29) I understand why I react the way I do in situations.
30) I think about how I can improve my relationships with those I love.
35) I use my feelings to help make decisions.
37) When I am anxious about a challenge, I can still prepare for it.
40) I am able to stay motivated when things do not go well.
41) I keep myself focused on my goals.

Lance (2003)

Table 8: Self-Control

Self-Control (Reflective Regulation of Emotions)
14) It is too stressful to stop unwanted personal habits such as overeating, smoking, nail biting.
16) Having car trouble causes me to feel stressful.
18) I lose control when I do not win a sporting contest.
19) Traffic jams cause me to lose control.
36) I can delay gratification (to wait for something better rather that get immediately what you want) in pursuit of my goals.
38) I can soothe or contain distressing feelings so they don't keep me from doing things I need to do.

Lance (2003)

Lance (2003) tested the four subscales, which she states are the same used by Tapia (2001) in her second study (Lance, 2003, p. 54-55). However, one distinction exists – Tapia (2001) states that the four subscales for her study contained all 41 items (p. 360). While the subscales used in Lance's (2003) study (see Tables 5-8) only contained 32 of the original 41 questions of the EII (see Table 4; Appendix D). Thus, it is necessary to conduct a reliability analysis to determine how many of the original 41 items will be included in this study. Additionally, a factor analysis will be run to determine whether the original subscales load the same or to identify any differences.

Reliability of the Measuring Instruments

Tapia (2001) originally piloted the EII in Mexico City using 111 college prep high school students (junior and seniors). From Tapia's original analysis, the Cronbach coefficient α had a value of .83. In Tapia's (2001) second study, the sample consisted of 319 college prep juniors and senior high school participants and produced a similar coefficient α of .81. Lance's (2003) study, with 152 American high school students (freshmen, sophomores, juniors, and seniors) had a coefficient α of .83. Table 9 shows all three results as reported by the original authors. While similar, these differences in coefficients do warrant the need for reexamination. Therefore, using Tapia's (2001) method, the current study will perform a new reliability analysis with an item-deletion process to make certain that the coefficient meets the criteria of acceptability of higher

than .83, thus ensuring internal consistency. Any variables showing a negative item-to-total correlation will be removed.

Table 9: Cronbach's Coefficient α of Three Studies

	Tapia (2001) 1st	Tapia (2001) 2nd	Lance (2003)
α	.83	.81	.83

(Tapia, 2001; Lance, 2003)

Dependent Variables

Measures of Deviance

The dependent variable in this study is deviance. In order to measure the level of deviance of the participants, the *Normative Deviancy Scale* (NDS) was used by Lance (2003). Like the EII, this included a five-point Likert scale to record the participants' responses: never, 1 time, 2-3 times, 4-5 times, and 6 or more times. According to Lance (2003), the NDS was developed by Vazsonyi and Pickering in 2000 and measures "adolescent norm-violating deviance" (p. 47). It includes questions for status offenses, such as tobacco usage, alcohol consumption, and school misconduct. However, it also contains more serious violations, such as accounts pertaining to theft and assault. Similar to the EII, the NDS is broken into seven subscales, each measuring a different aspect of deviant behavior and representing a dependent variable (DV). Tables 10 through 16 contain all the questions separated into the seven subscales (see Appendix G).

Table 10: Vandalism

Vandalism
Smashed bottles on the street, school grounds, or other areas?
Intentionally damaged or destroyed property belonging to your parents or other family members (brothers or sisters)?
Intentionally damaged or destroyed property belonging to a school, college, or university?
Intentionally damaged or destroyed other property (sings, windows, mailboxes, parking meter, etc.) that did not belong to you?
Intentionally damaged or destroyed property belonging to your employer or at your workplace?
Slashed or in any way damaged seats on a bus, in a movie theater, or something at another public place?
Written graffiti on a bus, on school walks, on restroom walls, or on anything else in a public place?
Committed acts of vandalism when coming or going to a football game or other sporting events?

(Lance, 2003)

Table 11: Alcohol Use

Alcohol
Consumed hard liquor (e.g. tequila, whiskey, vodka, or gin) before you were 21?
Consumed alcoholic beverages (e.g. beer, wine, or wine coolers) before you were 21?
Got drunk (intentionally) just for the fun of it (at any age)?
Got drunk just to fit in and be part of the crowd (at any age)?
Lied about your age to buy alcohol before you turned 21?
Had an older brother/sister or friend buy alcohol for you?
Bought alcohol for a brother/sister or friend?

(Lance, 2003)

Table 12: Drug Use

Drugs
Used tobacco products regularly (e.g. cigarettes, chew, snuff, etc.)
Used “soft” drugs such as marijuana (grass, pot)?
Used “hard” drugs such as crack, cocaine, or heroine?
Gone to school when you were drunk or high on drugs?
Gone to work when you were drunk or high on drugs?
Gone to a concert when you were drunk or high on drugs?
Gone to a club/dance/party when you were drunk or high on drugs?
Gone to a club/dance/party to get drunk or high on drugs?
Sold any drugs such as marijuana (grass, pot), cocaine, or heroine?

(Lance, 2003)

Table 13: School Misconduct

School Misconduct
Cheated in school (e.g. cheat sheet, copy from neighbor, etc.)?
Been sent out of a classroom because of “bad” behavior (e.g. inappropriate behaviors, cheating, etc.)?
Been suspended or expelled from school?
Stayed away from school/classes when your parent(s) thought you were there?
Intentionally missed classes over a number of days for “no reason,” just for fun (e.g., there was no family emergency)?
Been in trouble at school that your parents received a phone call about it?
Skipped school /work (pretending to be ill)?

(Lance, 2003)

Table 14: General Deviance

General Deviance
Intentionally disobeyed a stop sign or red traffic light while driving a vehicle?
Been on someone else's property when you knew you were not supposed to be there?
Failed to return extra change that you knew a cashier gave you by mistake?
Tried to deceive a cashier to your advantage (e.g. flash a larger bill and give a smaller one)?
Let the air out of tires of a car or bike?
Lied about tour age to get into a nightclub/bar?
Made nuisance/obscene telephone calls?
Avoided paying for something (e.g. movies, bus, or subway rides, food, etc.)?
Used fake money or other things in a candy, coke, or stamp machine?
Shaken/hit a parked car just to turn on the car's alarm?
Stayed out all night without informing your parents about your whereabouts?

(Lance, 2003)

Table 15: Theft

Theft
Stolen, taken, or tried to take something from a family member or relative 9e.g. personal items, money, etc.)?
Stolen, taken, or tried to take something worth $10 or less (e.g. newspaper, pack of gum, mail, money, etc.)?
Stolen, taken, or tried to take something worth between $10 and $100 (e.g. shirt, watch, cologne, video game cartridge, shoes, money, etc.)?
Stolen, taken, or tried to take something worth more than $100 (e.g. leather jacket, car stereo, bike, money, etc.)?
Stolen, taken, or tried to take something that belonged to "the public" (e.g. street signs, construction signs, etc.)?
Stolen or tried to steal a motor vehicle 9e.g. car or motorcycle)?
Bought, sold, or held stolen goods or tried to do any of these things?

(Lance, 2003)

Table 16: Assault

Assault
Hit or threatened to hit a person?
Hit or threatened to hit your parent(s)?
Hit or threatened to hit other students/peers or people?
Used force or threatened to beat someone up if they didn't give you money or something else you wanted?
Been involved in gang fights or other gang activities?
Beaten someone up so badly they required medical attention?

(Lance, 2003)

In addition, Lance (2003) did not complete an analysis of the small group of previously incarcerated participants (24) compared to those who had never been incarcerated (111) to see if there was a difference in correlations between EI and deviance. For this study, these two groups will be separated to compare the deviance levels of the two, as well as their correlation to EI.

Control Variables

The current study controls for a number of demographic variables: age, sex, race, parents' marital status, grade, school, and detention. Previous research has shown that these have an effect on social skills and deviant behavior. Because of these findings, these variables should be utilized to see the effect they have deviancy, as well as combining them with EI as a dependent variable (hierarchical multiple regression), to understand their role in predicting delinquency.

At the bivariate level of analysis, Frazier and Bishop (1985) found that age, sex, and race do not have an effect on who is sent to detention. However, using hierarchical regression analysis they were able to determine that as age increases, so too does the probability of having a case handled formally through the judicial system (which indicates detention is involved). This study also found that males have a higher rate of formal disposition that females and non-whites have an increased probability of being formally charged with deviant behavior than whites (Frazier & Bishop, 1985, p. 1147). Leiber and Fox (2005) suggest that race does have an additive effect on detention. Another study, Lauritsen (1998), found that delinquency increases from age 11 to 21, and when compared to females, juvenile males have increased attitudes that favor delinquency.

Using the Office of Youth Development and the Department of Public Safety and Corrections in Louisiana, Mbuba (2005) discovered that black juveniles are 54% more likely to recidivate than white youths (p. 62). Cernkovich and Giordano (1992) show that when examining school bonding and race, significant negative relationships exist for African-American youth between school attachments and deviant behavior; however, whites did not

show significance. Furthermore, failure at school has shown to be a strong predictor of delinquency (Siegel & Senna, 1988).

Other studies examined the relationship between living with married parents verses non-married parents, or parental attachment, and the relationship to juvenile delinquency. Hirschfield and Gasper (2011) found parental attachment and emotional engagement both have a small significant effect on school misconduct and general deviance. As to living in a single-parent household and being released from detention, African-American juveniles have a less of a chance being released from detention than their white counterparts (Leiber & Fox, 2005). Klein et al. (1997) found parents' marital status as a significant predictor in criminal offending for young adults. In examining the youths in a juvenile detention center, Smith (1998) discovered that 82% of the residents live in a home with at least one non-biological parent (p. 64) and found "very high rates of emotional disorders among residents" (p. 63).

Testing Dimensionality of the Measuring Instruments

Both the Emotional Intelligence Inventory (EII) and the Normative Deviancy Scale (NDS) will be subjected to factor analysis. Because the EI instruments were standardized on similar but different populations – Tapia's (2001) study consisted of juniors and seniors at a college prep high school and Lance's (2003) study used more traditional high school freshmen through seniors – subscales may need to be adjusted. Therefore, for this study, a new factor analysis will be conducted to determine which of the 41-item EI questions will fall into each of the four subscales.

Lance (2003), in her study, reports a reliability coefficient of .83 which is consistent with Tapia's (2001) second study (Lance, 2003, p. 55). However, a review of Tapia's (2001) results

revealed the Cronbach coefficient was .81. While close, this discrepancy, combined with the differences in study populations further support the need for a new factor analysis.

Additionally, a scree plot will be ran to see if it matches the same number of factors that Tapia and Burry-Stock (1998) (as cited in Tapia, 2001) and Tapia (2001) discovered. It is anticipated that this scree plot will produce like results. Additionally, this will be utilized to see if it is a unidimensional or to see if the same four multidimensional scales exist between this study and the study performed by Tapia (2001).

Coding Procedure

For this research, there will be some recoding of variables. Lance (2003) coded parents' marital status into several different categories (married, separated, divorced, remarried, never married, or single) (Lance, 2003, p. 43). However, for this research, all of these categories will be collapsed into two dichotomous binary response categories (e.g., married = 1, non-married = 0) (see Table 27).

Sex and race will also be recoded. Sex will be recoded as female = 0 and male = 1 rather than Lance's (2003) coding of female = 2 and male = 1 (see Table 27). Race will be recoded as non-white = 0 and white = 1. Lance (2003) had these coded Caucasian = 1; African American = 2; Hispanic = 3; Native American = 4; Asian = 5; other = 6. One question, or analysis, that Lance (2003) did not perform was to compare the correlations between those students who had not served time in a juvenile detention center with those who had been incarcerated. For this present study, these two groups will be compared to determine the correlation strength to the emotional intelligence subscales. Serving time in detention will be recoded as no = 0 and yes = 1 (see Table 27).

Data Analysis

Data will be analyzed in two phases. The descriptive statistics (e.g., frequency distributions, factor analysis for each scale, reliability analysis for each scale, etc.) will be presented in Phase I. The research questions will be answered in Phase II using bivariate, multivariate, logistic, and hierarchical multiple regression analyses,. The multivariate regression analysis will be used to predict the influence of independent variables (e.g., emotional intelligence) on the dependent variable (e.g., deviant behaviors among juveniles). Hierarchical multiple regression analysis allows for common variables to be put in blocks (Pallant, 2010). This in turn, permits the amount of variation each block of variables has on the outcome variables to be determined. This procedure will also give the opportunity to examine the regression coefficient to see how each DV increases by the IV. It will also allow an examination of the significant levels of each coefficient to see whether this sample's results can be projected onto a larger population, thus testing for statistical significance. By running a hierarchal regression analysis, the standardized and unstandardized coefficients can be observed, as well as the significant levels and the R squared.

CHAPTER 4

RESULTS

Following the procedures outlined in the Methods section, this chapter reports the results of the study. Both the EII and the NDS scales are examined to determine the strength of the relationship between EII and deviancy, as well as looking at the relationship of other variables to EI and deviance. Results are presented in two phases. The first phase presents results for the descriptive statistics, an item-to-deletion and factor analysis, as well as a reliability and correlations analysis. In addition, results from the scree plot will be shown. These data will determine the number of factors (subscales) for the EII. Phase two answers the research questions by running bivariate, multivariate, hierarchical, and logistic regression analyses.

Descriptive Statistics

Under this section, variables are examined using frequency distributions, factor analysis with scree plot, Pearson's correlations, and reliability analysis. These will allow the Cronbach coefficient alpha to be examined, as well as checking the validity and reliability with some of the variables.

Sample Characteristics

Frequencies were run for the following variables: age, sex, race (white v. non-white), parent's marital status in the household (married v. non-married), grade level, school attending, and detention (see Table 27). Of the 152 participants asked their age, the majority were either 16 (32%, $n = 49$), or 17 (28%, $n = 42$) years old. Over half the participants were male (53%, $n =$

80). The majority of respondents were white (87%, *n* = 132) and 13% (*n* = 19) were non-white. Most respondents reported living with a parent(s) who is married (78%, *n* = 118). Most of the participants are in the 11th grade (36%, *n* = 5), with a near equal distribution between 12th (25%, *n* = 38) and 10th grade (23%, *n* = 35), with the fewest respondents in the 9th grade (15%, *n* = 23), followed by the 12th grade, 25% (*n* = 38), then the 10th grade at 23% (*n* = 35), and 15% (*n* = 23) are in the 9th grade. As to which school participants attend, the majority go to Sky View (62%, *n* = 94), with 23% (*n* = 35) attending Cache High, and 15% (*n* = 23) go to North Cache. The majority of participants reported never being in detention (73%, *n* = 111).

Item-to-Deletion and Factor Analysis of Measuring Instrument

In order to confirm either Tapia's (2001) or Lance's (2003) study, an item-to-deletion process was conducted to omit any items in both the EII and NDS that showed a negative result. For the EII this resulted in six items being removed from the original 41-item EII survey (see Appendix D): items 13, 14, 16, 17, 25, and 34. However, no negative items were found in the NDS. Therefore, the present study only uses 35 (see Appendix I) of the original 41-item EII scale[1]. Once the item-to-deletion was completed for the EII, a factor analysis and scree plot was conducted to determine the number of subscales and their respective items.

The factor analysis indicated that four subscales accounted for nearly 38% of the variance in the new 35-item EII (see Table 17). In addition, the scree plot (see Figure 4) revealed a component analysis of four factors on the elbow before it begins to level off. Because of these findings, four subscales will also be used for this research (see Appendix J); however, some of the items contained in each of the four subscales of the EII differ from Lance's (2003) original study (see Appendix E).

[1] Details of this are further explained in the reliability and correlation section of the results.

Table 17: Variance of 35-item Emotional Intelligence Inventory

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.063	20.180	20.180	4.604	13.154	13.154
2	2.628	7.509	27.689	3.936	11.247	24.401
3	1.933	5.524	33.214	2.620	7.485	31.885
4	1.609	4.598	37.812	2.074	5.926	37.812

Figure 4: Scree Plot of 35-item Emotional Intelligence Inventory

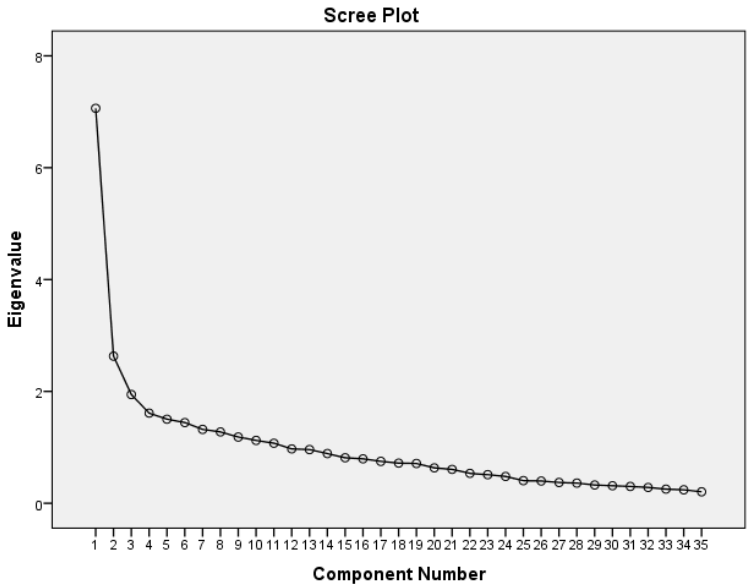


Table 18 shows the exploratory factor analysis that aided in creating the subscales for the current study. All 35 items were loaded in the factor analysis and then qualitatively examined to see if they matched the corresponding subscale as depicted by the factor analysis. After the qualitative analysis, boldfaced item numbers are not believed to accurately represent corresponding subscales according to the exploratory factor analysis placement (example: item 12 scores highest under empathy; however, it is placed under self-control). Details of these eight

items, and why they are placed in different subscales, are further discussed in the next section – Reliability and Correlations.

Table 18: Exploratory Factor Analysis of the Emotional Intelligence Inventory: Four Factors

Item Number	Component			
	1 Empathy	2 Handling Relationships	3 Utilization of Feelings	4 Self-Control
1	.496	--	--	--
2	--	.407	--	--
3	.494	--	--	--
4	--	.415	--	--
5	.696	--	--	--
6	.414	--	--	--
7	.640	--	--	--
8	--	--	--	.632
9	.417	--	--	--
10	.488	--	--	--
11	.432	--	--	--
12	.610	--	--	**.227**
15	.518	--	--	--
18	--	--	--	.456
19	--	--	--	.598
20	**.355**	--	--	-.398
21	--	.502	--	--
22	--	--	.456	--
23	--	.408	--	--
24	--	--	.528	--
26	--	--	.481	--
27	--	.417	**-.033**	--
28	--	.435	--	--
29	--	--	.513	--
30	--	.608	--	--
31	--	.454	--	--
32	.411	--	**.356**	--
33	--	--	.506	--
35	.521	--	**.034**	--
36	--	--	--	.418
37	--	--	.500	--
38	--	.557	**.438**	--
39	--	.442	--	--
40	--	.627	--	**.195**
41	--	.650	--	**-.018**

Note:
Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 10 iterations.

Reliability and Correlations

Emotional Intelligence Inventory and Subscales

By running an item-to-deletion analysis, this current study raised the overall EII Cronbach coefficient α from .83 (Lance, 2003) to a Cronbach coefficient α of .87 (see Table 19).

Table 19: Cronbach Coefficient α of Two Studies

	Lance (2003)	Current Study
α	.83 (41 items)	.87 (35 items)

In addition, each of the 35 statements of the EII was closely examined to see if some items should be placed under a different subscale than Lance (2003) used. The results revealed that in order to raise the Cronbach coefficient, and to increase internal consistency of each subscale, it was necessary to move some items. Tables 19 through 22 shows each of the four subscales utilized for this study (see Appendix J). The following paragraphs summarize the precise changes made to each subscale.

Table 20: Empathy

Empathy (Perception, Appraisal, Expression of Emotions)
1) I sympathize with other people when they have problems.
3) Overt human suffering makes me feel uncomfortable.
5) I am uncomfortable when someone is making fun of another person.
6) I am sympathetic with a nervous speaker.
7) I feel hurt when someone has taken advantage of a less fortunate person.
9) When I've offended someone, I am aware of it almost immediately.
10) In most cases I give people a second chance.
11) I feel moved to intervene when someone is abusing a helpless animal.
15) I get emotionally bothered when I am exposed to an upsetting TV show, movie, or book.
20) Most people feel comfortable talking to me about their personal feelings.

α = .75

Table 21: Handling Relationships

Handling Relationships (Emotional Facilitation of Thinking)
2) I go out of my way to help someone in need.
4) I can tell when other people's feelings are hurt.
21) People enjoy spending time with me.
23) It is easy for me to openly express warm and loving feelings towards others.
28) I am able to express my feelings without hurting others.
30) I think about how I can improve my relationships with those I love.
31) I think about how I can improve my relationships with those people that I don't get along with.
39) I find that setbacks and disappointments are lessons learned.

$\alpha = .74$

Table 22: Utilization of Feelings

Utilization of Feelings (Understanding and Analyzing Emotions, Employing Emotional Knowledge)
22) I can be assertive and forceful in situations where others are trying to take advantage of me.
24) I avoid responsibility whenever I can.
26) I am aware of even subtle feelings as I have them.
27) When I am angry, I express my feelings in a way that deals well with the situation.
29) I understand why I react the way I do in situations.
32) I think about why I don't like a person.
33) When someone makes me uncomfortable, I think about why I am uncomfortable.
35) I use my feelings to help make decisions.
37) When I am anxious about a challenge, I can still prepare for it.
38) I can soothe or contain distressing feelings so they don't keep me from doing things I need to do.

$\alpha = .67$

Table 23: Self-Control

Self-Control (Reflective Regulation of Emotions)
8) When someone is annoying me, I stop to think about the other person's situation rather than losing my temper.
12) Criticism is difficult for me to accept.
18) I lose control when I do not win a sporting contest.
19) Traffic jams cause me to lose control.
36) I can delay gratification (to wait for something better rather that get immediately what you want) in pursuit of my goals.
40) I am able to stay motivated when things do not go well.
41) I keep myself focused on my goals.

$\alpha = .54$

Empathy

As noted in Table 5, Lance's (2003) empathy subscale originally included 11 items[2] (1, 2, 4, 5, 6, 7, 9, 20, 21, 27, & 28) measuring an individuals' ability to express empathy for another person. A review of the new factor analysis revealed that only items 1, 5, 6, 7, and 9 loaded in the same way. However, upon doing a qualitative analysis, one item:

20) "Most people feel comfortable talking to me about their personal feelings"

[2] See Table 4 for a complete description of all items used in the Full Scale Emotional Intelligence Inventory

loaded high on the self-control subscale. Intuitively, this item does not measure self-control but rather empathy. Therefore, this item was moved to the appropriate subscale (see Tables 18 & 20).

Handling Relationships

In examining handling relationships, Lance (2003) included seven items (Items 8, 10, 15, 26, 31, 32, and 33). While no items were qualitatively removed from the scale, only one of Lance's original items (31) loaded in the same way with the new factor analysis. The new subscale includes items 2, 4, 21, 23, 28, 30, 31, and 39 (see Table 21). All items in the handling relationships subscale correspond with the highest number the item received as outlined by the exploratory factor analysis (see Table 18).

Utilization of Feelings

In the original subscales used by Lance (2003), eight items were used to measure utilization of feelings (11, 22, 29, 30, 35, 37, 40, & 41) (see Table 7). After the new factor analysis and qualitative analysis were conducted, utilization of feelings subscale for the current study has a total of 10 items (22, 24, 26, 27, 29, 32, 33, 35, 37, & 38) (see Table 22). In addition, six items (24, 26, 27, 32, 33, & 38) are not found in Lance's (2003) subscale, while four items:

27) When I am angry, I express my feelings in a way that deals well with the situation;

32) I think about why I don't like a person;

35) I use my feelings to help make decisions;

38) I can soothe or contain distressing feelings so they don't keep me from doing things I need to do.

originally loaded highest under empathy (32 & 35) and handling relationships (27 & 28). However, the qualitative analysis does not appear to measure either of these subscales; therefore, these four items were moved to handling relationships.

Self-Control

Lance's (2003) self-control subscale consisted of six items (14, 16, 18, 19, 36, & 38) (see Table 8). The new factor analysis only found three of these items (18, 19 & 36) belong under the subscale of self-control. The self-control subscale used for the current study (see Table 23) consists of seven items (8, 12, 18, 19, 36, 40, & 41). Three items:

12) Criticism is difficult for me to accept;

40) I am able to stay motivated when things do not go well;

41) I keep myself focused on my goals.

originally loaded highest under empathy (12) and handling relationships (40 & 41). However, after the qualitative examination, these items are believed to embody the subscale of self-control.

Cronbach coefficient was utilized to process the internal consistency of each of the four subscales for this study. This was compared to Lance's (2003) study, as well as Tapia's (2001) second study (see Table 24).

Table 24 shows that by utilizing both an item-to-deletion and factor analysis to decide which of the original 41 EII items to use, the resulting Cronbach coefficient α produced a higher alpha when compared to Lance's (2003) study and increased to reveal more of a likeness to Tapia's (2001) study. Lance (2003) states "the EII did not work as Tapia said it would because using her subscale order resulted in weak internal consistency" (p. 54). However, Tapia (2001) ran two studies, each with different items under each subscale, as well as ruining an item-to-deletion analysis to remove some of the items between the first and second studies (Tapia, 2001).

In addition, Tapia (2001) states her study "was limited to one special young population, so it is quite possible that different populations will not yield the same results" (p. 363). The Cronbach coefficient α for this study did produce a higher level of internal consistency than Lance's (2003) study.

Table 24: Cronbach Coefficient α of Four Subscales for the Emotional Intelligence Inventory (Three Studies)

Subscale	Cronbach Coefficient α		
	Tapia (2001) 2nd 41 items	Lance (2003) 41 items	Current Study 35 items
Empathy	.74	.74	.75
Handling Relationships	.75	.63	.74
Utilization of Feelings	.70	.65	.67
Self-Control	.67	.48	.54

The results showed that internal consistency increased for empathy (.75), both Lance (2003) and Tapia (2001) produced an alpha of .74. Handling relationships (.74) increased by .11 when compared to Lance's (2003) study, and nearly equaled Tapia's (2001) research (.75). Utilization of feelings (.67) reveals an increased internal consistency when compared to Lance (2003) (.65), yet was .03 points short of Tapia's (2001), which showed a .70. Self-control (.54) showed the weakest internal consistency; however, it did reveal a higher consistency than Lance's (2003) study (.48), but showed less of a consistency than Tapia's (2001) study of .67.

In addition, a Pearson's correlation matrix was run on the four subscales of EI to see their significance to one another (see Table 25).

Table 25: Pearson's Correlation Matrix for 4 Subscales of Emotional Intelligence Inventory

	Empathy	Handling Relationships	Utilization of Feelings
Empathy	--		
Handling of Relationships	**.56*** **	--	
Utilization of Feelings	**.46*** **	**.59*** **	--
Self-control	**.42*** **	**.54*** **	**.46*** **

***$p < .001$(two-tailed)

Empathy (perceiving emotions) measures the capability of recognizing emotions in others and self (Mayer et al., 2004). It includes the ability to be aware of identifying emotions in nonverbal communication, such as music, faces, and design. The correlation analysis of this subscale reveals that empathy is statistically significantly and positively correlated to the other three subscales: handling relationships (.56), utilization of feelings (.46), and self-control (.42). Thus the higher level of empathy, the higher emotional intelligence the person demonstrates. In addition, the results show that as the ability to perceive emotions in self and others increases, so does the ability to handle relationships, utilizes feelings, and demonstrate self-control.

Handling relationships (emotional facilitation of thought) quantifies the capacity of an individual to use thinking to assist with emotions (Chauhan & Chauhan, 2007; Mayer et al. 2004). It is also statistically significantly with a positive correlation to the other three subscales: empathy (.56), utilization of feelings (.59), and self-control (.54). Thus, as the ability to handle relationships increase, so does the empathy, utilization of feelings, and self-control.

Utilization of feelings (understanding and analyzing emotions; employing emotional knowledge) allows individuals to analyze emotions through problem solving and understanding that outcomes exist. A person with a high level of utilizing feelings will demonstrate a healthy decision-making process (Mayer et al., 2004). The results of this study reveal that utilization of feelings is statistically significant and positively correlated with the other three subscales of EI: empathy (.46), handling relationships (.59), and self-control (.40).

The fourth subscale, self-control (reflective regulation of emotion), represents the highest of the four branches of EI and heavily involves the personality (Chauhan & Chauhan, 200). It allows the individual to manage emotions and understand how they interplay with situations. A person with a high level of self-control would positively express emotions in a healthy context

(Mayer & Salovey, 1997). The correlation reveals that self-control is statistically significant and positively correlated with the other three subscales: empathy (.42), handling relationships (.54), and utilization of feelings (.46).

Normative Deviancy Scale

Cronbach coefficient α was also utilized to evaluate the NDS and its seven subscales. This is a 55-item scale (see Appendix F) designed by Vazsonyi and Pickering in 2000 and measures adolescent deviance using a five-point Likert scale (Lance, 2003). For assessing purposes, it is divided into seven subscales and measures vandalism (M = 13.89, SD = 7.5), alcohol use (M = 13.34, SD = 8.0), drug use (M = 1.67, SD = 10.11), school misconduct (M = 22.09, SD = 3.82), general deviance (M = 2057, SD = 10.79), theft (M = 11.83, SD = 7.08), and assault (M = 10.52, SD = 5.51) (see Table 27). Because the reliability analysis for the NDS revealed a high coefficient alpha (.98), there is no reason to run a separate item-to-deletion or factor analysis for this study. At .98, the coefficient alpha of the NDS is the same as Lance (2003).

To check the correlations between subscales, a Pearson's correlation analysis was initiated. Most correlations revealed results within normal range; however, Table 26 shows that four dimensions reveal a high correlation: vandalism to general deviance (.84) and theft (.81), alcohol to drug use (.87), and general deviance to theft (.84).

Table 26: Pearson's Correlation Matrix for 7 Subscales of Normative Deviance Scale

NDS	Vandalism	Alcohol	Drug Use	School Misconduct	General Deviance	Theft	Assault
Vandalism	--						
Alcohol	**.61***	--					
Drug Use	**.71***	**.87***	--				
School Misconduct	-.07	-.02	.03	--			
General Deviance	**.84***	**.67***	**.77***	-.05	--		
Theft	**.81***	**.65***	**.75***	-.03	**.84***	--	
Assault	**.71***	**.49***	**.54***	-.02	**.72***	**.69***	--

*p < .01 (one-tailed)

Because of the high correlations, a collinearity diagnostic was run to determine if there is a problem with multicollinearity, and to check the variance inflation factor (VIF). The results (minimum 1 and maximum 5.4) showed that no problem with the VIF exists. The scores were well below the cut-off 10 as stated by Pallant (2010).

Control Variables

Pearson's correlation was run to see if there were any possible relationships that might need to be explored at the multivariate and hierarchical regression level. The correlation matrix did not reveal any new information other than what has been addressed in the research questions.

Table 27: Descriptives of All Variables

Variable	Value	Min	Max.	Obs. Min.	Obs. Max.	$\bar{X}$	*SD*
Age	14 = 1; 15 = 2; 16 = 3; 17 = 4; 18 = 5	1	5	1	5	2.99	1.10
Sex	Female = 0; Male = 1	0	1	0	1	.54	.50
Race	Non-White = 0; White = 1	0	1	0	1	.87	.33
Parent's Marital Status	Living with non-married parent = 0; living with married parent(s) = 1	0	1	0	1	.79	.41
Grade	9^{th} = 1; 10^{th} = 2; 11^{th} = 3; 12^{th} = 4	1	4	1	4	2.72	1.01
School	Sky View = 1; North Cache = 2; Cache High = 3	1	3	1	3	1.61	.84
Detention	0 = No; 1 = Yes	0	1	0	1	.18	.38
NDS Total	55 items on 5-point Likert scale (never =1; one time = 2; two to three times = 3; four –to six times = 4; six plus times = 5)	55	275	64	257	107.91	43.55
Vandalism	8 items on a five-point Likert scale (never =1; one time = 2; two to three times = 3; four to six times = 4; six plus times = 5)	8	40	8	40	13.89	7.50
Alcohol Use	7 items on a five-point Likert scale (never =1; one time = 2; two to three times = 3; four –to six times = 4; six plus times = 5)	7	35	7	35	13.34	8.0
Drug Use	9 items on a five-point Likert scale (never =1; one time = 2; two to three times = 3; four –to six times = 4; six plus times = 5)	9	45	9	45	15.67	10.11
School Misconduct	6 items on a five-point Likert scale (never =1; one time = 2; two to three times = 3; four –to six times = 4; six plus times = 5)	6	35	8	33	22.09	3.82
General Deviance	11 items on a five-point Likert scale (never =1; one time = 2; two to three times = 3; four –to six times = 4; six plus times = 5)	11	55	11	55	20.57	10.79
Theft	7 items on a five-point Likert scale (never =1; one time = 2; two to three times = 3; four –to six times = 4; six plus times = 5)	7	35	7	35	11.83	7.08
Assault	6 items on a five-point Likert scale (never =1; one time = 2; two to three times = 3; four –to six times = 4; six plus times = 5)	6	30	6	30	10.52	5.51
EII Total	35 items on 5-point Likert scale (never like me = 1; occasionally like me = 2; sometimes like me = 3; frequently like me = 4; always like me = 5)	35	190	74	159	118.82	16.51
Empathy	10 items on 5-point Likert scale (never like me = 1; occasionally like me = 2; sometimes like me = 3; frequently like me = 4; always like me = 5)	10	50	18	49	35.04	6.25
Handling Relationships	8 items on 5-point Likert scale (never like me = 1; occasionally like me = 2; sometimes like me = 3; frequently like me = 4; always like me = 5)	8	40	10	39	27.81	5.01
Utilization of Feelings	10 items on 5-point Likert scale (never like me = 1; occasionally like me = 2; sometimes like me = 3; frequently like me = 4; always like me = 5)	10	50	20	49	32.68	5.45
Self-Control	7 items on 5-point Likert scale (never like me = 1; occasionally like me = 2; sometimes like me = 3; frequently like me = 4; always like me = 5)	7	35	11	33	23.29	4.04

Research Questions

The 35-item EII (see Appendix I) and the revised EI subscales (see Appendix J) are used to assess the research questions. Additionally, the 55-item NDS (see Appendix F) and NDS subscales (see Appendix G) used by Lance (2003) are utilized. Bivariate, multivariate, and hierarchical regression analyses were ran to analyze the results. For hierarchical regressions, Tabachnick and Fidell (1996) recommend the formula, $N \geq 50 + 8m$ (with m equaling the number of independent variables), be used to determine the appropriate number of independent variables to be included in the analysis. For this study, this recommendation is met ($152 \geq 50 + 8*11$).

RQ 1 (Emotional Intelligence, its Four Subscales, and Deviancy)

What is the relationship between emotional intelligence and juvenile delinquency as measured by the Emotional Intelligence Inventory and Normative Deviancy Scale?

What is the relation between the four subscales of emotional intelligence (empathy, handling relationships, utilization of feelings, and self-control) and juvenile delinquency?

When answering these questions, bivariate regression analysis was utilized. However, to further examine these questions in more detail, multivariate and hierarchical regressions were run. For the bivariate regression analysis, the results revealed that only self-control showed any significance to deviance, $F(1, 150) = 4.81$, $p < .05$ (see Table 28). While the EII and the four subscales all showed negative relationships between themselves and deviancy, only self-control was significant. Self-control's adjusted R^2 is .031, thus indicating that only 3% of the variance in deviancy is explained by self-control. According to the bivariate regression analysis, no other significance was found between EII or any other of its subscales.

Table 28: Bivariate Regressions: Regressing Deviancy on Emotional Intelligence Inventory and its Subscales

Bivariate Stats	β	t	R^2	F
EII Total	-.139	-1.725	.019	2.975
Empathy	-.136	-1.682	.019	2.829
Handling Relationship	-.102	-1.256	.010	1.578
Utilization of Feelings	-.042	-.513	.002	.263
Self-Control	-.176	**-2.193***	.031	**4.808***

*$p < .05$ Note: Emotional Intelligence Inventory and all four subscales were individually compared to deviancy. Dependent variable is deviancy.

Multivariate regression was used to check the four subscales of the EII as one model against deviancy, no statistical significance was discovered (see Table 29). When self-control is combined with the other three subscales to predict deviance, it lost its significant relationship as revealed in the bivariate analysis of Table 28.

Table 29: Multivariate Regressions: Regressing Deviancy on Emotional Intelligence Inventory Subscales

	β	t	R^2	F
			.033	1.259
Empathy	-.120	-1.189		
Handling Relationships	.039	.336		
Utilization of Feelings	.127	1.216		
Self-Control	-.154	-1.556		

*$p < .05$, **$p < .01$, ***$p < .001$ Note: Subscales ran together as one model. Dependent variable is deviancy.

Hierarchical multiple regression was utilized to control for demographic variables, such as age, sex, race, parent's marital status, grade level, school attended, and detention. The results revealed numerous significant negative correlations between three of the four subscales and overall deviance (see Table 30). The seven control variables were entered as Model 1, and explained 61.5% of the variance, $F(7, 125) = 28.52$, $p < .001$. After the four subscales of EI were added, the total variance explained is 66%, $F(11, 121) = 21.32$, $p < .01$, the adjusted R^2 (4.5%), F change (3.97). In the first model, sex, school, and detention revealed a significant

effect on deviancy ($p < .001$). In addition, by using the seven control variables, three of the four EI subscales show significance to deviance: handling relationships ($p < .05$), utilization of feelings ($p < .05$), and self-control ($p < .01$). This reveals a significant change from the other two tables (28 & 29) comparing EI subscales to deviance.

Table 30: Hierarchical Multiple Regressions: Regressing Normative Deviancy Subscales on Emotional Intelligence Subscales when Controlling for 7 Demographic Variables

	β	t	R^2	ΔR^2	F Change
Model 1			**.615**	.615	**28.522*** **
Age	-.030	-.217	-.030		
Sex	**.203**	**3.407*** **	.203		
Race	-.096	-1.703	-.096		
Parent's Marital Status	-.035	.576	.035		
Grade	.281	1.961	.281		
School	**.318**	**4.882*** **	.318		
Detention	**.359**	**5.262*** **	.359		
Model 2			**.660**	**.045**	**3.970****
Empathy	-.128	-1.802			
Handling Relationships	**.161**	**2.085***			
Utilization of Feelings	.141	**2.043***			
Self-Control	**-.177**	**-2.650****			

*$p < .05$, **$p < .01$, ***$p < .001$ Note: Dependent variable is deviancy.

Because Table 30 revealed that three control variables (sex, school, and previous detention) have significant effect with EI's subscales in predicting deviancy, this study examined three control variables, when run with the four subscales of EI as the second block, have the most significant effect on deviancy. To make the model more parsimonious, several combinations of three control variables were examined in one block with block two consisting of the four EI subscales to see the effect they have on deviant behavior. Although Table 30 shows sex, school, and detention as having significant effects with the subscales of EI on deviance, when these three were used as the only control variables, hierarchical regressions revealed that te lost some of their significance. The three control variables (when combined together in one

model) that have the most significant effect with the subscales of EI (model two) in predicting deviance are race, grade, and school (see Table 31).

The results showed that when controlling for three variables (race, grade, and school), their significance is most effective with the subscales of EI on deviance (see Table 31). When race, grade, and school were entered (Model 1), they significantly predicted deviance, $F(3, 146) = 38.06$, $p < .001$, $R^2 = .44$. When the four EI subscales were added, they increased the prediction $R^2 = .50$, R^2 change = .07, $F(4, 142) = 20.58$, $p < .001$. Using both models as predictors, the entire group significantly predicts deviance, F change = 4.63, adjusted $R^2 = .48$, thus 48% of the variance in predicting deviant behavior is explained by both of these models.

Table 31: Hierarchical Multiple Regressions: Regressing Normative Deviancy Subscales on Emotional Intelligence Subscales when Controlling for 3 Demographic Variables

		β	t	R^2	ΔR^2	F Change
Model 1				.439	.439	**38.059*** **
	Race	-.126	**-2.028***			
	Grade	.357	**5.528*** **			
	School	.439	**6.806*** **			
Model 2				.504	.065	**4.633** **
	Empathy	-.204	**-2.732** **			
	Handling Relationships	.180	**2.146***			
	Utilization of Feelings	.122	**1.594**			
	Self-Control	-.207	**-2.849** **			

*$p < .05$, **$p < .01$, ***$p < .001$ Note: Dependent variable is deviancy.

RQ 2 (Emotional Intelligence and Aspects of Deviancy)

How is emotional intelligence related to specific aspects of deviancy (vandalism alcohol, drugs, school misconduct, general deviance, theft, and assault)?

When NDS subscales are individually combined with EII as a predictor of deviance, school misconduct has the highest variance, $R^2 = 58\%$ (see Table 32). The remaining six NDS subscales show small levels of variance (vandalism $R^2 = 3\%$, alcohol use $R^2 = 1\%$, drug use $R^2 = 1\%$, general deviance $R^2 = 2\%$, theft $R^2 = 1\%$, and assault $R^2 = 2\%$).

Running bivariate regressions with the EII as the independent variable shows that two of the NDS subscales have significance: vandalism, $F(1, 150) = 4.58$, $p < .05$ and school misconduct, $F(1, 150) = 203.50$, $p < .001$. Vandalism revealed an adjusted R^2 of .02 and school misconduct shows an adjusted R^2 of .57. However, vandalism displays a negative correlation with EI (beta = -.17) and school misconduct shows a positive relationship (beta = .76).

Table 32: Bivariate Regressions: Regressing Deviancy using Normative Deviancy Subscales and Emotional Intelligence Inventory

	Vandalism	Alcohol Use	Drug Use	School Misconduct	General Deviance	Theft	Assault
EII							
β	**-.172**	-.117	-.084	**.759**	-.124	-.109	-.149
t	**-2.140***	-1.449	-1.034	**14.265*****	-1.528	-1.339	-1.841
R^2	**.030**	.014	.007	**.576**	.015	.012	.022
F	**4.579***	2.099	1.070	**203.500*****	2.335	1.793	3.389

*$p < .05$, ***$p < .001$ Note: Dependent variable is deviancy.

When separating EI into its four subscales and running them as one block against each of the seven NDS subscales, variance shows significance with all four EI subscales predicting school misconduct, $F(4, 147) = 106.61$, $p < .001$, adjusted $R^2 = .74$ (see Table 33). This indicates that 74% of the variance in school misconduct is explained by the four subscales of EI.

Self-control ran with vandalism, $F(4, 147) = 4.58$, $p < .05$, adjusted $R^2 = .05$ and self-control with general deviance, $F(4, 147) = 1.99$, $p < .05$, adjusted $R^2 = .02$ display the only other significance. However, all four variables need to be included for self-control to have this significant effect.

Table 33: Multivariate Regressions: Regressing Normative Deviancy Subscales by Emotional Intelligence Inventory Subscales

	Vandalism		Alcohol Use		Drug Use		School Misconduct		General Deviance		Theft		Assault	
	β	t	β	t	β	t	β	t	β	t	β	t	β	t
Empathy	-.119	-1.207	.039	.385	-.100	-.984	**-.189**	**-3.637*** **	-.116	-1.154	-.090	-.897	-.188	-1.881
Handling Relationship	-.014	-.123	-.107	-.926	-.037	-.319	**.480**	**8.070*** **	.095	.828	-.037	-.323	.088	.771
Utilization of Feelings	.130	1.270	.028	.264	.091	.867	**.456**	**8.466*** **	.037	.359	.137	1.311	.053	.509
Self-Control	**-.235**	**-2.416***	-.112	-1.127	-.063	-.633	**.198**	**3.873*** **	**-.196**	**-1.991***	-.159	-1.607	-.159	-1.619
R^2	**.07**		.026		.018		**.744**		.042		.038		.051	
F	**2.783***		.964		.668		**106.608*** **		1.622		1.450		1.967	

*$p < .05$, *** $p < .001$ Note: Subscales ran together as one block. Dependent variable is deviancy.

Yet, controlling for demographic variables (age, sex, race, parent's marital status, school, and detention), and running a hierarchical regression analysis, the results revealed significance between some variables that did not show significance in multivariate regressions (Table 33). Variance levels were also significantly increased: vandalism (55%), adjusted $R^2 = .05$; school misconduct (77%), adjusted $R^2 = .74$; theft (48%), adjusted $R^2 = .04$; assault (41%), adjusted $R^2 = .07$ (see Table 34).

Significance is added to several variable combinations: empathy predicting drug use, $F(11, 121) = -2.64$, $p < .01$; utilizations of feelings forecasting theft, $F(11, 121) = 2.03$, $p < .05$; self –control projecting theft, $F(11, 121) = -2.40$, $p < .05$; and self-control shows significance in predicting assault, $F(11, 121) = -3.02$, $p < .01$ (see Table 34).

Table 34: Hierarchical Multiple Regressions: Regressing Subscales of Normative Deviancy Scale by Emotional Intelligence Inventory Subscales when Controlling for Demographic Variables

	Vandalism		Alcohol Use		Drug Use		School Misconduct		General Deviance		Theft		Assault	
Hierarchical Steps	β	t	β	t	β	t	β	t	β	t	β	t	β	t
Model 1														
Age	-.040	-.253	-.043	-.284	-.018	-.136	.090	.408	-.007	-.045	-.043	-.257	-.082	-.452
Sex	**.272**	**3.988*****	-.011	-.169	.087	1.563	.009	.091	**.296**	**4.297*****	**.199**	**2.763****	**.267**	**3.429*****
Race	-.068	-1.053	-.049	-.808	-.023	-.432	.111	1.248	**-.132**	**-2.027***	-.131	-1.931	-.208	-2.839
Parent's Marital Status	.042	.603	-.059	-.898	.034	.594	-.099	-1.026	.092	1.310	.040	.542	.088	1.115
Grade	.177	1.080	**.332**	**2.152***	**.342**	**2.558***	.007	.030	.244	1.474	.179	1.032	.124	.662
School	**.236**	**3.159****	**.329**	**4.683*****	**.418**	**6.875*****	.042	.411	**.226**	**2.990****	**.262**	**3.325*****	.113	1.330
Detention	**.372**	**4.760*****	**.326**	**4.436*****	**.316**	**4.963*****	-.035	-.324	**.276**	**3.493*****	**.331**	**4.008*****	**.324**	**3.635*****
Model 2														
Empathy	-.109	-1.332	-.054	-.675	**-.180**	**-2.639****	**-.201**	**-3.448*****	-.059	-.694	-.089	-1.015	-.090	-.960
Handling Relationships	.099	1.117	.056	.643	.092	1.252	**.470**	**7.441*****	.155	1.692	.057	.598	.191	1.889
Utilization of Feelings	.156	1.960	.015	.194	.050	.759	**.480**	**8.476*****	.051	.616	**.173**	**2.031***	.157	1.730
Self-Control	**-.238**	**-3.082****	-.126	-1.671	-.056	-.874	**.207**	**-3.770*****	**-.213**	**-2.680****	**-.198**	**-2.392***	**-.266**	**-3.018***

	Vandalism		Alcohol Use		Drug Use		School Misconduct		General Deviance		Theft		Assault	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
R^2	.495	**.548**	.553	.567	.664	.687	.035	**.771**	.483	.519	.436	**.479**	.343	**.411**
ΔR^2	.495	**.054**	**.553**	.015	**.664**	.023	.035	**.736**	**.483**	.035	**.436**	**.042**	**.343**	**.068**
F Change	**17.479*****	**3.592****	**22.064*****	1.018	**35.332*****	2.210	.641	**97.119*****	**13.706*****	2.222	**13.832*****	**2.459***	**9.329*****	**3.484****

*p < .05, **p < .01, ***p < .001 Note: Dependent variable is deviancy.

RQ 3 (Emotional Intelligence and Detention with Control Variables)

What is the relationship between emotional intelligence and juvenile delinquency as measured by the Emotional Intelligence Inventory and Normative Deviancy Scale when comparing the juveniles who have served time in detention to those youths who have not been incarcerated in juvenile detention when controlling for six variables (age, sex, white v. non-white, married v. non-married, grade, and school)?

To answer research question number three, logistic regression analysis was utilized to assess the effect that age, sex, race, parent's marital status, grade, school, and the four subscales of EI (i.e., empathy, handling relationships, utilization of feelings, and self-control) have on detention (see Table 35). The full model contains 10 predictors and was statistically significant, x^2 (10, N = 133) = 53.30, $p < .001$, thus indicating that this model is able to distinguish between participants who answered yes to being in detention and those who responded no. According to Pallant (2010), this passes the goodness of fit test. Pallant (2010) states that in order for the model to show support, the Hosmer-Lemeshow Goodness of Fit Test should be greater than .05; for this model it is 12.27, $p = .140$, thus showing this model also passes this test. This 10 variable model explained between 33% (Cox & Snell R square) to 54% (Nagelkerke R squared) of the variance in detention. In addition, this model is able to correctly classify 90% of all cases.

Only three of the independent variables made a statistically significant contribution to the model (sex, school and self-control). The strongest predictor of going to detention is sex, odds ratio of 15.57, with a B value of 2.745. This indicates that males are over 15 times more likely to go to detention than females. School also has a significant effect on detention, odds ratio of 3.336, with a B value of 1.205. Self-control was also a significant predictor of going to

detention, odds ratio of .826 and a B value of -.191. This shows that those with higher self-control are less likely to be sent to detention.

Table 35: Logistic Regression: Predicting Likelihood of going to Detention

	B	S.E.	Wald	*p*	Exp (B) Odds Ratio	95.0% C.I. for Exp (B) Odds Ratio	
						Lower	Upper
Ages	-.492	.720	.468	.494	.611	1.49	2.506
Sex	**2.745**	.827	11.019	**.001*** **	**15.569**	3.078	78.744
Race	.259	.889	.085	.771	1.295	.227	7.401
Parent's Marital Status	.587	.749	.65	.433	1.799	.414	7.811
Grade	1.427	.854	2.791	.095	4.166	.781	22.226
School	**1.205**	.398	9.158	**.002** **	**3.336**	1.529	7.279
Empathy	.139	.080	3.018	.082	1.149	.982	1.344
Handling Relationships	-.037	.104	.130	.718	.963	.786	1.180
Utilization of Feelings	.015	.072	.042	.837	1.015	.882	1.168
Self-Control	**-.191**	.091	4.349	**.037***	**.826**	.691	.989

*$p < .05$, p < .01, ***$p < .001$ Note: Dependent variable is detention.

RQ 4 (Emotional Intelligence and Deviancy – Controlling for Asge)

What is the relationship between the level of emotional intelligence and overall deviance when controlling for age?

What is the relation between the four subscales of emotional intelligence (empathy, handling relationships, utilization of feelings, and self-control) when controlling for age?

By itself, age has a positive relationship that is significant in predicting deviancy, $F(1, 150) = 35.01$, $p < .001$, $R^2 = .19$ (see Table 36). When the full EII is included with controlling for age, EII does not show any significance. In addition, when the four subscales are run as one block and age is controlled for, no significance is reported. However, when each of the four subscales are independently run and age is controlled for, then self-control does show a

significant negative relationship in predicting deviancy, F change(2, 149) = 4.14, $p < .05$, adjusted $R^2 = .20$, $R^2 = .02$. Thus, when entered with age, self-control has a 20% chance of predicting deviance.

Table 36: Hierarchical Multiple Regressions: Predicting Deviance by Emotional Intelligence Inventory and its Four Subscales when controlling for Age

Hierarchical Steps	β	t	R^2	ΔR^2	F Change
Model 1					
Age	**.435**	**5.917*** **	.189	.188	**35.013*** **
Model 2					
EII	-.095	-1.289	.198	.009	1.662
Model 1					
Age	**.435**	**5.917*** **	.189	.188	**35.013*** **
Model 2					
Empathy	-.115	1.565	.202	.013	2.449
Model 1					
Age	**.435**	**5.917*** **	.189	.188	**35.013*** **
Model 2					
Handling Relationships	-.075	-1.013	.195	.006	1.027
Model 1					
Age	.435	**5.917*** **	.189	.188	**35.013*** **
Model 2					
Utilization of Feelings	.023	.312	.190	.001	.097
Model 1					
Age	**.435**	**5.917*** **	**.189**	.188	**35.013*** **
Model 2					
Self-Control	**-.148**	**-2.035***	**.211**	.022	**4.319***
Model 1					
Age	**.435**	**5.917*** **	**.189**	.188	**35.013*** **
Model 2			.232	.043	2.021
Empathy	-.110	-1.214			
Handling Relationships	-.021	-.200			
Utilization of Feelings	.163	1.741			
Self-Control	-.167	-1.885			

*$p < .05$, ***$p < .001$ Note: Dependent variable is deviancy.

RQ 5 (Emotional Intelligence and Sex)

What is the relationship between sex and emotional intelligence scores?

As shown in Table 37, sex has a significant negative relationship with the sex of the person, $F(1, 147) = 5.87$, $p < .05$, $R^2 = .04$. Thus, indicating that sex accounts for 4% of the variance in total EI scores. In addition, for every unit increase in sex (from female, coded 0, to male, coded 1), there is a decrease in the emotional intelligence scale by 6.35 units. This means, females demonstrate higher EI than males. When each subscale is run as a dependent variable, empathy is the only one that has a significant relationship with the sex of the participant. Sex reveals a significant negative relationship to empathy, $F(1, 147) = 15.89$, $p < .001$, $R^2 = .10$; thus, sex explains 10% of the variance in predicting empathy. The negative correlation shows that as sex increases one unit (from female to male), the level of empathy decreases by 3.91 units; therefore, females score higher on empathy than males.

Table 37: Bivariate Regressions: Predicting Emotional Intelligence based on Sex

	Sex			
	β	t	R^2	F
Dependent Variable				
EII	**-.196**	**-2.423***	.038	5.870
Empathy	**-.312**	**-3.986*****	.098	15.889
Handling Relationships	-.086	-1.045	.007	1.092
Utilization of Feelings	-.081	-.980	.006	.960
Self-Control	-.093	-1.130	.009	1.277

*$p < .05$, ***$p < .001$ Note: Sex is Independent Variable for all bivariate combinations.

RQ 6 (Emotional Intelligence and Deviancy – Controlling for Parent's Marital Status)

What is the relationship between emotional intelligence and overall juvenile delinquency when controlling for parental marital status?

To investigate how EI predicts deviant behavior when controlling for participants living in a married or non-married household, hierarchical multiple regression was computed (see Table 38). When married verses non-married household was entered by itself, it significantly depicts deviance, $F(1,148) = 9.88$, $p = .002$, adjusted $R^2 = .05$. However, as indicated by the R^2, only 5% of the variance in deviance can be predicted by whether the participant lives in a married or non-married household. When the total EII, and its four subscales were individually compared with married verses non-married household to forecast deviance, no statistically significance was found. Likewise, when the four subscales of EI were run as one model, and married v. non-married is controlled for, no significance was found in any of the subscales.

Table 38: Hierarchical Multiple Regressions: Predicting Deviance by Emotional Intelligence when controlling for Parents' Marital Status

Hierarchical Steps	β	t	R^2	ΔR^2	F Change
Model 1					
Parent's Marital Status	**-.257**	**-3.222****	**.063**	.063	**9.867****
Model 2					
EII	-.092	-1.153	.071	.008	1.329
Model 1					
Parent's Marital Status	**-.257**	**-3.222****	**.063**	.063	**9.867****
Model 2					
Empathy	-.128	-1.607	.079	.016	2.582
Model 1					
Parent's Marital Status	**-.257**	**-3.222****	**.063**	.063	**9.867****
Model 2					
Handling Relationships	-.025	-.310	.063	.001	.096
Model 1					
Parent's Marital Status	**-.257**	**-3.222****	**.063**	.063	**9.867****
Model 2					
Utilization of Feelings	-.003	-.043	.063	.000	.002
Model 1					
Parent's Marital Status	**-.257**	**-3.222****	**.063**	.063	**9.867****
Model 2					
Self-Control	-.143	-1.805	.083	.020	3.256
Model 1					
Parent's Marital Status	**-.257**	**-3.222****	**.063**	.063	**9.867****
Model 2					
Empathy	-.155	-1.570	.104	.042	1.674
Handling Relationships	.110	.964			
Utilization of Feelings	.082	.801			
Self-Control	-.176	-1.820			

**$p < .01$ Note: Dependent variable is deviancy.

CHAPTER 5

DISCUSSION, LIMITATIONS, IMPLICATIONS, AND FUTURE RESEARCH

Is has been postulated that lower levels of emotional intelligence may predict higher levels of deviant behavior (Mayer et al., 2001). The overall findings of this study support this, yet future research needs to be conducted into the role that EI plays in predicting deviancy. In addition, research should be concerned with looking into what specific branches of EI have significant effects on deviant behavior, as well as what areas of deviancy are negatively affected by EI.

Relationship Between Emotional Intelligence, its Four subscales, and Deviancy

To answer research question one, several different regression analyses were utilized: bivariate, multivariate, and hierarchical. After running bivariate regressions, and checking to see if overall EI or individual subscales of EI accounted for any significance in predicting deviant behavior, only self-control showed a significant negative correlation to deviancy, yet self-control only accounted for 3% of the variance in explaining deviant behavior (see Table 28). However, when running a hierarchical regression analysis and controlling for age, sex, race, parent's marital status, grade, school, and detention, three subscales showed significant relationships with deviancy: handling relationships, utilization of feelings, and self-control see (Table 30). In addition, when the EI subscales are combined with the seven control variables, they account for 66% of the variance in predicting deviancy.

Several hierarchical regressions were run to discern which of the three control variables, when combined with the four subscales of EI, have the highest variance. These analyses revealed that running the combination of model 1 (race, grade, and school), and model 2 (EI's four subscales) accounted for 50% of the variance in predicting deviant behavior.

This hierarchical analysis is supported by two previous studies that found low EI is negatively correlated with deviant behavior (Moriarty et al., 2001; Trinidad, 2002) In addition, Lance (2003) states that she did find an overall small negative correlation between overall EI and deviancy, yet this was not significant (p. 69).

Emotional Intelligence's Relationship to Different Aspects of Deviancy

Multivariate regressions revealed the four EI subscales significantly predict school misconduct at 74% variance (see Table 33). This is a 17% increase in predicting school misconduct compared to only running a bivariate regression analysis for EI see (Table 32). The remaining six deviant subscales did not show high variance percentages; however, at 7% variance the four EI subscales significantly predict vandalism and at 5% they significantly predict general deviance. The EI subscales did not show any significance at predicting any other deviant behavior.

When controlling for seven variables (age, sex, race, parent's marital status, grade, school, and detention), the four EI subscales significantly predict school misconduct with a variance of 77% (see Table 34). In the same analysis, self-control significantly predicts vandalism (55%), general deviance (52%), theft (48%), and assault (41%). Two other significantly important findings were utilization of feelings predicts theft (48% variance) and empathy predicts drug use (69% variance).

Overall, these findings are supported by Lance (2003) who found that empathy and self-control were negatively related to vandalism, general deviance, and assault. In addition, Moriarty et al. (2001) found that sex offenders scored lower on both empathy and self-control. Pihet et al. (2012) discovered that alexithymia (empathy), constructive thinking (utilization of feelings), and impulsivity (self-control) were negatively correlated with emotional regulation and minor offenses. Bacon et al. (2014) also found that higher impulsivity is positively correlated with delinquent behavior, thus those people with low self-control are more likely to commit deviant acts.

Conversely, previous research showed negatively correlations between EI and drug, alcohol, and tobacco use (Coelho, 2012; Claros & Sharma, 2012; Schutte et al. 2011; Trinidad et al., 2005). However, this current study only found a negative relationship between empathy and drug use; that is, as empathy decreases, drug use increases.

How Emotional Intelligence Affects Detention when Using Control Variables

Research question three examined whether or not lower EI predicted if a participant would go to detention. Using logistic regression, and controlling for six variables (age, sex, race, parent's marital status, grade, and school), the results revealed that males have a higher chance of going to detention than females (see Table 35). This coincides with another study, Bacon et al. (2014), which found that males have a higher proximity for committing deviant behavior when compared to females. In addition, as grade level increases, the chance of going to detention increases. Similarly, what school the participant attends increases the chance of spending time in detention. Self-control shows a significant negative relationship with detention, which indicates that those with lower self-control have a higher chance of being sent to detention. No other studies were found that looked at either school or self-control as predictors for being in detention

or being incarcerated. However, Zimmerman (2006) discovered that juveniles who were in detention, when compared to those who were not in detention, showed lower empathy. Two other studies did find self-control as a predictor of delinquency: Pihet et al. (2012) found that juvenile sex offenders demonstrated higher aggression, thus meaning lower self-control and Bacon et al. (2014) established that higher impulsivity (lower self-control) is positively correlated with delinquent behavior. Indicating that as self-control decreases, deviancy increases.

Emotional Intelligence and how it Relates to Deviancy when Controlling for Age

By itself, age accounts for 19% of the variance in predicting deviancy see (Table 36) and shows a positive correlation. Thus indicating that as the individual ages, deviancy increases. This is backed by the research of Hockenberry and Puzzanchera (2014) who found that as the age of the juvenile increases, so too does deviant behavior (see Figures 1 & 2).

When controlling for age and adding total EI or its four subscales (empathy, handling relationships, utilization of feelings, and self-control) to predict deviancy, only self-control reveals a significant affect. Self-control and age together display a 21% variance level in predicting deviant behavior. In addition, self-control shows a negative correlation with deviancy indicating that those with lower self-control are more likely to commit deviant acts. Lance (2003) found a small negative relationship between self-control and deviancy, yet it was not significant. However, other studies have found that some offenders display higher levels of aggression or impulsivity (low self-control). Moriarty et al. (2011) discovered that sex offenders score higher on aggression when compared to non-offenders. In addition, Pihet et al. (2012) established that poor emotional regulation (which they point out includes impulsivity) increases

minor offenses while Bacon et al. (2014) found higher impulsivity is positively correlated to delinquent behavior.

How Sex Relates to Emotional Intelligence

Bivariate regression was used to see if there was a significant difference in EI scores between males and females. The results show that males, when compared to females, score lower on total EI and empathy (see Table 37). Thus, females demonstrate higher EI and empathy than males. In addition, when lower empathy is correlated to specific acts of deviancy (drug use and school misconduct – see Table 34) then it can be postulated that by having lower empathy, males also have a higher chance of doing drugs or acting out at school.

The result that higher empathy reduces delinquency is supported by four previous studies. According to Bacon et al. (2014,) males have high negative relationships between trait EI (empathy is a subpart) and delinquent behavior. In addition, numerous studies postulate that lower empathy is attached to higher deviance: Moriarty et al. (2001) shows that male sex offenders score lower on empathy and both Pihet et al. (2012) and Zimmerman (2006) shows that juvenile offenders demonstrate low alexithymia (empathy).

Emotional Intelligence and Deviancy when Controlling for Parent's Marital Status

The final research question used a hierarchical regression analysis to examine how EI affects deviancy when controlling for whether or not the participant lived in a household with a married or non-married parent (see Table 38). No significant relationships were found between EI or any of its four subscales. However, whether the participant lived in a house with a married parent or non-married parent was significantly negatively correlated with deviance. Previous research has shown that living in a home with only one parent is a significant predictor of deviancy. Smith (1998) found that the majority (82%) of youths in detention came from

households with only one biological parent and Klein et al. (1997) showed parents' marital relations to be a predictor of juvenile delinquency.

Limitations of Current Study

There are six limitations found in this study. These should be considered in interpreting the results. The data collected for this research was conducted by Lance (2003) and her group of research assistants. Therefore, many of the same limitations that Lance (2003) discussed in her thesis are found in this study.

To begin, there is the issue of this not being a randomized study. As Lance (2003) points out, schools were specifically chosen for this study (p. 73). In addition, there exists the fact that groups of students were specifically chosen for this study because of their traits. As Lance (2003) discusses, "the alternative high school was intentionally selected because of the students' characteristics" (p. 73). Alternative and resource students were sought to provide both non-deviant and deviant youths. Furthermore, the attrition rate for this study was 47%, thus because of generalizability, impacting the ability to apply results. If the total 287 participants who were given surveys had returned them, the results may have differed. Lance (2003) also points out that 15 of the participants had to have help interpreting the information on the questionnaires; therefore, because the researcher was able to see every mark these participants made on the surveys, anonymity was erased, which may have affected the responses from these 15 participants.

Because they are only questions on a piece of paper and not a reflection of actual behavior, self-report surveys have a chance of providing mixed results. This holds true for both the EII and NDS questionnaires.

Reliability is in question because this study did not use the exact same 45-item EII, nor the same questions to make up the four subscales of the EII. The fact that the item-to-deletion process found negative items and eliminated these items calls into question the reliability of the instruments. The 41-item EII did not work the way it was designed and used by both Tapia (2001) and Lance (2003). Instead, a 35-item EII (made from the 41-item EII) was used for this study, along with different items in the four EII subscales. Even though the 35-item EII raised the Cronbach coefficient α and improved internal consistency, reliability is still violated because it is not consistent over time (Hartley, 2011).

As stated by Lance (2003), other EI tests "would give an accurate representation" (p. 75); therefore, validity would be better supported. In addition, because of the 47% attrition rate, and due to the small sample size (152), the ability to actually measure EI and delinquency is constrained.

For some of the research questions, numerous control variables were utilized. Because of the small sample size, the question of their accuracy and how the results should be interpreted is called into question. As Field (2013) discusses, small sample sizes can appear to show strong results.

In dealing with the research question that pertains to detention (#3), because of the low number of participants' who actually answered this question (135) and that only 24 answered yes and 111 responded no, data were missing for 17 participants, limitations were created. In running the hierarchical regressions for this question, 10 independent variables were used. Even though using the formula ($N \geq 50 + 8m$), 135 participants is barely above the total number allowed for; therefore, this should be taken into consideration when looking at the results.

Studies conducted with larger samples would produce better results, as well as more accurate results.

Implications

Goleman (1995) postulates that the "emotional lessons we learn as children" help "shape the emotional circuits" (p. xiii) in our brains, and allow us to adapt to our environment in healthy or unhealthy ways. Because of this knowledge, and the research that has shown errors in criminal thinking, examining what role emotional intelligence plays in those youths who become deviant, or why life-course criminals persist in criminality, is crucial.

The current study found that as grade level increases, so too does deviancy. It also shows that as age increases, delinquency increases. Because of these two key findings, schools should take a proactive approach and try and target children in lower grade levels and at an earlier age. In addition, because self-control is shown to have the strongest significant effect on predicting deviant behavior, getting children to develop higher levels of self-control is crucial in trying to reduce later deviance.

This study indicates that sex, school, and self-control have significant effects on whether a juvenile goes to detention. Because of this, there are implications for schools to provide better education to youths which increases engagement in schools. Implementing EI programs as disciplinary tools that teach juveniles self-control and empathy can help to not only reduce delinquency, but also raise engagement levels in the school for these juveniles. If children are acting out and causing classroom disturbances, or conflicts in other areas of the school, then a standard assessment tool to measure EI could be utilized to see what areas of emotional education these youths need.

In addition, because this study, and other studies, found negative relationships between parents' marital status and delinquency, those children coming from single-parent homes should be measured to see their level of EI. This can lead to implementing programs that target these types of children without labeling them delinquents.

There are also implications for those centers that work with juvenile delinquents. Because the current study, as well as other studies, show specific characteristics that have a negative effect on juvenile deviant behavior, implementing programs while these juveniles are in some form of custody (i.e., detention centers or homes for children) that counter these negative variables is crucial to lowering the juvenile recidivism rate.

Goleman (1995) advocates that teaching emotional intelligence to juveniles in our school systems can produce a healthier learning environment and increase prosocial skills. Because this study shows that some branches of EI share a negative relationship with deviancy, and that the school has some effect on detention, teaching EI to children will not only reduce delinquency, but will also decrease the number of youths that are being sent to detention. In addition, this will improve schools' learning environments which can increase educational attainment.

Because EI does seem to have an effect on vandalism, drug use, school misconduct, general deviance, theft, and assault (Table 34), the age when EI is first taught to youths needs to be examined. Perhaps beginning in between the third and fifth grade (8-10 year olds) is appropriate. In addition, the possibility of having a standardized EI test that every student takes throughout their educational upbringing will provide beneficial results to the student, parents, and society in general. The issue of how to raise the EI level of those students who demonstrate lower EI needs to also be examined. Branch two of EI shows that cognition effects EI; therefore, cognitive restructuring of those youths who demonstrate, or score low on EI tests, needs to be

studied so that these issues can be addressed in a positive manner. If this can improve youths' level of empathy, how they handle relationships and utilize feelings, and allow then to have higher self-control, perhaps this can improve marital relationships later in life, thus reducing the number of future generations growing up in non-married households.

Other areas of research that should be examined include how school effects EI, delinquency, and detention. During the logistic analysis of the current study, a significant relationship between school and detention was revealed; however, the reason for this is unknown. Future research may be able to add the reason for this significance, thus pinpointing what schools need to do in order to reduce the number of youths sent to detention. In doing so, school may be able to intervene and turn negative behaviors into positive conduct.

Future Research

In general, and because of the issues found with the EII in this study, and previous studies (Lance, 2003; Tapia, 2001), future research should look at utilizing other, more reliable measures to examine the relationship between EI and deviant behavior. In addition, studies with larger samples should be used to see how EI compares to previous studies. Suggestions for this include using the Mayer, Salovey, Caruso Emotional Intelligence Test (MSCEIT). This test intricately studies EI and gets participants more involved. However, because the MSCEIT costs over $600 (MHS, 2015) this may limit access to using it to measure EI and explore its relationship to deviancy. Few studies have been conducted which examine the whole concept of EI, its subscales, and their relationship to deviant behavior. Because of this, future research should look into the role that EI plays in delinquency. Emotional intelligence has been deemed to have a high effect on how well a person performs in social settings (Goleman, 1995), this area needs to expand and include how EI directly affects deviant behavior.

For this study, all demographic variables were run as one set (control variables) to see the effect they have on deviance. Because of the small sample size (N = 152), this causes issues with parsimony. Some control variables did show a significant effect with EI on predicting deviance. Therefore, the need for future studies utilizing larger samples should be conducted to see the effects these, and other control variables, have on EI when predicting deviancy.

Future research also needs to look at how EI can be improved. This can be accomplished through longitudinal studies. By studying a large sample who show low EI scores, then separating this same group into a control group (where nothing is done to improve EI) and an experimental group (which receives EI education in some form), the results can show researchers, school administrators, and juvenile justice officials how to improve EI in youths.

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APPENDIX A:

E-MAIL CORRESPODENCE WITH JENNIFER LANCE

RE: Emotional Intelligence

jolli_jenni <jolli_jenni@hotmail.com>

Fri 6/6/2014 12:18 AM

Inbox

To:Rex Hammond <rhammond1@sycamores.indstate.edu>;

12 attachments

correlations.spo; correlations2.spo; emotional raw data.sav; graphs of dist.spo; histograms.spo; meanssd.spo; missing values.spo; reliability3.spo; reliabilityel4.spo; reliabilityrads2.spo; spss #5.sav; spss #5a.spo

Well, it took me much less time to find my thesis data then it did to find a pencil. Go figure! The data is attached. Best of luck! I look forward to hearing your spin on the data and your own thesis results. You r my entire month! I felt smart again! LOL. Constant kid chatter does not bode well for intellectual stimulation. Have fun on your hike.

Jenni(fer) Lance Call

From: rhammond1@sycamores.indstate.edu
To: jolli_jenni@hotmail.com
Subject: Emotional Intelligence
Date: Thu, 5 Jun 2014 13:57:02 +0000

Jennifer,

My name is Rex Hammond and I am a criminology graduate student at Indiana State University.
My Master thesis is on emotional intelligence. I am wondering if you are the same Jennifer lance who did her thesis on EI and delinquency. If so, I am interested in obtaining secondary data on EI. Would you be interested in sharing your data for my thesis?

Rex E. Hammond
Graduate/Teaching Assistant Crim. Dept.
DL Coordinator Math/Writing Center
Indiana State University
Terre Haute, IN 47809
rhammond1@sycamores.indstate.edu
work – (812) 237-2192
cell – (812) 240-9191

APPENDIX B:

IRB APPROVAL FROM UTAH STATE UNIVERSITY

Utah State University
VICE PRESIDENT FOR RESEARCH OFFICE
1450 Old Main Hill
Logan UT 84322-1450
Telephone: (435) 797-1180
FAX: (435) 797-1367
Email: vpr@cc.usu.edu

9/27/2002

MEMORANDUM

TO: Randy Jones
Jennifer Lance

FROM: True Rubal, IRB Administrator T. Rubal

SUBJECT: Emotional Intelligence and Juvenile Delinquency: Do Delinquents Have Lower Emotional Intelligence?

Your proposal has been reviewed by the Institutional Review Board and is approved under expedite procedure #7.

X There is no more than minimal risk to the subjects.
There is greater than minimal risk to the subjects.

This approval applies only to the proposal currently on file for the period of one year. If your study extends beyond this approval period, you must contact this office to request an annual review of this research. Any change affecting human subjects must be approved by the Board prior to implementation. Injuries or any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Institutional Review Board.

Prior to involving human subjects, properly executed informed consent must be obtained from each subject or from an authorized representative, and documentation of informed consent must be kept on file for at least three years after the project ends. Each subject must be furnished with a copy of the informed consent document for their personal records.

The research activities listed below are expedited from IRB review based on the Department of Health and Human Services (DHHS) regulations for the protection of human research subjects, 45 CFR Part 46, as amended to include provisions of the Federal Policy for the Protection of Human Subjects, June 18, 1991.

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

APPENDIX C:

SCHOOL DISTRICT APPROVAL AND INDIVIDUAL SCHOOL'S APPROVALS

Cache County School District
2063 North 1200 East
North Logan, UT 84341-2007
Phone (435) 752-3925 Fax (435)753-2168 www.cache.k12.ut.us

September 18, 2002

Jennifer R. Lance
43 East 200 North
Wellsville, Utah 84339

Dear Jennifer,

Thank you for submitting the proposed research project titled: Emotional Intelligence and Juvenile Delinquency..." The proposal has been reviewed and it is approved for you to survey the students at Cache High School, one class of ninth graders at North Cache 8-9 Center and one class each of 10, 11, and 12th graders at Sky View High School.

Please contact the principals and review your research proposal with them. At that time inform the principal about the importance of the study. Also, pay particular attention to informing each principal how parents will be contacted and permission secured for student participation.

If I can help, please contact me.

Sincerely,

Stephen W. Zsiray, Jr.
Associate Superintendent

CACHE HIGH SCHOOL

October 28, 2002

Jennifer Lance
Student Research
USU

Dear Jennifer:

I am writing on behalf of Cache High School to confirm our willingness to participate in your research project. I would also like to reaffirm the necessity of having a signed permission form from each student before they take the survey.

I look forward to reading the results of your research. The topic is of great interest, and I look forward to new insights. Thank you.

Sincerely,

J Cody Dobson

J Cody Dobson
Principal

Sky View High School
520 South 250 East, Smithfield, Utah 84335
(435) 563-6273 FAX (435) 563-9534

October 28, 2002

To: Jennifer Lance
RE: Questionnaire

Jennifer, this letter is being written to inform you that your questionnaires have been reviewed by Steve Zsiray and myself and cleared.

You have been approved to use the above said questionnaires in three Sky View classrooms. If you have any further questions, we would be happy to help you.

Thank you for your interest in education.

Sincerely,

Dee R Ashcroft

Dee R. Ashcroft
Principal
Sky View High School

NORTH CACHE 8-9 CENTER
157 West 600 South
Richmond, Utah 84333
Phone 258-2452

By this letter, I wish to certify that I have given permission for Jennifer Lance, a USU graduate student, to conduct research at North Cache 8-9 Center. The teachers have been appropriately contacted and also have agreed to assist.

Respectfully,

Larry L. Larson
Principal

APPENDIX D:

41-ITEM EMOTIONAL INTELLIGENCE INVENTORY

Emotional Intelligence Inventory

1) I sympathize with other people when they have problems.
2) I go out of my way to help someone in need.
3) Overt human suffering makes me feel uncomfortable.
4) I can tell when other people's feelings are hurt.
5) I am uncomfortable when someone is making fun of another person.
6) I am sympathetic with a nervous speaker.
7) I feel hurt when someone has taken advantage of a less fortunate person.
8) When someone is annoying me, I stop to think about the other person's situation rather than losing my temper.
9) When I've offended someone, I aware of it almost immediately.
10) In most cases I give people a second chance.
11) I feel moved to intervene when someone is abusing a helpless animal.
12) Criticism is difficult for me to accept.
13) There are times when I let a problem work itself out by waiting.
14) It is too stressful to stop unwanted personal habits such as overeating, smoking, nail biting.
15) I get emotionally bothered when I am exposed to an upsetting TV show, movie, or book.
16) Having car trouble causes me to feel stressful.
17) Being expected to take charge of a group activity is upsetting to me.
18) I lose control when I do not win a sporting contest.
19) Traffic jams cause me to lose control.
20) Most people feel comfortable talking to me about their personal feelings.
21) People enjoy spending time with me.
22) I can be assertive and forceful in situations where others are trying to take advantage of me.
23) It is easy for me to openly express warm and loving feelings towards others.
24) I avoid responsibility whenever I can.
25) My moods are easily influenced by those around me.
26) I am aware of even subtle feelings as I have them.
27) When I am angry, I express my feelings in a way that deals well with the situation.
28) I am able to express my feelings without hurting others.
29) I understand why I react the way I do in situations.
30) I think about how I can improve my relationships with those I love.
31) I think about how I can improve my relationships with those people that I don't get along with.
32) I think about why I don't like a person.
33) When someone makes me uncomfortable, I think about why I am uncomfortable.
34) I tend to procrastinate.
35) I use my feelings to help make decisions.
36) I can delay gratification (to wait for something better rather that get immediately what you want) in pursuit of my goals.
37) When I am anxious about a challenge, I can still prepare for it.
38) I can soothe or contain distressing feelings so they don't keep me from doing things I need to do.
39) I find that setbacks and disappointments are lessons learned.
40) I am able to stay motivated when things do not go well.
41) I keep myself focused on my goals.

APPENDIX E:

FOUR SUBSCALES OF EMOTIONAL INTELLIGENCE INVENTORY

Empathy (Perception, Appraisal, Expression of Emotion)
1) I sympathize with other people when they have problems.
2) I go out of my way to help someone in need.
4) I can tell when other people's feelings are hurt.
5) I am uncomfortable when someone is making fun of another person.
6) I am sympathetic with a nervous speaker.
7) I feel hurt when someone has taken advantage of a less fortunate person.
9) When I've offended someone, I am aware of it almost immediately.
20) Most people feel comfortable talking to me about their personal feelings.
21) People enjoy spending time with me.
27) When I am angry, I express my feelings in a way that deals well with the situation.
28) I am able to express my feelings without hurting others.

Handling Relationships (Emotional Facilitation of Thinking)
8) When someone is annoying me, I stop to think about the other person's situation rather than losing my temper.
10) In most cases I give people a second chance.
15) I get emotionally bothered when I am exposed to an upsetting TV show, movie, or book.
26) I am aware of even subtle feelings as I have them.
31) I think about how I can improve my relationships with those people that I don't get along with.
32) I think about why I don't like a person.
33) When someone makes me feel uncomfortable, I think about why I am uncomfortable.

Utilization of Feelings (Understanding and Analyzing Emotions, Employing Emotional Knowledge)
11) I feel moved to intervene when someone is abusing a helpless animal.
22) I can be assertive and forceful in situations where others are trying to take advantage of me.
29) I understand why I react the way I do in situations.
30) I think about how I can improve my relationships with those I love.
35) I use my feelings to help make decisions.
37) When I am anxious about a challenge, I can still prepare for it.
40) I am able to stay motivated when things do not go well.
41) I keep myself focused on my goals.

Self-Control (Reflective Regulation of Emotions)
14) It is too stressful to stop unwanted personal habits such as overeating, smoking, nail biting.
16) Having car trouble causes me to feel stressful.
18) I lose control when I do not win a sporting contest.
19) Traffic jams cause me to lose control.
36) I can delay gratification (to wait for something better rather that get immediately what you want) in pursuit of my goals.
38) I can soothe or contain distressing feelings so they don't keep me from doing things I need to do.

APPENDIX F:

NORMATIVE DEVIANCY SCALE SURVEY

Normative Deviancy Scale

Have you ever:

Smashed bottles on the street, school grounds, or other areas?
Intentionally damaged or destroyed property belonging to your parents or other family members (brothers or sisters)?
Intentionally damaged or destroyed property belonging to a school, college, or university?
Intentionally damaged or destroyed other property (signs, windows, mailboxes, parking meter, etc.) that did not belong to you?
Intentionally damaged or destroyed property belonging to your employer or at your work place?
Slashed or in any other way damaged seats on a bus, in a movie theater, or something at another place?
Written graffiti on a bus on school walks, on restroom walls, or on anything else in a public place?
Committed acts of vandalism when coming or going to a football game or other sporting event?
Consumed hard liquor (e.g. tequila, whiskey, vodka, or gin) before you were 21?
Consumed alcoholic beverages (e.g. beer, wine, or wine coolers) before you were 21?
Got drunk (intentionally) just for the fun of it (at any age)?
Got drunk just to fit in and be part of the crowd (at any age)?
Lied about your age to buy alcohol before you turned 21?
Had an older brother/sister or friend buy alcohol for you?
Bought alcohol for a brother/sister or friend?
Used tobacco products regularly (e.g. cigarettes, chew, snuff, etc.)
Used "soft" drugs such as marijuana (grass, pot)?
Used "hard" drugs such as crack, cocaine, or heroine?
Gone to school when you were drunk or high on drugs?
Gone to work when you were drunk or high on drugs?
Gone to a concert when you were drunk or high on drugs?
Gone to a club/dance/party when you were drunk or high on drugs?
Gone to a club/dance/party to get drunk or high on drugs?
Sold any drugs such as marijuana (grass, pot), cocaine, or heroine?
Cheated in school (e.g. cheat sheet, copy from neighbor, etc.)?
Been sent out of a classroom because of "bad" behavior (e.g. inappropriate behaviors, cheating, etc.)?
Been suspended or expelled from school?
Stayed away from school/classes when your parent(s) thought you were there?
Intentionally missed classes over a number of days for "no reason," just for fun (e.g., there was no family emergency)?
Been in trouble at school that your parents received a phone call about it?
Skipped school /work (pretending to be ill)?
Intentionally disobeyed a stop sign or red traffic light while driving a vehicle?
Been on someone else's property when you knew you were not supposed to be there?
Failed to return extra change that you knew a cashier gave you by mistake?
Tried to deceive a cashier to your advantage (e.g. flash a larger bill and give a smaller one)?

Let the air out of tires of a car or bike?
Lied about tour age to get into a nightclub/bar?
Made nuisance/obscene telephone calls?
Avoided paying for something (e.g. movies, bus, or subway rides, food, etc.)?
Used fake money or other things in a candy, coke, or stamp machine?
Shaken/hit a parked car just to turn on the car's alarm?
Stayed out all night without informing your parents about your whereabouts?
Stolen, taken, or tried to take something from a family member or relative 9e.g. personal items, money, etc.)?
Stolen, taken, or tried to take something worth $10 or less (e.g. newspaper, pack of gum, mail, money, etc.)?
Stolen, taken, or tried to take something worth between $10 and $100 (e.g. shirt, watch, cologne, video game cartridge, shoes, money, etc.)?
Stolen, taken, or tried to take something worth more than $100 (e.g. leather jacket, car stereo, bike, money, etc.)?
Stolen, taken, or tried to take something that belonged to "the public" (e.g. street signs, construction signs, etc.)?
Stolen or tried to steal a motor vehicle 9e.g. car or motorcycle)?
Bought, sold, or held stolen goods or tried to do any of these things?
Hit or threatened to hit a person?
Hit or threatened to hit your parent(s)?
Hit or threatened to hit other students/peers or people?
Used force or threatened to beat someone up if they didn't give you money or something else you wanted?
Been involved in gang fights or other gang activities?
Beaten someone up so badly they required medical attention?

APPENDIX G:

SEVEN SUBSCALES OF NORMATIVE DEVIANCY SCALE

Seven Subscales of the Normative Deviancy Scale

Vandalism

Smashed bottles on the street, school grounds, or other areas?
Intentionally damaged or destroyed property belonging to your parents or other family members (brothers or sisters)?
Intentionally damaged or destroyed property belonging to a school, college, or university?
Intentionally damaged or destroyed other property (sings, windows, mailboxes, parking meter, etc.) that did not belong to you?
Intentionally damaged or destroyed property belonging to your employer or at your workplace?
Slashed or in any way damaged seats on a bus, in a movie theater, or something at another public place?
Written graffiti on a bus, on school walks, on restroom walls, or on anything else in a public place?
Committed acts of vandalism when coming or going to a football game or other sporting events?

Alcohol

Consumed hard liquor (e.g. tequila, whiskey, vodka, or gin) before you were 21?
Consumed alcoholic beverages (e.g. beer, wine, or wine coolers) before you were 21?
Got drunk (intentionally) just for the fun of it (at any age)?
Got drunk just to fit in and be part of the crowd (at any age)?
Lied about your age to buy alcohol before you turned 21?
Had an older brother/sister or friend buy alcohol for you?
Bought alcohol for a brother/sister or friend?

Drugs

Used tobacco products regularly (e.g. cigarettes, chew, snuff, etc.)
Used "soft" drugs such as marijuana (grass, pot)?
Used "hard" drugs such as crack, cocaine, or heroine?
Gone to school when you were drunk or high on drugs?
Gone to work when you were drunk or high on drugs?
Gone to a concert when you were drunk or high on drugs?
Gone to a club/dance/party when you were drunk or high on drugs?
Gone to a club/dance/party to get drunk or high on drugs?
Sold any drugs such as marijuana (grass, pot), cocaine, or heroine?

School Misconduct

Cheated in school (e.g. cheat sheet, copy from neighbor, etc.)?
Been sent out of a classroom because of "bad" behavior (e.g. inappropriate behaviors, cheating, etc.)?
Been suspended or expelled from school?
Stayed away from school/classes when your parent(s) thought you were there?
Intentionally missed classes over a number of days for "no reason," just for fun (e.g., there was

no family emergency)?
Been in trouble at school that your parents received a phone call about it?
Skipped school /work (pretending to be ill)?

General Deviance
Intentionally disobeyed a stop sign or red traffic light while driving a vehicle?
Been on someone else's property when you knew you were not supposed to be there?
Failed to return extra change that you knew a cashier gave you by mistake?
Tried to deceive a cashier to your advantage (e.g. flash a larger bill and give a smaller one)?
Let the air out of tires of a car or bike?
Lied about tour age to get into a nightclub/bar?
Made nuisance/obscene telephone calls?
Avoided paying for something (e.g. movies, bus, or subway rides, food, etc.)?
Used fake money or other things in a candy, coke, or stamp machine?
Shaken/hit a parked car just to turn on the car's alarm?
Stayed out all night without informing your parents about your whereabouts?

Theft
Stolen, taken, or tried to take something from a family member or relative 9e.g. personal items, money, etc.)?
Stolen, taken, or tried to take something worth $10 or less (e.g. newspaper, pack of gum, mail, money, etc.)?
Stolen, taken, or tried to take something worth between $10 and $100 (e.g. shirt, watch, cologne, video game cartridge, shoes, money, etc.)?
Stolen, taken, or tried to take something worth more than $100 (e.g. leather jacket, car stereo, bike, money, etc.)?
Stolen, taken, or tried to take something that belonged to "the public" (e.g. street signs, construction signs, etc.)?
Stolen or tried to steal a motor vehicle 9e.g. car or motorcycle)?
Bought, sold, or held stolen goods or tried to do any of these things?

Assault
Hit or threatened to hit a person?
Hit or threatened to hit your parent(s)?
Hit or threatened to hit other students/peers or people?
Used force or threatened to beat someone up if they didn't give you money or something else you wanted?
Been involved in gang fights or other gang activities?
Beaten someone up so badly they required medical attention?

APPENDIX H:

IRB APPROVAL FROM INDIANA STATE UNIVERSITY

Indiana State University
More. From day one.

Institutional Review Board

Terre Haute, Indiana 47809
812-237-3092
Fax 812-237-3092

DATE:	April 7, 2015
TO:	Rex Hammond, BS
FROM:	Indiana State University Institutional Review Board
STUDY TITLE:	[712789-2] Emotional Intelligence and Its Effects on Juvenile Delinquency
SUBMISSION TYPE:	Revision
ACTION:	DETERMINATION OF EXEMPT STATUS
DECISION DATE:	April 7, 2015
REVIEW CATEGORY:	Exemption category # *4*

Thank you for your submission of Revision materials for this research study. The Indiana State University Institutional Review Board has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations (45 CFR 46). You do not need to submit continuation requests or a completion report. Should you need to make modifications to your protocol or informed consent forms that do not fall within the exempt categories, you will have to reapply to the IRB for review of your modified study.

Informed Consent: All ISU faculty, staff, and students conducting human subjects research within the "exempt" category are still ethically bound to follow the basic ethical principles of the Belmont Report: a) respect for persons; b) beneficence; and c) justice. These three principles are best reflected in the practice of obtaining informed consent.

If you have any questions, please contact Dr. Kim Bodey within IRBNet by clicking on the study title on the "My Projects" screen and the "Send Project Mail" button on the left side of the "New Project Message" screen. I wish you well in completing your study.

APPENDIX I:

35-ITEM EMOTIONAL INTELLIGENCE INVENTORY

35 items taken from the original 41-item EII (Appendix D)

1. I sympathize with other people when they have problems.
2. I go out of my way to help someone in need.
3. Overt human suffering makes me feel uncomfortable.
4. I can tell when other people's feelings are hurt.
5. I am uncomfortable when someone is making fun of another person.
6. I am sympathetic with a nervous speaker.
7. I feel hurt when someone has taken advantage of a less fortunate person.
8. When someone is annoying me, I stop to think about the other person's situation rather than losing my temper
9. When I've offended someone, I am aware of it almost immediately.
10. In most cases I give people a second chance.
11. I feel moved to intervene when someone is abusing a helpless animal.
12. Criticism is difficult for me to accept.
15. I get emotionally bothered when I am exposed to an upsetting TV show, movie, or book.
18. I lose control when I do not win in a sporting contest.
19. Traffic jams cause me to lose control.
20. Most people feel comfortable talking to me about their personal feelings.
21. People enjoy spending time with me.
22. I can be assertive and forceful in situations where others are trying to take advantage of me.
23. It is easy for me to openly express warm and loving feelings towards others.
24. I avoid responsibility whenever I can.
26. I am aware of even subtle feelings as I have them.
27. When I am angry, I express my feelings in a way that deals well with the situation.
28. I am able to express my feelings without hurting others.
29. I understand why I react the way I do in situations.
30. I think about how I can improve my relationships with those I love.
31. I think about how I can improve my relationships with those people that I don't get along with.
32. I think about why I don't like a person.
33. When someone makes me uncomfortable, I think about why I am uncomfortable.
35. I use my feelings too help make decisions.
36. I can delay gratification (to wait for something better rather than get immediately what you want) in pursuit of my goals.
37. When I am anxious about a challenge, I still can prepare for it.
38. I can soothe or contain distressing feelings so they don't keep me from doing things I need to do.
39. I find that setbacks and disappointments are lessons learned.

40. I am able to stay motivated when things do not go well.
41. I keep myself focused on my goals.

APPENDIX J:

FOUR SUBSCALES OF EMOTIONAL INTELLIGENCE INVENTORY (35 ITEMS)