Characteristics of Aggression in Male Youth:

Cognitive and Affective Empathy as Antidotes for Proactive and Reactive Aggression

Submitted by

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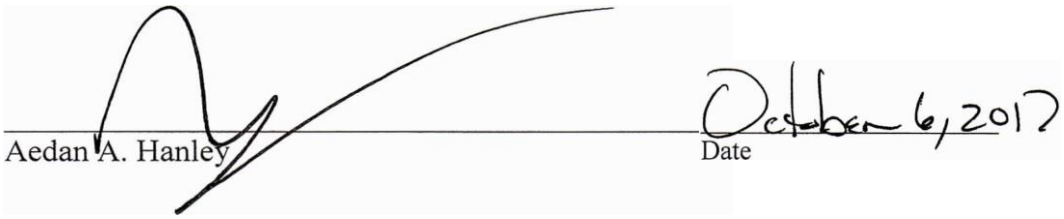
I verify that my dissertation represents original research, is not falsified or plagiarized, and that I have accurately reported, cited, and referenced all sources within this manuscript in strict compliance with APA and Grand Canyon University (GCU) guidelines. I also verify my dissertation complies with the approval(s) granted for this research investigation by GCU Institutional Review Board (IRB).



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Abstract

It is not fully known to what extent, if any, male youth proactive and reactive aggression predict overall basic empathy. A biopsychosocial model of childhood and youth aggression was therefore explored. A few primary theoretical modalities were introduced as underpinnings for potential amelioration of aggression in youth, such as theory of mind (ToM) and motivational interviewing (MI). A select number of evidence-based empathy intervention models were discussed, two primary models being *"The six seconds EQ in action model of emotional intelligence"* and restorative justice (RJ). The study surveyed 65 male youth ages 13 to 18 in grades 9 through 12 at four small to large public secondary school campuses in Arizona. Data were collected from two survey instruments: The Basic Empathy Scale (BES) and the Reactive-Proactive Questionnaire—Child (RPAQ-C). A multiple regression analysis was applied to the data with reactive and proactive aggression serving as the independent variables and empathy serving as the dependent variable. Residual regression and scatterplot figures were provided to examine normality and homoscedasticity. A significant regression equation was found, (F (2, 62) = 6.768, $p < .05$), with an $R^2 = .179$. The results suggest that the relationship between reactive and proactive aggression and empathy in teenage males should be explored further, possibly with the addition of relevant moderating variables. .

Keywords: proactive aggression, reactive aggression, child narcissism, biopsychosocial, EQ, ToM, and RJ.

Dedication

I would like to dedicate this study to a few influential and significantly important people in my life, each encouraging my diligence and perseverance to complete the doctorate in psychology. From the very beginning when I first flirted with the idea of pursuing a doctoral education in 2008, and then briefly attended another doctoral program part-time before enrolling full-time at GCU in 2011, my life partner then and now husband, Rod Alan Hampton, held my hand through every emotional aspect of this journey. His beautiful spirit, patience, and emotional coaching assisted me through what were often frustrating moments where I simply wanted to give up. To my mother, Loretta Brhely, who, at this very moment, is likely holding a large mug of rich, black coffee in one hand while finally completing that brilliant color field canvas in the other of fuchsia poppies, dark gold wheats, and her icon of beauty, Varushka von Lehndorff, in repose amongst the poppies, my mother cheering me on from another spiritual universe—your humor and unconditional belief in my intellectual and creative abilities always reminded me that having resolve was a virtue. To my dearest friends, Dr. Bobbi Vogelsang and her husband, Randy, a musicologist in his own right, for joining me emotionally and with gratitude and empathy while Bobbi completed her own doctoral journey at another competitive university program as I was completing my own—thank you, thank you, thank you.

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Chapter 1: Introduction to the Study

Introduction

Research supported that gender was one key contributing variable for a host of underlying causes for anti-social behaviors, such as proactive and reactive aggression, in children and youth (Gordon, 2013; Mayberry & Espelage, 2007; Stickle, Marini, & Thomas, 2012; Strayer & Roberts, 2004). Nonetheless, ideological differences and the polemics surrounding the causes of aggression in children and youth, specifically males, remain in the literature regarding certain types of child and youth aggression, such as proactive and reactive subtypes, according to Stickle et al. (2012). While the psychiatric community has continued to disagree about how to best reduce male youth aggression, most have agreed that empathy can be a key prosocial skill to ameliorate aggression character traits (Smith, 2012). For these reasons, the following discussion examined current research trends and antidotes for proactive and reactive aggression to determine if the pathology and biopsychosocial origins of these aggression subtypes had a predictive relationship to overall basic empathy.

According to some theorists, aggression pathologies exhibited by children, and particularly youth, in terms of proactive and reactive aggression, have been commonly associated with the diagnostic criteria established for adult male anti-social personality disorder (ASPD) attributes. Therefore, it was argued by some that this clinical diagnosis should remain the domain of adult clinical criteria as detailed in the fifth edition of the Diagnostic Statistical Manual of Mental Disorders (DSM-V) (American Psychiatric Association, 2013; Bobadilla, Wampler, & Taylor, 2012; Denson, DeWall, & Finkel, 2012); Perez-Albeniz & De Paul, 2006). Hence, why many school psychologists prefer

the diagnoses of Conduct Disorder (CD)—a childhood diagnostic and clinical term synonymous with ASPD yet commonly reserved for those under 18 years of age. However, one could argue that children and youth with these personality characteristics should not have to shoulder the emotional burden of a diagnostic label such as ASPD since it could inadvertently stigmatize those affected so early in their cognitive and socio-emotional development. These may however be more epistemological arguments requiring the kind of in-depth explorations and therefore justifications that ultimately would deter from the primary focus of this study.

Consequently, research that gave specific attention to polyvictimization as a research variable (e.g., experienced two or more adverse childhood experiences of trauma) was not central to the research questions explored within this study. However, it was worth noting that polyvictimization has shown to be a significant predictor of poor behaviors and decision-making in children and youth, and therefore could spark a larger discussion for future research to address when measuring for types of youth aggression in relationship to social, emotional, and cognitive development. These were all important contributions nonetheless to the overall debate for whether male children should be clinically identified with ASPD aggressor traits—once only reserved for diagnoses in adult males.

Ultimately, professionals most trusted with evaluating and providing treatment interventions for proactive/reactive aggressive children and youth (also termed "Behaviorally Disordered" (BD), Conduct Disordered (CD), or Emotionally Disturbed (ED) children in K-12 education) have been the very school psychologists and counselors across the US speaking loudest about wanting schools and politicians to seriously acknowledge the ever-growing culture of pathological aggression-types in children. More

specifically, male children and youth have suffered the most with proactive and or reactive aggression traits consistent with the characteristics of ASPD (National Association of School Psychologists, 2012; Daily, Frey, & Walker, 2015). To reduce the likelihood of proactive and reactive aggression becoming a pathology (and considering the possibility that perhaps comorbid neurotic and or narcissistic tendencies could also be exacerbating the conditions that give rise to childhood and youth aggression, polyvictimization notwithstanding), researchers have pointed to social emotional intelligence (SEI) skill-building activities accompanied by empathy-focused curriculum as potential interventions. These types of learning intervention models have shown the most profound impact upon reducing pathological aggression, more pointedly for reactive subtypes, in youth (Black, 2013; Delič, Novak, Kovačič, & Avsec, 2011; Fossati, Borroni, Eisenberg, & Maffei, 2010; Gordon, 2013; Van der Graaf , Branje, de Wied, & Meeus, 2012).

Arguments therefore have been made in more progressive communities around the country for empathy education and compassion-learning to begin at the Pre-K level and continue throughout a person's formal education to 12th grade. This kind of learning approach has allowed for the full development of cognitive and affective empathy, thus made it necessary for positive regard to be demonstrated and internalized. Likewise, this learning style and approach has allowed youth to gradually build a healthier self-esteem, and in turn help them shape an emergent positive self-efficacy (Bugental, Corpuz, & Schwartz, 2012; Dewar, 2014; Garaigordobil, 2009; Hutman & Dapretto, 2009; Schwenck et al., 2012). Specific models that supported emotional intelligence (EQ)

learning and development were explored to define how the amelioration of aggression and ASPD-type behaviors have occurred in male youth.

Background of the Study

According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) (American Psychiatric Association, 2013), children and youth who exhibited callousness toward others' feelings; expressed irrational ideals through aggressive means about what their personal responsibilities entailed and ideologies that were essentially a form of practicing antisocial norms; displayed low frustration tolerance; and demonstrated an incapacity for experiencing guilt and shame, have more and more been diagnosed with ASPD—a diagnostic DSM axis once only reserved for adults. The dramatic increase of violence across all forms of American public media and culture, as well as a host of other potential culprits (i.e., the effects of an expectant mother's unhealthy eating habits upon brain development in the womb and or during early cognitive developmental years), have resulted in early childhood trauma greatly exacerbated by social conditions such as poverty and or generational cycles of maladaptive cognitive and behavioral dysfunction. These kinds of characteristics have shown the great influence latent ASPD traits have had upon teens and young adults (Arsenio & Ramos-Marcuse, 2014; Bezdjian, Tuvblad, Raine, & Baker, 2011; Black, 2013; Denson et al., 2012; Feder, Levant, & Dean, 2010; Finkelhor, Vanderminden, Turner, Hamby, & Shattuck, 2014; Pemment, 2013).

It was extremely important then that an examination of the literature included a pursuit for specific preventative measures, methods, and traditional learning theory models that incorporated social emotional learning (SEL)—and therefore social

emotional intelligence (SEI)—as prosocial trait competencies and skills. These methods have shown great promise when introduced as whole classroom SEL instruction, as EQ-focused support groups, and or via individual one-on-one therapeutic supports for youth exhibiting aggressive personality traits (Bugental et al., 2012; Glick & Gibbs, 2011; Hutman & Dapretto, 2009; Marshall & Marshall, 2011; Mayberry & Espelage, 2007; Meneses & Larkin, 2012; Rameson, Morelli, & Lieberman, 2012; Stanger, Kavussanu, & Ring, 2012). The profound rise in youth violence and poverty has indicated that these have been two primary conditioned variables inadvertently supporting youth aggression, and thus have exacerbated the environmental and biopsychosocial conditions for Conduct Disorder (CD) or ASPD to occur. According to VanHook (2012), a disproportionate number (e.g., 62% as of 2010) have been African-Americans, with over 80 percent being Black males diagnosed with CD, emergent ASPD symptoms, or callous and unemotional (CU) traits (i.e., personality characteristics exhibited as a lack of guilt and or shame, profoundly deficient traits of empathy, a lack of concern about personal and or academic performance, and a rather shallow or deficient affect). These personality trait identifiers have been confirmed in the literature as some of the inherent clinical characteristics of proactive and reactive aggression (VanHook, 2012; Thornton, Frick, Crapanzano, & Terranova, 2013).

While future research about cultural awareness would need to address the early identification process of aggression-types in children and youth, there must also occur a more courageous conversation amongst parents and teachers about best-practice models for perhaps teaching prosocial competencies such as empathy in a whole classroom environment. These interventions have shown to be particularly significant in affecting behavioral change at earlier stages of human development such as pre-adolescent

(Bugental et al., 2012; Marshall & Marshall, 2011; Meneses & Larkin, 2012; Rameson et al., 2012; Stanger et al., 2012). Current research in this area indicated that in order to stave off conditions for emergent ASPD and subsequent proactive and or reactive aggression, schools that already provided prosocial skills development specific do building EQ traits, such as empathy, consequently have observed the positive and impactful benefits upon behavior, social identity, self-esteem, and academic success in children and youth over the long term of their physiological and psychological development (Bugental et al., 2012; Marshall & Marshall, 2011; Meneses & Larkin, 2012; Rameson et al., 2012; Stanger et al., 2012).

Problem Statement

While many current researchers have described proactive and reactive youth aggression as resulting from fundamental biopsychosocial underpinnings in childhood, it was not fully known to what extent, if any, male youth proactive and reactive aggression predicted a relationship to empathy (de Wied, van Boxtel, Matthys, & Meeus, 2012; Huntington, 2012; Lopez-Duran, Olson, Hajal, Felt, & Vazquez, 2009; Malik, Zai, Abu, Nowrouzi, & Beitchman, 2012; Shirtcliff et al., 2009; Stanger et al., 2012). Early research experts in the field of emotional intelligence (EQ), social intelligence (SI), and social emotional learning (SEL) (e.g., Ekman, 2003; Gardner, 1983; Goleman, 2007; Salovey, Brackett, & Mayer, 2004) as well as current researchers (i.e., Barbey, Colom, & Grafman, 2012; Freedman & Ghini, 2010; Goleman, 2011; Klass, 2012; Song et al., 2010), asserted that once K-12 educators began a serious conversation about progressively offering antidotes for reactive/proactive aggression via evidence-based models for intervention and prevention, only then could specialized empathy-building prosocial competencies and skills programs show measurable success.

A few such prominent K-12 programs given support throughout this doctoral study were the Olweus SEL curriculum program, *Top 20 Teens*, and RJ practices, with more emphasis detailing the significance of *"The six seconds EQ in action model of emotional intelligence"* of self-science learning. All of these intervention program models have robust empathy-based prosocial skills development as central tenets underlying each approach. Each theoretical design adhered to an intervention and prevention implementation model successfully shown to remediate burdensome disciplinary problems in youth who have demonstrated trait behaviors consistent with the signs and symptoms of proactive and reactive aggression. If left without intervening, these types of youth have the behavioral and cognitive potential to wreak much physical and or emotional harm and havoc upon others over their lifespan. Although current research showed that EQ could be taught as a part of prosocial competency skills development model (Gordon, 2013; Kahn, 2013; Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009; Brackett, Rivers, & Salovey, 2011), it was not as well-defined in the literature to what degree or extent empathy specifically as a tenet of emotional intelligence (EQ) helped children and youth rid themselves of biopsychosocial patterns of aggression cognitions and behaviors.

One of the most misunderstood emotion attributes in male youth aggression has been a noticeable lack of empathy for others during early stages of human development. More pronounced irrational behaviors and cognitions clearly arise by four to five years of age (Black, 2013; Gordon, 2013; Marshall & Marshall, 2011; Mathieson & Crick, 2010; Mcdonald & Lochman, 2012; Muñoz, Qualter, & Padgett, 2011; Raine & Glenn, 2014; Rathert, Fite, & Gaertner, 2011; Strayer & Roberts, 2004; Yeo, Ang, Loh, Fu, & Karre,

2011). Therefore, developmental signs for lacking empathy likely start when early established behavioral and cognitive patterns of much self-centeredness and egocentricity morph into verbal and eventually physical incidences of aggression and manipulative emotional cruelty to self, others, animals, and or property (Black, 2013; Marshall & Marshall, 2011; Mathieson & Crick, 2010; Mcdonald & Lochman, 2012; Stickle et al., 2012; van Baardewijk, Stegge, Bushman, & Vermeiren, 2009; Yeo et al., 2011).

This doctoral study therefore asserted that any activities and lessons promoting EQ and SEL for aggression in youth would ultimately assist in establishing new emergent literature in the areas of cognitive science and socio-behavioral psychology. It was thus posited that reactive aggression in male youth statistically significantly predicted overall basic empathy. It was also hypothesized that proactive aggression statistically significantly predicted overall basic empathy, whereby proactive aggression personality development and any associated behavioral traits often fell along the spectrum of sociopathy, with newer research regarding pediatric narcissism as a co-occurring personality characteristic. Statistical significance showed that, for example, as proactive aggression increased, empathy decreased. The converse was true for reactive aggression and overall basic empathy. These results were consistent with research that showed proactive aggressors lacked the capacity for identifying attributes of empathy in self as well as others; and that reactive aggressors struggled, but could generally identify empathy trait behaviors in others (American Psychiatric Association, 2013; Black, 2013; Dickson, Richmond, & Brendgen, 2015; Feder et al., 2010; Finkelhor et al., 2014; Gordon, 2013; Huntington, 2012; Jones, Happé, Gilbert, Burnett, & Viding (2010); Muñoz et al., 2011; Shirtcliff et al., 2009; Thornton et al., 2013).

Purpose of the Study

The purpose then of this quantitative study was to assess whether male youth proactive and reactive aggression predicted overall basic empathy. Therefore, most of the focus of this research was to specifically examine if there was a relationship between these variables in 13 to 18-year-old males. Although much attention was made to how the biopsychosocial roots of aggression stem from childhood, a coexisting discussion was made throughout regarding polyvictimization as a significant underlying contributor to youth aggression. Therefore, it was presumed that a certain yet unknown number of participants likely experienced two or more incidences of emotional, physical, and or psychological trauma over their lifespan.

The participants for this proposed study were voluntary and remained anonymous. They were drawn from four urban small to large public secondary schools in the state of Arizona. Participants were surveyed to determine their individual indicators for proactive and reactive subtypes of aggression as well as for the overall basic empathy. From a diverse student population in grades 9-12 public educational settings, all eligible-aged male youth between 13 and 18 years of age were offered the opportunity to participate in this study.

Both predictor variables (PV's)—proactive and reactive aggression—were defined as either behavioral acts of unprovoked aggression with intent to harm others (e.g., proactive), or as behavioral acts of aggression in response to an irrational perception that physical and or emotional harm is eminent (e.g., reactive). The criterion variable (CV), overall basic empathy, measured whether there was a statistically significant prediction for proactive or reactive aggression in male youth. Control variables were school environment, school climate, school culture, class size, type of

behavioral intervention/discipline program implemented at each site, and the socioeconomic class of participants.

It was hoped that results from this study would highlight a gap in the literature regarding male youth with proactive or reactive aggression. More specifically, the goal was to determine if proactive and reactive aggression in male youth were statistically significant predictors for overall basic empathy. Consequently, this study and its results potentially offered a major contribution to the growing literature on the biopsychology of male youth aggression. Hopefully, future researchers will be encouraged to build upon the dearth of studies in the areas of empathy as an EQ competency and any relationship to aggression in children and youth of both genders, and perhaps identify other significant relationships each subtype of aggression has had upon empathy as a competency social skill.

G*Power analyses were used to compute the sample size (*n*:) in order to reduce the possibility of future Type II errors and underpowered false negative data results. Using an exact bivariate normal distribution of variables and a one-tailed a priori analysis, the statistical probability results were as follows: Correlation ρ under H1 is 0.3; α of error probability is .05; power analysis of β (beta) is 1 minus the power or 1 minus the sensitivity of the test, or .80—the minimum statistically allowed for avoiding the possibility of Type II errors in probability, and therefore rejection of the null hypothesis as well as the effect size from the sample. G-Power output data thus established a minimum (*n*: 67) potential participants.

Research Question(s) and Hypotheses

The literature studied herein highlighted the biopsychosocial and maladaptive factors that nurture potentially violent and aggressive personalities more prevalent in male than in female youth comparatively (Bezdjian et al., 2011; Fossati et al., 2010; Garaigordobil, 2009; Gordon, 2013; Hubbard, McAuliffe, Morrow, & Romano, 2010; Huntington, 2012; Mathieson & Crick, 2010; Murray-Close et al., 2014). The seminal work of Black (2013), for instance, was but one of only a handful of researchers who examined the biopsychosocial development of male aggression (i.e., the biological, psychological, socio-economic, environmental, and cultural factors), and more specifically callous and unemotional (CU) personality traits, as significant markers of proactive aggression when compared to reactive aggression. Albeit somewhat controversial in tone, Black (2013) asserted that persistent patterns of bad behavior and proactive aggression were innate personality characteristics, and therefore rooted in biology. The evidence for such an assertion was also noted later in this study as irrefutable research conducted by Raine and Glenn (2014). They argued that genetic testing, MRI imaging, and psychosocial nurturing of trauma and emotional dysregulation in families were evidence for the physio-biological basis of psychopathy. This polemical research evidence was thus the basis of the research questions and hypotheses that follow and therefore guided this study.

Since it was not fully known to what extent, if any, male youth proactive and reactive aggression predicted overall basic empathy, quantitative research questions were formulated to hypothesize if predictors were present between male youth proactive and reactive aggression and overall basic empathy. The following research questions and hypotheses therefore guided this quantitative study:

RQ1: Did proactive aggression in male youth predict overall basic empathy?

H_{01}: Proactive aggression in male youth did not statistically significantly predict overall basic empathy.

H_{1a}: Proactive aggression in male youth statistically significantly predicted overall basic empathy.

RQ2: Did reactive aggression in male youth predict overall basic empathy?

H_{02}: Reactive aggression in male youth did not statistically significantly predict overall basic empathy.

H_{2a}: Reactive aggression in male youth statistically significantly predicted overall basic empathy.

Advancing Scientific Knowledge

Research around learning and human development of empathy has not been new, post-modern, or even innovative as study concepts and competencies in terms of psychosocial and emotional well-being. Much research regarding empathy as part of a larger framework of intervention study and or treatment modality has dated back to Rogers (1951) when, during the 1940s and early 1950s, he incorporated empathy as a central tenet of effective humanistic psychotherapy. It was famously coined as the "person-centered approach" or client-centered therapy (Rogers, 1951).

The etymological roots of the word "empathy" itself date even further to the middle Victorian era as a German word for passion—Einfühlung—in terms of learning to gain appreciation for another's visual art form or artistic medium (Harper, 2013). Like many root English words, there were also fleeting connections to the Ancient Greek word empátheia—to show affection for another (Harper, 2013). Post-Rogerian contributions of literature then made significant inquiries to empathy through numerous avenues of

research. More recent research by Oswalt (2008), for example, examined early childhood social emotional development and the impact of learning reflective empathy during cognitive maturation. Decety, Skelly, Yoder and Kiehl (2014), on the other hand, tested this same theoretical hypothesis with incarcerated psychopathic males to determine if, indeed, the male prisoners had somehow missed learning reflective empathy during their formative years. What the test subjects learned instead was a pattern of abnormal social emotional development that resulted in a more blunted type of cognitive processing (Decety et al., 2014). Finally, Gordon (2013) identified cognitive and affective empathy as possible predictors for measuring whether certain types of proactive and reactive aggression correlated to affective or cognitive empathic in children of both genders.

None of the researchers in this area of study examined empathy from the perspective of how aggressive youth had an ability or inability to identify attributes of empathy in self or others, and the consequent long-term humanistic value for such an ability or inability to recognize empathy when modeled in others. One of the major arguments made in this study, and supported by the literature, was to promote SEL strategies and activities for families and educational settings by which empathy could become the antidote for fostering cognitive and behavioral change in aggressive youth. Furthermore, the dearth of research on male youth who may have experienced multiple incidences of emotional, physical, and or psychological trauma over their lifespan (e.g., polyvictimization), and likewise have demonstrated possible psychological maladies such as narcissism and or co-occurring CU traits, was evidenced as a gap in the literature on male youth aggression. As noted previously, the primary focus of this study was not to solely focus upon the biopsychology of aggression; rather, it was to highlight the broader topic of biopsychology of aggression and other associated early childhood experiences

connected to polyvictimization, and therefore if a relationship could be discovered between male youth aggression subtypes and overall basic empathy.

Authors Finkelhor, Ormrod, and Turner (2007), for example, albeit somewhat dated, were the primary historical resource on the topic of polyvictimization and its long-term effects upon child social emotional development and co-occurring post-trauma. Although recent research and brief writings tackled the challenging topic of polyvictimization, more specifically the sexual exploitation of boys and adolescent males addressed by the French-Canadian research team of Cyr et al. (2012); researchers Duke, Pettingell, McMorris, & Borowsky (2010); and finally, Ford, Elhai, Connor, & Frueh (2010), none had a research focus specific to polyvictimized male youth with aggression, CU traits, and any relationship predictors for overall basic empathy. For the purposes of this thesis, however, reviewing and highlighting the research of Gordon (2013) and others who focused on empathy as either an inherent or social, emotional, and intellectual deficit in one's personality development were key to determining if, indeed, certain types of male aggression were even responsive to overall basic empathy. The challenge here was to examine any literature specific to empathy as a possible antidote for ameliorating male youth aggression in addition to assumptions about proactive versus reactive aggression subtypes—polyvictimization aside.

Due to what was learned from this study, it was proposed that empathy needed to be a central competency-based prosocial skill tenet of any working intervention model for specifically addressing reactive aggression. One such evidence-based model proposed as an antidote for cognitive and behavioral change was *"The six seconds EQ in action model of emotional intelligence"*. An examination of the literature regarding biopsychosocial factors that nurtured some children and youth to exhibit conduct

disorders (CD), CU traits, and or sociopathic traits found a correlation to proactive aggression. Likewise, research posited that overall basic empathy was a CV for reactive aggression. The literature indicated that while reactive aggressors were generally able to identify attributes of empathy in others, and perhaps understood that their reactive aggressive traits could be reduced or eliminated; their proactive aggression counterparts were incapable of doing the same. Much of the research literature therefore indicated that proactive aggressive male youth were not intrinsically or extrinsically capable of grasping the interventions associated with prosocial skills attributes and competencies focusing on empathy as a coping skill.

The primary theoretical underpinnings for this study were, first, recognition of early research and evidence-based contributions to humanism that involved empathy as a client-centered intervention for behavioral change (Elliott, Bohart, Watson, & Greenberg, 2011; Rogers, 1951; Tudor, 2011); and second, examine theory of mind (ToM) (Pinel, 2014) perspectives specific to the Simulation Theory of Empathy (STE) (Meneses & Larkin, 2012). Exploration of these theories highlighted how each was connected to this study's focus upon the empathy as a competency and therefore antidote for reactive aggression in male youth. The population sample was specifically drawn from four small to large urban public secondary schools in the state of Arizona with estimated overall enrollments of 100 or more males at each site under consideration. The researcher was made aware in advance of the study implementation that some of the prospective participants had clinical psychological diagnoses that were comorbid with psychosocial maladies, were either a special education or general education student, and had some

history with aggression and or school discipline for aggression, and even presumably polyvictimized.

Significance of the Study

The intention of this study was to highlight a possible predictive relationship between male youth proactive and reactive aggression to that of overall basic empathy. According to the literature, proactive aggression has been found to be exacerbated by emergent biopsychosocial patterns of CU traits as well as a spectrum scale of narcissism or sociopathy. Traditional socio-emotional development of stereotypical masculine norms, for example, has only served to estrange many young males from being genuine, multi-sensory human beings (Delič et al., 2011; Yeo et al., 2011; Van der Graaf et al., 2012; Zukav, 2014). Thus, research showed that boys were more often unwittingly socialized to disengage from trusting their natural feelings and emotions, and therefore intentionally and unintentionally learned to demonstrate deficits in showing genuine emotions such as empathy when compared to females overall. This study determined that if a predictive relationship emerged for proactive and reactive aggression in male youth and overall basic empathy, this result would be considered a change-agent for promoting intervention models that ameliorate male youth aggression.

Rationale for Methodology

Quantitative research designs provide a course of action, offer consensus, can project results to a larger audience, test specific hypotheses emerging from the research, and pinpoint evidence from cause-and-effect relationships between variables (Băban, 2008). The research intent of this study was to use a quantitative format specifically for

determining if a predictive relationship existed between proactive and reactive aggression in male youth 13 to 18-years-old, and overall basic empathy as measured by the Basic Empathy Scale. Since this predictive relationship would be based upon emergent research studies and observations in the field, the most effective design approach was methodological as well as relational and predictive in scope and content (Băban, 2008; Mills, Abdulla, & Cribbie, 2010). Study participants were male youth drawn from four differing urban public secondary schools in the state of Arizona with parental, participant, as well as school district accountability and consent. Youth who were 18 years old, however, were not required to submit parental signed consent forms; rather, they could sign the consent forms themselves.

Nature of the Research Design for the Study

The research design proposed was an attempt to determine quantitatively if a predictive relationship existed between proactive and reactive aggression in male youth and overall basic empathy. Although not specifically under study as variables, additional discussions regarding polyvictimization experiences, and perhaps exacerbated by biopsychosocial traits of narcissism and or sociopathy, were defined and explored in the literature. Although it was not given any focus in this study, it should be noted that clinically diagnosed combined-types of aggression (i.e., youth who meet criteria for both proactive and reactive aggression) were shown in the literature to possibly have a more negative relationship to empathy, albeit weak. Data results were neither robust nor definitive in the literature (Gordon, 2013; Hubbard et al., 2010), therefore implied that perhaps this subtype of aggression could be identified using empathy-based competencies and prosocial skills when compared to youth specifically diagnosed with proactive aggression, and thus considered incapable of identifying attributes of empathy in others.

In terms of reactive aggression, Gordon (2013) and Hubbard et al., (2010) described it as an irrationally-perceived emotional and aggressive response to fear and or anger. Proactive aggression, on the other hand, was described as a CU response with an expressed intent to perpetuate fear, anger and even harm toward others (Gordon, 2013; Hubbard et al., 2010). Thus, a quantitative approach was chosen for many very important reasons. For one, the expediency of time to implement a battery of highly valid and reliable self-report survey questionnaires proved to offer more reliable and factual results (Băban, 2008). Second, the potential for bias was ruled out more easily using a quantitative inquiry since by design it is inherently objective, and qualitative methods have been known to be vulnerable to bias (Băban, 2008).

Ideally, a mixed-method design could offer the most intriguing and perhaps compelling data in that qualitative inquiries often provide an opportunity to highlight the subtler details of a problem or problems under study within the population being assessed (Băban, 2008; Mills et al., 2010). A quantitative research tool then, like a self-report questionnaire, can validate or invalidate any observations made during a qualitative phase of study (Mills et al., 2010). This type of design approach inherently relegates qualitative inquiry to become the exploratory tool it was intended to be, and therefore does not over-emphasize quantitative analysis as a stand-alone tool to both explore and define a problem with potential solutions for intervention.

The kinds of important and subtle nuances captured through qualitative inquiry required much investigative time and expense—two things this researcher was not able to afford. Therefore, the purpose here was to disprove the null hypothesis through more expedient and thus quantitative means, and then prove that the alternative hypotheses for this study were true. That is, it was necessary to establish that proactive aggression had a

statistically significant relationship to overall basic empathy; and second, that reactive aggression also had a statistically significant relationship to overall basic empathy. A quantitative approach and methodology was therefore the best-suited design for this purpose.

The goal was to have study participants complete two differing self-report Likert-type scale measures in an online format using Google Forms for each assessment so that participants could easily understand survey statements and thus navigate through the assessments with ease and a steady response-time. This allowed the researcher in the end to gather data in real-time. These survey instruments were implemented between April 13, 2016 and April 27, 2016, with parent and child consent/assent and recruitment letters handed out to all prospective male participants at each school site. The researcher was able to then capitalize on the current school-wide built-in incentives (e.g., snack bars and or small bags of candy and incentive point sheets) that each school ascribed to in an effort to persuade students to seriously consider participating, and thus increase the potential number of participants. Prospective participants were given two weeks prior to implementation of the assessments to return all consent forms to their school site's designated liaison.

The projected sample size (*n*:) was estimated to be roughly between 65 and 125 students, with an a priori G-Power Analysis that indicated a population sample of 67 plus or minus male youth between 13 and 18 years-of-age in grades 9 through 12 would be the expected minimum goal. Participants were drawn from an overall potential population of roughly 600 male youth across all four urban, small to large, public secondary schools in Arizona. Using the SPSS statistical program tool (version 24) to assess for bivariate factors, the data results were displayed as tables and charts from the findings. Since objectivity was highly important to ensure reliability and validity of the data, only descriptive demographic information (e.g., ethnicity, gender, age, and grade) was made

available to this researcher. Other demographic information such as personal names and addresses, social security numbers, personal phone numbers, and any available clinical psychological diagnoses information was not requested nor released to this researcher. However, masked information was verbally shared that regarded some of the participants as having certain clinical psychiatric disorders, such as Conduct Disorder, Bipolar Disorder, Psychosis, Depression, various signs and symptoms of personality disorders, and CU traits, although no specific names of participants was shared for this study.

Definition of Terms

All the following terms and definitions apply to this study:

Affective empathy. The sharing of emotional experiences and states of being with others (Gordon, 2013).

Biopsychology. The biopsychosocial viewed point and theoretical perspective stated that all individuals are made of an alliance of biological, psychological, and social elements at work in the mind/brain and body, and thus the theory purports a holistic viewpoint of human nature regarding an individual's clinical, medical/biological and social-environmental health and well-being (Pinel, 2014).

Cognitive empathy. The ability to demonstrate an understanding for others' life experiences and their associated emotional states of mind (Gordon, 2013).

CU traits. CU traits are "characterized by a lack of guilt and empathy, lack of concern about performance, and a shallow or deficient affect" (Thornton et al., 2013, p. 366).

EQ. An abbreviation for "emotional intelligence quotient," also known synonymously as social emotional intelligence, or SEI, refers to a person's "capacity for recognizing [his or her] own feelings and those of others" (Goleman, 1998, p. 317) in

addition to the capacity to self-motivate and reasonably manage one's personal emotions toward self as well as toward inter- and intra-relationships.

Multi-sensory human being. A person who was simply more than the elements of a mind and a body; and thus, was considered a soul with a personality consisting of a mind, a body and an intuition (Zukav, 2014).

Narcissism. Personality traits that indicated a grandiose self-identity and irrational sense of self-importance, arrogance, much entitlement, coveted others, a strong need for admiration, often jealous, and displayed a profound lack of empathy (Delič et al., 2011).

Polyvictimization. Children who were environmentally, socially, and psychologically exposed to and victimized by multiple forms of aggression and passive aggression from individuals entrusted to provide care, love, and well-being (Finkelhor et al., 2007).

Proactive aggression. "[R]epresent[s] predatory attacks motivated by external reward[s]" (Fite, Stoppelbein, Greening, & Gaertner, 2009, p. 141). Likewise, proactive aggression is linked to entrenched forms of antisocial behavior, delinquency, and CU traits associated with sociopathy or psychopathy in children and teens (Fite et al., 2009; Koolen, Poorthuis, & van Aken, 2012).

Reactive aggression. "[R]epresent[s] a combative response to [a] perceived threat" (Fite et al., 2009, p. 141). Essentially, reactive aggression is linked to a consistent pattern of negative mood or dysthymia in childhood and adolescence to include "increased levels of sadness, unhappiness, depression, and suicidal behavior" (Fite et al., 2009, p. 142).

Sociopathy/psychopathy. Specified as Cluster B personality disorders, according to the DSM-V (American Psychiatric Association, 2013). Sociopathy, psychopathy, and

antisocial personality disorder are often synonymously used depending upon the similar nuances of behaviors exhibited by each disorder. Sociopathy, for example, is defined as a "dramatic–eccentric–emotional cluster, which also includes Borderline Personality Disorder . . . and Narcissistic Personality Disorder . . . with the exception of Histrionic Disorder . . . as also tied together by Baron-Cohen as disorders that result in zero degrees of empathy" (Pemment, 2013, p. 2). That is, "Those afflicted 'have no awareness of how [they] come across to others, how to interact with others, or how to anticipate their feelings or reactions" (Pemment, 2013, p. 2).

Theory of mind (ToM). "[T]he capacity to attribute mental states to the self and to others in order to explain and predict behaviors (Renouf et al., 2010b, p. 1110). ToM was thus "considered a crucial element in the capacity to decode and understand social cues and hence in the development of adaptive social behavior" (Renouf et al., 2010b, p. 1110).

Assumptions, Limitations, Delimitations

Assumptions.

1. It was assumed that all projected participants (e.g., 67 plus or minus) responsibly and genuinely engaged with and thus completed both online survey tools for this study. For example, students were provided the opportunity to dissent at any time from participation prior to completing both online tools.

2. It was assumed that each participant was a male student between 13 and 18 years-old; or born male but identified as "female"; or born female but identified as "male"; attended grades 9 through 12, and attended an urban small to large public secondary school within the state of Arizona. For example, participating school principals or designees provided student demographic data to verify eligibility for the study.

3. It was assumed that some participants had a clinical mental health diagnoses or documented biopsychosocial malady, and was an adolescent male with an Individual Education Plan (IEP) or a General Education (Gen Ed) plan. However, medical release of information from community providers and school personnel for mental health information and or Special Education records was not requested

by the researcher to avoid any potential violations of FERPA and or HIPPA compliance.

4. It was assumed that some prospective participants had a pattern or history of proactive and or reactive aggression, and possibly exhibited other clinical behavioral traits consistent with narcissism or sociopathy. This information was anecdotally provided by each school site's social worker, behavioral health specialist, or research study designee, and directly related to the school intervention behavioral program adopted by each site.

5. It was thus assumed that some prospective participants had school discipline and behavioral documentation that indicated the presence of comorbid biopsychosocial maladies regarding one or more of the following: Emergent sociopathic or psychopathic traits; Conduct Disorder (CD) or Oppositional Defiant Disorder (ODD); narcissistic tendencies; anti-social personality (ASPD) or CU traits; Attention Deficit Hyperactivity Disorder (ADHD); or a consistent pattern of aggression toward others. Each site's school social worker or behavioral health specialist informally provided this information (e.g., verbally only) to the researcher. No direct personal medical and or psychiatric records were therefore requested for this study.

6. It was assumed that some participants were polyvictimized (e.g., some participants may have experienced two or more incidences of emotional, physical, and or psychological trauma over his lifespan).

Limitations and delimitations.

1. Participants were 13 to 18-year-old males and excluded all female youth. The projected sample size (*n*:) was 67, or (*n*: 67) according to a priori G-Power analysis for (*n*:) drawn from an overall population of 600 plus or minus male youth between all four secondary campuses. Since this was a smaller sample size compared to the overall population of potential participants, the confidence level was established as 80%, with a margin of error of three percent (3%). Future research will need to consider a much larger pool of potential participants from more schools and or school districts, and perhaps include females of the same age range. While statistical data may ultimately indicate that the correlations and assertions being hypothesized in this study matched the alternative hypotheses, there remained constraints upon generalizability in that the design methodology for this study was purely quantitative, and therefore lacked the significant qualitative attributes of a mixed-method design. This was done for the purposes of expediency and generating "clean" data outcomes that would be supported by dissertation committee members.

2. Socioeconomic data was not a variable factor in this study. Future replication of this study should perhaps consider social class as an independent variable which may or may not reveal an affective statistical outcome. For the purposes of this

study, and time limitations to complete the study effectively, socioeconomics was not directly relevant.

3. While ethnicity remained a descriptive statistic in this study, it should be given serious consideration as a dependent variable for future research and or replication, and therefore either correlate to proactive and or reactive aggression as perhaps an additional PV, or be a moderator variable in a multiple linear regression approach. For the purposes of this study, however, this was not directly relevant as a variable under consideration.

4. Since polyvictimization in and of itself was not a study variable for this research, it should be noted as a consideration for future research on the topic of child and youth aggression specific to males, but children and youth in general as well.

5. There was a lack of research study on this topic; hence, why this researcher elaborated on this gap based upon empathy and aggression studies in the literature spanning the last 10 or more years.

6. The population under proposed study was drawn from only four urban small to large secondary schools in the state of Arizona. This limited the demographic population sample to specific types of school programs as opposed to broadly sampling male youth aggression across many schools or school districts— public and private—within the state of Arizona.

7. The projected study group were male youth (e.g., participants who identified as a "male"). Gender sexuality identifications, such as "female," were not allowed to participate, and thus were not a population under study consideration. Research already indicated that females, with more concentration upon middle-aged females, were generally more empathic as a gender social group than male, comparatively (O'Brien, Konrath, Gruhn, & Hagen, 2013). The correlation of empathy to proactive and reactive aggression in female children and youth was less known. Nonetheless, it was not directly relevant to this study.

Summary and Organization of the Remainder of the Study

Chapter 1 began with a discussion of aggression pathologies in children specific to proactive and reactive aggression types. Often nurturing these kinds of personality attributes were other comorbid maladies such as Conduct Disorders (CD), ASPD traits, sociopathy or psychopathy traits, Oppositional Defiant Disorder (ODD) behavioral tendencies, and polyvictimization (Black, 2013; Delič et al., 2011; Fossati et al., 2010; Pemment, 2013). It was posited here that one strong contender for intervening and thus ameliorating aggression in youth who were proactive or reactive was the social skills EQ

competency of empathy. Based upon evidence-based research literature empathy as a prosocial skill was described as a possible antidote for cognitive-behavioral change in reactive aggressive youth. Therefore, it was argued throughout this study that a negative predictive relationship existed between male youth reactive aggression and overall basic empathy (Gordon, 2013; Mayberry & Espelage, 2007; Strayer & Roberts, 2004; Van der Graaf et al., 2012). However, it was conversely argued that a positive predictive relationship existed between male youth proactive aggression and overall basic empathy (Gordon, 2013; Mayberry & Espelage, 2007; Strayer & Roberts, 2004; Van der Graaf et al., 2012).

Chapter 2 presented a review of the current and prevailing research literature on child and youth ASPD, CD, CU traits, narcissism, psychopathy, sociopathy, and overall youth aggression specific to proactive and reactive subtypes. Arguments and research evidence were presented that indicated empathy, as a social emotional intelligence (EQ) competency and construct, could be the antidote for positive change in aggression-patterned youth whose trait behaviors were consistent with reactive as opposed to proactive aggression (Bezdjian et al., 2011; Delič et al., 2011; Gordon, 2013). Prevailing research around learning empathy, such as through *"The six seconds EQ in action model of emotional intelligence"*, posited that empathy was an EQ competency, and thus a prosocial skills approach to gaining more empathic reasoning and behaviors. In turn, it was posited that this model could offer youth ways to reduce aggression whom may have also been polyvictimized during childhood.

This study in the end purported that reactive aggressors could be ameliorated with the implementation of prosocial EQ competency-based skills focused around empathy. For proactive aggressors, however, these same kinds of prosocial behavioral

and SEL interventions were proven to be challenging if not nearly impossible to return improved behavioral results (Black, 2013; Mayberry & Espelage, 2007; Stickle et al., 2012; Strayer & Roberts, 2004; Van der Graaf et al., 2012).

In Chapter 3, a description and synopsis of the methodology was explained, and the proposed research design (e.g., quantitative) was described in detail with procedures for implementing the study and what variables would be examined as a result of the investigation. Chapter 4 explained and illustrated how the data were calculated, analyzed, and constructed to provide statistical research study results in both written, figurative and table summary review. Chapter 5 was an interpretation and discussion of the overall study results, and whether the research questions and hypotheses predicted a relationship between the PV's and CV, and thus added to the emerging cannon of literature on the topic of proactive and reactive aggression in male youth and any predictive relationship data results to overall basic empathy.

Chapter 2: Literature Review

Introduction to the Chapter and Background to the Problem

The overall focus of this chapter was theoretical and therefore aimed to identify the central issues in research used to explain the phenomena of proactive and reactive aggression sub-types in male youth between the ages of 13 and 18. Likewise, due to examining the literature it was highly important that an antidote-type of intervention was proposed in the form of describing prosocial skills learning models with empathy competencies as one amongst many central theoretical tenets. This study showed that these intervention models were key to the success of ameliorating reactive aggression, yet unsuccessful toward ameliorating proactive aggression for a myriad of clinical and biopsychosocial reasons as described in this chapter as well as later chapters.

Establishing then a central definition for each subtype of aggression was important before moving on to address other related research topics of discussion. Reactive aggression in children and youth, for example, was described in the literature as traits consistent with impulsivity and retaliatory anger that strongly correlated to signs and symptoms of narcissism, neuroticism, and a persecutory self-image (Bobadilla et al., 2012; Fite, Raine, Stouthamer-Loeber, Loeber, & Pardini, 2010). Proactive aggression, on the other hand, was linked to traits consistent with Antisocial Personality Disorder (ASPD; formerly Dissocial Personality Disorder (DPD) in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-V) (American Psychiatric Association, 2013); Conduct Disorder (CD); callous unemotional (CU) traits; Oppositional Defiant Disorder (ODD); and sociopathy/psychopathy (Bobadilla et al., 2012; Fite et al., 2010; Pemment, 2013).

An extensive examination of the literature on male youth aggression and its subtypes—proactive and reactive—indicated that a gap existed in the literature regarding any statistically significant relationship to overall basic empathy. This was particularly evident for reactive aggression in male youth whereby two or more incidences of emotional, physical, and or psychological trauma had occurred over the lifespan of these youth (e.g., polyvictimization), or as what some researchers have labeled as "adverse childhood experiences" (ACES). However, research literature regarding proactive and reactive aggression in polyvictimized youth has lacked any kind of real evidence for a direct predictive relationship to overall basic empathy. Thus, the ultimate aim of this doctoral study was to hopefully contribute to the canon of literature regarding empathy as a EQ competency intervention for male youth with reactive aggression as indicated by either a negative or positive relationship that was predictive of overall basic empathy as evidenced from data findings on the RPAQ-C and BES. The topic of polyvictimization was defined throughout this study in terms of it being a psychosocial contributor to both subtypes of aggression in male youth; however, it was not a variable for the stated hypotheses in this study.

By advancing the tenets of several methodological models and theories supporting the assertion that reactive aggression had a predictive relationship to overall basic empathy, emphasis could therefore be placed on examining prosocial skills development as interventions for ameliorating patterned aggression behaviors in male youth. It was surmised that aggression, specifically reactive aggression, could be addressed initially via intervention best-practices using techniques such as motivational interviewing (MI). Here, prospective clients could be engaged using a goal-oriented, client-centered counseling approach that targeted one's intrinsic

motivation to change, and thus help resolve much personal ambivalence surrounding anger and aggression (Miller & Rollnick, 2013).

The current literature regarding youth aggression in general did produce much discussion and research study that was focused primarily on each subtype of aggression and its psychosocial correlates of behavior. However, it was the goal of this research study to hypothesize that proactive aggression had a statistically significant positive relationship to overall basic empathy (Black, 2013; Bezdjian et al., 2011; Bobadilla et al., 2012; Delič et al., 2011; Farmer, 2009; Fite et al., 2010; Fossati et al., 2010; Pemment, 2013; Stickle et al., 2012). This rationale proposed helped establish that there was a lack of theories or models that addressed intervention strategies for how proactive and reactive aggression developed. Consequently, this deficit in the availability of evidence-based literature revealed that traditional psychological interventionist theories were insufficient toward explaining why some aggressive male youth responded positively to empathy prosocial skills (e.g., showed growth in understanding empathy), and why some did not (e.g., showed no growth in understand empathy). The organization and examination of research articles and books for this study therefore weighed heavily upon critically evaluating current methodologies used to best investigate the hypothesized research questions.

The review of literature critically examined other dissertations on closely related topics of research study as well as peer-reviewed articles and books discovered through *ProQuest*, *Ebscohost*, *PsycINFO, PsycBOOKS, PsycARTICLES, Dissertations & Theses: The Humanities and Social Sciences Collection,* other online search engines such as the *National Institutes of Health* publications website where info through the previous noted sites was unavailable, and personal collections of published books and

textbooks. Although adherence to guidelines that ensure cited publications are post-2007, thus providing the most current literature available on the topic of study, earlier research articles available on the web and books are cited to lend a credible historical context of male youth aggression specific to childhood aggression tendencies as well as to proactive and reactive subtypes. This allowed the researcher to scrutinize a body of historical, emergent, and current knowledge so that a more cohesive picture could support the need for an area of study requiring further investigation of an existing gap.

One of the aims for the chapter was to advance the tenets of a few models of intervention focused primarily upon empathy prosocial skills development for ameliorating aggression, specifically the reactive subtype. A few such EQ-based models were *the six seconds model of emotional intelligence*, *cognitively-based compassion training* (CBCT) (Negi, 2014), and the therapeutic interventionist theory of MI (Miller & Rollnick, 2013). Each had not only asserted value and evidence as intervention tools for remediating reactive aggressive and polyvictimized male youth, but supported a rationale that helped establish the lack of research and theory regarding proactive and reactive subtypes and any correlation to overall basic empathy. Current prevailing traditional theories of intervention that regarded male youth aggression have been insufficient toward explaining the biopsychosocial causes of each aggression subtype in male youth, especially polyvictimized youth. This gap in the literature aided in justifying that emergent EQ-based models such as *The six seconds model of emotional intelligence* and CBCT could offer the most current methodological approaches to ameliorating pathologized aggression subtypes, and thus nurture empathy as an antidote for male youth aggression.

Examining each model as well as including techniques of MI provided the very foundation necessary for asserting that a gap existed in the extant literature on male youth

aggression and any relationship to overall basic empathy indicated by the BES instrument. A proposal for each EQ-based methodology was therefore supported by the existing canon of literature on the topic of male youth aggression. As described earlier, a methodological approach was chosen to review the literature as would be done in an empirical paper (i.e., examining the introduction and the arguments made in the article; scrutinizing the methods and results; and finally, synthesizing the ideas proposed in the discussion sections). Chapter 2 examined available publications that supported the background of the study, evaluated the theoretical foundations and or conceptual framework for each study, and explored the historical foundations for which the research was proposed. A deconstruction of facts and data was supported and detailed in several subsections of the chapter. An encapsulation summary of the cited studies was also presented so that areas of research gaps were specifically highlighted, and therefore supported the format and design choice for this study. The chapter finally provided a clinical definition for what comprised proactive and reactive aggression traits in male youth, as well as any associated biopsychosocial behavioral characteristics that fleshed out any ambiguity about what inherent traits constituted each subtype of aggression.

Descriptors were provided that detailed the most current statistical data available regarding who were the most vulnerable populations at-risk for proactive and reactive aggression. Consequently, this was given more emphasis in the subsection, *Current Status of Research on Empathy with Children and Youth*, and highlighted the dearth of research on age-appropriate and successful interventions used to advance methods for implementing overall basic empathy as an antidote for changing irrational, aggressive decision-making and behaviors in male youth. A discussion in the subsection that followed, *Defining Social and Emotional Intelligence through Current Theoretical Best*

Practices, provided a general definition for what the antidote consisted of (e.g., overall basic empathy), and more specifically detailed several theoretical and methodological movements in current practice around the United States in public and private educational settings and whole school districts.

The third subsection, *Attributes of Aggression in Male Children and Youth*, provided descriptors and information that regarded the suspected and research-based root causes for proactive and reactive aggression. The fourth subsection, *Gordon's Predictors for Cognitive and Affective Empathy Associated with Proactive and Reactive Aggression*, was a published dissertation that highlighted Gordon's (2013) study as the only pivotal research available that made any kind of correlation to aggression in school-age children as a predictor for affective or cognitive empathy. The fifth subsection—*The Biopsychosocial Model and Proactive and Reactive Aggression*—provided an identification and description for defining the biological and psychosocial roots of aggression, and thus supported the theoretical model and backdrop foundation for this study when looking at overall basic empathy as a construct for implementing social emotional learning (SEL) to address and remediate proactive and reactive male aggression.

The final subsection—*The Six Seconds Model of Emotional Intelligence: Empathy as a Learnable Competency*—explored the theoretical tenets of the model and specifically focused on its eight competency areas of EQ in which increasing empathy and pursuing noble goals were posited as measurable and learnable traits. An exploration and discussion of the model was presented that looked at the potential implementation of the model's EQ areas of competency as an antidote for reactive aggression. All competency areas of the model were individually explored and briefly defined; however,

more emphasis was made in this study about empathy as a potential EQ competency trait than the other foundational tenets of the model.

Theoretical Foundations and/or Conceptual Framework

Theoretical foundations for each instrument under proposed implementation. Both self-report survey measures proposed for implementation in this study—the Basic Empathy Scale (BES) and the Reactive-Proactive Aggression Questionnaire—Child (RPAQ-C)—were based upon a model and or seminal model of discovery and maturation that regarded measures for evaluating childhood empathy development, or the roots for measuring reactive/proactive aggression in children and youth. Each assessment was given a brief research and historical foundation for how it was developed by its authors. For example, the developmental underpinnings for Jolliffe and Farrington's (2006) BES instrument were first deconstructed through the various researchers who originally defined empathy as an affective process of putting one's self into another's emotional experience (Bryant, 1982); or defined empathy as a cognitive process for understanding another's emotions (Hogan, 1969).

Jolliffe and Farrington (2006) asserted that if one were to follow that a relationship existed between aggression and prosocial competency skills such as empathy, then it could be posited that having an inability to identify the attributes of empathy were strongly linked to aggression with comorbid CU traits and narcissism. The researchers argued that individuals who intuitively understood each other's negative reactions due to their own aggressions exacerbated by antisocial behaviors were consequently inhibited by these very behaviors, and thus less interested in continuing what presented as being CU traits. With these premises in mind, Jolliffe and Farrington

posited that they could test their hypothesis about a relationship between empathy and aggression by linking it specifically to CU trait behaviors.

The authors based much of their assertions for the BES upon Miller and Eisenberg's (1988) meta-analytic study of 43 individual studies that regarded the relationship between empathy and aggressive externalizing antisocial behaviors in children and youth. Here, Jolliffe and Farrington (2006) posited that aggressive and externalizing anti-social behaviors were generally defined as meaning "to include self-report measures of aggression, peer/teacher ratings of aggression and administration of 'shock' to an experimental confederate" (p. 590).

In 2004, with solid knowledge about this meta-analytic research information and data, Jolliffe and Farrington (2006) eventually generated their own meta-analytic results based upon three main self-report scales: The Interpersonal Reactivity Index (IRI; Davis, 1980); the Hogan Empathy Scale (HES; Hogan, 1969); and the Questionnaire Measure of Emotional Empathy (QMEE; Mehrabian & Epstein, 1972). The HES was a measure for cognitive empathy; the QMEE was a measure for emotional empathy; and the IRI was a measure for both cognitive and emotional empathy. The QMEE was also originally inspired by findings from Eysenck, Pearson, Easting, and Allsop's (1985) Impulsiveness-Venturesome-ness Empathy Scale, and Bryant's (1982) Index for Empathy in Children and Adolescents (IECA).

Jolliffe and Farrington (2006) soon discovered that too many limitations and deficiencies existed in each of the foundational research study instruments; therefore, they created a new measure for empathy in children and youth based upon what they considered at the time to be a more genuine definition and originally put forth by Cohen and Strayer (1996) in "The understanding and sharing in another's emotional state or

context'' (p. 523). The authors chose this definition because it allowed for a focus on both affective empathy and an understanding of another's emotions or feelings. Thus, test items were then established and normed upon the theoretical foundations of cognitive and affective empathy. Test items were also derived from four basic emotions: Fear, anger, sadness, and happiness. The authors argued that all other emotions stemmed from these main basic human emotions.

The Reactive-Proactive Aggression Questionnaire—Child (RPAQ-C), on the other hand, purports to define the layers of cognitive and biopsychosocial dysfunction during child development that have led to trait behaviors for reactive and proactive aggression. The original creators of the instrument itself—A. Raine and K. Dodge—later teamed up with a group of researchers to publish their findings (e.g., Raine et al., 2006). Test items originally drawn from a few research sources focused upon reactive and proactive aggression, and then correlated to such mental health ills in children and teens as psychopathy, sociopathy substance abuse, poverty, schizotypal disorders, and schizophrenia.

Dodge and Coie's (1987) Teacher Rating Instrument (TRI), for example, was a teacher-rating measure for proactive–reactive aggression that in part offered evidence to support the creation of a more current reactive-proactive self-report measure. Both Raine and Dodge originally looked to Dodge and Coie's (1987) instrument, the Teacher Rating Instrument (TRI), to examine social-information-processing mechanism outcomes for aggressive and conduct disordered children (Raine et al., 2006). Dodge and Coie argued that such variables were defined as hostile attributional biases and intention-cue detection deficits common amongst children and youth who showed patterns of proactive or

reactive aggression, and therefore these factors were considered when developing a rating scale.

This same teacher rating scale was later revised by Brown, Atkins, Osborne, and Milnamow (1996), for example the TRI-Revised, to reflect such study variables as covert antisocial behaviors (e.g., CU traits and conduct disorders) based upon a sample of predominantly white, lower middle-class 7 to 9-year-old boys. Thus, Raine et al. (2006) considered the foundations for both Dodge and Coie's (1987) TRI instrument as well as Brown et al.'s (1996) TRI-Revised instrument in the development of their own measure for reactive and proactive aggression in children and youth. These changes to a more improved psychological instrument were evident in the updated RPAQ-C instrument as well as the conceptual and theoretical factors that regarded its development.

Authors Barratt (1991), Meloy (1988), and Vitiello, Behar, Hunt, Stoff, and Ricciuti (1990), for example, categorized their research into subtypes of aggression in children; thus, Raine and again Dodge posited that self-report items had to reflect aggression that was physical and or verbal as well as "include the motivation and situational context for the aggression (e.g. 'Had fights with others to show who was on top', 'Gotten angry when others threatened you')" (Raine et al., 2006, p. 161). Test items were therefore intentionally written in easy-to-understand sentences (e.g., 2nd to 3rd grade reading level) for 7 to 8-year-olds as well as teens with reading difficulty levels to engage in understanding and completing the RPAQ-C. Raine et al. asserted that their RPAQ-C test items also focused upon aggression content that was very broad in order for a wider age gap (e.g., 7 to 16 years) to identify with age-specific levels of developmental aggression. The self-report questionnaire instructions were thus kept very simplistic to enable facilitating "a non-defensive response style" (p. 161), and therefore began by

acknowledging, for example, self-report statements such as, “Most people feel angry at times” (p. 161).

Finally, it needed to be noted here that Ang and Raine’s (2009) instrument, the Narcissistic Personality Questionnaire for Children—Revised (NPQC-R), a psychometric for measuring childhood maladaptive narcissism (Loke & Lowe, 2014), was given serious consideration as a study instrument and statistical foundation as a moderator variable for this study. Albeit a brief assessment, it offered layers of factors that could identify the nuances of child and youth narcissism (e.g., pediatric narcissism). However, for obvious purposes of this study (e.g., being a quantitative study), a moderator variable and resultant statistical linear regression model were not pursued. It was however recommended in Chapter 5 as an option for future study and review.

Defining trait behaviors of proactive and reactive aggression sub-types. According to the latest *Diagnostic and Statistical Manual of Mental Disorders— Fifth Edition* (DSM-V) (American Psychiatric Association, 2013), children who exhibited callousness toward others, expressed irrational ideals about personal responsibility, displayed antisocial norms through aggressive means, had a low frustration tolerance level, and thus appeared to have an incapacity to experience guilt and shame, consequently showed the behavioral markers for what were considered a combined set of diagnostic criteria identifying CU trait behaviors. This definition specifically included personality characteristics that targeted behaviors such as a lack of guilt and or shame, profound deficient traits in cognitive and affective empathy, lack of concern about personal and or academic performance, and nonverbal expressive displays of a rather shallow or deficient affect. These cognitive and behavioral exhibitions were described in

the DSM-V criteria for Antisocial Personality Disorder (ASPD)—a diagnostic label once only reserved for adults age 18 and older.

In previous versions of the DSM, children and youth who met these same or similar criteria were considered to have a Dissocial Personality Disorder (DPD). To be clear, however, children, youth, as well as adults have now been essentially lumped under one diagnostic cluster label—ASPD, according to the most recently published DSM V (American Psychiatric Association, 2013). The dramatic increase of violence in all forms of media within American culture, psychosocial issues related to poverty, and how children have learned to think and act in psychosocially maladaptive ways within their families significantly nurtured the development of this disorder (Mohl, 2013; National Forum on Youth Violence Prevention, 2013). Current neuropsychological brain-behavior researchers posited that genetic ASPD markers in children (often unbeknownst to the parents) were exacerbated by the very psychosocially maladaptive conditions and environments they were nurtured within (Mohl, 2013; National Forum on Youth Violence Prevention, 2013). Hence, this gave reason for perhaps why much current research into early childhood sociopathic development has been more focused upon identifying cause-and-effect thinking, decision-making, and behavioral learning from a biopsychosocial model and perspective than upon interventions to affect behavioral change (Mohl, 2013; National Forum on Youth Violence Prevention, 2013).

According to one study, for example, a disproportionate number of children with CU traits and ASPD attributes were also polyvictimized (i.e., 62% as of 2010) and having endured multiple levels of trauma and victimization during early developmental years (Thornton et al., 2013). In this study, African-Americans were 80 percent of the population statistic, the clear majority were male children, and diagnosed as aggressive

and or violent with CU traits, Conduct Disorders, sociopathy, neuroticism, and or ASPD. However, a statistical study by Child Maltreatment (2012) pointed to some differing, albeit sobering statistics regarding polyvictimized children and youth.

Nationally, birth to 1-year-olds has had the highest rate of polyvictimization (e.g., two or more incidences of emotional, physical, and or psychological trauma) at 21.9 per 1,000 children. Overall data revealed that 50.9 percent of the victims were girls, and 48.7 percent were boys, with a 1 percent margin of error for gender that was unknown. Three ethnic populations comprised the clear majority of polyvictimized children and youth (87% overall), with White/Anglo populations the largest proportional share at 44.0 percent, Hispanic children and youth at 21.8 percent, and last (but not significantly less) were African-American children and youth at 21.0 percent. And yet another current research study (Finkelhor et al., 2014) asserted a contradictive set of results in which ethnocentric variables played less of a significant role, and therefore were more indicative of maladaptive experiential learning and development, low to lower-middle socioeconomics, and environmental risk factors as contributors upon the neural development of behaviors.

Hence, the perpetuation of polyvictimization of children was supported in this research by the tenets of a biopsychosocial model—ethnicity notwithstanding. Finkelhor et al.'s (2014) data results indicated the ethnic concentrations based upon population numbers alone were primarily amongst Whites, African-Americans, and Hispanics in the United States when compared to other ethnic groups in the U.S. Finkelhor et al. (2014) provided the following data that ultimately supported the theory of a biopsychosocial model and explanation for why polyvictimization was a recurrent generational psychosocial malady. In their study, "At-School Victimization and Violence Exposure

Assessed in a National Household Survey of Children and Youth," the authors pointed to data results that in many ways contradicted early data findings by other researchers on the topic of polyvictimization with relatively few differences for in-school victimization by gender, race, SES, place type, and disability status. Males, for example, had higher rates of assault at school (18.5% vs. 9.1% for girls, $\chi 2 = 62.2$, $p < .001$) and lower rates of sexual harassment/flashing (e.g., 2.3% for boys vs. 4.2% for girls, or $\chi 2 = 9.0$, $p < .05$). Assault with a deadly weapon showed the most significant differences across demographic categories with African-American children ($\chi 2 = 35.1$, $p < .001$) and children living in large cities having the highest rates ($\chi 2 = 19.8$, $p < .01$). Children in mid-level SES families had the highest rate of sexual harassment and flashing (4.1%) compared to the high (1.4%) and low SES groups (2.3%, $\chi 2 = 12.8$, $p < .01$). Children with disabilities had higher rates of assault (18.4% vs. 12% for children without disabilities, $\chi 2 = 24.8$, $p < .001$), and higher rates of intimidation/bullying (34.2% vs. 27.9% for children without disabilities, $\chi 2 = 13.4$, $p < .05$). Children living in stepparent homes compared to two parent families reported higher rates of any assault (20.6% vs. 12.1%, $\chi 2 = 17.4$, $p < .05$) and weapon assaults (6.4% vs. 1.3%, $\chi 2 = 40.0$, $p < .001$) at school.

Differences in exposure to intimidation differed by family type as well. Children living with stepparents (31.8%) and those living with single parents (34.7%) had the highest rates of exposure to intimidation tactics by adults when compared to two-parent families (27.1%) (Finkelhor et al., 2014). All this data and the following demographics were gathered using the *National Survey of Children's Exposure to Violence II* (NatSCEV II), an instrument used to measure for multiple incidences of environmental and familial violence and victimization occurrences during childhood that unfortunately

reoccurred at school by other polyvictimized children and youth. The authors conducted the national survey in 2011, gathering information from a population sample of 4,503 children and youth ages 1 month to 17 years. For the data analysis, however, the authors limited the sample size to 3,391 school-aged children between 5 to 17 years-old since each of these participants also had significant historical information in terms of polyvictimization at their respective school sites (Finkelhor et al., 2014).

Current status of research on empathy with children and youth. The dearth of research around empathy as an EQ competency was arguably supported by the very evidence of public and private school districts that have continued to prescribe outdated punitive discipline paradigms as interventions for controlling child and youth aggression (Bear, 2010). Indeed, there have been some very promising empathy programs piloted around the country in numerous public and private educational settings. These types of programs have allowed for more evidence-based research literature and statistical data to emerge in helping future research in areas of empathy as part of a prosocial skill development model of intervention and supports.

The six seconds model of emotional intelligence, for example, and corresponding K-12 curriculum as well as teacher and counselor training, have been implemented in a number of school districts around the world, although primarily in Arizona, California, and several East coast states. Founded in 1997 by current chief executive officer, Anabel Jensen, PhD, as a global non-profit, the essential goal of the program was to deliver methods for integrating SEL as a network of EQ competencies that included empathy, with a secondary goal of teaching children and youth worldwide to earn compassion and happiness in school as well as life (*The six seconds model of emotional intelligence*, 2014). Other competitive intervention models have focused primarily upon children

learning the EQ construct of empathy, such as with the *roots of empathy* and *seeds of empathy* evidence-based programs out of Canada that have gained international attention in K-5 school settings.

Founded by internationally acclaimed educator and child advocate, Mary Gordon, the theoretical foundations for *roots of empathy* have taught parents and caregivers how to be more empathic people, and in turn helped them build loving and genuine relationships with their infants and children. The end-goal and hope of each program was to stave off many of the psychosocial ills that gave rise to children who lacked empathy often learned from the very adults who were supposed to be caring for them. Other programs, such as the CBCT model proposed earlier in this study were premised upon "analytical meditations that encourage us to actively work with our emotions and cognitive appraisals in order to release hostility and indifference toward others" (Dodson-Lavelle, 2013), and thus have allowed for nurturing genuine feelings of affection for others.

Finally, Stanford University's "Center for Compassion and Altruism Research and Education," began a series of training modules and workshops for professionals and educators titled, compassion cultivation theory, or CCT, originally created by two Stanford professors, T. Jinpa and J. R. Doty, to promote compassion through communication and empathy training with international business leaders. It was later tested as a research study pilot with Jazaieri et al. (2013). The mission and theoretical foundation for CCT was to help individuals become attuned to their "compassionate nature so that their instinctive response to a given situation will come from that compassionate understanding standpoint rather than negative excessive judgment" (Jazaieri et al., 2013). Albeit these notable models have been groundbreaking evidence-

based programs designed to moderate and adjust reasonably healthy children and teens from creating self-destructive established patterns of counterproductive behaviors and decision-making, the availability and affordability of these evidence-based resources and information have been scarce. This is particularly true for parents and or guardians bewildered by the consistent emotional angst of an angry, aggressive, depressed and impulsive child. Schools more than ever have been forced to endure unfamiliar psychological territory when it has come to "dealing" with aggressive children and youth—particularly proactive and reactive subtypes.

There has been evidence that these programs, and all of the following, have gradually made inroads and thus tremendous positive ground gained nationally with the addition of successful piloted prosocial skills prevention programs in schools. Many such successful intervention programs have been, for example, the school-wide positive behavioral intervention supports (SWPBIS) program; the Olweus bullying prevention Program (OBPP); response to intervention (RTI); top twenty teens; the six seconds emotional intelligence network; the RJ practices and circles—anti-bullying and empathy-based mediation programs; and finally, the roots of empathy and seeds of empathy early childhood prosocial skills programming for elementary school children and parents. However, many public and private or charter school districts have lacked the research, funding, and or pedagogical support for adopting EQ social skills curriculums or intervention programs that prescribe empathy as a core prosocial value to assuage reactive aggression and emergent anti-social behavioral children and youth (Baker, Sciarra, & Farrie, 2014).

Defining social and emotional intelligence through current theoretical best practices. The following definitions briefly described the current theoretical school

prevention and intervention practices in use in many school districts as defined in each theoretical model. According to PBIS.org, the central clearinghouse for research and prevention/intervention theory on positive behavioral intervention supports in schools, the following definition has been the description adopted to define the tenets of SWPBIS:

> PBIS is a framework or approach for assisting school personnel in adopting and organizing evidence-based behavioral interventions into an integrated continuum that enhances academic and social behavior outcomes for all students. PBIS IS NOT a packaged curriculum, scripted intervention, or manualized strategy. PBIS IS a prevention-oriented way for school personnel to (a) organize evidence-based practices, (b) improve their implementation of those practices, and (c) maximize academic and social behavior outcomes for students. PBIS supported the success of ALL students. (Positive Behavioral Interventions, PBIS FAQ's, What is PBIS?, 2014, para. 2)

One caveat to SWPBIS is that it has had legislative support when linked to behavioral services for special education children through the Individuals with Disabilities in Education Act (IDEA), albeit it has been a program servicing all school children and youth regardless of whether evidence has supported it primarily for cognitively and physically disabled children and youth.

The Olweus Bullying Prevention Program (OBBP) (2014) stated the following description on its website the theory and practice for the purpose and intent of the Olweusprevention model:

> OBPP is a whole-school program that has been proven to prevent or reduce bullying throughout a school setting. OBPP is used at the school, classroom, and individual levels and includes methods to reach out to parents and the community

> for involvement and support. School administrators, teachers, and other staff are primarily responsible for introducing and implementing the program. These efforts are designed to improve peer relations and make the school a safer and more positive place for students to learn and develop. The goals of the program are to reduce existing bullying problems among students, prevent the development of new bullying problems, [and] achieve better peer relations at school. (Olweus Bullying Prevention, Scope and Sequence Report, 2014, p. 2)

In addition, the OBBP has asserted that in practice its anti-bullying tenets have served to prevent suicides amongst children and youth (*Violencepreventionworks.org*, youth suicide, 2014). The RTI theoretical model, on the other hand, has been a sibling theory and practice to SWPBIS as well as variant behavioral intervention program identifying children and youth in special education with behavioral abnormalities so that they may learn new and healthy ways for interrelating with peers and adults. According to the RTI Action Network, a clearinghouse for research on the theory and practice of RTI in schools, it has defined the RTI methodology as the following:

> RTI is a multi-tier approach to the early identification and support of students with learning and behavior needs. The RTI process begins with high-quality instruction and universal screening of all children in the general education classroom. Struggling learners are provided with interventions at increasing levels of intensity to accelerate their rate of learning. These services may be provided by a variety of personnel, including general education teachers, special educators, and specialists. Progress is closely monitored to assess both the learning rate and level of performance of individual students. Educational decisions about the intensity and duration of interventions are based on individual student response to

> instruction. RTI is designed for use when making decisions in both general education and special education, creating a well-integrated system of instruction and intervention guided by child outcome data. (RTI Action Network, What is RTI?, 2014, para. 1)

The top twenty teens social emotional learning (SEL) school prevention and intervention program was created by Bernabei, Cody, Cole, Cole, and Sweeney (2004), three non-academic lay people involved in K-12 education via being school athletic coaches as well as key motivational leaders within their respective corporate American business communities. Their foundational principle was based upon the 80/20 rule of life first proposed by Italian philosopher, sociologist and economist, Vilfredo Federico Damaso Pareto (1848-1923), and featured a central tenet for identifying children and youth who became disengaged from learning (Bernabei et al., 2004). Essentially, the prevention and intervention program was defined as follows:

> Top 20 . . . is for students of all ages and grade levels. The concepts help any student looking for better relationships and experiences in the classroom, with friends and at home. The concepts can help with such challenges as: Finding relevancy in classes that don't seem appealing; dealing with conflict with a teacher or a classmate; procrastination and boredom; staying focused; building trust; [and] dealing with negativity. (Who is it for?, 2014, para. 1)

EQ learning theories, philosophy, and interventionist curriculum and tools promoted by the SixSeconds.org foundation were fundamentally social emotional learning and intelligence theories and practice taught globally in businesses, governments, and in K-12 and Higher Ed classroom settings. They were based upon the principles and evidence-based research of emotional intelligence (EQ) as originally published by Salovey and Mayer (1990), and later popularized by Goleman (1995, 1998),

a few of the 20th and 21st century's most influential psychologists on the research behind social emotional intelligence (SEI), all of whom single-handedly provided evidence-based research dismissing the traditional psychology school of thought for determining a person's intellectual value by using the intelligence quotient (IQ) as a stand-alone measure of one's cognitive and intellectual ability.

Likewise, researchers such as Greenspan (1989), and earlier research by Gardner (1983), arguably set the popular stage for emotional intelligence and the EQ movement in social emotional research with Gardner's revolutionary research theories that regarded multiple intelligences in children and youth. According to the Six Seconds Emotional Intelligence Network website, EQ has been simply defined as being smarter with one's feelings, and putting together what is rational and emotional in order to effectively move forward in life. Consequently,

> emotions are part of human biology; [*sic*] they are chemicals that help regulate our minds and bodies, assisting us to cope with complexities of making decisions, interacting with people, and finding our way through life. We feel emotions to help us pay attention, and to focus our attention. While sometimes they're confusing, emotions are part of us, so we might as well learn to use them well. (The Six Seconds Model, Get Started with EQ, 2014, para. 2)

It was important here to further highlight some competing methodological features of four grass roots programs described earlier that have surfaced around the country in various piloted school and community agencies serving to address empathy as an antidote to aggression in children and youth: CBCT, CCT, *restorative circles* (RC)—a tenet of RJ, and roots of empathy.

CBCT is an intervention evidence-based tool of theory and practice studied at the University of Arizona (U of A) Department of Psychiatry through C. Raison, M.D. and his research team and focuses upon mind-body medicine research. The U of A website described CBCT as "based on the principle that self-centered thoughts and emotions contribute to our suffering, whereas altruistic thoughts and behaviors ultimately benefit oneself and others" (College of Medicine, Tucson Psychiatry, Sowing the Seeds of Compassion, 2014, para. 6). According to the university, preliminary research showed that CBCT "involve[d] an in-depth exploration and the recognition of the sources of self-destructive thoughts and behavior patterns, and addresse[d] ways to reverse and transform them" (College of Medicine, Tucson Psychiatry, Sowing the Seeds of Compassion, 2014, para. 7).

There was a sequential process of learning that participants had to master in order for CBCT to be an effective tool for change not only in self but for others. Hence, training- the-trainer on CBCT principles was key to the principles all-together having reached a wider audience for effect as well as impact. There were eight principled steps participants needed to accomplish:

1. ***Developing attention and stability of mind***—focused breathing to reduce environmental distractions and encourage concentration;
2. ***Cultivating insight into the nature of mental experiences***—self-awareness for thoughts and emotions without ruminating upon them;
3. ***Cultivating self-compassion***—take actions to first be kind and considerate to self;
4. ***Cultivating equanimity and mental balance***—remain calm and in control and not reactive;
5. ***Developing appreciation and gratitude for others***—make consideration and appreciation for those in our lives who assist in our well-being;
6. ***Developing affection and empathy***—be kind and welcoming to the needs and concerns of others;

7. ***Aspiring to compassion***—show a desire to help others who are emotionally struggling toward happiness or have difficult life paths; and finally,
8. ***Active compassion for others***—make compassion the center of one's core value to have others learn from them.

Raison's research team asserted that early data findings pointed to CBCT as a change-agent in people's everyday behaviors and cognitions "in ways [that] likely Enhance[d] emotional well-being, relationships, and improve physical health" (College of Medicine, Tucson Psychiatry, 2014). Its application then to working with children and youth in educational settings was profound toward derailing potential early-life experiences of psychosocial aggression often discovered to be the result of some form of trauma and or repeated traumas. CBCT training was also implemented through a core research project that took place at Emory University in the Emory-Tibet Partnership Program. Lobsang Tenzin Negi, PhD, directed the program and project originally derived as an intervention and prevention program to address the overwhelming stress and anxiety experienced by many Emory students, some of whom completed suicide on campus during the 2003-2004 academic school year. The founder and developer described CBCT as the following:

> Based on the understanding that self-centered thinking and behavior cause suffering for self and others, while other-centered thoughts, emotions, and behaviors ultimately benefit all, CBCT works to promote a deep sense of endearment for others. Compassion is fostered through a process that begins with the stabilization of the practitioner's mental activity, and then progresses to the cultivation of a sense of closeness or connectedness to others, and the recognition of the causes of suffering. The fundamental premise—that compassion is a trait that can be developed and expanded, and that its practice benefits both self and society. (Negi, 2014)

The Stanford University School of Medicine also supported these same or similar tenets of CBCT through its own secular-based compassion and altruism research through The Center for Compassion and Altruism Research and Education, or CCARE, within the CCT Program. Promoted and clinically-directed by J. R. Doty, MD, with the assistance of Buddhist scholar, T. Jinpa, PhD, the intervention program consisted of an eight-week educational workshop designed to build resiliency, well-being, and an improved connectedness to others through the tenets of cognitive behavioral and dialectical psychology with science research that promoted empathy, compassion, and kindnesses for self as well as others (The Center for Compassion and Altruism Research and Education, 2017). However, CCT differed from CBCT in that it drew upon neuropsychology and the biological bases and precursors of empathic behavior, the neural correlates of empathy in terms of brain behavior, and thus ways in which more people could learn empathy and altruism as interventions and prevention for addressing, amongst other emotions, the bases for aggression (CCARE, 2017).

Another research project finding great success as a pilot program to address aggression and bullying amongst children and youth were the theoretical principles and practices of RC and RJ restorative mediation intervention programs. While there was a growing body of literature available that examined the effects and outcomes of RJ programs based on populations of youth and young adult offenders reentering civilian life, little research available addressed the sibling intervention principle of RC in elementary and secondary schools. Albeit, newer research and intervention strategies have emerged over the last decade, principally the work of van Wormer and Walker (2013) and Johnstone (2013). Again, many of these compassion-building programs such as RC/RJ, CBCT and CCT have been in the infancy stage of implementation around the

country, and thus have been more aptly piloted programs in schools and school districts nationally. Therefore, robust research data regarding effectiveness long-term has not been unavailable. Early preliminary findings, however, suggested that all were incredibly powerful tools toward affecting change in others as well as self, and thus participants learned to facilitate peaceful and empathic solutions as ways of behaving during stress, crises, and conflicts.

Recent investigative research by Mirsky (2011) stated that the philosophy and theory behind RC was as a replacement prevention and intervention program to counter the "exclusionary and punitive zero-tolerance policies mandated in many schools today" (p. 4), that research has already established as only leading to increased juvenile behaviors and campus-wide discipline problems (Fabelo, Thompson, & Plotkin, 2011; Geangu, 2009). Thus, the goal of RC was really to empower youth to take responsibility for their behaviors focused upon mediating and repairing the emotional trauma and or harm that resulted from victims (e.g., harmed) and their offenders (e.g., harm-doers). Additional learning focused proactively upon preventing wrong or illicit behaviors in the future (Mirsky, 2011).

Finally, the roots of empathy and its sibling program, seeds of empathy, aimed to address birth to five developmental and biopsychosocial behaviors of aggression. The following was the mission statement for the program: "To build caring, peaceful, and civil societies through the development of empathy in children and adults" (About Us, para. 1). The long-term goals of the program were to teach children how to be responsible citizens and eventually responsible adults while nurturing empathy. It was hoped that this continual process of learning overall basic empathy would drastically reduce levels of

aggression and bullying in children as well as their own children someday, and so on for future generations (About Us, para.3).

The following nine tenets have been the core beliefs or mission statements of *roots of empathy*, and thus have been taught as a collective set of valuable and powerful psychological tools to minimize aggression and bullying in school-age children:

9. *Empathy*—"The ability to identify with another person's feelings" (About Us, para. 5);

10. *Culture of Caring*— "The classroom is a window on the future. Children learn to care for one another, their world and their future" (About Us, para. 6);

11. *Respect*—Regards an "appreciation of the uniqueness of each individual, their opinions, beliefs and contributions, [and] the importance of voice" (About Us, para. 7);

12. *Power of Parenting*—Parenting for optimal early childhood development leading to healthy human development" (About Us, para. 8);

13. *Participatory Democracy*—The classroom becomes a democracy whereby all students are encouraged to contribute to classroom discussions and formulate opinions based upon facts. Much focus is given to helping students work on collaboration and agreeing to disagree (About Us, para. 9);

14. *Inclusion*—Regards "identifying our differences and celebrating our sameness" (About Us, para. 10); that is, giving allowance to those things that which build upon our common human experiences;

15. *Diversity*—Broadening one's perspective equates to learning about who we are in a larger diverse world of ethnicities, religion affiliations, language and culture, differing lifestyles, socioeconomics, political philosophies, ways of parenting, family dynamics, and those with disabilities (About Us, para. 11).

16. *Infant Safety*—An awareness of "risk factors to babies . . . [with] a strong focus on abuse prevention" (About Us, para. 12). The presumption is that children must be aware of and learn from information regarding which could cause them lifelong trauma and harm, such as with Shaken Baby Syndrome (SBS), Sudden Infant Death Syndrome (SIDS), Fetal Alcohol Spectrum Disorder (FASD), and the imminent dangers of second-hand cigarette smoke.

17. *Non-violence/Anti-bullying*—Children learn to empathize with others and are "encouraged to take responsibility for their actions and inactions" (About Us, para. 13), whereby as prosocial behaviors increase bullying behaviors decrease.

Attributes of aggression in male children and youth. Aggression attributes, particularly in male children, were indicated by a lack of empathy for others at early stages of life; that is, the milestone years for social emotional growth, cognitions, and language development—such as four to five years of age (Strayer & Roberts, 2004; McDonald & Lochman, 2012). According to the literature in this area of study, the psychosocial development of proactive and reactive aggression and consequent emotional and cognitive deficits in empathy began when patterns of self-centeredness and egocentricity slowly morphed into verbal and or physical incidences of aggression, anti-social and CU traits, narcissism, sociopathy traits, and even manipulative, emotional cruelty (Gordon, 2013; Renati, Berrone, & Zanetti, 2012; Stickle et al., 2012; Strayer & Roberts, 2004; van Baardewijk et al., 2009).

Research thus far into attributions of proactive and reactive aggression has leaned heavily upon psychopathology, particularly in regard to correlating genetics and environment with personality disorder development and emergent psychopathy; for example, a biopsychosocial developmental pattern (Bobadilla et al., 2012; Gauthier, Furr, Mathias, Marsh-Richard, & Dougherty, 2009; Hubbard et al., 2010; McDonald & Lochman, 2012). Some researchers posited that a lack of empathy in aggressive children was a direct result of deficient social emotional caregiving; therefore, parental social skills training needed to occur to stave off aggression subtypes such as proactive and reactive in children (Barker et al., 2010; Bugental et al., 2012; Van der Graaf et al., 2012). Others still asserted that social information processing (SIP) and genetic neural brain deficits were definitive combined variables for determining the root causes of proactive and reactive aggression in males (Arsenio & Ramos-Marcuse, 2014; Lopez-

Duran et al., 2009); or that empathy was teachable as a prosocial competency, but not necessarily to aggressive personality types (Dewar, 2014).

Gordon's predictors for cognitive and affective empathy as correlated with proactive and reactive aggression. The specific intent of Gordon's (2013) dissertation study ultimately moved closest to an examination of arguments in which the author posited that cognitive and affective empathy (either present or lacking) in children and youth were early predictive indicators for proactive and reactive aggression personality trait behaviors. Hence, Gordon's hypotheses and assertions strongly suggested that this was an area of neglected study that more pointedly addressed whether empathy was even learnable for those children and youth who exhibited consistent patterns of proactive or reactive aggression. A close investigation of literature focused primarily upon the central or pivotal articles in the field not only highlighted this gap, but just as importantly addressed the research not chosen. This would, amongst others, included Buffone and Poulin's (2014) research with adults correlating neural pathways of aggression and empathy; Gambini's (2014) research that discussed the relationship between aggression and empathy in adults; or Pouw, Rieff, Oosterveld, Huskins, and Stockmann's (2013) research that correlated proactive/reactive aggression to affective and cognitive empathy in autistic children.

This was largely because the research appeared to be not central or relevant and thus pivotal to this study primarily because research completed with adults or intellectually delayed special education children was not the focus population for this study. However, each author's findings arguably added peripheral support to this study's hypotheses. Significance also lied in the specific instruments Gordon (2013) used to validate and support her research hypotheses that linked subtype proactive and reactive

aggressions to a child's ability to demonstrate cognitive and affective empathy (i.e., the Basic Empathy Scale (BES) (Jolliffe & Farrington, 2006) and the Reactive-Proactive Aggression Questionnaire-Child (RPAQ-C; Raine et al., 2006). However, the intent or purpose of this study was to expound on Gordon's dissertation study, and then further pursue research about whether proactive and reactive aggression had a predictive relationship to overall basic empathy.

The biopsychosocial model and proactive and reactive aggression. This section defined the biopsychosocial model, and specifically its correlation to human emotion, stress, fear, defense mechanisms, and aggression. Perhaps more commonly known as the biological bases of human behavior, biopsychosocial human development "denote[d] a biological approach to the study of psychology rather than a psychological approach to the study of [human] biology" (Pinel, 2014, pp. 3-4). Biopsychosocial development, and hence the model itself, was described as integrative of many individual neuro-scientific disciplines.

All of the following, for example, were considered sub-correlate disciplines that supported the overall tenets of the model: Neuroanatomy—study of the structure of the nervous system; neurochemistry—study of the chemical bases of neural activity; neuroendocrinology—study of the interactive relationship between the nervous system and the endocrine system; neuropathology—study of the nervous system disorders; neuropharmacology—study of the effects of drugs on neural development; neurophysiology—study of the functions and actions of the nervous system; and psychophysiology—study of the relationship between physiological movement and psychological decision-making processes (Pinel, 2014).

It should be no surprise then that the biopsychosocial model of human development specific to experiential learning, neuroscience, and its biologic correlation to behavior negated more dichotomous traditions that have argued some behaviors were too complex to have psychophysiological determinates, and therefore were purely psychological or learned. This harkened back to the old Freudian psychoanalytic adage that all behavior was a repository of the unconscious, or like a recipe all humans essentially carried an equal distribution of genetic ingredients (e.g., nature) and experiential learning (e.g., nurture). Biopsychosocial and neuropsychological researchers argued, however, that the nature/nurture debate and or perspective was fundamentally and theoretically flawed, and thus passé. And although there has been much to discredit this perspective over the last 10 years given the explosion of neuropsychological research regarding brain and human behavior, particularly through genetic testing and MRI studies, it has remained a permeation in much of academia and with those staunchly holding to the tenets of older 20th century models of psychological human development and behavioral science.

According to Pinel (2014), the underlying motivation to perpetuate such a flawed perspective in psychological research has remained for the following reason:

> The problem is that it was based on the premise that genetic factors and experiential factors combined in an additive fashion— that a behavioral capacity, such as intelligence, [was] created through the combination or mixture of so many parts of genetics and so many parts of experience, rather than through the interaction of genetics and experience. (p. 23)

In terms of the biopsychology of emotions, stress, and health specific to fears, defense mechanisms, and aggression (and importantly reactive and proactive sub-types), the

seminal dissertation research of Huntington (2012) more aptly described the biopsychosocial model of aggression in youth. Here, the author provided a brief descriptive narrative that mirrored the basic biopsychosocial model of human behavior and cognitions (figure illustration below): "Biological factors include physiological and neurophysiological responses to exposure to violence and trauma; psychological factors include neuropsychological and cognitive changes in the exposed children; and social factors center on social support and social cognition" (Huntington, 2012, p. 18).

The following page illustrated a flowchart of the basic biopsychosocial model of psycho-physiological, neuropsychological, and psychosocial human behavior:

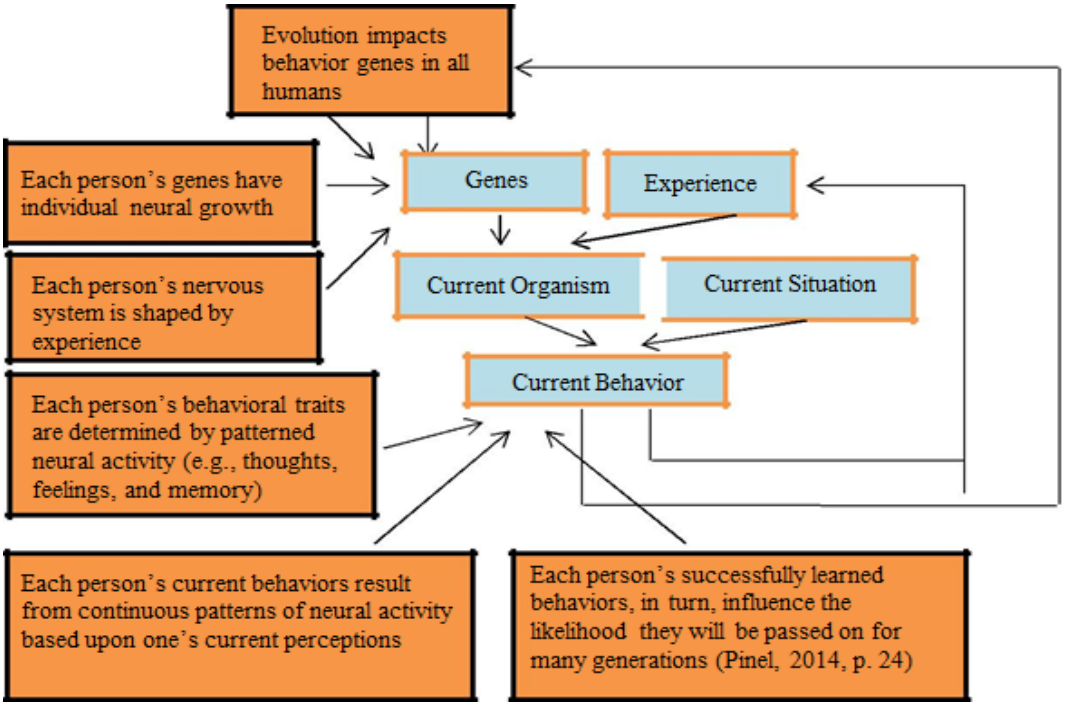

Figure 1. Basic biopsychosocial model of psycho-physiological, neuropsychological, and psychosocial human behavior

The six seconds model of emotional intelligence: Empathy as a learnable competency. Of all the empathy-based prevention and intervention programs highlighted in this study, none was as comprehensive and layered with details regarding empathy as a learnable and measurable competency than the the six seconds model of emotional intelligence, or what Six Seconds.org titled, "EQ in Action" (Six Seconds Model, eqmind.com, 2013). The organization promoted these two competencies and six others as sub-competencies in its evidence-based model, and subsequently addressed what were termed three major areas of emotional pursuit: Know Yourself, Choose Yourself, and Give Yourself. The premise behind the model was that, first, everyone was presumed to have emotional intelligence (The six seconds model of emotional intelligence, 2014). This same theoretical and philosophical premise was echoed in the early research and narratives of Zukav (2014) in which he asserted that as individuals grew to be more multisensory, they moved beyond their basic five senses to evolve into a new and different level of physical reality to include making responsible choices with the guidance and direction of multisensory teachers and educators. It regarded acknowledging and then harnessing social emotional intelligence through activities and curriculum promoting social emotional learning (SEL) of EQ competencies such as empathy that could result in lifelong positive changes. The following Figure 2 provided an illustration based on the Six Seconds organization's EQ in Action model.

Figure 2. EQ in action model

Additionally, Table 1 below provided the sub-competencies (eight in all) for the three EQ in Action "pursuits" shown in Figure 2. Also included were definitions for learning how to self-manage and enhance emotional literacy and intelligence.

Table 1.

EQ in Action Pursuits Table

Pursuit	Competency	Definition
Know Yourself	Enhance emotional literacy	Accurately identifying and interpreting both simple and compound feelings
	Recognize patterns	Acknowledge frequently recurring actions and behaviors
Choose Yourself	Apply consequential thinking	Evaluating the costs and benefits of your choices
	Navigate emotions	Assessing, harnessing, and transforming emotions as a strategic resource
	Engage intrinsic motivation	Gaining value from personal values and commitments vs. being driven by external forces
	Exercise optimism	Taking a proactive perspective of hope and possibility
Give Yourself	Increase empathy	Recognizing and appropriately responding to others' emotions
	Pursue noble goals	Connecting your daily choices with your overarching sense of purpose

In terms of the EQ in Action model indicating learnable and measurable competencies, especially around empathy as it related to this study, *Six Seconds.org* developed an evidence-based self-assessment tool—the Social Emotional Intelligence—Youth Version (SEI—YV) EQ Assessment—for measuring a child's baseline of EQ, and then used the data results as a framework for personal change and professional growth. The tool was the original creation of Jensen and Fiedeley-Van Dijk (2007), and last reviewed and updated by Jensen, Fiedeley-Van Dijk, and Freedman (2012).

The authors of the SEI-YV normed their results on a sample size of 2, 697 participants between the ages of 7 and 18 collected from around the world in countries where English was either a primary or secondary language (The six seconds model of

emotional intelligence., 2014). The instrument itself contained 74 items that assessed for the competencies inherent within the EQ in Action model above (Table 2.1), with 25 of the self-report items assessing for what *Six Seconds* termed "Life Barometers" (The six seconds model of emotional intelligence., 2014) in addition to measures for mood and self-perception. According to Jensen et al. (2012), factorial analysis indicated excellent concurrent validity of the "life barometers" to that of participants' self-reported pursuits and the corresponding eight sub-competencies described in the model.

The following coefficient of determinations (R^2), a statistical indicator for how well the resulting data aligned with the instrument and model, showed high validity measures in the following areas: Overall wellbeing (50.22%), Good health (21.78%), Relationship quality (37.76%), Life satisfaction (54.53%), Personal achievement (42.03%), and Self-efficacy (12.01%) (Jensen et al., 2012). Using Cronbach's coefficient alpha, Jensen et al. also found high reliability of test items, with a raw score range of 20 to 100, and mean scores between 64.55 for the sub-competency of Navigate Emotions to a high of 72.01 for the sub-competency of Increase Empathy. While Jensen et al. stated that there were no age and gender differences overall within the self-report measures, there were however slightly elevated scores for girls over boys in the areas of navigate Emotions and Increase Empathy.

Review of the Literature

Youth aggression and the moderating impact of empathy. As early as 1982 research into empathy as a childhood psychosocial developmental characteristic of overall emotional development appeared in the literature, with researchers stating at the time that there was a relationship between aggression and how one accepted the individual differences of his or her peers (Bryant, 1982). Up to that point much research

focused upon measuring for empathy in adults, with limited research addressing children's socio-emotional learning and development specific to empathy as a prosocial competency skill. Bryant's (1982) research added to an emerging (albeit deficient) canon of studies on the topic of children and youth as comparative measures for affective and or cognitive empathy.

However, Bryant's (1982) study focused upon measuring for individual differences of social development in boys and girls as indicated by several types of scale indexes that were also simultaneously used to measure adult emotional development. This was most notably Mehrabian and Epstein's popular (1972) affective empathy scale, the *Questionnaire Measure of Emotional Empathy* (QMEE), and Hogan's (1969) cognitive empathy index or *Hogan's Empathy Scale*. An additional index scale was included in Bryant's (1982) study and normed on children using a picture-book questionnaire format.

This assessment was known as the FASTE or *Feshbach's Affective Situations Test for Empathy* (Feshbach & Roe, 1969). Bryant attempted to graph current empathy scales using a total population of 258 first through seventh grade males and females split between three separate study sample groups (i.e., third graders (Sample 1), fourth through six graders (Sample 2), and eighth graders (Sample 3). Samples 1 and 2 were individually interviewed. Sample 3 participants could individually self-assess. All participants, however, were children and youth attending Dutch public school systems across the Netherlands (e.g., not American children).

Bryant (1982) looked for reliability and validity in an overall attempt to provide quantitative evidence that a lack of empathy could be related to aggressiveness in children, youth, and adults. The primary research intent, however, was to correlate

popularly-used indexes for measuring empathy in adults, yet carefully apply the data to measuring empathy in children. No relationship was established at the time that correlated empathy to types of aggression in children, much less to empathy being a prosocial competency skill. What emerged in the end of Bryant's (1982) study was a discussion of one dimension for measuring empathy as indicated in her own newly created assessment scale, *Index of Empathy for Children and Adolescents* (IECA). A glaring problem with this result was that, even for empathy measurement scale data in the early 80's, empathy as an EQ competency had been already demonstrated in other published literature to be multi-dimensional and sensory (de Wied et al., 2012; Karlsson, 2012).

Titchener's early 1900's neuroscience research, on the other hand, established that there was a neural basis for the brain to process emotions such as empathy (Keen, 2006). However, Bryant (1982) was more interested in the scale indexes as assessments rather than what the results could indicate regarding the significance of the population used to gather the data to begin with. Therefore, it was possible that Bryant wanted to establish reliability and validity of the instruments prior to promoting them in any future substantive research.

Much of the prevailing literature regarding empathy as a construct of adult emotional behavior assumed a correlation existed to an inhibition of aggression, and only in the absence of evidence to the contrary (Dadds, Cauchi, Wimalaweera, Hawes, & Brennan, 2012; Eisenberg, Eggum, & Di Giunta, 2010; Gordon, 2013; Marshall & Marshall, 2011; Pouw et al., 2013). Regarding empathy in children and youth, whether cognitive and or affective, it was the prevailing historical belief and theory of psychology that children bore too much developmental egocentricity to experience an understanding

or wherewithal of empathy, and therefore were incapable of developing empathy until adulthood (Freud, 1958; Piaget, 1965). Researchers have since profoundly debunked this psychological and theoretical myth about human social and emotional intelligence. Gardner's (1983) early research on multiple intelligences of children along with contemporaries, Salovey and Mayer's (1990), was a testament to this fact. Later research would serve to enhance these earlier findings from Decety (2011), Gordon (2013), and Klass (2012).

Since more recent late 20th and early 21st century correlational studies have acknowledged empathy as an EQ competency that youth could intuitively recognize and practice, it therefore became known that biopsychosocial neural correlates to behavior exhibited as cognitive and or affective empathy could be based upon the understanding that youth also learned these EQ competencies. Conversely, a lack or deficit of cognitive and affective empathy documented in the research on subtypes of aggressive children and youth (e.g., proactive, reactive, and proactive/reactive) highlighted the need for more exploration on how this deficit was a result of biopsychosocial impacts upon child development. The discussion needed to answer whether empathy as a social and emotional intelligence construct indicated that children and youth had the ability to identify patterns of proactive and or reactive aggression just as much an ability to identify character traits exhibited as empathy.

Many early authors provided continuing support for the role empathy played in human development, behavior, and cognition. In the past 30 plus years, for example, some highly regarded and popular psychology research gurus who wrote about EQ and SEL, namely Ekman (2003); Gardner (1983); Goleman (1995); Greenspan (1989); Salovey et al. (2004); Salovey and Mayer (1990); and later Brackett et al., (2011),

established robust evidence that empathy could be a learned multi-dimensional, intellectual, cognitive and affective trait. Emerging evidence regarding the trajectory of empathy in childhood and its emotional growth into adulthood was arguably considered the evidential traits of a healthy, multi-dimensional and sensory human being, and thus had become the pinnacle ideal of a sensitive, caring, and empathic man or woman (Brackett et al., 2011; Ekman, 2003; Goleman, 1998; Salovey et al., 2004; Zukav, 2014).

While the above studies provided invaluable early information regarding the social and emotional aspects of empathy development, caution needed to be exercised before assuming the inverse that simply by showing empathy one lacked aggression or the propensity for aggression. Furthermore, established conventional psychology theories conflicted with many of the assertions put forth by Goleman's (1995) research on EQ. Zeidner, Matthews, and Roberts (2009) argued, for example, that Goleman (1995) attributed such human qualities as optimism and moral character as part of EQ, whereas traditional psychology had labeled these as personality traits, not social emotional intelligence traits. Zeidner et al. (2009) also argued against Goleman's premise that to gain a more fruitful and enjoyable life one must undervalue the conventional wisdom that cognitive intelligence was important, and instead put value and importance into EQ by generating successful relationships and honing one's emotional literacy. Ironically perhaps, Goleman was criticized for trying to devalue the popularity of IQ while popularizing the notion that EQ as a more prominent "science" to study (Zeidner et al., 2009).

For all the great research and work put forth by Goleman (1995), and others such as Salovey and Mayer (1990) in regard to EQ, Zeidner et al. (2009) posited that their research simultaneously traversed an emerging canon of literature on EQ while echoing

the tenets of Positive Psychology and its tenuous relationship as a field of psychology widely commercialized in and connected to the self-help book industry. Thus, its emergence as an important zeitgeist for traditional and organizational psychology was also popularized and sold as a quick-fix, self-help approach. In some cases, prominent researchers and their books perhaps unwittingly were sold as self-help pop psychology primers for the lay public's interest in all things EQ and other EQ-related subjects.

The self-help section of any popular bookstore, such as *Barnes & Noble*, would have the books anywhere from Goleman's original (1995) edition of *Emotional Intelligence* and all subsequent republished editions; Anthony's (2003) pitch for selling with emotional intelligence to Caruso and Salovey's (2004), *The Emotionally Intelligent Manager*; and even a primer on *Emotional Intelligence for Dummies* by Stein (2009). Currently these same texts are sold in the self-help section of the online bookstore, *Amazon Books*.

In Grant's (2014) article, "The Dark Side of Emotional Intelligence," he argued that for all of the great evidence-based research strides established regarding empathy as a competency to strive for, there was skepticism about how the evidence for establishing EQ as a new frontier-psychology came about, and whether much of the hype had been just psychological theatre. New research by Menges, Kilduff, Kern, and Bruch (2014), as well as Côté, Kraus, Cheng, Oveis, van der Löwe, Lian, and Keltner (2011), suggested that emotional intelligence, once skillfully mastered, could ironically for some be an emotional intelligence tool used for manipulation, deceit, and even an exercise in testing one's Machiavellian personality traits. Although it seems entirely counterintuitive to the intent of EQ and SEL, some prominent and emerging researchers found it challenging to acknowledge the EQ movement as a legitimate construct of psychology.

Menges et al. (2014), for example, observed how when some leaders gave inspirational speeches masterfully using EQ language to convey information to an audience, listeners were so enthralled with the speaker's speech and tone and delivery that they focused less on criticism and deconstructing the speech itself and thus engaged in more of the emotional content of the speaker. Hence, he argued the audience lost focus on the actual content of the speech. Ironically, Menges et al. argued that when listeners were polled they claimed to know the content of the speech because it was emotional. This, the authors asserted, was the result of what they coined "The Awestruck Effect," or "Dumbstruck Effect" in EQ leadership circles. In other words, transformational leaders whose charisma impacted some had the effect of inhibiting the emotionally expressive behaviors within the audience while seeming visibly emotional, animated, and engaging.

In a study by Côté et al. (2011), they asserted that social power facilitated the effect of prosocial orientation on empathic accuracy. For example, University of Toronto employees were asked to complete a survey about whether they had Machiavellian tendencies, and thus took a follow-up assessment that measured participants' knowledge of how to effectively self-manage emotions. Côté et al. then measured for how often university employees intentionally undermined their departmental cohorts. Côté et al.'s team discovered that employees who engaged in harmful emotional behaviors toward cohorts, such as manipulation and passive aggression, were Machiavellian-types with high EQ. That is, Côté et al. argued that these types of employees, often leaders in their respected areas of study at the university, used their high EQ skills to belittle or embarrass others for personal and professional gain.

Furthermore, virtually no studies to date have gone beyond examining the variable of empathy as an EQ trait and correlate to subtypes of proactive and reactive aggression. Consideration for a second significant correlating variable, such as behaviors mimicked by males obsessively playing violent video games, was possibly at play in suppressing any desire to be empathic. Literature by Anderson et al. (2010), for example, did make this attempt to connect aggression to pop-cultural phenomena like violent video-gaming. However, it fell short in the areas of where EQ could be considered a biopsychosocial factor at-play.

Tremendous research around verbal and facial autonomic responses to children's empathy and aggression was given strong consideration as having a positive or negative correlation depending upon the psychosocial development of a child (de Wied et al., 2012). Yet many researchers have discovered only a fleeting correlation of overall basic empathy to aggression, with some of it focused on children and the majority focused upon findings from adult populations. Notable researchers in this area were Strayer and Roberts (2004); Mayberry and Espelage (2007); Nesdale, Killen, and Duffy (2013); Jones et al. (2010); Schwenck et al. (2012); Van der Graaf et al. (2012); and finally, Gordon (2013).

Conversely, an assumption was made that generalized an individual with an average propensity to be aggressive as incapable of demonstrating empathy, and thus lacked the ability to identify attributes of empathy. One should not assume, however, that the data findings by the aforementioned authors regarding aggression and empathy were generalized to results from all studies on social emotional lifespan development. This included Bryant's (1982) early research in which it was admittedly noted that the only research intent was to present "the development and validation of an index of empathy

for use with children and adolescents" (p. 257), and thus was more focused upon creating an Empathy Index Scale with "acceptable reliability and construct validity . . . useful for research" (p. 257) than identifying the developmental roots of empathy.

Differences regarding empathy and aggression discovered between children, youth, and adults were merely due to participants having a myriad of unidentified and unacknowledged biopsychological factors that contributed to their lack of being empathic. One glaring limitation to much research on empathy (particularly since the earliest robust studies of empathy development discovered a neuroscientific explanation for kinesthetic development from the research contributions of Titchener (1908/2013) was that much of the research data had been gathered on adult populations in and out of prison, or upon adults and children in Europe and Asia with some correlative connections to aggression. Again, as noted earlier even more robust recent literature since 2007 regarding the biopsychology of aggression (Huntington, 2012) in children and youth indicated a lack of validity between empathic learning and additional significant variables impacting aggression when the moderating factors were basic aggression, sociopathy or psychopathy and any possible relationship to empathy.

Strayer and Roberts (2004) completed perhaps some of the best-known early research on the correlational and hypothetical links of aggression, prosocial development, and emotional expressiveness to that of empathy in school-aged children. Their research focused heavily upon observations of anger and aggression in playgroups of 12 boys and 12 girls to that of expressions of or the ability to demonstrate empathic behaviors. What the authors discovered through observing these play groups of gender-mixed children (e.g., three separate 1-hour play sessions) was that aggression and expressions of anger

positively correlated to empathy. As expected, the converse was true with negative correlations of empathy hypothesized to precursors for prosocial skills in children.

First, it must be noted that Strayer and Roberts' (2004) research was significant in that it established a foothold into studies on empathy and correlations to aggression in school-aged children as opposed to all the prevailing research focused upon adult psychology. Second, the research emphasis was on empathy and prosocial/antisocial development—not on adult development or the evolutionary root causes of anger and aggression in adult males and females. However, there were some inherent research problems. For example, one obvious limitation showed that the study was anecdotal and thus observational only. It was also based upon three individual 1-hour observations of 24 boys and girls (e.g., 50/50 ratio of boys to girls) playing together.

Some may take issue here with the short time given to assess and observe participants as well as the confidence interval generated to assess only 24 boys and girls; and thus, the authors making bold, generalizing statements about human behavior and social development of children. For example, Strayer and Roberts' (2004) asserted that if a child were aggressive, he or she lacked the ability to display empathy. This was considered a suspect assertion based upon the reliability and validity outcome measures alone. In that regard, this perspective certainly ran contrary to other prevailing literature at the time for the subject, and certainly later on in regard to the biopsychosocial model of human emotions and behavior.

Considering the small population studied in Strayer and Roberts' (2004) research, by not having divided the playgroups into gender-based study participants so-to observe possible gender-based connections to empathy and aggression, this may have arguably

left out possible important links to aggression and empathy that could have been observed as biological and psychosocial. Strayer and Roberts (2004) also stated that their results were "aggregated across methods and sources" (p.1) without much explanation for what these methods and sources were. This at best left questionable their reliability and validity results. Nonetheless, their research remained important overall toward researching future gaps in studies using multiple variables on empathy as correlated to aggression when assessing children in research studies.

By 2007, Goleman truly revolutionized social and emotional intelligence as new theoretical buzz words, and generated efforts to draw attention to EQ traits while inadvertently pushing biopsychology to the forefront of research. He provided further robust evidence that biology and brain science coexisted as variables toward explaining human behavior, decision-making, emotional intellect, and one's ability to be a sociable, caring human being—hence Goleman's (2007) famous line, "Wired to connect" referring to the human biological drive to either do good or ill-will upon others. This was highlighted in his book, *Social Intelligence: The New Science of Human Relationships.* While Goleman (2007) and his research predecessors (e.g., Ekman, 2003; Salovey et al., 2004) primarily focused upon empathy and EQ as social and emotional characteristics of brain intelligence and biopsychosocial human development, they linked empathy to trait behavior and personality development in regard to workplace behaviors, group-think decision-making in the workplace, and social intelligence leadership qualities. However, Goleman placed an overall greater importance upon emotional and social intelligence as the cornerstones of education and child development theory and practice.

Goleman's (2007) brain science and biology research, using the "wired to connect" premise he coined behind how humans socialize and generate healthy or unhealthy relationships, laid the groundwork for many other future researchers to use empathy as a fertile topic for psychological and clinical social work research that regarded children and adolescents as study subjects. Thus, one could argue that several prominent studies emerged using social intelligence (SI) as an influence linking relationships of psychopathology of child abuse victims, for example, to the acculturation of how adults became child abusers. This included comorbidity for aggression and cognitive behavioral deficits in emotional empathy (e.g., Perez-Albeniz & De Paul, 2006; Finkelhor et al., 2007). For each study the authors asserted that there were overall more inhibitions of empathy by subjects abused as children, and now perceived their own children as having hostile intent[s]" (Perez-Albeniz & De Paul, 2006, p. 1) compared to non-abused subjects. However, adult males were the research subjects for the data findings and not male children or youth.

Considering the emerging research area of study regarding empathy and aggression in children, post the published works of Ekman (2003), Salovey et al. (2004), and Goleman (1998), and Goleman (2007), new psychological research began to focus upon empathy correlated to disaggregated types of child and adolescent aggressors—that is, proactive or reactive-type aggressors (Mayberry & Espelage, 2007; Raine et al., 2006). For example, significantly important research had been generated regarding how to assess for proactive and reactive aggression in children and adolescents, and thus helped create an emergent instrument for measurement (e.g., the Reactive-Proactive Aggression Questionnaire, or RPAQ-C) to determine, first, if there was an etiological

progression for each specific type of aggression in boys, and if, indeed, this new instrument could determine differential correlates for reactive and proactive aggression.

The goal was to create an instrument by which more time-efficiency could be achieved in implementing the assessment to its targeted population. The authors also for the first time created a set of DSM-V (American Psychiatric Association, 2013) criteria for determining the type of aggressive child or adolescent that correlated to either a reactive-type or a proactive-type aggressor. Criteria for consideration of reactive or proactive aggression were essentially broken down into two sets of categorical descriptors of human behavior: Expressions of irrational emotionality (i.e., "Impulsivity, hostility, social anxiety, and a lack of close friends), and had unusual perceptual experiences and ideas of reference" (Raine et al., 2006, p. 159)—both considered determinant criteria for reactive aggression.

Proactive aggression criteria, however, was determined, for example, by age 7 to be an "initiation of fights, strong-arm tactics, delinquency, poor school motivation, poor peer relationships, single-parent status, psychosocial adversity, substance-abusing parents, and hyperactivity" (Raine et al., 2006, p. 159). By age 16 to 17 years-old proactive types were unequivocally found to have consistent patterns of psychopathic or sociopathic personality traits such as a blunted affect, school delinquency, and egregious offenses of violence (Raine et al., 2006). These traits were currently termed by school psychologists as one having a "Conduct Disorder"—formerly part of a DSM-IV (American Psychiatric Association, 1994) class of personality disorders known as Dissocial Personality Disorder (DPD), and now classified in the current DSM-V (American Psychiatric Association, 2013) as a Cluster B Disruptive Behavior Disorder

(DBD). It was important to note here that Raine et al. (2006) were the first researchers, according to the literature available on this area of study, to hypothesize that psychopathy and schizotypy characteristics of proactive and reactive aggression were the basis for their study, and that there were other differential correlates of proactive and reactive aggression that must be given serious consideration.

What was suggested for the first time, due solely to the addition of Raine et al. (2006) into the canon on this subject, was that reactive aggression was a characterization of boys demonstrating a fear-induced irritability and "hostile affect-laden defensive response to provocation [Dodge and Coie, 1987; Meloy, 1988] [involving] a lack of inhibitory functions, reduced self-control, and increased impulsivity (Raine et al., 2006, p. 159-161). This correlation thus established that these characteristics could predict reactive aggression in youth. Indicators of an impulsive personality with high scores for hostility were also determinants for reactive aggression. Ultimately, the correlation made was that reactive aggressor-types were found to be overly sensitive to environmental stimuli (e.g., animate and inanimate alike), and thus had irrational perceptions about them as personal threats to their space and boundaries. High levels of social anxiety were also comorbid predictors for reactive aggression.

In terms of the method used, Raine et al. (2006) administered the RPAQ-C to a sample of 164 male schoolchildren aged 16 years (Sample 2) who were also previously evaluated using the same instrument when the participants were 7 years old (Sample 1). However, there were 170 participants during the first sample administration. The psychosocial and behavioral measures originally collected at age 7 were used to establish criterion validity of the questionnaire, while the new added personality and behavior rating data collected from the same population at 16 years of age was used to establish

construct, convergent, and discriminant validity. Albeit incredibly important as a contribution to a more reliable and valid instrument for measuring reactive and proactive aggression in children and youth, Raine et al. (2006) had not made therapeutic and or supportive interventions a cornerstone of their research on reactive and proactive aggression. This would soon appear in the literature and research of Shechtman (2006) in terms of outcomes from using bibliotherapy with aggressive boys.

Shechtman (2006), for example, assessed a population of 72 Israeli boys on measures of aggressiveness as correlated to integrative counseling (IC), integrative counseling adjunct to bibliotherapy (ICB), and no counseling received at all. The purpose was to demonstrate that an adjunctive to psychotherapy could be bibliotherapy implemented as a tool toward reducing aggression and aggression-related behavioral traits in boys while increasing empathy as a result. The research revealed that, indeed, bibliotherapy was a powerful tool toward increasing empathy while reducing aggression behaviors and cognitions (Shechtman, 2006). This was indicated in data from both the IC and ICB groups, with each group having received cognitive behavioral therapy (CBT) and the ICB group, of course, having received the added variable of bibliotherapy. This latter group showed the most improvement in reducing aggressive tendencies due solely to the addition of bibliotherapy as an intervention tool to increase empathy.

Several problems emerged, however, in Shechtman's (2006) research. As in the previous outcome research by Raine et al. (2006) in which a highly valid and reliable tool was generated (and sorely needed for measuring reactive and proactive aggression types), there was nonetheless a lack of additional information that could lead to establishing effective treatments and long-term interventions. Shechtman's study, for example, showed that bibliotherapy—an ancient psycho-educational therapeutic intervention used

to relieve stress, anxiety, and depression through the writing of poetry and literature, originally termed "bibliotherapy" in 1916 by S. M. Crothers (1857-1927), a Unitarian minister and prolific writer (Beatty, 1962)—assisted in changing behavior as a stand-alone variable for aggressiveness in boys. No other constructs or variables were measured in Shechtman's study. Measures for specific types of aggression (e.g., reactive versus proactive) already established in the literature as sub-types in boys were unaccounted for in the Shechtman study.

The assumption and hypothesis then that bibliotherapy alone reduced generalized aggression was promising, albeit further research inquiry into each subtype of aggression needed to reveal more robust nuances or make a reasoned argument for dismissing bibliotherapy as an effective intervention tool for ameliorating proactive and reactive aggression. Bibliotherapy as a cognitive helper tool was a creative and expressive act that by its psycho-physiological nature of behavior produced certain levels of empathy and emotion (later known in brain studies as the cocktail of "happy chemicals"—dopamine, serotonin, oxytocin, and endorphins (Graziano-Breuning, 2016). Research studies such as Shechtman's (2006) established bibliotherapy as an adjunct legitimate treatment modality for such psycho-maladies as clinical depression, alcohol and drug abuse treatment, and anxiety disorders. However, perhaps one primary limitation in Shechtman's study was that by using bibliotherapy as a stand-alone treatment study variable he was unable to provide enough valid data on generalized aggression. Shechtman's research assertion therefore was not comparable to other co-existing studies from the same period that used several or more variables as study for aggression in children and youth.

Research by Raine et al. (2006) and Mayberry and Espelage (2007), for example, already established that dissociative properties of emotion by way of patterned and predictable unempathic behaviors in boys were found to be demonstrations of patterned proactive aggression. Again, Shechtman (2006) did not include research on sub-types of aggression in his study. Likewise, his population was drawn from Israel; and thus, never accounted for socio-cultural and socio-economic influences upon aggression behaviors experienced by American boys, comparatively. Perhaps an implied argument emerged here that raised the question of whether aggression in boys (and males for that matter) was universal irrespective of any socio-cultural and biological origins.

Overall, each of the previously discussed research studies focused on the primary variable of male child aggression to describe the historical and or current context of aggression in youth as well as adult males, with empathy as perhaps a moderating variable. Given the complexities of a biopsychosocial model for aggression, these studies consequently did not provide enough contextual and definitive data to warrant them as seminal studies on the origins of aggression in male youth— albeit they were foundational to the overall topic. Each did build a pathway for understanding the intricate biopsychology of aggression in addition to understanding the root bases for empathy.

The biopsychology of aggression: Introducing a third variable. For this section of the review of literature, while there were only a handful of research studies available that correlated the variables of aggression in general, or aggression subtypes such as proactive and reactive aggression to that of empathy, a chosen number of authors were referenced as support for this thesis study, described in detail, and then deconstructed for how each supported or did not support the assertions for this study.

However, the authors not mentioned due to being either less supportive or peripheral were nonetheless worth noting here (and even referenced as collective support occasionally throughout this study). Each added some study significance regarding aggression and or empathy prosocial competency skill information to the canon of research and gave some discussion to the importance of the biopsychology of aggression in children and youth.

Nesdale et al. (2013), for example, added robust research to the body of literature on group-think regarding the norms children created to rationalize aggression, such as joining a gang or an emotionally troubled collection of friends, as opposed to collectively trying to generate good or make empathic decisions with others. A connection to what underlined the motivation, however—whether experiential, biological, and or psychophysiological—was never explored nor referred to. Authors Renouf et al. (2010b), as well as their sister study by many of the same authors—Renouf et al. (2010a)—closely examined the root causes and effects of aggression, even proactive and reactive subtypes, in correlation to ToM perspectives and peer relationships in early childhood.

In brief, ToM regarded an individual's awareness of his or her own mental processes and those of others (Goldstein & Winner, 2012; Sebastian et al., 2012). It was defined as the ability to exercise how to empathically think about self in relation to others while understanding one's own emotions and perceptions (Goldstein & Winner, 2012). Exhibitions of prosocial behavior were an additional third moderating variable in each study. While profoundly important in terms of identifying the psychology of aggression—even perhaps its evolutionary roots—the moderating role of empathy as it

correlated to the biopsychosocial model for aggression was not a central purpose or inquiry of either study. Likewise, the added significance of research put forth by Anderson et al. (2010) did not go unrecognized for the inroads that were made toward dispelling a popular myth perpetuated by video gamers that violent video games did not correlate to actual aggressive behavior and decision-making. On the contrary, Anderson et al. (2010) discovered that youth obsessions with violent video gaming did have a cognitive behavioral impact upon decision-making that ultimately made the video gamers' arguments irrational and unfounded. Violent video games were found to nurture aggression behaviors over empathy behaviors when the biopsychology of the player was considered for study.

Others such as Jones et al. (2010) and the research team of Schwenck et al. (2012) sought to correlate the variables of autism and brain behavior connection to the psychopathology of CU traits, aggression, and a moderating effect (if any) upon empathy in autistic male and female youth. Each study chose a developmental paradigm for examining aggression in autistic youth and the trajectory of how behaviors consistent with sociopathy, psychopathy and or conduct disorders could be ameliorated by learning how to make empathic decisions. The shortcoming of each study, however, was that when compared to the research for this study on empathy as an antidote to reactive aggression, only certain types of children and youth were found in these studies to be receptive to understanding empathic reasoning (Jones et al., 2010; Schwenck et al., 2012). Thus, both sets of authors asserted that children who generally displayed reactive aggressive behavioral traits had an ability to demonstrate empathy compared to children diagnosed with pediatric sociopathic, psychopathy, and or conduct-disordered tendencies (i.e., proactive aggression).

The work of Rathert et al. (2011) was then examined for efforts they made to deconstruct human behavior and aggression to lowest denominators—effortful control versus psychological control—and therefore detailed the underlying causes and motivations for proactive and reactive aggression in terms of how children became maladaptive to learning ways of practicing aggression on peers. Their research came closest to identifying the root biopsychosocial causes of aggression in children. However, again as with both research studies by Renouf et al. (2010a) and Renouf et al. (2010b), and Leahey (2013) the primary missing link was the factor of empathy and how it did or did not moderate aggressive behaviors outside of any attempts toward self-control.

Authors de Wied et al. (2012) completed fascinating and enriching data findings that correlated multiple variables of verbal, facial and autonomic responses to that of emotive and empathic-arousing film clips. Participants were adolescent males diagnosed with co-occurring conduct disorders and CU traits. In their study, the authors measured facial electromyography (EMG) and heart rate (HR) responses during exposure to film clips that portrayed the seven basic human emotions, with more emphasis upon clips that depicted sadness, happiness, and anger. As predicted, those adolescent males with the co-occurring disorders showed little to no empathic responding and or reasoning as compared to a control group. This was perhaps the first study of its kind that measured for traits of empathy in youth with sociopathy and CU traits that used imaging technology to measure for heart rates triggered by body temperature and facial muscle responses or controls to images of facial emotions.

Again, as in the previous studies discussed, while empathy was not a specified study variable yet was discussed in context, it was nonetheless never discussed as

perhaps a learnable prosocial competency skill for those children and youth who exhibited sociopathy and or CU personality traits, or even children with impulse and reactive psychological control issues surrounding aggression. A few of these same authors from the de Wied et al. (2012) study completed a similar study with Van der Graaf et al. (2012) in which empathy became a central discussion—not a study variable. However, the second time around the authors focused upon the impact of parental support (or the lack thereof) that possibly contributed to aggression and CU traits in their children. It had much similarity to the de Wied et al. study, except there was a change in one of the variables (e.g., parental support) and the absence of using EMG imaging technology and measures for heart rate (HR).

One intriguing caveat did however emerge in the study. Aside from the fact that the population studied was near-split between male and female (e.g., 158 boys and 165 girls), and thus less focused upon gender specifically, empathy was the variable that moderated how the population of aggressive and CU adolescents viewed their parental support. After controlling for gender, those participants who perceived higher rates of parental support also had fewer instances of aggression when compared to those adolescents who perceived little parental support, and therefore displayed more aggression and CU traits during their developmental years. It would be remiss here, however, to ignore research support that regarded the intervention strategies outlined in the Collaborative for Academic, Social, and Emotional Learning (*CASEL*) program.

The education and training organization of *CASEL* has promoted SEL development in Pre-K-12 education since the early 2000's. While the *CASEL* program's curriculum does not offer the tenet of empathy as a prosocial competency skill as found

in the The six seconds model of emotional intelligence, the CASEL program did, through its interventionist tenets, arguably generate empathic reasoning and acknowledgement outcomes in students due to its very methodology and curriculum. Allen, Pianta, Gregory, Mikami, and Lun (2011), for example, discussed how learning could be interactive and introspective for each student, and allow students to believe they could achieve in social emotional areas they once self-identified as being failures. Bear (2010) made a similar claim by stating that much of a typical school's discipline problems could be managed and even greatly reduced by using *CASEL* curriculum and learning to promote prosocial behaviors and personal responsibility as well as care and concern for others while vicariously or inadvertently nurturing empathy.

Denham, Brown, and Domitrovich (2010) agreed with these assertions, making the argument that when students collaboratively engaged with their teachers and other students in the classroom they tended to show an ability

> to utilize their emotions to facilitate learning . . . [thus] it is becoming ever clearer that SEL must be given the attention required to maximize not only children's success in social relations and personal well-being but also their broader school/classroom adjustment and academic success. (p. 652)

Denham et al. also asserted that when children were provided the opportunities to demonstrate prosocial skills and behaviors in the classroom, they in turn used cognitive and affective empathic reasoning to demonstrate that they shared in a positive attitude about such things as school, learning, and extracurricular activities. The result was that young people demonstrated "less difficult, risky behavior . . . and ultimately greater academic success" (p. 653).

In their meta-analytic study of 213 school-based SEL programs from around the world using over 270,000 K-12 participants, authors Durlak, Weissberg, Dymnicki, Taylor, and Schellinger (2011) stated that, except for those individual classrooms and or schools within school districts using SEL to promote social and emotional competencies and awareness, the majority of children "lack[ed] social-emotional competencies and [therefore were] less connected to school as they progress[ed] from elementary to middle to high school" (p. 405). Thus, the authors argued that children learned to be disconnected from education, and therefore were negatively impacted with long-term struggles to achieve in education, learn prosocial behaviors, and have a positive and healthy outlook.

Since the goal of SEL was to integrate prosocial competencies into the classroom environment (e.g., show a positive attitude, be engaged to explore, discover interactive learning, and demonstrate performance objectives that actively engage others in making good choices or taking responsibility for one's own actions), Durlak et al. (2011) posited that "frameworks for reducing risk factors and fostering protective mechanisms for positive adjustment" (p. 406) were key to successfully implementing SEL curriculums. Much of the research findings to date on SEL programming addressed the positive correlation that existed between SEL and enhanced academic performance. For example, SEL program data findings, such as through *CASEL*, purported that children who learned negative social behaviors became more positive, and that learning itself became more engaging and interactive. This allowed children to demonstrate more respect for learning while self-improving their social emotional competence in the areas of empathy, self-respect, and responsibility (Allen et al., 2011; Denham et al., 2010; Durlak et al., 2011).

In terms of the limitations noted in some of the literature on SEL, it was suggested that while there were plenty of data providing evidence of SEL in action, nearly two-thirds of all research on SEL outcomes had not produced data based upon long-term outcomes of SEL upon the social and emotional development of children (Durlak et al., 2011). Moreover, even less current research and data suggested that any positive impact upon children could condition them to be less aggressive long-term. There was older evidence that SEL was a predictor for improved mental health and lower incidences of risky behaviors in adolescence—that is, teen drug use and abuse, violence, and risky sexual behavior (Payton et al., 2000). None however had been available correlating SEL specifically to reactive and or proactive aggression in male children and youth.

Summary

The primary objective was to highlight the central issues of research that had provided evidence to define the phenomena of proactive and reactive aggression subtypes in male youth between 13 to 18 years-of-age. In examining the literature from the last 35 years, it was evident that a dearth of research information regarding specific interventions promoting empathy as an EQ competency prosocial skill were present, particularly lacking when it came to methods for ameliorating proactive and reactive aggression tendencies in male youth. Some of the projected participants in this study, for example, were suspected of having high-risk indicators for lacking the fundamental tenets of empathy.

This supported the empirical gap in the literature; and thus, was more highlighted by the fact that those male youth participants for this study that indicated lower reactive aggression data also consequently had higher overall basic empathy data. Compared to their proactive aggressive peers, and supported by the literature, these findings revealed

that reactive aggressors were better equipped socially and emotionally to identify attributes of empathy-based prosocial skills in self as well as others. The empirical gap was then examined thoroughly using the support of many evidence-based models and theories such as the *Biopsychosocial Model of Proactive and Reactive Aggression* and The six seconds model of emotional intelligence—both of which were given a detailed discussion earlier in this chapter. CBCT and CCT were also defined and supported as potential interventions for aggressive youth in addition to advancing other evidence-based methods of prevention and intervention (e.g., the psychological principles of Rollnick & Miller's (1995) MI techniques). Miller and Rollnick (2013) took their research further by addressing the challenges in providing long-term, effective social emotional supports that aim to affect behavioral change in those youth with signs and symptoms of proactive aggression.

Briefly, MI was an evidence-based practice similar to the foundational tenets of Rogers' (1951) person-centered psychotherapy approach. MI techniques were used to assist patients in learning empathy prosocial skills so that they may eventually demonstrate these skills as evidence of social and emotional behavioral change. Since a quantitative approach was taken for this study, and time was limited to implement it, two evidence-based self-assessment survey instruments were proctored in one sitting. No pre- and post-test implementations of these survey instruments were therefore offered to participants. Hence, why the research subject of youth aggression and the capability to learn empathy was noted in Chapter one as a future suggested research topic since this would require two sets of assessment data to compare in order to show that growth.

Other chapter discussions examined information about the trait behaviors of proactive and reactive aggression in youth, as well as the status of research on empathy

toward better-defining SEL as a theoretical best practice. It was discovered in the literature search that developmental attributes of aggression in male children and youth significantly affected how they learned, understood, and applied empathy with others. The biopsychosocial model for how aggression subtypes developed, and were perhaps inadvertently nurtured as personality-behavioral character traits, demonstrated the impact and thus strong relationship aggression subtypes had with character traits that obviously were deficient of empathy and compassion.

The following chapter therefore provided a detailed methodology for moving forward with the research proposal. Included in the discussion was a general overview of the research, analysis of the data, definitive descriptions of data collection procedures, further details regarding the instrumentation used and outcomes from those tools, and the validity and reliability measures examined for each of the self-report measures. Limitations and delimitations were highlighted, and an argument was made for the research design, detailing descriptive data from the demographic population under proposed study, and the proposed analysis procedures for collecting that data.

Chapter 3: Methodology

Introduction

Some theorists believed that aggression pathologies in male children, such as proactive and reactive aggression, were commonly associated with more adult anti-social personality disorder (ASPD) attributes. To minimize the likelihood of pathological proactive and reactive aggression and any comorbid neurotic, narcissistic or sociopathic traits that may exacerbate aggression (Arsenio & Ramos-Marcuse, 2014; Bezdjian et al., 2011; Black, 2013; Delič et al., 2011; Fossati et al., 2010), a research gap was evident that highlighted the need to address and examine empathy as a prosocial skill, and thus CV for this study. Empathy as a prosocial competency has shown to have a significant impact upon the reduction of these kinds of maladaptive traits in children and youth (Gordon, 2013; Mayberry & Espelage, 2007; Strayer & Roberts, 2004; Van der Graaf et al., 2012). Therefore, the purpose of this quantitative study was to assess whether male youth proactive and reactive aggression predicted overall basic empathy. In the end, both of the study's hypotheses were found to have a statistically significant predictive relationship to overall basic empathy. It was posited then that empathy as a prosocial competency skill served could be offered as a potential antidote toward ameliorating male youth aggression using SEL skills and curriculum immersion that focused specifically around empathy as an EQ competency.

Statement of the Problem

It was not fully known to what extent, if any, male youth proactive and reactive aggression predicted overall basic empathy. This was the kind of hypothesis many current researchers had described as representative of the biopsychosocial development

of childhood aggression (de Wied et al., 2012; Huntington, 2012; Lopez-Duran et al., 2009; Malik et al., 2012; Shirtcliff et al., 2009; Stanger et al., 2012). An often-misunderstood attribute of anger emotions was that of proactive and reactive aggression in children and youth. However, these types of subjects glaringly lacked empathy for others and animals at very early ages of social and emotional development such as four to five years of age (Strayer & Roberts, 2004). The warning signs for un-empathic behaviors likely emerged when other learned behaviors such as self-centeredness and egocentricity eventually morphed into physical attributes of aggression and emotional manipulation or cruelty toward others and or animals. Psychosocial stage theorists such as Erikson (1950) termed these early age personality characteristics as stages 2 through 4 of psychosocial development, or Autonomy vs. Shame and Doubt, Initiative vs. Guilt, and Industry vs. Inferiority (Stickle et al., 2012; Strayer & Roberts, 2004; van Baardewijk et al., 2009).

Therefore, it was argued that being exposed to prosocial EQ competency skills such as empathy was the primary missing link as an intervention for children and youth who demonstrated early developmental behavioral patterns of irrational behaviors, poor basic decision-making, and a general level of daily angst. Research has pointed out that this was often the result of social environments in which there were regular exhibitions of poorly modeled behaviors by older siblings and adults such as high anxiety, neuroticism, depression, impulsivity, and explosive personality disorder characteristics in parents or caregivers that invariably resulted in becoming learned family norms. Experts in the field of EQ, specifically social intelligence (SI) and the EQ trait of empathy (e.g., Cherniss, 2010; Fiedeldey-Van Dijk & Freedman, 2007; Freedman & Ghini, 2010; Goleman, 2011;

Jensen et al., 2012; Mayer, Salovey, & Caruso, 2008), asserted that once schools and school districts began to engage in national and collaborative conversations about the implementation of empathy-building prosocial skills programs that addressed youth aggression, only then could amelioration-type intervention programs such as *CASEL* and *Six Seconds* take effect long-term. Likewise, these kinds of prosocial skills programs have proven to instill lifelong positive effects upon those youth most vulnerable at wreaking physical and or emotional pain upon others throughout their lives if left "untreated." These types of curriculums offered EQ-based principles and lessons fostering empathic social understanding for others, and have allowed youth to learn in interactive ways about how to engage positively and responsibly with peers, parents, and other adults.

Research Question(s) and Hypotheses

It was not fully known to what extent, if any, male youth proactive and reactive aggression predicted overall basic empathy. All the research studied herein therefore highlighted the forces behind the emotional and environmental factors that likely nurtured potentially violent and or aggressive personalities within male youth. The seminal research work of Black (2013), for instance, examined the biopsychosocial development of CU traits, and thus Black argued that "badness" behaviors were innate. Several quantitative research questions were therefore created to address whether a statistically significant predictive relationship existed between certain male youth aggression types with CU traits (e.g. proactive versus reactive) and with prosocial skills such as empathy. The following research questions and hypotheses guided this study:

RQ1: Did proactive aggression in male youth predict overall basic empathy?

H_{01}: Proactive aggression in male youth did not statistically significantly predict overall basic empathy.

H_{1a}: Proactive aggression in male youth statistically significantly predicted overall basic empathy.

RQ2: Did reactive aggression in male youth predict overall basic empathy?

H_{02}: Reactive aggression in male youth did not statistically significantly predict overall basic empathy.

H_{2a}: Reactive aggression in male youth statistically significantly predicted overall basic empathy.

The instruments used in measuring and supporting these hypotheses were the self-report survey scales, the Basic Empathy Scale (BES; Jolliffe & Farrington, 2006) and the Reactive-Proactive Aggression Questionnaire-Child (RPAQ-C; Raine et al., 2006). The BES instrument, for example, supported the research question of whether a statistically significant predictive relationship occurred between proactive and reactive aggression in male youth and overall basic empathy. A presumption was therefore made (and supported by the literature and data findings for this study) that a social emotional predictive disconnect was present between proactive aggression and overall basic empathy, while a social emotional predictive connection was made between reactive aggression and overall basic empathy. Data results from Raine et al.'s (2006) RPAQ-C instrument further revealed that if the CV for this study, overall basic empathy, were affected by proactive or reactive aggression traits, then it could be presumed as well that each subtype of aggression was predictive for overall basic empathy traits.

Research Methodology

Quantitative research designs provide a course of action and consensus, project results to larger audiences, test specific hypotheses emerging from the research, and pinpoint evidence from cause-and-effect relationships between variables (Băban, 2008). Thus, the research intent of this study was to use a quantitative design specific to measures that could identify whether a statistically significant predictive relationship occurred between proactive and reactive aggression and overall basic empathy in 13 to 18-year-old male youth. As a result, the assessments implemented for this study indicated that, indeed, both proactive and reactive aggression were predictive for empathy. Data results further supported the assertion that male youth with poorly developed biopsychosocial behaviors and maladaptive decision-making (e.g., proactive aggressors) were difficult and challenging individuals to help ameliorate aggressive character traits.

Since examining any statistically significant relationship between variables was based upon emergent research studies and observations in the field, a quantitative methodological design was chosen to easily show findings that highlighted any potential predictive relationships between the CV and PV's. Sixty-five male youth participated in this study out of a potential population of 600 males from four urban small to large public secondary schools in Arizona. The overall rationale for choosing a quantitative design was that, in consideration for the proposed target population, and that many were presumed to have burdens associated with several biopsychosocial maladies, this made them strong candidates to participate in this study. The design of the study also provided participants immediacy of responses using an online platform. For a certain number of the 65 study participants there were psychosocial histories of impulsivity and or mood disorder signs and symptoms. Thus, completing a pencil-paper version of the survey

instruments would have inadvertently raised anxiety levels, and perhaps would have encouraged mood and anger or frustration-tolerance levels to increase during implementation.

Thankfully, common maladaptive behaviors regarding inattentiveness, impulsivity, and low frustration-tolerance were shared in advance with the researcher prior to implementation of the the self-report surveys. This advance notification allowed this researcher to better prepare the environments for each campus under study, and therefore accommodate participants should any disturbance or anomaly have occurred. A number of researchers, such as Ellis, Weiss, and Lochman (2009); Fite et al. (2010), discussed solutions for these kinds of assessment conditions with similar types of participants who volunteered for this study, and how troubling aggression character traits can be impacted by certain testing conditions. Therefore, the survey formats used herein (e.g., self-report Likert-type) offered an immediate response time by which participants could answer the survey statements with relative ease and expediency of completion. This online format in a computer lab at each site again provided a comforting environment that did not inadvertently spark anxiety or produce unfocused, disruptive behaviors that could possibly affect data results.

Attention to these types of personality traits was given precedence to ensure that reliable and valid results occurred across both the BES and the RPAQ-C. Likewise, the turn-around time for evaluating data results was much quicker than if, for example, a mixed-method or qualitative design was implemented. Consideration for time to implement the instruments was provided since participants had numerous school responsibilities such as statewide and local testing requirements, vacation breaks,

instructional responsibilities on their campuses, and planned or unplanned activities such as fire and crisis safety drills.

Finally, it was hoped that predictive assessment results from both the BES and the RPAQ-C would indicate participants that had a statistically significant positive predictive relationship with proactive aggression and overall basic empathy comparatively had peer participants with a statistically significant negative relationship of reactive aggression and overall basic empathy. Data results from both survey instruments inferred that other psychosocial factors may have been at play; and therefore, indicated that some participants likely had emergent sociopathic and or narcissistic and neurotic character traits based upon their responses and scores. Neuronal factors and biopsychosocial deficits were given consideration as well since these factors could have affected participant decision-making when answering a number of the survey statements that addressed aggression. Since much research literature supported the argument that character issues such as proactive and reactive aggression and sociopathy significantly deterred one's EQ, it was posited that only reactive aggression could respond effectively to social emotional skills using empathy (Arsenio & Ramos-Marcuse, 2014; Bezdjian et al., 2011; Black, 2013; Gordon, 2013).

Research Design

To provide a more thorough explanation of the research design proposed (e.g., quantitative), consideration was made that not only regarded the demographics of the population under study, but also the social emotional, psychological, and environmental factors that potentially impacted the participants. Therefore, consideration was made for accepting biopsychosocial attributes as likely contributors to how participants would perform on a quantitative design self-report survey. Likewise, it was understood that

mental health issues or troubled cognitions likely affected a participant's decision-making. A multiple-choice self-report online format therefore provided participants an immediacy of interactive engagement that minimized anxiety or stress upon working memory (WM; Alloway & Alloway, 2010). Unequivocal anonymous data results were therefore easily obtained without any environmental disturbances or anomalies.

The nature and scope of a quantitative design was such that it determined whether a statistically significant predictive relationship existed between two variables based upon the results from each survey instrument (VanderStroep & Johnson, 2010). In a quantitative design, for example, hypotheses have to be proven or disproved by any relationships between variables. This included identifying patterns in the data, or if any emergent and perhaps unexpected trends resulted from the data based upon these very relationships in the variables.

Quantitative research designs by structure and intent, however, never prove or disprove any causes for these patterns and or trends (VanderStroep & Johnson, 2010). The underlying assertion here was that cause and effect relationships amongst study variables were not always the basis for quantitative research methodologies. The data that resulted from the variables within this study, whether or not there was a relationship between these variables to answer the research questions, was what ultimately mattered in choosing a quantitative research approach. Consequently, the variables under study—the CV of empathy and the PV of proactive and reactive aggression—were not manipulated as would perhaps occur in other research designs, such as with experimental and quasi-experimental approaches.

The variables for this study were thus continuous since continuous variables in research are intended to measure a wide range of values from, say, behaviors and levels

of aggression, to varied ranges of developmental levels of empathy. It was posited that a statistically significant predictive relationship existed between proactive and reactive aggression in male youth and overall basic empathy. As is the basis for the RQ's and hypotheses for this study, the very nature of quantitative evidence indicated that a relationship existed between proactive and reactive aggression in male youth and overall basic empathy, and thus a relational assumption was made to tie together specific RPAQ-C and BES scores so that future replications of this study could explore if empathy was a learned prosocial skill that likewise would ameliorate aggression in children and youth.

Proactive/reactive aggressor combined-type aggression was also examined in the literature as having some form of relationship to overall basic empathy, albeit a weak one. However, little conclusive data was available to substantiate fully any robust relationship between this combined-type of aggression and empathy. In the end, a quantitative design approach afforded expediency of time to implement the study and receive immediate statistical feedback that produced factual results (Băban, 2008). By its methodological structure a quantitative design also minimized any potential for bias from data results that could have proven unreliable if, say, a non-objective structural design was chosen, such as a qualitative design (Băban, 2008; VanderStroep & Johnson, 2010).

Population and Sample Selection

The general population in this study included male youth who were between 13 and 18 years of age. The target demographic population was from four small to large urban public secondary schools within the state of Arizona, and included a prospective selection of 600 male students from this same age group. Characteristics of the target population, and the study sample from each type of school setting, included all potential

general and special education male youth. All prospective participants with an Individual Education Plan (IEP) categorized as "Other Health Impaired" (OHI), typically a label used for Attention Deficit Hyperactivity Disorder, or ADHD, and those on 504 PLANs, were open to volunteer for this study. No female participants, however, were offered to participate. The sites under proposed study were by design co-educational 9-12 public high school settings serving a diverse population of ethnic and sociocultural youth who resided primarily from the surrounding neighborhoods of each school.

Private day-placed vouchered special education and general education students from area public school districts that attended self-contained small school campuses around Arizona were not included in this research study. An assigned designee at each school site was asked to invite all eligible students who met criteria for participation (e.g., male and between 13 and 18 years of age). All prospective participants received a written invitation and recruitment letter, a parental informed consent, and a written child assent. Incentives for participating and completing the forms, such as a pizza party and gift card raffle, were offered to all prospective participants.

Two of the secondary school sites for this study followed a "Positive Behavior Intervention & Support" (PBIS) model of school and classroom management based upon the broader theoretical principles of *School-Wide Positive Behavioral Interventions and Supports* (SWPBIS) prevention and intervention model described earlier in Chapter two. Sugai and Horner (2002) originally introduced this model as part of the revision and requirement of the Individuals with Disabilities Act (IDEA) of 1997. Each was consequence-driven and emphasized social skills accountability, responsible decision-making, and how to develop prosocial behavioral skills that were externally modeled and

thus intrinsically learned. On its state-affiliated website, PBISAZ.org, the following was provided as a full definition of PBIS in a school setting:

> PBIS is . . . a framework for enhancing the adoption and implementation of a continuum of evidence-based interventions to achieve academically and behaviorally important outcomes for all students. As a "framework," the emphasis is on a process or approach, rather than a curriculum, intervention, or practice. The "continuum" notion emphasizes how evidence-or research-based behavioral practices are organized within a multi-tiered system of support, also called "response-to-intervention. (PBIS Overview, History of PBIS, para. 5)

This curriculum and behavior modification model coexisted with the tenets and theoretical principles of the RTI model of intervention and prevention supports. It was first endorsed by the IDEA in 2004 during its reauthorization process as an adjunct 3-tier implementation process for determining the needs and behavioral supports of special education students.

To justify a proposed (*n*: 67) participants out of a total prospective population of possibly 600 males from four urban secondary schools, a G*Power analysis was configured to ensure that the sample size (*n*:), effect size, and *p*-value gave determined valid statistical outcomes and thus accepted or rejected the null hypothesis. A priori G-Power computation data established a projected sample size calculation, and reduced the possibility of future Type II errors as well as any under-power of false negative data results. Using an exact bivariate normal distribution of variables, and a one-tailed a priori analysis, the statistical probability results were as follows: Correlation ρ under H1 is 0.3; α of error probability is .05; power analysis of β (beta) is 1 minus the power or 1 minus the sensitivity of the test, or .80—the minimum statistically allowed for avoiding the

possibility of Type II errors in probability and therefore rejection of the null hypothesis as well as the effect size from the sample. G-Power output data thus established a (*n*: 67) potential participants. Post-hoc G-Power data will, however, be detailed in Chapter 4 indicating if measures were made to determine the accuracy of the data based upon the a priori sample size, along with any validity and reliability statistics.

Instrumentation

The following self-report scales were used in this study: The Basic Empathy Scale (BES) by Jolliffe and Farrington (2006) and the *Reactive and Proactive Aggression Questionnaire-Child* (RPAQ-C; Raine et al., 2006). Each of these authors generated a series of individual measures and subscales as baseline data to support their hypotheses and thus validate that each instrument as a reliable tool. The BES, for example, was originally administered to 363 English adolescents, 194 of them adolescent males with a mean age of 16.8. Jolliffe and Farrington asserted that meta-analytic data already showed that "young people [had] stronger relationships between low empathy and offending [compared to] adults" (p. 594). Hence, why the authors believed their results were more robust with teens as participants since it was well-known in the literature on adolescent development that the executive functioning portion of the adolescent brain measurably grew into early adulthood. This was also why the authors supported the assertion that empathy development was more measurable in youth than in adults. Specifically, adolescents were posited as being more vulnerable to poor decision-making compared to adults; therefore, the impact upon empathy-development was considered more measurably profound. Furthermore, females studied for the BES were, overall, more significantly empathic due to their acculturation and socialization as females compared to a presumed stereotypical socialization of males.

Jolliffe and Farrington (2006) also provided correlative BES data on such constructs as Extraversion, Conscientiousness, and Perspective-taking and compared it to cognitive and affective empathy in adolescent males and females. However, for the purposes of this study only data measures from studies on the adolescent male participants were examined as support. Jolliffe and Farrington did however provide a detailed figure that noted the mean scores per study question for those questions that addressed cognitive as well as affective empathy. However, the data was unusable for this study since these were overall mean scores from males and females combined. The scoring structure for the BES 20-item self-report measure was as follows: Strongly disagree = 1; Disagree = 2; Neither agree nor disagree = 3; Agree = 4; and Strongly Agree = 5. Scores were then totaled for each of the 20 items for an overall BES scale score. Using this scoring guide and scale, potential scores could range from a low of 20 points to a high of 100 points. The following table showed the measures, sub-scales, and mean scores for the BES as drawn from the data results on males in Jolliffe and Farrington's study:

Table 2.

Jolliffe and Farrington's BES Measures, Subscales, and Mean Score Results from Male Adolescent Participants

BES Measures	Subscale: Cognitive	Subscale: Affective	Mean Score	Pearson's *r*
Cognitive empathy			32.2	
Affective empathy			32.1	
Overall score			64.3	
Correlation between affective and cognitive scales				.41
Empathic concern	.30	.39		
Perspective taking	.33	.51		
Extraversion	.16	.06*		
Agreeableness	.26	.23		
Conscientiousness	.16	.13		
Openness	.34	.24		
Neuroticism	-.10*	-.10*		
Poor parental supervision	-.12	-.20		
Low SES	-.10*	-.07*		

(*p >.05)

The BES was used to measure for characteristics of cognitive and affective empathy in youth. Data results from Jolliffe and Farrington's (2006) study provided a comparative baseline understanding for types of cognitive and affective empathy data gathered from this study to determine if male youth proactive and reactive aggression relationally influenced both types of empathy—cognitive and affective, or simply overall basic empathy. It was highly important then that the same population that participated in taking the BES for this research study also participated in taking the RPAQ-C to determine if a positive or negative predictive relationship existed between proactive and reactive aggression and lower or higher scores for overall basic empathy. Much like the BES being used to measure for types and or characteristics of empathy, Raine et al.'s (2006) RPAQ-C self-report measure was used to specifically identify those male youth

participants who demonstrated characteristics of proactive or reactive aggression, and thus determined if a relationship existed between each type of aggression and overall basic empathy.

The RPAQ-C was originally administered by Raine et al. (2006) on two separate occasions in which 170 male seven-year-olds participated in completing the self-report measure (Sample 1), and then almost 10 years later 164 of the same males were assessed again using the same instrument (Sample 2). The mean age for the second implementation of the RPAQ-C was 16.8. For the purposes of this study, and to ensure better reliability, only data results from Raine et al.'s second administration of the RPAQ-C were used as comparative data to results from this research study. The following table therefore showed the measures of mean scores, coefficient α, and Pearson's *r* for the RPAQ-C as drawn from Raine et al.'s second research study (e.g., Sample 2) of males with a mean age of 16.8 years:

Table 3.

Raine's RPAQ-C Measures for Mean Score, Coefficient α, and Pearson r Sample 2 Results from Male Adolescent Participants

RPAQ-C Measures	Mean	Coefficient α	Pearson *r*
Proactive Aggression Score	7.42	.87	
Reactive Aggression Score	2.84	.86	
Total Aggression score	10.26	.91	.67

These data were used as comparative data results only to the data results from this research study, and thus were not used specifically as cut-off comparative measures for assessing results in this study. Raine et al. (2006) had only used the data from both of his sample studies (e.g., Sample 1 and Sample 2) as comparative and correlative, and thus did not use the scores from Sample 1, for example, as cut-off scores for Sample 2 since the age and social emotional development of each population sample was 10 years apart

and would not be valid or reliable to use in this manner. In terms of how the scores were determined for this research study, Raine et al. described the following method for scoring the RPAQ-C instrument: Each item on the RPAQ-C (23 total items) is scored as 0 = never, 1 = sometimes, or 2 = always. To obtain the total score for proactive aggression, add scores from items 2, 4, 6, 9, 10, 12, 15, 17, 18, 20, 21, and 23. To obtain the total score for reactive aggression, add scores from items 1, 3, 5, 7, 8, 11, 13, 14, 16, 19, and 22. To obtain an overall RPAQ-C score, add both the total scores from proactive aggression items and total scores from reactive aggression items are for an overall self-report score.

Validity

Sample size results from each instrument (e.g., BES and RPAQ-C) were used to justify a projected baseline for validity results from this study. Implementation of the instruments therefore reflected the methodological design of this study (e.g., correlational). *The Basic Empathy Scale* (BES) (Jolliffe & Farrington, 2006), for example, was a 20-item scale (originally 40 items) instrument that measured affective and cognitive empathy. It was originally normed on 363 fifteen-year-old adolescents. One year later, Jolliffe and Farrington normed the assessment again on 357 different fifteen-year-old adolescents from the same school. The assessment has since been a valid and reliable measure for levels of empathy in children and adolescents due to its ease in accessibility and understanding of language (e.g., survey questions) for participants of all ages, genders, and ethnic backgrounds. Thus, the data findings met the baseline parameters and criteria for this study as well.

Content validity results from the original BES were validated by a small group (N = 6) of Turkish adolescents and could be transferrable in content and language (Topcu, Erdur-Baker, & Çapa-Aydin , 2010). Construct validity measures were also confirmed by a two-factorial analysis conducted with two differing groups of teens (e.g., 358 participants for group 1 and 359 for group 2). A factorial analysis provided identical data sets for each group, confirming robust construct validity. Topcu et al. (2010) assessed for divergent validity as well in Jolliffe and Farrington's (2006) BES by measuring a relationship of aggression and bullying to one other scale: *The Revised Cyber Bullying Inventory* (RCBI; Topcu et al., 2010). Both variables (e.g., bullying and aggression) were found to be negatively correlated.

The Reactive and Proactive Aggression Questionnaire-Child (RPAQ-C; Raine et al., 2006) was again a normed self-report measure based upon on two sample groups made up of the same male participants 10 years apart, with Sample 1 being studied at age 7 and that same group studied again as Sample 2 with a mean age of 16.8. Raine et al. looked for any emergent patterns of aggression, violence, ASPD, Conduct Disorder, DPD, ADHD and ADD, as well as a host of other NOS mood disorders. More specifically, 170 male seven-year olds participated in Sample 1, and then again 10 years later as Sample 2, with 164 of the original 170 males having completed the same RPAQ-C instrument. Based upon overall data findings from Raine et al., authors Uz Bas and Yurdabakan (2011) sought further validation of the RPAQ-C instrument as a highly reliable tool for measuring aggression using a confirmatory factorial analyses to indicate that a two-factor structure of the questionnaire was far more valid (i.e., based upon a "good fit index, or GFI; an adjusted good fit index, or AGFI; and a comparative fit index,

or CFI) than on a one-factor measure of aggression alone. These data therefore met the parameters and criteria for this study.

Reliability

According to Topcu et al. (2010), Jolliffe and Farrington's (2006) BES assessment tool indicated that, for two data sets, reliability figures were robust. In the first data set, for example, internal consistency of test items using the Cronbach's coefficient alpha specific to affective empathy revealed a subscale result of .74, a cognitive empathy subscale result of .79, and a global scale of .79. The second data set indicated that a Cronbach alpha coefficient was discovered to be far more satisfactory (e.g., .76), with higher results for the affective empathy domain a bit higher (.80) for the cognitive empathy, and .83 for the global scale. These data therefore met the parameters and criteria for this study.

Raine et al. (2006), on the other hand, discovered in the RPAQ-C that for reactive and proactive aggressions there was much robust internal consistency and reliability of the test items. For example, Raine et al. provided statistical measures in terms of reliability to support the use of the RPAQ-C as an assessment with high internal reliability. He stated the following:

> Means, SDs, and internal reliabilities for the scales (raw scores) are provided . . . for the two subsamples and the total sample. Item-total correlations ranged from .41 to .57 for the proactive scale, .45 to .58 for the reactive scale, and .41 to .60 for the total scale. All three scales have internal reliabilities in excess of 0.83. Proactive aggression was less prevalent than reactive aggression, with proactive scores being considerably lower than reactive scores (paired $t = 524.6$, $df = 5333$,

$p < .0001$, $d = 51.35$). As would be expected from randomly produced samples, samples 1 and 2 did not differ significantly on scale scores ($p > .23$). (p. 164-165)

Data Collection and Management

Parental and child consent and assent collection procedures. Three of the four secondary school sites under proposed study were pre-visited and given a presentation of the dissertation proposal followed by a question and answer session with school teacher and administration staff. At two sites, a few select students—both male and female—were chosen by their Principal to attend the researcher's presentation. One of the four campuses, however, chose to correspond only electronically (e.g., online and via email) for all forms of communication, including delivery of consent forms forwarded to that school site's designee, and then returned as signed hard copies to the researcher via mail delivery. This school site was a small school of blended learning (e.g., online instruction and small classroom cohorts), and therefore requested to have all communication and forms collection via email and or hyperlinked scanned materials. Participants at all school sites, however, completed both Google Form surveys via a generated hyperlink printed out on a Word Doc along with specific directions for the order in which to take the surveys and title of the survey instrument to be completed. This was sent to each school site designee whom then generated copies of directions for participants to have on the designated day and time in their site's computer lab.

For the other three school sites that were visited in-person via invitation by School Principal's, an explanation of the research process was previously given to staff that included a discussion of the ethical expectations and guidelines for graduate researchers, a presentation on the topic of the study, and current best-practices for identifying subtypes of aggression in youth (e.g., proactive versus reactive). At no time

was an explanation of projected outcomes or results ever discussed so to avoid any implications of bias and or possible impropriety on the part of the researcher. A campus designee to assist in consent forms collection was previously assigned by each site's school Administration team in advance of the researcher's visit.

Several follow-up campus visits occurred at the three original visited school sites to provide more general information about the study, and to raise interest and awareness of male youth aggression and mental health issues affecting learning as well as relationships. Each school site designee was provided an electronic copy of the Parental Consent Form and Child Assent Forms in both English and Spanish, along with a Recruitment Letter in English and Spanish as well. The designee for each campus distributed the forms to all eligible males between 13 and 18 years-of-age, with the exception of one large comprehensive campus of 2900 students, whereby that Principal hand-selected six teachers 'students as prospective study participants. This researcher, therefore, only described the study proposal to those six teachers and their prospective male students. All consent and assent forms were collected and securely locked away by each school site's designee. Email alerts were sent weekly for three weeks that hard copy signed consent and assent forms were ready to be collected.

Each IRB-approved consent form (e.g., Informed Consent and Child Assent) described in detail how the confidentiality of data results and all personal information of participants in terms of protecting anonymity was going to be confidentially managed by the researcher and school designees. Once all prospective participants returned their consent and assent forms, arrangements were made with each school designee for an agreed-upon suitable computer lab to be reserved for participants at their school sites.

A truncated hyperlink was created for both study instruments to be accessed separately. These hyperlinks were provided electronically to each school designee in a Word Doc with the title of the self-report instrument and a hyperlink to that instrument. School designees were strongly urged to consider using their campus' Advisory or Homeroom time (e.g., a 50-minute class time) to arrange for participants to enter a reserved computer lab. The expected time to complete both study instruments was projected to be no more than 30 minutes. Each campus designee did state that its school site's Advisory or Homeroom time was provided to participants for completion of the two surveys. All participants were anonymous and voluntary—a requirement for the study and supported by each school's site administrator and or school district administrator. The only descriptive data requested from each participant was written into each of the study's self-report instruments as additional needed demographic data. However, no social security numbers, personal names, phone numbers nor contact information were ever requested. Only descriptive data variables of gender, age, ethnicity, and grade were collected.

A formal letter of approval and thus acceptance to implement this study was provided by school district offices managing instructional and accountability factors for any school site under proposed study. The expected month for implementation was within a window of time between March 28, 2016 and April 22, 2016. The proposed study instruments—the BES and the RPAQ-C—were completed at each school site's main computer lab. The instruments were in the form of two separate Google Form hyperlinks. Upon completion and submission of both surveys participants' responses routed directly into an established private Google email database for the direct purpose of collecting and evaluating real-time survey data results. The hyperlink for each instrument

was provided to participants by the school designees in a Word Doc format handout naming the title of the self-report instrument and its corresponding hyperlink. Participants had to type in the hyperlink using Google Chrome as the browser.

Previously, a reasonable time was given (e.g., one week) for school designees to have participants submit Parent/Guardian Informed Consent and Child Assents Forms to the designee. Those prospective participants who were 18 years old were not required to have Parent/Guardian Informed Consent Forms signed by a parent or guardian. These participants could sign and date the forms themselves. No Child Assent Forms were required of any participant 18 years of age. The designee for each of the four campus sites signed off and acknowledged receipt of all forms as well as agreed to follow-up with each participant's parent(s)/guardian(s) after completion of the study for feedback, if any.

Participants at each school site were instructed by their designee at a specific day and time to enter a reserved campus computer lab for participation in the study. School designees were given a window of time (e.g., one week) in advance to choose a day and time during their designated week in the computer lab to allow all consented participants to complete the self-report surveys. A Word Doc was handed out to participants that contained the title and hyperlink to each self-report survey, as well as brief directions that alerted participants to choose the best answer choice in their opinion. Answer choices were designed as Likert-type response options. These directions were then printed out by the school designee in advance, and handed to each participant as he entered the reserved computer lab. Designees remained on site to give a brief explanation for expectations of behavior and computer lab rules for participants. Designees then explained how participants were to boot computers, login with student ID data, and then use the search

engine, Google Chrome, to enter the hyperlink for the first instrument—the BES. Upon completion of the BES, participants had an online prompt built into the BES Google Forms version to submit the survey and then print out a completion slip. The designee in the lab collected these slips as evidence of completion. Participants were instructed to follow this same process for the RPAQ-C instrument as well.

Tech support was also on-call at each school site if needed for any participants experiencing computer-related technology issues. However, no environmental issues and or concerns were reported to the researcher from each school site that could have hampered or interrupted participation. Data results from participant responses who fully completed both instruments were the only results used for data collection to support the hypotheses and research questions. These anonymous results were received in real-time directly into a Google Forms databank and spreadsheet depository as part of the Google Forms program, and linked to a separate Google email account set up specifically for data collection. Data arrived into the spreadsheet noting the specific day and time the participant submitted his study results. However, since results were anonymous, there was no indication in the spreadsheet to identify which school site was submitting its self-report measure results.

There were no responsibilities put upon the school staff at any time to collect data nor provide informational handouts to participants that specifically regarded the self-report measures used for the study. There was no responsibility for staff to have liability regarding test security and or securing any collected results. Although paper-pencil versions were available for participants, no participant at each school site requested this version of the study instruments. Data collected and evaluated by this researcher was kept completely confidential, anonymous, and voluntary, securely saved to a private thumb

drive, and safely secured in a private locked file cabinet once upon completion of the study. This researcher was available to parents and or school leadership and staff after the completion of the study should it be requested by school designees. Follow-up meetings for parents and or staff were also offered for future workshops and or informational sessions at each school site. However, none of the school sites requested a future post-study presentation for their staffs.

A data recording sheet (e.g., spreadsheet) was designed and built into the Google Forms program to collect specific item-response data to generate graphs and other disaggregated data. There were no multiple trials for both self-report measures used in the study. Therefore, no other data structures, such as columns to record multiple results in a quantitative study, were necessary. Records displaying thoughts and ideas of this study's implementer regarding the survey assessment tools and results were provided, such as feedback from school staff regarding the time and date of when the surveys were taken, and any environmental issues which may have impacted participants during their participation. However, as stated previously no issues were recorded or noted from any staff at each school site. This excluded, of course, the need for the school designee to read aloud (yet not interpret) survey statements to participants who struggled with reading and or had an Individual Education Plan (IEP) requiring that assessments and or survey materials had to be read aloud to the participant. Other than a report at one site in which the designee had to read several survey statements to one, no school designee reported that it was necessary to read aloud the survey statements and directions.

A thorough review of the results was evaluated for biases and inaccuracies as well as accuracy of reporting. Making sure variables were properly controlled for (e.g., environment, age of participant, and any possible computer technology issues) was of

paramount importance and expressly related to each school campus designee. After analyzing the results, a determination was made as to whether the experiment had proved the any of the proposed hypotheses for this study. If the experiment proved the proposed hypothesis to be incorrect, a decision was made as to whether the hypotheses or the actual experiment was faulty. The size of the sample was expected to be plus or minus 67 male participants between 13 and 18 years-of-age from four small to large urban public secondary schools in the state of Arizona (i.e., drawn from a proposed total population of 600 or so prospective males). However, 65 actual participants completed both survey instruments under study. Adherence to IRB regulations for vulnerable populations and protections of their data results was also paramount. Approved IRB parental informed consent and child assent forms clearly outlined the procedures for keeping participants safe as a vulnerable population as well as asserted the liability the researcher had in keeping the participants and their data confidential.

Data Analysis Procedures

Raw data were evaluated using SPSS version 24 to analyze the statistical data results from both assessment tools using a multiple regression. Data were collected from a final anonymous and voluntary (n = 65) male youth between the ages of 13 and 18 from a population of approximately 600 prospective male students overall from four small to large urban public secondary schools in the state of Arizona. Data collected for each PV and the CV resulted from each of the following survey scale assessment tools: Jolliffe and Farrington's (2006) The Basic Empathy Scale (BES), and Raine et al.'s (2006) the *Reactive Proactive Aggression Questionnaire--Child* (RPAQ-C).

Descriptive statistical analyses highlighted features of the sample studied. For example, Tables 4 through 7 in Chapter 4 describe the overall demographic sample size by addressing the proportion of subjects to gender, ethnicity, grade level, and age. Furthermore, summary statistics with examples of graphs, measures of central tendency, the quantitative statistical significance (*p*-value) were used to determine if a null hypothesis could be rejected and thus set at ($\alpha = .05$), and then any data results indicating variability, kurtosis, and skewness were graphically illustrated. It was not fully known to what extent, if any, PV, male youth proactive aggression, predicted the CV, overall basic empathy. Consequently, it was not known to what extent, if any, male youth reactive aggression predicted overall basic empathy. Therefore, since it was not fully known to what extent either PV had upon the CV, quantitative research questions were formulated to hypothesize if statistically significant predictors were present between male youth proactive and reactive aggression and overall basic empathy based upon data findings from the BES. The following research questions and hypotheses therefore guided this quantitative study:

RQ1: Did proactive aggression in male youth predict overall basic empathy?

H_{01}: Proactive aggression in male youth did not statistically significantly predict overall basic empathy.

H_{1a}: Proactive aggression in male youth statistically significantly predicted overall basic empathy.

RQ2: Did reactive aggression in male youth predict overall basic empathy?

H_{02}: Reactive aggression in male youth did not statistically significantly predict overall basic empathy.

H_{2a}: Reactive aggression in male youth statistically significantly predicted overall basic empathy.

Given that this was a quantitative study and design, these questions and hypotheses did not include non-statistical investigations of findings. Specific analyses procedures displayed results from typical quantitative data analyses such as a priori and post-hoc G-Power data; the mean, median, and mode; the standard deviation; variance, range, and coefficient of variation; the standard error; a correlational analysis of each hypotheses (e.g., a Pearson's *r* correlation); a Normal P-P Plot; a regression scatterplot; a multiple regression; and finally, a path analysis correlation of variables. It was important that all this study's statistical data results not indicate anomalies that would invalidate or "taint" the results in a way that interferes with rejecting the null hypothesis—the goal or aim of this study. Cleaning the data through the SPSS program was therefore a prerogative that had to be met once raw data were collected and sorted.

In the *Statistical Package for the Social Sciences* (SPSS) program, for example, looking for possible transcription errors (the problem of copying information from one place to another) was a critical function of the analysis to ensure the data from each proposed self-report survey were "clean." This was completed through the Frequency (Analyze → Descriptive Statistics → Frequencies) function of the program. Most errors (if any) were expected to be detected through SPSS generating descriptive statistics, histograms, and scatter plots (Newmark, 2009). SPSS generated a table noting each of the variables under study through the Frequencies function of the program. Each variable or variables was then examined individually to see if any errors occurred in transcription and or coding of data.

Newmark (2009) recommended using the Crosstabs function once a Frequency function was used to look for transcription anomalies. That is, Crosstabs (Analyze → Descriptive Statistics → Crosstabs). This step-function allowed for a matrix of the frequencies of two variables to verify if, indeed, there were transcription errors. It was viewed as a fail-safe type of SPSS function or backup function that could verify if any anomalies were present by using the Frequencies function. Newmark (2009) also recommended data recoding cleaning which essentially entails turning ordinal variables, such as age, into nominal variables by, say, grouping for age ranges. For example, in the case of this study to convert the ordinal (categorical) range of ages it was necessary to group or code them in a nominal pattern, such as 13 to 14-year old's, 15 to 16-year old's, and 17 to 18-year old's. The age of participants was also considered continuous. This same process was done for grade levels since it allowed for highlighting the variables as broader segments of frequency data. However, ethnicity and gender variables did not lend well to being described in this manner, and thus both remained nominal categories.

Ethical Considerations

It was highly important that the observance of procedural safeguards to protect the rights, welfare, values, and principles of human subjects was strictly observed. This included protections for youth as research participants. According to APA ethical guidelines, researchers must establish a "clear and fair agreement . . . prior to research" (*American Psychological Association*, 2017) explaining the expectations and responsibilities of both the investigator and the prospective participants. That is, to provide full disclosure prior to informed consent clearly defined the safeguards, protections, and dignity of participants. According to the Institutional Review Board (IRB) under the Department of Health and Human Services (HHS), in terms of "research

involving greater than minimal risk, but presenting the prospect of direct benefit to the individual child subjects involved in the research" (HHS, Special Protections, 2016, para. 6), the research involving direct observation, interviewing, and assessing as part of a correlational design had to meet the following:

> The risk is justified by the anticipated benefits to the subjects; the relation of the anticipated benefit to the risk presented by the study is at least as favorable to the subjects as that provided by available alternative approaches; *and* adequate provisions are made for soliciting the assent of the children and the permission of their parents or guardians, as set forth in HHS regulations at 45 CFR 46.408. (HHS, Special Protections, 2016, para. 6)

Limitations and Delimitations

The most outstanding limitation of this study was that it drew upon a male youth population between 13 and 18 years of age as opposed to an overall broad selection of students and ages—gender, socio-behavioral and clinical issues notwithstanding. Therefore, any students who shared or "fit" the identical attributes of the population proposed for the study, yet did not align with this researcher's variables and thus were found ineligible to be a study participant were not generalized to the broader population of urban public-school children and youth of any age at surrounding schools and or school districts. This was due to specific considerations based upon the type of campus, its discipline and or behavioral program in place, its social skills development ideas and curriculum, and the climate and culture of the overall population of high school campus. Likewise, identifying as a "male" gender group of a certain age (e.g., younger than 13 and older than 18 years) prohibited other males from consideration to participate.

This included addressing such research variables as sexuality; and therefore, those children and youth who identify as "female" yet were physically male (e.g., Transgendered) were included due solely out of respect and dignity for their gender identification and psychological transformative development. Frequency data showed only one participant fit this category from of the actual number of 65 participants. Additionally, the topic of polyvictimization noted throughout this study was not addressed specifically as a study variable, and therefore was suggested as a future research moderator variable to examine its contributory impact, if any, upon the development of aggression in male youth.

Within each of the normed survey assessment tools used in this study, sample sizes ranged from 355 plus to over 1000 participants—clearly far more than was proposed in this study (e.g., original proposal of 67 plus or minus participants). Much of the psychometric data publicly available on each survey instrument did not specifically focus on an identified select group of participants (e.g., only behavioral disordered and or exceptional education students). Rather, participants for each were drawn— gender notwithstanding—from a pool of possible participants in an entire school system. Since the focus of this study was to determine if male youth who exhibit proactive aggression versus reactive aggression have a statistically significant relationship to overall basic empathy, drawing from a broader school population may have produced more parallel figures to the assessment tools than was being evaluated for in this study.

Delimitations were described as follows, and given much of the same detail as in the "Assumptions, Limitations, and Delimitations" section of Chapter one: The population under proposed study was chosen from four small to large urban public secondary schools in the state of Arizona. This may have ultimately limited the proposed

sample to a specific type of school and program rather than data gathered from a broad spectrum of secondary educational settings. The population studied also consisted of many students who had a history of behavioral and social emotional problems in schools. This, of course, somewhat narrowed the demographic from the larger school population of each site under proposed study to a smaller pool of prospective participants. Thus, one type of delimitation was that the study inadvertently targeted a portion of the overall study population previously identified by its respective school site as youth who exhibited patterns and a history of aggression, academic deficits, and or maladaptive social skills development.

The projected study group was male youth (e.g., participants who physically identified as male). Students who identified as "female" in terms of gender sexuality, yet were physically born male, were allowed to participate in this study. Those students who were physically female, but identified as "male," were not allowed to participate, and therefore would be a potential variable to tap for future replication of this study. Current literature in this area of gender sexuality indicated that females, particularly nearing the reach of middle age, generally demonstrate more empathic reasoning and behaviors than do their same-age male peer groups (O'Brien et al., 2013). Any correlation of empathy to proactive and or reactive aggression in female children and youth was not as well-known in the literature. Therefore, it was determined that there was no direct relevance upon this study.

Summary

Chapter 3 encapsulated the details of Chapter 1 yet provided further examination and detail for such features as the statement of the problem and research questions and hypotheses. Descriptors for specific details regarding validity measures were provided.

For example, descriptions were provided for the Basic Empathy Scale (BES) assessment tool (Jolliffe & Farrington, 2006) and the *Reactive and Proactive Aggression Questionnaire-Child* (RPAQ-C) (Raine et al., 2006). Reliability results were discussed for each assessment tool in terms of its test-retest and variability in addition to findings which supported a robust result for construct and content validity within each survey. Additionally, definitions were provided for the instrumentation used and data analysis procedures that predicted the hypotheses for the study and its subsequent design (e.g., quantitative). Limitations were discussed at-length, keeping in mind that each assessment tool used, for example, had a normed population of participants much greater in numbers and more broadly defined (i.e., both genders were subjects in the published studies) than in this research study.

Chapter 4: Data Analysis and Results

Introduction

The purpose of this quantitative study was to investigate to what extent a relationship existed between proactive and reactive aggression and overall basic empathy for 13 to 18-year-old males. It was not fully known to what extent, if any, male youth proactive and reactive aggression predicted overall basic empathy. Several quantitative research questions were generated to hypothesize if a statistically significant relationship existed between male youth proactive aggression (possibly co-occurring with CU traits), and overall basic empathy. Conversely, it was argued that those male youth with reactive aggression had a statistically significant relationship as well to overall basic empathy. Thus, the following research questions and hypotheses guided this study:

RQ1: Did proactive aggression in male youth predict overall basic empathy?

H_{01}: Proactive aggression in male youth did not statistically significantly predict overall basic empathy.

H_{1a}: Proactive aggression in male youth statistically significantly predicted overall basic empathy.

RQ2: Did reactive aggression in male youth predict overall basic empathy?

H_{02}: Reactive aggression in male youth did not statistically significantly predict overall basic empathy.

H_{2a}: Reactive aggression in male youth statistically significantly predicted overall basic empathy.

The instruments used in measuring and supporting these hypotheses were the self-report scales of the Basic Empathy Scale (BES) (Jolliffe & Farrington, 2006) and the

Reactive-Proactive Aggression Questionnaire-Child (RPAQ-C) (Raine et al., 2006). Each instrument provided a measurement for total levels of aggression in male youth—proactive and reactive—and a measurement for total overall basic empathy from the BES instrument; albeit, the BES instrument was originally normed on children and youth from both genders—not just males. Conversely, the RPAQ-C instrument was normed on two samples of the same male participants: Sample 1at age seven, and again as Sample 2 at age 16.

For this study, the PV's were proactive and reactive aggression. The aim was to determine if these variables predicted outcomes for whether male youth with these variables as character traits had a predictive relationship with overall basic empathy. The overall rationale for choosing a quantitative methodology and design was to consider the proposed study population of likely burdened youth with any number of biopsychosocial maladies such as inattentiveness and or impulsivity (Ellis et al., 2009; Fite et al., 2010), and thus a multiple choice or Likert-type self-report instrument offered immediate response times and expediency in completing an online self-report tool. Attention to executive functioning traits, such as inattentiveness and or impulsivity, was considered to ensure reliable and valid results. Likewise, the turn-around time for evaluating data results was much quicker than if a mixed-method or qualitative design was used. Careful consideration for time to implement the instruments was provided since the study participants had numerous other responsibilities (e.g., statewide and local testing, vacation days, and instructional requirements on their campuses). This chapter therefore presented study results with a summary of statistical analyzed data presented in narrative, tabular and figurative form and format with visual organizers such as tables and graphs.

Descriptive Data

Extant data results were from a sample of 65 secondary school-age adolescents who participated in the study, with 64 participants identified as male and one participant identified as born male but "identified" as female. This participant's data are reported in the descriptive statistics section of this chapter, but were excluded for the analyses for the hypothesis tests. This is because the focus of the study was on male participants only. There were 102 original participants who provided all the required permissions (e.g., parental consent, child assent, and site consent). However, 22 participants gave a verbal notice to withdraw prior to actual participation; six participants participated in the first assessment (e.g., the BES), but did not complete the RPAQ-C, and thus their time-stamped scores were withdrawn; and nine participants came prepared to fully participate in the study but had to suddenly withdraw due to personal, legal and or family crises situations.

Participants completed the Basic Empathy Scale (BES) (Jolliffe & Farrington, 2006), and the Reactive and Proactive Aggression Questionnaire-Child (RPAQ-C) (Raine et al., 2006). All coding of nominal categorical data was as follows per variable in SPSS: Gender **(**e.g., Male = 0; Born female, but "identify" as male = 1; and Born male, but "identify" as female = 2); Age (e.g., 13 years old = 1; 14 years old = 2; 15 years old = 3; 16 years old = 4; 17 years old = 5; and 18 years old = 6); Grade (e.g., 9^{th} = 1; 10^{th} = 2; 11^{th} = 3; 12^{th} = 4; and 12+ = 5); and finally, Ethnicity (e.g., White = 1; Black or African-America = 2; Hispanic/Latino Origin = 3; American Indian or Alaska Native = 4; Asian = 5; Hawaiian Native or Pacific Islander = 6; and Multi-racial (2 or more races) = 7). For gender then, 98.5 percent were male and 1.5 percent were born male but "identified" as

female. In terms of age, there were no 13 or 14-year-old participants. Sixteen-year olds comprised of 6.2 percent of overall participants, with 23.1 percent being 17 years old and the remaining being 18 years old at 64.5 percent of overall study participants. Participant grade-level data were as follows: Ninth graders were 3.1 percent of participants; 10th graders were 7.7 percent of participants; 11th graders were 24.6 percent of participants; 12th graders were 52.3 percent of participants; and 12+ graders were 12.3 percent of participants. Finally, ethnicity data showed that seven (10.8%) were White; eight (12.3%) were Black/African-American; 41 (63.1%) were Hispanic/Latino origin; four (6.2%) were American Indian or Alaska Native; one (1.5%) was Asian; one (1.5%) was Hawaiian Native or Pacific Islander; and three (4.6%) were multi-racial (e.g., two or more races).

Thus, a set of four frequency tables was generated to structure all the descriptive data from the study more succinctly as follows:

Table 4.

Participant Ethnicity/Race

Ethnicity/Race	Freq.	Valid	Cum Valid %
White	7	10.8	10.8
Black/African-American	8	12.3	23.1
Hispanic/Latino Origin	41	63.1	86.2
American Indian or Alaska Native	4	6.2	92.4
Asian	1	1.5	93.9
Hawaiian Native or Pacific Islander	1	1.5	95.4
Multi-racial (two or more races)	3	4.6	100.0
Total	65	100.0	100.0

Table 5.

Participant Grade

		Freq.	Valid	Cum Valid %
Valid			65	
	Grade 9	2	3.1	3.1
	Grade 10	5	7.7	10.8
	Grade 11	16	24.6	35.4
	Grade 12	34	52.3	87.7
	*Grade 12+	8	12.3	100.0
	Total	65	100.0	100.0

*Second -year 12th grade students (Repeating 12th grade)

Table 6.

Participant Age

		Freq.	Valid	Cum Valid %
Valid			65	
	15 years old	4	6.2	6.2
	16 years old	4	6.2	12.4
	17 years old	15	23.1	35.5
	18 years old	42	64.5	100.0
	Total	65	100.0	100.0

Table 7.

Participant Gender

		Freq.	Valid	Cum Valid %
Valid			65	
	Male	64	98.5	98.5
	Born male but "identify" as female	1	1.5	1.5
	Total	65	100.0	100.0

Post hoc G*Power data was also included here to illustrate if any changes occurred that were not specified a priori. Using the same exact bivariate normal distribution of variables (as with a priori and a one-tailed post hoc analysis), the statistical probability results were as follows: Correlation ρ under H_1 was 0.4; α of error probability

was .05; power analysis of β (beta) was 1 minus the power or 1 minus the sensitivity of the test, or .80—the minimum statistically allowed for avoiding the possibility of Type II errors in probability, and therefore rejection of the null hypothesis as well as the effect size from the sample. G-Power output data established a (*n*: 65) participants. Both a priori and post hoc data results have been illustrated as appendixes for this study.

The inferential statistics used to address the research questions resulted from a multiple regression analysis of the PV's and the CV. Here, normality of the variables was examined for a normal curve using results from total BES scores, and then illustrated in the two following histograms for skewness and kurtosis as well as residual regression. Tables and figures were also provided to illustrate support for the assumptions of a multiple regression analysis method. All the following assumptions of multiple regression were therefore made in this study: Sample size data for making reliable predictions; CV (e.g., empathy) needed to be normally distributed and thus non-skewed; all variables measured reliably as demonstrated earlier in Chapter 3; and homoscedasticity of the CV was present (i.e., the variance of errors is the same across all levels of the criterion), and thus illustrated using a histogram and figure plot of the standardized residuals. Additional analyses were provided later in this study regarding the assumption of multicollinearity for a multiple regression analysis.

It was necessary then to examine for the PV's to make valid and reliable predictions about the outcome of the study based upon the CV. Each PV therefore needed to have no less than 15 participant scores. Since this study used two PV's—proactive and reactive aggression—a minimum of 30 study participants was necessary for the assumption to be valid. This study had 65 total participants, and thus assumption was met

as demonstrated through a priori G-Power data described earlier in Chapter 1 and again in Chapter 3.

Assumptions of Normality and Multiple Regression Analysis

For the assumption of normality and thus the normal distribution of the CV, a multiple regression analysis and skewness and kurtosis was generated as well as two histogram illustrations to support these assumptions: *Figure 3:* Histogram of Total BES Scores for Skewness and Kurtosis, and *Figure 4*: The Histogram of Residual Regression for BES Regression. Both figures illustrated the CV in terms validity and reliability data for the BES instrument as a measure of normality.

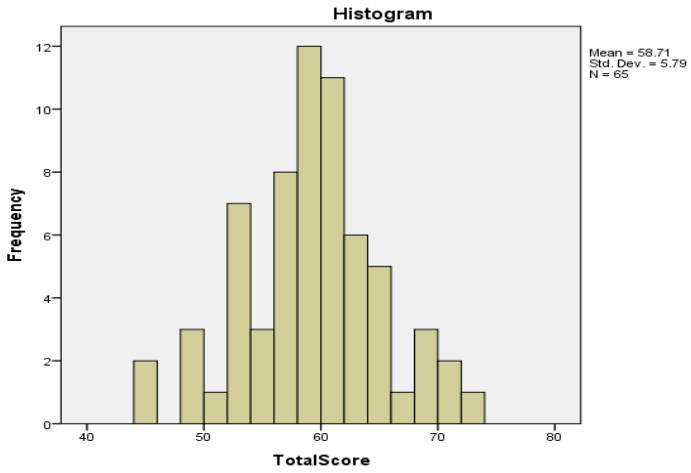

Figure 3. Histogram of total BES scores for skewness and kurtosis

According to *Figure 3*, for example, BES score data revealed that from all 65 participant scores the highest frequency of scores fell between 10 and 12 participants, or between a score range of 58 to 60. The second highest total BES score range was between 60 and 62 with a frequency level of approximately 11 participants. The third highest BES score range was from 56 to 58 with a frequency level of eight participants. There were three notable lowest score ranges with a frequency of three participants each:

Score ranges 50 to 52, 66 to 68, and 72 to 74. As described earlier on (p. 99), BES scores could range from a low of 20 to a high of 100 per participant. This score range thus indicated that the higher the score, the higher the level of overall empathy. All scores fell within a normal curve distribution indicated by a symmetric bell-shape (M = 58.71, SD = 5.79, N = 65), and therefore no violations of normality and probability were evident. Likewise, there was no excess of skewness and kurtosis in the data.

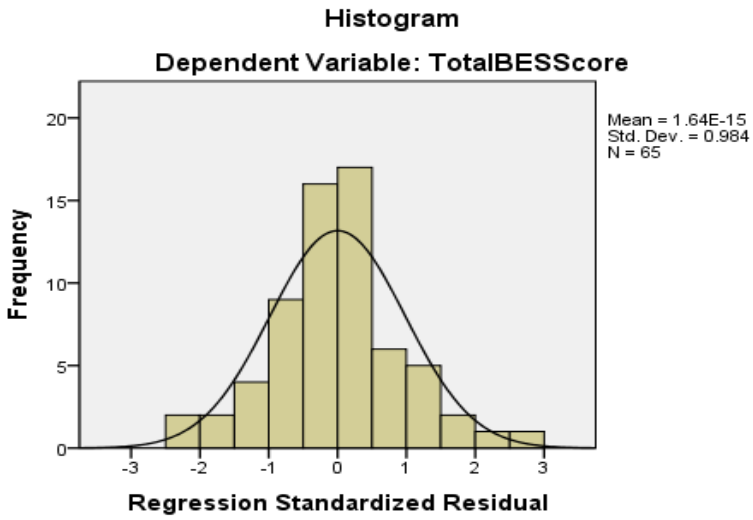

Figure 4. Histogram of residual regression for BES

Figure 4 revealed that for all participant scores from the BES there was a symmetric distribution of scores, with frequency levels that matched the outcomes revealed in Figure 3 above, indicating normality of the data and thus did not contradict the linear assumption (M = 1.64, SD = 0.98, N = 65). The highest frequency of standardized residuals was between 15 and 20 with 18 being the highest approximate residual plot. The second highest regression residual was between 10 and 15, with 12 being the approximate residual plot. There were two lowest frequency regression residuals, both at approximately a frequency of one, however normally distributed within the histogram. In looking then at the following normal P-P Plot of the residual data,

Figure 5: Normal p-p plot of regression, it revealed that for total BES scores there was minor variability, the plots were nonetheless approximately distributed normally along the line of best fit, and moved in a positive direction.

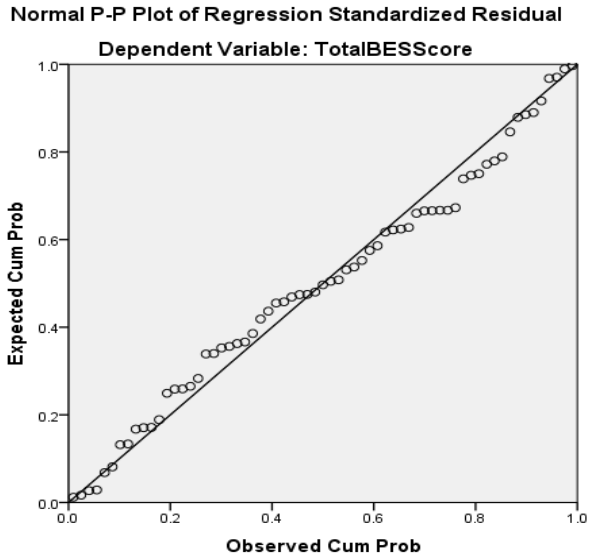

Figure 5. Normal p-p plot of regression

Additionally, for both Figure 5 and Figure 6: Scatterplot of regression, the assumption of homoscedasticity for a multiple regression analysis was met since the data showed a reasonable random scatter of plots above and below the mean of residuals.

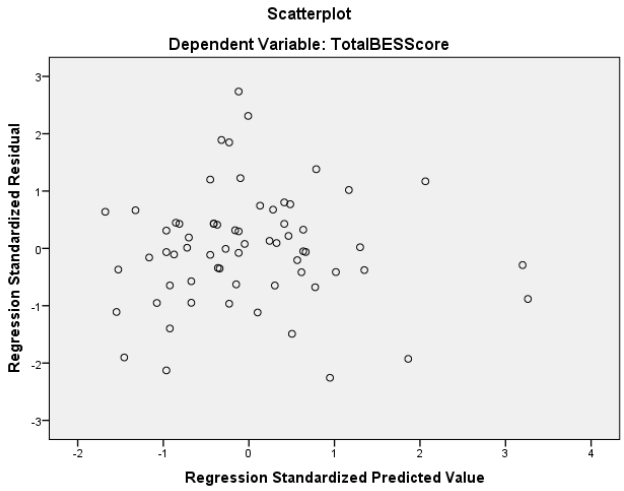

Figure 6. Scatterplot of regression

Additional analysis was performed to verify any presence of skewness and kurtosis within the data. This was drawn from the following Table 8: *BES Statistics of Skewness and Kurtosis*, to observe for any skewness and the standard error of skewness by dividing the skewness result by its standard error result:

Table 8.

BES Statistics of Skewness and Kurtosis

N	Valid	65
	Missing	0
	Mean	58.71
	Median	59.00
	Mode	60
	Skewness	.022
	Std. Error of Skewness	.297
	Kurtosis	.304
	Std. Error of Kurtosis	.586

The following formula represented the data used to determine if skewness was present in the BES findings: $$S = \frac{n}{(n-1)(n-2)} \frac{\sum_{i=1}^{n}(X_i - X_{avg})^3}{s^3}$$ However, a simpler check would be to divide the skewness score by its standard error of skewness (e.g., .022 / .297 = .074)—well within the expected *z*-value of 1.96 and -1.96, and indicated a slight positive lean yet nonetheless a normally distributed set of data. Kurtosis data revealed much of the same in terms of normality of findings and data for the BES. The formula for a sample population of scores for kurtosis is as follows: $$K = \frac{n\,(n+1)}{(n-1)(n-2)(n-3)} \frac{\sum_{i=1}^{n}(X_i - X_{avg})^4}{s^4}$$

Using the same calculation method as with skewness, a simpler mathematical solution was to divide the kurtosis score by its standard error of kurtosis in which the result needed to indicate a z-score between 1.96 and -1.96. For .304 / .586 = .518 the result indicated no kurtosis (e.g., a normal peaked distribution of BES participant overall

data scores). Cronbach's reliability statistics were considered for application in this study to evaluate if the data mirrored results obtained in Jolliffe and Farrington's (2006) study on basic empathy. However, it was not necessary since reliability and variability were accounted and measured for earlier through examining the processes of the multiple regression analysis that predicted no variability in the PV's or concerns with reliability, internal consistency, and validity of data results.

Examining further the total BES score in relation to total proactive and reactive RPAQ-C scores, and therefore the assumptions of a multiple regression analysis, zero-order correlations and VIF were used to examine the assumption of multicollinearity. Although not robust a Pearson's *r* revealed a statistically significant positive relationship ($p \leq .05$) occurred between Total BES scores to Total Proactive RPAQ-C scores, $r(63), = .32$, $p = .009$. For Total BES scores to Total Reactive RPAQ-C scores, the Pearson's *r* did not reveal a statistically significant positive relationship between the variables, $r(63), = .05$, $p = .72$.

Table 9.

Correlations: Total BES Score to Total Proactive/Reactive Aggression Scores

Measure	Correlation Type	Total BES	Total Proactive RPAQ-C	Total Reactive RPAQ-C
Total BES (Empathy)	Pearson Correlation	1	.322**	.04
Total Proactive RPAQ-C	Pearson Correlation	.322**	1	.728**

** Correlation is significant at the 0.05 level (2-tailed), $N = 65$

An analysis of Table 10: *Coefficient and Collinearity Results for Proactive and Reactive Aggression*, it was important to determine if the null hypothesis could be rejected based upon the *p*-value for each PV. Total proactive aggression, for example, showed $p \leq .001$, and therefore was significant for proactive aggression and thus rejection

of the null hypothesis for this variable. The *p*-value for this study was established post-hoc at .04 through the G-power analysis detailed earlier in Chapter 3. The same significance result occurred for the Reactive Aggression variable at $p \leq .020$, again indicating that the null hypothesis could be rejected.

Table 10.

Collinearity Results for Proactive and Reactive Aggression

80% Confidence Interval for B						
				Correlations	Collinearity Statistics	
		Lower Bound	Upper Bound	Zero Order Partial	Part Tolerance	VIF
57.336	61.705					
.474	1.035	.322	.421	.421	.470	2.127
-.759	-.226	.045	-.291	.275	.470	2.127

a. Criterion Variable: Total BES Score

A fourth and final assumption of multiple regression analysis regarding multicollinearity needed to be examined so that each PV could show a highly-correlated relationship with an *r* value of .9 or higher—a typical correlational assumption of multicollinearity. The data indicated (Table 9) that one of the PV's for this study (proactive aggression) had a positive, but weak relationship to the CV. However, reactive aggression did not have a significant linear relationship with empathy; therefore, multicollinearity was not considered an issue in this data analysis. After examining the data from Tables 9 and 10, as well as subsequent visual illustrations of Figure 5 and Figure 6, multicollinearity was ruled out and thus met the assumption for multiple regression analysis.

Finally, checking for extreme scores or outliers in both PV's and the CV was very important to ensure that the data were accurate and complete. This method assumed that

deletion of the highest and lowest scores needed consideration to avoid skewed results. However, not enough outlier scores as illustrated in *Figure* 6 were of concern that required perhaps excluding one of the PV's as would be expected for this type of statistical case. A multiple linear regression was therefore performed to predict the CV based on PV1 and PV2. A significant regression equation resulted, $F(2, 62) = 6.768$, $p < .05$). Both PV1 and PV2 were found to be significant predictors of the CV, with PV1 having explained 2% of the variance, and PV2 explained 62% of the variance in the CV.

Data Analysis Procedures

Two research questions and four hypotheses—a null and an alternative for each RQ—were proposed as guides for this study. Relative to the purpose of the study it was not fully known to what extent, if any, male youth proactive and reactive aggression predicted overall basic empathy. The following research questions and hypotheses guided this study:

RQ1: Did proactive aggression in male youth predict overall basic empathy?

H_{01}: Proactive aggression in male youth did not statistically significantly predict overall basic empathy.

H_{1a}: Proactive aggression in male youth statistically significantly predicted overall basic empathy.

RQ2: Did reactive aggression in male youth predict overall basic empathy?

H_{02}: Reactive aggression in male youth did not statistically significantly predict overall basic empathy.

H_{2a}: Reactive aggression in male youth statistically significantly predicted overall basic empathy.

The null hypothesis for RQ_1 (e.g., proactive aggression in male youth does not statistically significantly predict overall basic empathy) was tested via a multiple regression analysis with proactive aggression as the PV and overall basic empathy serving as the CV. Results revealed that the null hypothesis for RQ_1 was rejected. The null hypothesis of RQ_2 (i.e., reactive aggression in male youth does not statistically significantly predict overall basic empathy) was also tested via a multiple regression analysis with reactive aggression as the PV for overall basic empathy, to determine if a relationship existed between each variable. Results revealed that the null hypothesis for RQ_2 was rejected as well.

Table 11.

Coefficients Variables Resulting from Multiple Regression Analysis

		Unstandardized Coefficients		Standardized Coefficients		
Model		β	Std. Error	Beta	*t*	Sig.
1	Constant	59.521	1.686		35.295	.000
	Total Proactive	.764	.209	.614	3.658	.001
	Total Reactive	-.493	.206	-.402	-2.393	.020

There were overall scale scores for both the BES in terms of basic empathy and the RPAQ-C in terms of proactive/reactive aggression. Additionally, both instruments had measurable subscales scores. The RPAQ-C in this study, for example, generated two stand-alone subset scores for reactive aggression and proactive aggression. The BES also provided subset scores for cognitive and affective empathy. While statistical data and graph illustrations showed correlative data for overall RPAQ-C scores to BES scores, subset scale scores for both predictor and criterion variables were necessary to determine if there existed any subtleties in variability within the relationships of variables. A

correlational analysis of each hypothesis (e.g., a Pearson's *r*) was applied along with a multiple regression analysis through SPSS Statistics, version 24, for proactive and reactive RPAQ-C predictor scores and overall criterion scores from the BES.

It was also necessary to observe for the assumptions of a multiple regression analysis, and thus normality, linearity, and for any significant outlier plots of the PV's. Therefore, the normal p-p plot (Figure 5) was observed for points along a best-fit line for deviations from normality. The scatterplot of all variables—predictor and criterion—was also observed (Figure 6) for a rectangular distribution of the plots whereby most plots needed to be clustered around the center of the mean for residuals to determine if normality was met. It was determined that the data showed normality through the random distribution of residual regression plots with a few outliers; however, none were statistically significant as to alter or redefine the hypotheses for this study. The visual data therefore indicated that normality of the predictor and criterion variables was apparent. Albeit observing the scatterplot revealed that there were some residual outliers, none were greater than -2 or +4 for predicted values, and none were greater than -2 and +3 for residual values. Therefore, not enough residual outlier plots were raised enough concern and consideration in terms of meeting normality for the variables of this study.

Assuming then a normal distribution of the CV, and an adequate sample size as an assumption of the multiple regression analysis method described earlier, the process for determining if the assumption of multicollinearity was evident in the SPSS outcome data came from Table 9 (p. 131) and Table 10 (p. 132). It was necessary to observe this data for whether the PV's indicated multicollinearity, and thus a potentially weakened relationship that could affect the CV or outcome of the model and study. For example, in

Table 9 it was necessary to rule out for multicollinearity by examining the relationship of the CV to both PV's. Here, the Pearson *r* for the Total BES Score needed to be above .30 for both PV's—proactive and reactive aggression. As shown earlier in Table 9, the Pearson *r* for Total BES Score was .322 for Total Proactive Aggression and .045 for Total Reactive Aggression.

The correlation score for Total Proactive Aggression was above the .30 threshold for multicollinearity. However, some abnormality occurred for Total Reactive Aggression with a correlation of .045. This indicated that perhaps some multicollinearity may have been at play. Likewise, the PV's needed to remain below a correlation value of .70. The correlation for both predictors was very high and robust at .728. Although slightly high, this data may have indicated that perhaps some multicollinearity was at play. Table 10 was then examined by looking at the last columns for Collinearity Statistics for Tolerance and Variable Inflation Factor (VIF) to see if the Tolerance correlation was above the standard .10, and if the VIF was below the standard of 10. Tolerance here referred to how much of the variability in each PV was not explained by other possible variables in the study. The VIF referred to the inverse of the Tolerance value. The data revealed that multicollinearity of predicator was not a concern, with a Tolerance correlation of .470 for each subtype of aggression—well above .10, and a VIF correlation of 2.127—well below 10.

Given that all four of the assumptions of multiple regression were examined and met, it was important to determine if the model of the study was effective, statistically significant, and could accurately predict the criterion variables under study. This required examining the following Table 12: *Model Summary*, to observe the value for *R* Square.

The *R* Square value was an indicator for how much variance occurred in the CV, Total BES Score (e.g., empathy), and explained by the model using two PV's—proactive and reactive aggression. It was necessary then to determine how much proactive and reactive aggression values affected empathy. In looking at the data for Table 12 below, the *R* Square value was .179, or 18 percent of the variance in empathy explained by each PV. This explained that 82 percent of the variance in empathy was from other lesser-known factors. Since the Adjusted *R* Square was even less at 15.3 percent, the normal *R* Square was therefore the value examined for any variance in the CV.

Table 12.

Model Summary of Variance in Empathy Data

Model Summary

Model	*R*	*R* Square	Adjusted *R* Square	Std. Error of the Estimate
1	.322[a]	.103	.089	5.526
2	.423[b]	.179	.153	5.329

a. Predictors: (Constant), TotalRPQProactiveAggressionScore
b. Predictors: (Constant), TotalRPQProactiveAggressionScore TotalRPQReactiveAggressionScore
c. Dependent Variable: TotalBESScore

The next process for multiple regression analyses was to examine Table 13: *ANOVA*, to determine if the model was a statistically significant predictor of the CV, and thus provide a truer prediction about the population studied. As shown below in Table 13, the statistical significance *p*-value was .002, less than the established $p < .05$ for the study. This value indicated that the model did do better to predict the CV than by chance alone, and thus produced a significant linear relationship between the variables.

Table 13.

ANOVA

Model		Sum of Squares	*df*	Mean Square	*F*	Sig.
1	Residual	1923.590	63	30.533		
	Total	2145.446	64			
2	Regression	384.449	2	192.224	6.768	.002[c]
	Residual	1760.997	62	28.403		
	Total	2145.446	64			

a. Dependent Variable: TotalBESScore

b. Predictors: (Constant), TotalRPQProactiveAggressionScore

c. Predictors: (Constant), TotalRPQProactiveAggressionScore, TotalRPQReactiveAggressionScore

An evaluation of the PV's was then made to determine if either variable contributed the most to the prediction of the CV. This information was available in Table 10—Beta column (p. 132). Standardized coefficients in SPSS referred to all values of variables in the study being converted to the same scale so that they were easier to make comparisons with. In the Beta column, for example, the largest value of the PV was the one that could explain its significance upon the CV. For Table 10 then, the value of .614 for Total Proactive Aggression was higher than for Total Reactive Aggression (e.g., -.402). The Beta value of .614 made the most robust explanation for explaining the CV. Examining the statistical significance from Table 9 (p. 131) also indicated that for each predicator variable there was $p < .05$ at .001 for Total Proactive Aggression and .020 for Total Reactive Aggression, and therefore were uniquely significant contributors to the prediction of the criterion for the study.

Finally, one last step was made to examine for any predictive value of the CV in terms of how much variability there was (i.e., how far off the data was). This value was listed in Table 10 (p. 132) under the Standard Error of the Estimate column. Here, the

standard error was 5.329. This revealed that when examining the effect of the PV's upon the CV, there was variability in this prediction of a little more than 5 points. Overall, what was learned through the multiple regression analyses was that proactive aggression made the largest individual statistical contribution (61%) compared to reactive aggression (39%), although both PV's were statistically significant contributors to the overall model.

Path analysis correlations. This last section was devoted to furthering the investigation of a possible causal relationship between all variables in the study—particularly the PVs—and CV results from examining multiple correlation regression data. The purpose here was to make additional examinations of the data to see if there were any possible causal relationships between the PV's, and a direct or indirect effect, if any, upon the CV. Thus, this method would serve to compliment or enhance the findings already examined in this study from the multiple regression analysis. The following assumptions therefore guided this application of the study results: All causal relationships between variables had to be one directional (e.g., no pair of variables could be the cause of each other); and secondly, all variables had to be clearly time-ordered (e.g., no one variable could be identified as the cause of another variable unless a variable precedes another in terms of time) per Crossman (2017). Application of a path analysis method does not provide evidence of any causal directionality, or explain which variable is causing another variable to have an effect. It simply explains if a causal relationship existed, and to what effect positively or negatively one variable had on another variable.

In doing a bivariate path analysis of the variables for this study, Table 9 (p. 131) was observed. Due to the value for significance originally established in this study at $p <$ .03 through a priori G-Power analysis, the significance 2-tailed value for Total Bes Score

in Table 9 revealed it was above $p = .009$, and thus the Pearson's r for Total Proactive Aggression Score revealed a significant positive correlation of $r = .322$. Therefore, the computed path analysis revealed that a statistically significant positive causal relationship occurred between Total Proactive Aggression Score and Total Bes Score, or $r = .322$, $N = 65$, $p \leq .009$, thus validating the rejection of the null hypothesis for Research Question 1 and supported by the multiple regression analysis examined earlier in this study. In other words, the table showed that as RPAQ-C proactive aggression scores increased there was an increased causal relationship in scores on the BES. For Total Reactive Aggression, however, there was no statistically significant causal relationship to Total BES Scores except for that the significance value was less than established $p < .05$, or was .045—a slightly positive looking Pearson's r value ($r = .045$, $N = 65$, $p \leq .720$). This may have simply indicated that there was no robust causal effect and relationship between each variable. More detail is provided in the explanation for the research questions that follow.

Results

Findings for research question 1. Did proactive aggression in male youth predict a statistically significant relationship to overall basic empathy? The alternative hypothesis for this research question was accepted, and thus the null hypothesis was rejected. A significant positive relationship occurred between proactive aggression and total empathy (i.e., lower empathy scores occurred on the BES in relationship to higher proactive aggression scores on the RPAQ-C). These results predicted a statistically significant relationship to overall basic empathy indicated by Pearson's r data for overall global empathy and gender of participants ($r = .728$, $p < 0.05$, one-tailed). A normal p-p

plot of regression and a scatterplot of regression were developed to examine predictor and criterion variable results for line of best fit and normality of assumptions. The normal p-p plot of regression (Figure 5) suggested that a positive linear relationship occurred, and therefore the null hypothesis was rejected. It also indicated that a statistically significant relationship occurred between overall basic empathy and proactive aggression.

For regression, residual scatter plot data (Figure 6) it was important to examine the clustering of plotted scores relative to the PV's on the Y axis and CV on the X axis. The scatterplot therefore indicated that most of the plots were centered together in a rectangular shape, and thus normality of the predictor and criterion variables was indicated. There were some residual outliers. None was greater than -2 or +4 for predicted values, and none were greater than –2 and +3 for residual values. Therefore, not enough residual outlier plots were of concern in terms of not meeting the assumption of normality. Finally, a path analysis method was applied that looked for causality between variables in Research Question 1. Data results revealed that for Total Proactive Score there was a significant positive causal relationship to Total BES Score (r=.322, $p < .01$) as was indicated earlier in Table 9.

Findings for research question 2. Did reactive aggression in male youth predict a statistically significant relationship to overall basic empathy? The alternative hypothesis was accepted. A significant negative relationship occurred between reactive aggression and total empathy (i.e., higher empathy scores occurred on the BES in relationship to lower reactive aggression scores on the RPAQ-C). The PV—reactive aggression, and the CV—empathy, revealed an opposing directionality in participant empathy. That is, the lower the scores were for participants indicating reactive aggression on the RPAQ-C, the

higher scores were indicated for basic empathy on the BES. The ANOVA data from Table 12 (p. 139) indicated that for both PV's there was a statistically significant relationship to overall empathy ($F(2, 62) = 6.768$, $p < .05$). A path analysis method was applied to discover whether there was causality between the variables for Research Question 2. Data from Table 9 (p. 131) revealed that while there was no statistically significant causal relationship between Total Reactive Score and the Total BES Score. Data did indicate that a slightly positive, but not significant Pearson's *r* correlation occurred between both variables (r=.04, $p > .05$).

Summary

A multiple regression analysis indicated that the combined effect of cognitive and affective empathy, as measured by the BES instrument and the PV's—proactive and reactive aggression—had a statistically significant relationship as stated in the hypothesis of RQ_1 and RQ_2. Unlike Gordon's (2013) research where it was discovered that a small or weak negative relationship existed between proactive aggression and basic cognitive empathy, data results in this study ultimately suggested the contrary. In Table 9 (p. 131) for example, both correlative data for proactive and reactive aggression indicated that each aggression type and overall aggression had no numeric differences in value, and thus were not consistent with Gordon's correlative results for PV's. It was clear then that the values for this study indicated statistical significance as PV's.

Examining the specific multiple regression analyses was significantly important toward determining if, indeed, the null hypothesis could ultimately be accepted or rejected—the purpose for examining the data and supporting the alternative hypotheses and therefore rejecting the null. In that regard coefficient estimates from the multiple

regression tables indicated that there may have been invariability (as opposed to consistency and a direct correlation) in the overall scores from each of the variables measured. The concern here was that this could indicate more erratic responses to even the slightest variances in scores, and therefore this could suggest that the data indicated flaws or implied unreliability.

As described in detail earlier for the assumptions of multiple regression analysis, the intent of showing multicollinearity was that there was no reduction in the predictive power or reliability of the sample data. Consequently, data showed that it only affected perhaps some isolated factors within any one variable without much significance or consequence to the overall acceptance or rejection of the null hypothesis. Path analyses also revealed that while causality was statistically significant for proactive aggression and empathy, there was no definitive causal relationship between reactive aggression and empathy.

A few limitations resulted from this study. Several were projected as part of the limitations section in Chapter 3. The variable of gender (e.g., only male adolescents), for example, as opposed to all adolescent genders was originally studied and normed for the BES instrument as well as in Gordon's (2013) own research, albeit Gordon focused on children of all genders and not adolescents as study participants. Participants for this doctoral study were either students in a behavioral program and or were receiving some form of behavioral curriculum in a secondary general education environment, or in general had discipline and or mental health histories that involved aggression issues. Although not entirely limiting one could argue that data findings in this study may not exactly mirror other male teens in the general population, and therefore could be viewed as a presenting limitation. There was one participant born a male, but identified as female

who was excluded from this study for sampling homogeneity purposes. Unfortunately, transgendered youth may have been inadvertently excluded from research studies on this topic if only selecting participants who identify as heterosexual male and or female subjects. Considerations will need to be made to include transgendered youth for future replication.

Polyvictimization was also not a study variable, and therefore may have had a statistically significant effect upon the other variables in this study if it were introduced as perhaps a moderator or an additional PV. Additionally, for those participants who partially answered questions and or statements in an instrument (i.e., chose to quit participating mid-way through the online survey) were not included in any narrative or data findings indicating in any way the percentage and number of participants who completed both self-report survey instruments. The only data collected to determine a statistically significant relationship was between predictor and criterion variables to support the research questions.

The following final chapter will therefore offer a comprehensive examination and highly important summary of implications and interpretations of the study data in its entirety regarding proactive and reactive aggression and the predictive relationship each had in regard to determining any amelioration of male youth aggression. It is hoped that this research will therefore significantly contribute to the emergent extant literature and research on adolescent male aggression as it relates to the biopsychosocial forces at play in constructing personality and behavior. Conclusions, implications, and recommendations for future research were thus proposed.

Chapter 5: Summary, Conclusions, and Recommendations

Introduction

The topic of this research study regarding adolescent personality development and youth aggression is not new to research. Some of the foremost American social psychologists, such as Bandura, Maslow, Piaget, Erikson and arguably Vygotsky, produced much of the robust foundational psychoeducational research currently practiced today in most K-12 and psychotherapeutic settings. Each researcher profoundly changed the ever-growing landscape of human developmental theory and practice, and thus added to the emerging canon of research regarding child and adolescent brain-based stages of maturation and behavior, specifically regarding aggression and anti-social personality development. In terms of current male adolescent personality development specific to male proactive and reactive aggression, however, emerging literature on the topic (and hopefully from this study) have made significant progress in highlighting the dearth of research on the biopsychosocial roots of youth aggression. Even less research has been produced that examines the predictive relationship, if any, between aggression subtypes such as proactive and reactive aggression and overall basic empathy (e.g., de Wied et al., 2012; Feder et al., 2010; Fite et al., 2010; Netland & Miner, 2012; Oransky, 2011; Raine, & Glenn, 2014; Shepard, Nicpon, Haley, Lind, & Liu, 2011; Strenziok, Krueger, Heinecke, Lenroot, Knutson, van der Meer, & Grafman, 2011; Whelan, Kretschmer, & Barker, 2014).

At first one may wonder if the very topic of this quantitative study added new research new to the plethora of current research on male psychology, more specifically adolescent male development regarding abnormal psychology and aggression. However,

only one research study (i.e., Gordon, 2013) was found that specifically explored the topic of adolescent aggression characteristics linked to aggression subtypes such as proactive and reactive aggression and empathy in general, or cognitive and affective empathy to be precise. Furthermore, no evidence-based research was found other than Gordon's correlational study that considered empathy-types as a variable worth examining in in relationship to types of aggression in children of both genders. Unlike the PVs hypothesized for this study, these same variables in Gordon's study were hypothesized as CVs and basic empathy was the PV. Additionally, Gordon's objective was to hypothesize if certain types of empathy in general had a causal impact upon certain types of aggression in children. However, since this study instead examined aggression variables in male youth as predictors to determine if each had a statistically significant relationship to basic empathy, a causal relationship resulted regarding aggression subtypes in relationship to overall basic empathy. This examination of the data and analysis in turn produced statistical results that supported the alternative hypotheses for both PV's, and thus the null for each research question was rejected.

At the risk of over-simplifying Gordon's (2013) research, the hypotheses that were explored in that study highlighted the need for a debate about whether the presence of cognitive and affective empathy occurred dependent upon the type and level of aggression observed in children. On the contrary, the PV's (e.g., cognitive and affective empathy) in Gordon's study were found to have a correlation with proactive and reactive aggression. Therefore, Gordon's research supported several of the niche underpinnings and exploration of focus for this doctoral study regarding youth aggression in 13 to 18-year-old males who may have exhibited acts of proactive and or reactive aggression, and

as a result were found to indicate a statistically significant relationship to overall basic empathy.

In addition to Gordon (2013), the research gap in this study resonated in part from the work of Su, Mrug, & Windle (2010); Dadds et al. (2012), and later Bussey, Quinn, and Dobson (2015) whom explored moral dyscognitive reasoning and psychopathy development in traumatized juveniles, primarily males. The study topic of callous and unemotional (CU) traits in children and youth added further inquiry and study implemented by Muñoz et al. (2011) and Delič et al.'s (2011) into how empathy deficits occurred during the natural stages of social emotional development in children. Pemment (2013) and Dewar (2014) provided additional specific research data regarding the developmental stages of psychopathy and narcissism in children.

Out of an overall collective sample of $N = 102$ males, data were collected from 65 voluntary, anonymous male adolescent participants. Examining variables then in terms of whether proactive and reactive aggression had a statistically significant relationship to overall basic empathy became the primary focus and research gap explored throughout this quantitative study. Two survey instruments were implemented to generate key evidence-based data necessary for supporting or refuting the variables and hypotheses under proposed study. Four small to large urban public secondary schools were chosen within the state of Arizona as prospective research sites—three of which were specifically alternative secondary educational settings, and one of which was a general comprehensive secondary educational setting with behavior classrooms. This chapter in the end provided recommendations that could be considered potential contributions to enhancing further inquiry and research on the topic of male youth aggression in general,

its subtypes, and best-practices for implementing social emotional supported to ameliorate pervasive patterns of aggression in children and youth.

Summary of the Study

In summary, it was not fully known to what extent, if any, male youth proactive and reactive aggression predicted overall basic empathy. From an overall target population of 600 adolescent males in grades 9 through 12 drawn from four small to large urban public secondary schools in the state of Arizona, there were 102 random prospective participants who consented to be participants in this study from which 65 fully participated. Participants were provided two survey instruments to determine whether there existed any statistical relationship between aggression subtypes (e.g., proactive and reactive) and the EQ competency of empathy. Variables which were considered were a school's environment (e.g., school climate, demographics, and class size) as well as the type of behavioral intervention program being implemented at each site although these variables were not measured or quantified in the statistical analyses. To highlight features and statistics within this gap from the extant literature on male child and youth aggression, it was hypothesized that results from this study would offer a significant contribution to the emergent literature regarding the biopsychology of childhood aggression in general, and furthermore contribute to the dearth of research on empathy as a EQ competency that could be used to ameliorate male youth aggression. The two evidence-based survey instruments were therefore used to support this research gap: The Basic Empathy Scale (BES) (Jolliffe & Farrington, 2006) and the Reactive-Proactive Aggression Questionnaire—Child (RPAQ-C; Raine et al., 2006).

Chapter one introduced the study on male youth aggression and its historical and empirical foundations, specifically examining aggression pathologies such as proactive and reactive aggression subtypes. The purpose for the study was presented along with research questions and hypotheses. An explanation was given for how the research will advance scientific knowledge of the topic. A rationale for the study and this researcher's recognition of a gap in the literature was provided along with an explanation of the research design, some key defined terms, assumptions as well as limitations and delimitations, and a summarization of the organizational framework for the research. Chapter two reviewed the extant literature on child and youth aggression and briefly explained the background to the problem of the subject. Theoretical foundations for each survey instrument were provided.

A detailed explanation was given for trait behaviors of proactive and reactive aggression, and where the status was on empathy research. Additional research explored social emotional intelligence, attributes of male youth aggression, an examination of Gordon's (2013) research on proactive and reactive aggression to that of cognitive and affective empathy, and offered several pictorial models for the biopsychology of male aggression as well as emotional intelligence. Chapter two offered an overview of the research on empathy and learning. Finally, Chapter three reintroduced the study's methodology, purpose and problem statements. The research design was briefly explained, along with an overview of the population under proposed study and its demographic characteristics. A deconstruction of validity and reliability results from each of the survey instruments used was explained as well as any resultant ethical considerations and potential limitations and delimitations that resulted in the findings.

Summary of Findings and Conclusion

An analysis of the data was conducted based upon two research questions and hypotheses to determine if indeed a statistically significant relationship existed between three main variables: basic empathy, proactive aggression, and reactive aggression. Specific descriptive analyses were gathered upon the population sample of 65 participants using data results generated in SPSS, version 24. This statistical tool was also used to test for violations of the assumptions of a multiple regression analysis, specifically assumptions of normality, correlations, and multicollinearity. Visual tables and graphs were used to support the hypothesis and analyze the predictor and criterion variables, such as a normal p-p plot of regression (Figure 5) and a scatterplot of regression (Figure 6). Finally, a path analysis was conducted to determine if any causal (non-directional) relationships occurred between the variables.

The multiple regression analysis was applied to test the hypotheses which could support the theoretical and practical tenets of cognitive and affective empathy as a criterion measure of total empathy via the BES instrument. This in turn supported the hypothetical assertions for the presence of a relationship between proactive aggression and overall basic empathy as stated in RQ_1. However, no significant correlation was found between reactive aggression and empathy, originally hypothesized in RQ_2 as a statistically significant relationship.

Likewise, correlational and coefficient data revealed that a reactive aggression was a significant negative predictor of overall basic empathy after evaluating the results from Table 11 (p. 132). Data findings thus supported the hypothesis that a statistically significant predictive relationship existed between reactive aggression and overall basic

empathy when, for example, participant scores decreased for reactive aggression as basic empathy scores increased. The following research questions and hypotheses therefore drove the findings and conclusions for this study, and thus provided the epistemological foundation to assert that, one, there were two types of aggression; two, that each type or subtype differed in response to social and emotional intelligence; and three, that proactive and reactive aggression had a statistically significant relationship to overall basic empathy.

Findings for research question 1. Did proactive aggression in male youth predict a relationship to overall basic empathy? The alternative hypothesis statement was accepted since a significant relationship occurred as supported by the data. Here, data findings indicated that proactive aggression had a strong positive predictive relationship to overall basic empathy data. For example, higher proactive aggression scores indicated a predictive relationship to lower BES scores. Focus specific to individual and group scores for both the RPAQ-C in terms of proactive aggression and the BES, however, would require further exploration in order to make any specific correlations.

Findings for research question 2. Did reactive aggression in male youth predict overall basic empathy? The alternative hypothesis statement was accepted since a statistically significant relationship occurred as supported by the data. Results from a multiple regression supported findings for rejecting the null hypothesis of RQ_2. Reactive aggression data indicated a negative predictive relationship to overall basic empathy in participant responses. These results showed that, for example, lower reactive aggression scores appeared to have a predictive relationship to higher BES scores. Focus specific to

individual and group scores for both the RPAQ-C in terms of reactive aggression and the BES would again require further exploration in order to make any specific correlations.

These findings supported the early theoretical foundations for the biologic bases of behavior originally put forth by Titchener's (1908/2013) theories , and more recently theoretically supported by de Wied et al. (2012). They argued that the model for biopsychology of aggression in children and youth indicated strong sociopathic and conduct traits consistent with high levels of proactive aggression while low to minimal for reactive aggression. Likewise, this study's findings and literature supported the theory of polyvictimization as a post-trauma anxiety comorbid to overall aggression in youth (Cyr et al., 2012; Ford et al., 2010; Moore & Ramirez, 2015).

Study findings also supported the rejection of the null for each research question whereby each RQ was first posited in Chapter 1 as possibly having a statistically significant predictive relationship between proactive and reactive aggression and overall basic empathy, and was consequently proven after examining data results. It was asserted in turn that these predictive relationships could indicate the need for EQ competency-based empathy social skills to help ameliorate proactive aggressive youth. Likewise, the overarching tenet of this research study regarded the promotion of schools and school districts to implement competency-based empathy social skills through SEL strategies for families and classroom settings. This researcher asserted that empathy could be an antidote for nurturing cognitive behavioral and social emotional change in polyvictimized youth (e.g., experienced multiple levels of life trauma over a lifetime). The dearth of evidence-based research specific to polyvictimization and male youth aggression was evident after examining the literature. When correlated with biopsychosocial attributes of

aggression, and examining additional research on youth sociopathy, psychopathy and narcissism (as well as other co-occurring issues such as callous and unemotional (CU) traits), the evidence was overwhelmingly clear that a gap existed in the current literature on youth aggression and empathy alone as variables specific to adolescent males lacking overall basic empathy, and thus why this became the primary research topic for this study.

Finkelhor et al.'s (2007) early research provided the foundational and historical context for the subject of this study. Their research focus regarded polyvictimization and its long-term effects upon social emotional development in children. The research topic of male child polyvictimization was later published by Cyr et al. (2012); Ford et al. (2010); and Moore and Ramirez (2015), and drew attention to co-occurring post-trauma and or the sexual exploitation of male children and youth. However, it was not until Gordon's (2013) study that any kind of correlative link was made between proactive and reactive aggression as variables to that of cognitive and affective empathy in children. To further the argument and expose a gap in the literature it was then posited that empathy could be an EQ competency social skill that can be learned. However, this depended upon the type of behavioral aggression displayed and the statistical analyses used to support what intervention/prevention model of learning would offer the greatest impact for reactive aggressive male youth.

One such intervention posited as an antidote for cognitive and behavioral change was *"The six seconds EQ in action model of emotional intelligence,"* a biopsychosocial diagram for children and youth who have exhibitions of conduct disorder (CD) traits, CU traits and aggression, narcissism, and or sociopathy that correlate to proactive aggression.

It was also argued that empathy as an EQ competency could indicate that a negative relationship existed with reactive aggression, and therefore reactive aggression may show that higher scores on the BES, for example, could indicate that reactive aggression youth would respond favorably to empathy-based competencies and prosocial skills development. Several theoretical underpinnings came to bear when examining these variables and resultant data analyses.

Humanism, for example, fundamentally shaped research, theory and practice in terms of including empathy as a learnable competency through Rogers' (1951) client-centered theory of behavioral change. For this doctoral study, findings indicated that other notable researchers, such as Tudor (2011) and Elliott et al. (2011) later enhanced the objectives and interventions of Rogers' original theoretical approach to humanism by introducing research focused primarily on empathy as a construct of Transactional Analysis. Additional constructs also included socio-centric and emotional well-being therapeutic approaches.

ToM (Pinel, 2014) was another significant theoretical contribution that has shown highly effective treatment for aggression using empathy-based strategies. More specifically, the simulation theory of empathy (STE) by Meneses and Larkin (2012) asserted that children could use their own range of emotions to predict what others would do. Therefore, it was assumed through using STE that children could project their own states of mind onto others to ameliorate negative behaviors. Notation was given by Meneses and Larkin to indicate that aggression could be minimized; although, there were no specific references that addressed male youth aggression coupled with life experiences of multiple incidences of trauma (e.g., polyvictimization) and the ability or inability to

demonstrate empathy in male youth. Data analyses from this study however revealed that a statistically significant negative relationship occurred between reactive aggression and overall basic empathy.

Although it must be noted here that some of the data findings (e.g., multicollinearity of variables) were not as robust for rejecting the null of RQ_2, the data nonetheless indicated a statistically significant relationship occurred between both variables. While the predetermined alpha significance level of .05 was met, the data were slightly less than what was hypothesized in terms of making a strong predictive correlation for this research question. Perhaps other factors unexplained by the data pointed to a possible relationship between male biopsychosocial development of proactive and or reactive aggression and emergent patterns of CU traits such as narcissism and sociopathy. Again, this would be worth examining in any future replications of this study, including whether proactive and reactive aggressive youth of both sexes have the capacity to learn overall basic empathy. Theoretically, it would need to be determined if a more robust statistically significant positive relationship of proactive aggression—and any associated characteristics such as CU traits, narcissism, and or sociopathy--occurred with overall basic empathy. Considering the findings herein were predicated upon extant research literature examining male youth, their developmental psyches, and stereotypical masculine norms (Delič et al., 2011; Van der Graaf et al., 2012), it now can be arguably asserted that proactive and reactive aggressive male youth have shown a statistically significant relationship to overall basic empathy.

Finally, some evidence-based research literature has highlighted male aggression attributes in terms of how some males become unconsciously socialized in ways that

disengage them from showing innate emotions, and thus replace empathic emotions with defense mechanisms for avoiding the expression of empathy. This arguably was viewed as intentional, inadvertent, or an unconscious developmental behavioral pattern over time. Therefore, it was determined that if a negative relationship emerged for reactive aggression in relationship to overall basic empathy, interventions supporting empathy as an EQ competency through *"The six seconds EQ in action model of emotional intelligence"* or the biopsychosocial model of emotional intelligence could possibly support change in reactive aggressive youth to build positive coping mechanisms that ameliorate aggression tendencies.

Although data findings regarding reactive-proactive subtype aggressors were not explored in this study, some evidence in the literature pointed to a possible correlation between this subtype of aggression in children (not youth) and improved learning of empathy, albeit a statistically weak. This could be explored further by researchers interested in replicating this study. Determining if any robust relationship exists between proactive/reactive subtype aggression and prosocial skills competencies such as empathy (or prosocial skills in general) would need to be specifically explored in any replication of this study.

Importance for supporting this doctoral study and its findings has been predicated upon the extensive body of research knowledge, findings and literature examined in detail throughout Chapter 2. Proactive aggression, for example, had its trait developmental roots in the psychological profiles of conduct and oppositional defiance disorders as well as anti-social personality disorder (ASPD), a biopsychosocial (or dissocial) characteristic of aggression and psychopathy diagnosed predominately in male

children and youth (Bobadilla et al., 2012; Fite et al., 2010). Research findings by Keen (2006) also supported and expounded upon Titchener's (1908/2013) early 20th century studies regarding neural brain-based behaviors and emotions (and for that matter much later findings regarding brain behaviors and emotional intelligence development by Gardner, 1983; Goleman, 1995; Ekman, 2003; Ekman & Friesen, 2003; and Salovey & Mayer, 1990). It could be argued then that based on findings here some neural bases of aggressive behaviors can be ameliorated with exercises in basic empathy and empathic logic for those youth whom are more reactive aggressors as opposed to proactive aggressors.

Foundations were paved for further inquiry and redefinition of aggression subtypes to correlations in social emotional development in children. This in turn led to extensive research into psychopathy, sociopathy, neural brain behaviors and social emotional learning (SEL) and development within children and youth, reframing outdated psychological and psychiatric definitions and attributes of aggression, human development, emotional well-being as well as the biopsychological constructs of influence previously considered the domain of adult diagnoses (Decety, 2011; Decety & Michalska, 2010; Decety et al., 2014; Klass, 2012). Exploring these roots of neuroscience and the biological basis for anti-social behavioral development (e.g., sociopathy, psychopathy, and conduct disorders) would therefore become popular studies in child psychological and developmental research, from Raine et al. (2006) and Mayberry and Espelage (2007) to Huntington's (2012) findings that linked biopsychology of emotions to childhood aggression and later Gordon (2013) on childhood aggression and empathy subtypes.

It was not until more progressive research literature regarding the biopsychology of aggression and "third variable" options for how it developed that the psychology research community began to broaden its perspectives and look to other on-topic contributors researching why some children and youth developed conduct and dissocial trait behaviors and others did not. Findings by Nesdale et al. (2013), for example, offered supporting data for how some children easily developed group-think norms for rationalizing aggression during their concrete operational stages of cognitive development (i.e., children would join a gang or group of shoddy friends to cause harm rather than do good deeds). Others such as Renouf et al. (2010a), as well as in a sister study (Renouf et al., 2010b), examined the roots of aggression and proactive and reactive subtypes in correlation to ToM and peer relationship development.

Yet other emergent researchers on childhood aggression added more popular and culturally relevant literature to the canon. Anderson et al. (2010) focused on dispelling the pop media myth believed by gamers of violent and sexually suggestive videos that these types of games have no influence upon decision-making. Anderson et al.'s findings proved that youth obsessions with violent video games did affect decision-making and unconsciously nurtured aggressive behaviors more often in males compared to females. Jones et al. (2010) and Schwenck et al. (2012) discovered through research that children and youth with autism were not immune to being callous (e.g., having CU traits) and expressing aggression and harm. Each team of authors looked at how the impact of empathy could ameliorate aggressive decision-making. Yet both did not go as far as this doctoral study to identify a statistically significant relationship between aggression subtypes and overall basic empathy. Each did however suggest that aggressive children in

general *could be* empathic compared to children who are sociopathic and or conduct-disordered. The inherent weakness in this argument was that it could be considered to have obvious face-validity, and therefore not a profound conclusion.

As detailed in Chapter 2 authors Rathert et al. (2011) furthered the argument by deconstructing aggression behaviors into two new subtypes: Aggression with effortful control versus psychological control when linked to childhood proactive and reactive aggression and the overall biopsychology cycles of aggression. Unlike this study, the exploration and data findings by Rathert et al. did not necessarily look to an antidote for aggression, such as by examining social emotional intelligence constructs like empathy. They focused their research primarily upon defining the underlying root causes of aggression subtypes. Their findings nonetheless were foundational support for this study. Arguably more progressive research by de Wied et al. (2012), whose work greatly influenced this researcher's own examination of aggression subtypes as well as support for the biopsychosocial model of aggression and emotional intelligence, correlated verbal and facial autonomic responses in male teens diagnosed with co-occurring conduct disorders and CU traits. Participants for their study were observed for autonomic facial expressions and non-verbal behaviors while viewing empathic-arousing film clips. de Wied et al.'s research thus made significant headway into advancing knowledge and scientific evidence-based research regarding social emotional intelligence previously examined in studies by Ekman (2003); Ekman and Friesen (2003); Goleman (1995); and Salovey and Mayer (1990). In the end, some weaknesses became apparent in terms of participant data as compared to what this researcher originally projected for the study. For example, out of 600 potential male participants, 102 consented to participation and

only 65 ultimately completed both survey instruments—the BES and the RPAQ-C. The original expectation for numbers of participants was to be between 80 and 150 from the pool of 600 male adolescents between 13 and 18 years-of-age.

Implications

Research findings from this study helped support and describe the theoretical framework and foundations and thus assertions regarding adolescent male aggression and its relationship to overall basic empathy. This study's data findings revealed, for example, that certain kinds of male youth aggression (e.g., reactive) showed a negative relationship to overall basic empathy, and thus supported the assertions from Chapter 1 and 2 that empathy-based competency prosocial skills could ameliorate reactive aggressive patterned behaviors. In terms of proactive and reactive aggression subtypes, this regarded study participants who would, say, liked to inflict harm upon others physically and or verbally (e.g., proactive aggression), or irrationally believed others want to inflict harm on them and thus perceived their social world as threatening (e.g., reactive aggression). Prior research on this topic asserted that deficits in empathy of aggressive youth directly correlated to strong deficiencies in social emotional caregiving during the sensorimotor through concrete operational and cognitive developmental stages of childhood, for example, infancy through age 11 or so (Bugental et al., 2012; Van der Graaf et al., 2012; Whelan et al., 2014). Similarly, other researchers argued that social information processing (SIP) and resultant genetic neural brain deficits were determinant causes for proactive and reactive aggression in males (Arsenio & Ramos-Marcuse, 2014; Lopez-Duran et al., 2009). Even further, Dewar (2014) posited that empathy was a teachable social emotional construct as long as the child or youth was not an aggressive

personality type, irrespective of whether the aggression was proactive or reactive in scope or nature.

The participant sample for this study was of predominately Hispanic/Latino origin (e.g., 63%). For the BES instrument, out of a total score on 20 items with possible score ranges from 1 to 5 on Likert-type statements (e.g. Strongly Disagree = 1; Disagree = 2; Neither Agree nor Disagree = 3; Agree = 4; and Strongly Agree = 5), and overall scores between a minimum of 20 to a high of 100, an examination at the mode of scores indicated that there were 10 participants who had scores of 60 out of a possible 100—the most common score. Six participants had a score of 59 and six participants had a score of 58. Other than for five participants with scores of 56 and another with scores of 53 respectively, all other scores were either singletons or of two or three participants. No survey score was higher than 73 out of 100 possible points. The higher the score the more cognitive, affective, and or overall total empathy was indicated for that participant.

The RPAQ-C instrument was a 23-item questionnaire measuring for levels of proactive and reactive aggression with Likert-scale response choices of Never, Often, and Always. Response choices, for example, were scored and coded with Never as 0, Often as 1, and Always as 2. Proactive aggression items were survey statement numbers 2, 4, 6, 9, 10, 12, 15, 17, 18, 20, 21, and 23. Reactive items were survey statement numbers 1, 3, 5, 7, 8, 11, 13, 14, 16, 19, and 22. Scores of between (0 and 2) were then summated for each subtype of aggression as proactive and reactive scales to arrive at a total score for each PV per participant. Thus, for total proactive aggression the total scores could range between (0 and 24). For reactive aggression, total scores could range between (0 and 22). A participant could theoretically have an overall total RPAQ-C aggression score between

(0 and 45). The higher the score per PV the higher level of that attribute of aggression was determined as being the daily life characteristic of that participant. This researcher therefore created score ranges to better identify levels of proactive aggression, and thus best identify the frequency level of those score ranges. For example, Total Proactive Aggression Scores from (0 to 6) indicated low proactive aggression. Scores from (7 to 12) indicated moderate proactive aggression. Scores that ranged from (13 to 18) indicated moderately high proactive aggression. And finally, scores that ranged from (19 to 24) indicated high or very high proactive aggression. The highest participant score for proactive aggression was 21. This was one (n = 1) participant. The lowest score a participant could have was zero (0). There were seven (n = 7) participants with a score of zero (0). The mean score was seven (7) out of 24 total possible points. This established that the average participant was a moderately proactive aggressive individual, although 11 participants out of 65 had a score of five (5), and thus were considered low proactive aggressors.

For Total Reactive Aggression Score, however, the frequency data differed. Again, score ranges were created to better identify levels of reactive aggression, and thus best identify the frequency level of those score ranges. Total Reactive Aggression scores could range between (0 and 22). Therefore, ranges of scores were established as follows: Scores of (0 to 5) indicated low reactive aggression; scores from (6 to 10) indicated moderate reactive aggression; scores that ranged from (11 to 16) indicated moderately high reactive aggression; and finally, scores that ranged from (17 to 22) indicated high or very high reactive aggression. The highest participant score for reactive aggression was 21. This was one (n = 1) participant. The lowest score a participant could have was zero

(0). No participant had a score of zero (0). However, there were seven (n = 7) participants with a score of one (1). The mean score was 11 out of 22 total possible points. This established that the average participant was a moderately high reactive aggressive individual, with the highest number of participants (n = 7) out of 65 who had a Total Reactive Aggression Score of 14—again, moderately high reactive aggression. The following section therefore provided an explanation of the theoretical frameworks and models that guided this study and thus supported the alternative hypotheses for this study.

Theoretical implications. There were a few theoretical frameworks and models which guided this study and its findings in terms of male adolescent aggression types and indicators from the BES of lower or higher empathy scores as a pathway to ameliorate that aggression, and especially for those who have been polyvictimized (e.g., endured two or more instances of social, emotional, and or physical trauma). In terms of child and youth aggression itself the biopsychosocial model of proactive and reactive aggression was explored. Here, theory stated that there were many underlying predictors for and causes of childhood and youth aggression. Renouf et al. (2010a) and Renouf et al. (2010b) used ToM to help young people become positively self-aware of their own mental processes and those of others. Anderson et al.'s (2010) research on video game violence was found to be a nurturing precursor to aggression in males due to cultivating aggressive obsessions from video game subliminal imagery and aggressive male language. de Wied et al.'s (2012) study found that when correlating multiple variables of verbal, facial and autonomic responses to emotive and empathic-arousing images they were able to easily identify adolescent males who had co-occurring conduct disorders and CU traits.

One type of evidence-based antidote (as framed in this study) was *"The six seconds EQ in action model of emotional intelligence"*, a biopsychosocial diagram of social and emotional intelligence for children and youth who, amongst other social and emotional deficits, have shown consistent patterns of reactive aggressive behaviors (as opposed to proactive aggression). Likewise, the theoretical tenets of *"The six seconds EQ in action model of emotional intelligence"* supported other associated empathy-based models discussed in-depth in Chapter 2. The following were chosen empathy-based models that supported hypotheses three for this study: CBCT, CCT, RC/RJ, and roots of empathy.

Each was described as an enriching framework for assuaging aggression in children and youth. CBCT, for example, was described by Negi (2014) as understanding that self-centered behaviors cause some level of suffering for self and others, nurturing a deep sense of empathy for others. Compassion is fostered through a sort of in vivo process that begins with the practitioner's mental stability, and then moves toward cultivating a connectedness with others using eight guiding principles. RC are tenets of RJ theory and practice—a kind of cognitive behavioral and empathic logic and reasoning support group for resolving conflict and aggression. And finally, roots of empathy is an evidence-based classroom instructional social skills program for reducing aggression and bullying amongst school-age children and youth using social emotional intelligence and learning to increase empathy.

Other guiding theoretical models for this study were the foundational tenets of Humanism in terms of its emphasis upon building empathy as a learnable competency (Rogers, 1951), and more specifically client-centered theory (CFT) of behavioral change.

Tudor (2011) and Elliott et al. (2011) would advance Rogers' objectives and interventions and thus introduced research specific to empathy as a construct of Transactional Analysis along with other socio-centric and social emotional learning (SEL) therapeutic approaches. Additionally, ToM practices (Pinel, 2014) were referenced and supported as interventions for addressing aggression using empathy-based strategies such as through the skills practices of Simulation Theory of Empathy (STE) proposed by Meneses and Larkin (2012). Here, research evidence revealed that if children were to use their own range of emotions to predict what others might do, perhaps much like experiencing another's emotions vicariously, they could then project their own states of mind onto others as an antidote for patterns of negative thinking, decision-making, and aggressive behaviors. These theoretical frameworks guided and supported the interpretation for each research question and hypotheses in this current study.

RQ1. Did proactive aggression in male youth predict overall basic empathy? The alternative hypothesis statement was accepted since theories suggested that many underlying causes for male aggression come from a myriad of biopsychosocial forces which could be viewed as provocateurs for proactive aggression and even narcissism. This result provided the underlayment and therefore psychological groundwork for aggression in early to mid-childhood in which male proactive aggression and overall basic empathy indicated that a statistically significant relationship occurred. Future research replications would need to examine this relationship further by focusing on specific scores and groups of scores from the RPAQ-C and the BES.

RQ2. Did reactive aggression in male youth predict overall basic empathy? The alternative hypothesis statement was accepted since findings in this study showed that a

significant statistical relationship occurred between reactive aggression and overall basic empathy. Again, future research replications would need to examine this relationship further by focusing on specific scores and groups of scores from the RPAQ-C and the BES. This study's findings correlated with the theoretical tenets of Humanism, the implementation of *"The six seconds EQ in action model of emotional intelligence"* and ToM. As noted earlier, these indicators also supported the theoretical foundations for the biologic bases of behavior originally posited by Titchener's (1908/2013) theories of experimental psychology. More recently research by de Wied et al. (2012) posited that the biopsychology model of child and youth aggression indicated high levels of proactive aggression were nurtured by sociopathic and CU traits, and thus supported the theory that polyvictimization was a post-trauma anxiety comorbid to aggression and aggression subtypes specifically (Cyr et al., 2012; Ford et al., 2010; Moore & Ramirez, 2015).

Since the gender variable for the present study was front and center (e.g., only examined a specific age population of males) it would be advantageous for future research to enhance the present study as well as Gordon's (2013) findings to include both genders of adolescent youth. Establishing a relationship to social cognitive learning with specific aggression types—proactive and reactive—would also offer a significant contribution to emerging cannon on child and youth aggression. Additionally, any expansion of potential participants would need to occur by being drawn from a larger participant pool than was available for this study. For example, school districts would need to allow researchers greater access to campus locations and have more compliance and buy-in by site-based administrations and educators.

The schools studied for this research were also majority minority populations (i.e., Black, Hispanic/ Latino and American Indian), with roughly 50 percent of the students in designated site-based behavioral modification programs. Thus, familial cultural biases of psychology by first and second-generation Hispanic/Latino parents/guardians and American Indian parents/guardians, for example, were a hindrance to greater participation for this study. Broader racial diversity and parental compliance would need to be expectations that could be addressed through campus-based parent informational meetings and flyers sent home. These approaches in turn may allow for greater buy-in across school campuses in terms of understanding the assumptions of an interventionist model for social emotional, intellectual, and behavioral growth. Although not entirely limiting, one could argue that data findings in this study may not have exactly mirrored other male teens in the general population. Transgendered youth as well would need to be considered potential participants. Finally, there are many epistemological arguments being made regarding the topic of polyvictimization and trauma-informed schools. Since polyvictimization in and of itself was not a specific variable in this study, it may be appropriate for future researchers to explore and examine any potential relationship to trauma and male youth aggression for future replications of this and other studies on the topic of male youth aggression.

Practical implications. New insights learned from the present study were effective in highlighting the dire need for clinical mental health practitioners, secondary school behavioral health providers, and educators to systemically generate an integrative model for empathy-based social emotional intelligence (SEI) and SEL to temper and assist in behavioral and cognitive changes for male youth with reactive aggression.

Likewise, it was asserted that the etiology of proactive aggression in young males indicated that they may lack overall basic empathy. Therefore, based upon the current and previous supportive literature in this area of study given extensive exploration in Chapter 2, it was surmised that those youths, for example, with CU traits, conduct disorders, oppositional defiant disorder, sociopathy and or psychopathy trait behaviors as well as personality disordered symptoms may not effectively respond to empathy-based SEL competency skills interventions. This would arguably include court-ordered types of intervention services (i.e., anger management support groups) that research shows are more often outdated, inexpensive intervention models often adopted by many secondary or K-12 school districts as well in the form of basic social skills support groups. Some popular methodologies commonly adopted in schools, for example, have been Dowd and Tierney's (2005) teaching social skills to youth; Glick and Gibbs' (2011) aggression replacement training (ART) guided practice curriculum; Goldstein's (1999) the PREPARE curriculum; Gresham and Elliott's (2008) social skills intervention guide—K-12; and Walker and Holmes' (1987) the ACCEPTS program. Other behavioral interventionist models, such as Fay and Fay's (2016) love and logic theory of classroom management and discipline, have gained tremendous support over the last decade by many public-school districts and private faith-based school organizations for its conservative right and implicit religious, pro-family approach to creating positive behavioral change in disruptive children and youth (Buttner & Fridley, 2007).

Ultimately, if secondary school districts were to focus attention more strategically on male youth aggression, and thus support professional development training for staffs as well as parents regarding the biopsychosocial roots of aggression and its underlayment

of emotional and physical trauma, then more transparent and polemical discussions could occur to address and thus effectively treat reactive and proactive aggressive behaviors in youth. A few significant and evidence-based models were then introduced to help support change and thus nurture the conversations around addressing the clinical identifiers of proactive and reactive male aggression (e.g., conduct disorders, oppositional defiance traits, sociopathy, psychopathy, and comorbid "maladaptive narcissism" (Barry, Kerig, Stellwagen, & Barry, 2011). One such model was the which recognized EQ personality *"The six seconds EQ in action model of emotional intelligence"* markers for empathy and compassion. Implementing this intervention model would provide reactive aggressive male youth the intrinsic and intuitive understanding required to better grasp the roots of one's spectrum of emotions, and thus how one's biopsychosocial aggressive traits may be stunting social, emotional and intellectual growth—even lifelong. Others introduced were, for example, CBCT for youth in which learners would gain a more intuitive and intellectual understanding of their self-centered behaviors, and thus learn about their own empathic understanding of the emotional impact of aggressive behaviors have upon others (Negi, 2014). CCT, RJ, and roots of empathy practices were introduced as methods for providing classroom-based social emotional learning skill-sets focused upon the immersion of empathy and solution-focused interventions that would have the intent of ameliorating male youth reactive aggression long-term.

Nonetheless, several research teams were also noted in this study for their contributions toward improved understanding of and knowledge for the biological correlates of proactive aggression and youth sociopathy. Raine and Glenn (2014) specifically contributed significant research evidence to support MRI imaging and

autonomic facial recognition evidence that pointed to proactive aggression, conduct disordered youth, and youth with sociopathic traits as having the biological (e.g., neural), socialized and environmental impulses for aggression and psychopathy. These types of youth were considered incapable of ever learning prosocial emotional skills around empathy despite some contrary research asserting a diametrically opposite opinion. In that regard, there were researchers who argued that early childhood and parenting skills, skills-streaming of prosocial skills, and psychotherapy could offer amelioration for emergent sociopathy and CU traits, such as research supported by Dadds et al. (2012); Powell et al. (2011); Thomaes, Bushman, Orobio de Castro, Cohen, & Denissen (2009); and Waschbusch, Carrey, Willoughby, King, and Andrade (2010).

However, one of the foremost research psychologists studying the biopsychology of childhood sociopathy, psychopathy, aggression and conduct disorders, psycho-criminologist, A. Raine, argued extensively (as have researchers Bezdjian et al., 2011; Black, 2013; Brendgen, Girard, Vitaro, Dionne, & Boivin, 2015; Denson et al., 2012; de Wied et al., 2012; Manti, Scholte, Van Berckelaer-Onnes, & Van Der Ploeg, 2009; Mehta, Goetz, & Carre, 2013; Moore & Ramirez, 2015; Reidy, Shelley-Tremblay, & Lilienfeld, 2011; Shirtcliff et al., 2009) that neurobiological and psychosocial development aspects are the primary causes for sociopathic, CU traits, maladaptive narcissism, conduct disorders and proactive aggression in children and youth—especially males. Likewise, Raine and Glenn (2014) asserted that MRI imaging of dysfunctional neural brain pathways were very revealing of the neural behaviors of aggression in the part of the brain which produces empathy-based behaviors (i.e., the anterior insular cortex). For the first time, technology provided actual neurobiological visual evidence for

why children and youth with CU traits, maladaptive narcissism, conduct disorders and sociopathy/ psychopathy, and or proactive aggression were incapable of being empathic and morally reasoned individuals over their lifespan.

Those study participants already corrupted by inherited "bad" genes, such as with familial histories of personality disorders; serious and persistent mental illnesses (SPMI); and aggression and co-occurring addictions may likely have predispositions which affected the behavior and thus scores on the RPAQ-C and BES. This may likely have been the reason why data results from certain participants indicated a statistical significant positive or negative relationship to overall basic empathy. As evidenced by the supportive literature for this study, these results could have also indicated that the same participants lacked an understanding for basic social emotional competencies such as empathy often learned in early childhood. However, due to Raine and Glenn's (2014) new research regarding the neurobiology of aggression and sociopathy, it is now known that deficits in neural correlates necessary for identifying empathy, and how it is used as a means for engaging positively with others, may very likely have impacted how many participant scores were high for empathy and low for reactive aggression, and vice versa. Research literature examined in Chapter 2 showed that, for example, youth who were poorly acculturated socially and emotionally by their parents or guardians and families had early childhood issues of abandonment, adjustment and separation anxiety due largely to a lack of love and devotion by parents or guardians and caregivers.

These study results then may encourage public secondary school district leaders to reach out to mental health clinicians for integrative support services so to help teach psychological and psychoeducational constructs and interventions for addressing youth

aggression on school campuses and classrooms. Unfortunately, many school districts choose counterproductive ideological practices to address youth aggression and anger through basic social skills curriculums that ultimately ineffective toward addressing and ameliorating youth symptoms of aggression and mental health. Many secondary school program leaders lack the necessary training and understanding for how neuro-psychological and biopsychosocial forces shape aggression and aggression subtypes in children and youth. The success of any empathy-based learning model is predicated upon current evidence-based tools and antidotes for psychological disorders that schools could learn from and therefore implement in order to help reactive aggressors, for example, reduce aggressive tendencies and cognitions and replace them with more empathic socially developed character traits.

Future implications. This study found that while proactive aggressive male youth had a statistically significant positive relationship to overall basic empathy, and therefore indicated that they could not identify attributes of overall basic empathy on the BES, reactive aggressors showed a statistically significant negative relationship to overall basic empathy, indicating that they could identify attributes of overall basic empathy on the BES. All of the intervention models proposed in the study therefore addressed effective evidence-based treatments for reactive aggression to build and elevate empathy in male youth, such as using *"The six seconds EQ in action model of emotional intelligence"*, CBCT, CCT, and RC/RJ, to name a number. No proposed intervention models, however, addressed proactive aggression in this study other than references to behavioral modification and accountability/personal responsibility intervention methods to affect behavioral change in those youth with CU traits.

Curriculum programs and methodologies were however supported for doing group and whole classroom presentations on youth aggression (hence, the ART curriculum or social skills intervention guide (K-12) noted previously). Future research could address this variable with effective programs and models that seek to purely modify anti-social behaviors and thus support behavioral compliance to rules of social norms. Research has consistently shown that these types of behavioral modification interventions focused around accountability and basic social skills learning have more improved outcomes with proactive aggressors and those with CU traits. Models that focus on basic empathy, prosocial skills streaming, social emotional intelligence, and other EQ trait competencies are weak at-best in offering proactive aggressors any amelioration from being aggressive personality types, primarily due to their biopsychology (i.e., the neural deficits that impact their ability to demonstrate basic empathy social skills).

In the end, a new theoretical issue emerged from the present study based upon the data findings and the implications of these results, and thus would need to be explored in future research. Much if not all previous research studies on human aggression only examined data on empathy and correlates to aggression from the perspective that empathy was an emotion construct incapable of being demonstrated by those with aggression tendencies—male and female alike. None examined overall basic empathy for any statistically significant relationship to reactive and proactive aggression. Other biopsychosocial constructs, such as narcissism, should be considered as well in future research to determine if, for example, it would have a modifying effect upon proactive or reactive aggression in youth. Future research could also focus on the biopsychology of

male youth aggression and its postmodern relationship to social cognitive learning theories in education. Some of the basic assumptions underlying Bandura's (2001) original theory (e.g., attention—sensory, arousal, and perceptual; retention; and motivation), for example, could be explored in relationship to the postmodern sciences of neuropsychology, neurobiological roots of moral and ethical behaviors, and constructivism around youth aggression.

Recommendations

Recommendations for future research. As described previously, this section of the study presented a few recommendations for future research. Because of this study's findings and the evidence-based research that supported it, there emerged nine areas of study which would need further explanation and research to support other possible gaps in the extant literature regarding youth aggression. **1)** Future studies would need to advance the findings of this present study in addition to expounding upon Gordon's (2013) research findings by including both genders and seeking a larger participant pool. This would then help establish that a correlation may exist between social cognitive learning theories and proactive and or reactive aggression. This study's focus was 100 percent upon male youth; however, it was established early on in this study that supportive evidence-based literature regarding proactive aggressors asserted that it was primarily (although not predominately) a male characteristic, and thus indicated through data findings that these subtype aggressors could not strongly identify attributes of empathy social skills due likely to having character traits of maladaptive narcissism, polyvictimization, and or a dysfunctional biopsychology.

2) Expanding the reach for potential participants should be drawn from a larger participant pool. This could very likely provide smaller margins of error in the data, in turn leading to more robust validity measures. **3)** School districts would need to allow researchers greater access to campus locations; and thus, receive more compliance and agreement by site-based administrations and educators. **4)** The realistic racial makeup of participants will need to broaden to multiple ethnicities since this study supported research findings from primarily Hispanic/Latino male participants (63percent), and thus lacked ethnic equity. **5)** Family cultural biases of psychology by first and second-generation Hispanic/Latino parents/guardians as well as American Indian parents were a hindrance for the present study. More multicultural outreach in advance of any future research will be necessary to establish a framework of buy-in and sensitivity from families whose culture does not historically trust nor engage in psychological examinations of behavior and mental health of its members. **6)** Secondary schools should establish strategic protocols for treating anti-social behaviors and proactive aggression by, first, providing professional development opportunities for school staff to learn about the biopsychosocial tenets of youth aggression and trauma; and second, offer it to parents or guardians of students. **7)** Secondary schools need to seriously consider reaching out to community mental health clinicians and research psychologists to perhaps establish a school-based mental health hub on several designated school campuses as pilot programs for treating and addressing youth aggression and the psychology of conduct disorders. This could be in collaboration with current school district behavioral health staff. **8)** Future research will need to address any specific effective outcomes for proactive aggressors and those with maladaptive narcissism through models such as Dowd and

Tierney's (2005) *Teaching Social Skills to Youth*; Potter, Gibbs, and Goldstein's (2001) *The EQUIP Implementation Guide: Teaching Youth to Think and Act Responsibly Through a Peer-helping Approach*; and Glick and Gibbs' (2011) *Aggression Replacement Training (ART): A Comprehensive Intervention for Aggressive Youth (3e)*. Additionally, assessing for narcissism data findings in youth participants could easily be gathered by implementing an additional survey instrument—Ang and Raine's (2009) *Narcissistic Personality Questionnaire Child-Revised* (NPQC-R). **9)** And finally, future research on youth aggression and maladaptive personality disorders would need to focus on the biopsychology of male child and youth aggression and the postmodern relationship it may have to social cognitive learning theory in education. Any connections to neuropsychology and the neurobiological roots of moral and ethical behaviors around youth aggression, and an overall examination of scores and specific group scores from both survey instruments, would need to be examined for any direct correlations that may exist between the study variables. Examining the variable of empathy then from the perspective that reactive male aggressive youth could learn to be more empathic individuals was based upon the available extant literature supporting this study. Higher empathy scores on the BES, for example, indicated that a statistically significant negative relationship occurred with lower reactive aggression scores from the RPAQ-C. The converse was true for data findings regarding proactive aggression and its statistically significant positive relationship to lower scores on the BES.

Thus, further examination of the interconnectedness with Humanism and Rogerian ideology (or any other postmodern theoretical perspective) would be worth research exploration. Since this connection was posited as a contributing argument in this

study, researching for new and inventive ways to promote learning strategies and activities regarding empathy competencies for families and educational settings would help establish more antidotes for ameliorating child and youth aggression. According to the extant literature, this in turn would foster cognitive and behavioral change within reactive aggressive youth specifically—male and female alike.

Recommendations for future practice. There were several recommendations for future practitioners to follow as a result of this study's findings. First, the population sample was smaller than projected for in the present study. Despite actually having access to roughly 600 plus prospective male participants between four small to large secondary school campuses, there were some limiting factors which contributed to the final number of participants being far below expectations. One significant limiting factor was having less access to this larger participant pool due to limited timing and other social factors out of the control of the researcher. For example, a limited school calendar of time for effective implementation of the study was a major contributing factor. Therefore, more schools—even campuses with identified structural behavioral programs, although not necessary—need to be queried far in advance for prospective participants (e.g., two to three months) to allow more options for buy-in by school administrators, teachers, students and parents.

Second, since the research findings herein indicated that reactive aggression had a statistically significant negative relationship to overall basic empathy, these results likewise indicated that reactive aggressors may likely benefit the most from empathy-based competency prosocial skills models such as *"The six seconds EQ in action model of emotional intelligence"*, and even CCT, CBCT or perhaps PBIS interventions as

described in Chapter 3, compared to proactive aggressive peers. Therefore, it may be counter-productive to introduce these interventions models as a means toward ameliorating proactive aggression once proactive aggression has been identified. According to the literature, maladaptive narcissism may have been a moderating characteristic for whether reactive or proactive aggression impacted one's ability to identify attributes of empathy on the BES. Therefore, future researchers, educators, and or clinicians would greatly benefit from introducing models for SEL with proactive aggressors that emphasize instead accountability and responsibility measures for one's own destructive behaviors, actions, and decision-making. Examining narcissism as a possible study variable—predictive or moderating—should then be given serious consideration in the context of this study for future researchers. The NPQC-R would be a highly valid and reliable self-assessment survey instrument to measure for this data.

Several evidence-based approaches, such as using Glick and Gibbs' (2011) ART or Gresham and Elliott's (2008) K-12 social skills intervention guide were supported as evidence-based prevention and intervention methods for this purpose. The construct of social cognitive learning from a postmodern perspective including perhaps an epistemological argument for neuropsychological and biological bases of aggressive behavior would tremendously enhance the narrative put forth in this study as well as offer explanation toward a possible new gap in the extant literature. Future replication of this study and its research findings should be given serious consideration when examining specific scores and or groups of scores for any predictive relationships to whether either aggression subtype—proactive and reactive—could reveal that certain RPAQ-C scores statistically correlate to higher or lower scores for empathy on the BES.

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Appendix A.

IRB Approval Letter

GRAND CANYON UNIVERSITY

3300 West Camelback Road, Phoenix Arizona 85017 602.639.7500 Toll Free 800.800.9776 www.gcu.edu

DATE:	March 9, 2016
TO:	Aedan Hanley
FROM:	Grand Canyon University Institutional Review Board
STUDY TITLE:	[562274-1] Characteristics of Aggression in Male Children and Youth: Cognitive and Affective Empathy as Antidotes for Proactive and Reactive Aggression
IRB REFERENCE #:	
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	March 9, 2016
EXPIRATION DATE:	March 9, 2017
REVIEW TYPE:	Full Committee Review
REVIEW CATEGORY:	Expedited review category # *[7.6, 7.7]*

Thank you for your submission of New Project materials for this research study. Grand Canyon University Institutional Review Board has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Full Committee Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

Please report all NON-COMPLIANCE issues or COMPLAINTS regarding this study to this office.

Please note that all research records must be retained for a minimum of three years.

Based on the risks, this project requires Continuing Review by this office on an annual basis. Please use the appropriate renewal forms for this procedure.

If you have any questions, please contact Stephanie Henkel at 602-639-8010 or stephanie.henkel@gcu.edu. Please include your study title and reference number in all correspondence with this office.

cc:

Appendix B.

Parent and Child Informed Consent/Assent

Grand Canyon University
College of Doctoral Studies
3300 W. Camelback Road
Phoenix, AZ 85017
Phone: 602-639-7804
Email: irb@gcu.edu

PARENTAL PERMISSION/CONSENT FORM

TITLE OF RESEARCH STUDY

Characteristics of Aggression in Male Children and Youth: Cognitive and Affective Empathy as Antidotes for Proactive and Reactive Aggression

INTRODUCTION

The purposes of this form are to provide you (as a prospective research study participant) information that may affect your decision as to whether or not to participate in this research and to record the consent of those who agree to be involved in the study.

RESEARCHERS

Aedan A. Hanley, Doctoral Student in Psychology—Cognition & Instruction, Grand Canyon University, Phoenix, AZ, has invited your minor child's (ward's) participation in a research study for this institution.

DESCRIPTION OF RESEARCH STUDY

This study looks at how understanding another person's feelings can help reduce aggressive behavior. Your son's participation will help him as well as others learn about the importance of getting help with aggression. If you decide your son can participate he will join a larger study across several *Phoenix Union High School District* (PUHSD) campuses involving research of male children and youth ages 13 to 18. Participants may or may not have a history of some form of behavior problems, such as aggression, at home and or at school. Your son also will be able to help other schools and families better understand the social and emotional needs of male teens so each can potentially grow up happy, healthy, and lead successful lives. Students who participate will complete three (3) brief online surveys that will take no more than 30 minutes to complete. Your son will not be graded on his performance--there are no right or wrong answers. His participation will be completely voluntary and anonymous. This research study is *not* part of the PUHSD daily lessons for teachers. Therefore, it is *your* choice if you want your child to participate. Your son's progress and grades at school will *not* be affected whether he participates or not.

If you say **YES**, then your son's participation is proposed to take place between the weeks of March 28, 2016 and April 22, 2016. It is hoped that approximately 80 to 150 participants from several PUHSD schools participate in this study. If your son does participate, by returning both consent forms he will receive two snack bars and two bonus points on his point sheet, or share pizzas for all participants, depending upon the school and whether any currently imbedded positive behavioral incentive programs are in practice at each site. His name will also be entered into a drawing for one of (10) $10 Wal-Mart Gift Cards for completing all three surveys.

EXCLUSIONARY CRITERIA

There will be no exclusionary criteria for your child to participate in this study.

RISKS

If you do decide to have your son (ward) participate in the study, the only risk he may possibly face is perhaps some discomfort in answering some survey statements about his history with being aggressive toward others at home and or at school. The researcher has attempted to reduce any discomforting feelings on the part of participants by introducing self-report surveys (three in all) that are brief—that is, no more than 12 to 24 statements per survey—and are interactive (on a computer in the school computer lab or allowable on participant's personal cell phone).

BENEFITS

Possible benefits of your participation in this research study are that others, such as school administrators, teachers, and parents/guardians will learn about how to best help your son understand the causes of aggression and behavior problems. His teachers will also learn how to use more social and emotional supports in the classroom as a way to reduce barriers to learning and development.

NEW INFORMATION

You will be contacted if new information is discovered that would reasonably change your decision about your son's (ward's) participation in this study.

COMPENSATION FOR ILLNESS AND INJURY

There are no situations or circumstances in this proposed study which would cause illness or harm. However, as always with studies involving children and teens as potential study participants it is your parental and legal right to say **NO** to your child (ward) participating in any study you feel could potentially cause illness or harm.

VOLUNTARY CONSENT

Your signature (as well as your child's) below indicates that you consent to participate in the above doctoral research study. Thank you.

_____	_____	_____
Participant's Signature	Printed Name	Date
_____	_____	_____
Parent/Guardian Signature	Printed Name	Date

****Please indicate your parental guardianship status in the following by checking the box which currently applies to you:**

Biological Parents (Father and Mother) ☐ Biological Father Only ☐ Biological Mother Only ☐

Adopted Parent(s) ☐ Foster Parent(s) ☐ Step-Parent(s) ☐ CPS Custody/Ward of State ☐

Family Member(s) (e.g., Grandparents, aunts, uncles, adult siblings, etc.) ☐

PRINCIPAL INVESTIGATOR'S STATEMENT

"I certify that I, Aedan A. Hanley, have explained to the above individual the nature and purpose, the potential benefits and possible risks, if any, associated with participation in this research study. I have answered any questions that have been raised, and have witnessed the above signatures. These elements of Informed Consent conform to the Assurance given by *Grand Canyon University* to the Office for Human Research Protections to protect the rights of human subjects. I have provided (offered) the subject/participant a copy of this signed consent document."

Signature of Principal Investigator _____ Date_____

CO-INVESTIGATOR'S WITNESS STATEMENT

"I certify that I, _____, School Principal/Designee for _____ in the *Phoenix Union High School District*, Phoenix, Arizona, have assured distribution of the above individual principal investigator's (researcher's) Parental Informed Consent and Child Assent Forms to each potential 13 to 17 year old male study participant on my campus as well as a Recruitment Letter created by the researcher, that I have collected signed originals of these forms from each prospective participant's parent/guardian, that I have assured the principal investigator/researcher that I will have all forms secured for his collection, that I have only facilitated the investigator's/researcher's study by meeting his demographic study requirements for who is eligible to participate, made available a designated computer lab or allowed for online personal cell phone access, provided brief instructions written by the researcher to staff so that may assist any participant on how to access the online links for completing the surveys, and therefore was not responsible for collecting any data for the researcher.

Signature of School Principal/Designee: _____ Date _____

Characteristics of Aggression in Male Children and Youth: Cognitive and Affective Empathy as Antidotes for Proactive and Reactive Aggression

Grand Canyon University
College of Doctoral Studies
3300 W. Camelback Road
Phoenix, AZ 85017
Phone: 602-639-7804
Fax: 602- 639-7820

WRITTEN CHILD ASSENT FORM

STUDYING CHARACTERISTICS OF AGGRESSION AMONGST 13 TO 18 YEAR OLD MALES

Hello. My name is Aedan A. Hanley. I'm a doctorate student at Grand Canyon University in Phoenix, AZ. I'm asking for your permission to participate in my school research project because I'm trying to learn more about anger and aggression in male teens 13 to 18 years old, and if they are able to learn how to show care for others at school and at home so they do not have to feel anger and aggression with other kids, friends, or family members. I also want to help your teachers, parent(s) or guardian(s) learn better ways to understand aggression in male teens, and then provide them supports to best help you in positive ways.

If you and your parent(s) or guardian(s) agree, you will participate in taking three (3) short online surveys. Each survey will only ask for your opinions. There will be no right or wrong answers. You do not receive a grade for participating, and your class grade will not be affected. The only personal information that will be asked of you is your age, ethnicity/race, grade, and if you are a boy or a girl. Your name and school ID# as well as social security number *will not* be asked. Answering these questions will only take about 30 minutes for all three online surveys.

Participation will between March 28, 2016, and April 22, 2016. You will take them in your school computer lab or cell phone with your Principal's approval. You will be given three (3) different Survey Gizmo online links—one per survey. You don't have to answer any questions that make you feel uncomfortable. If you're unable to answer some questions, just let your school social worker or counselor know and he or she will delete your participation. You'll be provided a safe space for calming any anxiety or troubling moods should you need one. Remember: Your participation is completely voluntary. Even if you start the study, you can stop later. Any questions about the study beforehand can be given to your social worker/counselor. He or she will get those questions to me as quickly as possible.

You'll receive two snack bars from your school and two bonus points, or have pizzas delivered, depending upon the incentives your school gives for showing responsibility by returning the consent forms. Participants who complete all three surveys will be able to print out a proof of completion slip for the Principal. Your name will also be put into a drawing at your school for one of (10) Wal-Mart Gift Cards worth $10 each.

Signing and dating here means that you have read this form, or had someone read it to you, and that you are willing to be in this study.

Signature of participant _____
Printed name of participant _____

Signature of Principal Investigator *Aedan A. Hanley*

Date Received _____

Appendix C.

Site Approval

Site approval letter is on file at Grand Canyon University.

Appendix D.

Copy of Instruments and Permissions Letters to Use the Instruments

Basic Empathy Scale

The following are characteristics that may or may not apply to you. **Please pick one answer for each statement** to indicate how much you agree or disagree with each statement. Please answer as honestly as you can.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. My friend's emotions don't affect me much.	☐	☐	☐	☐	☐
2. After being with a friend who is sad about something, I usually feel sad.	☐	☐	☐	☐	☐
3. I can understand my friend's happiness when she/he does well at something.	☐	☐	☐	☐	☐
4. I get frightened when I watch characters in a good scary movie.	☐	☐	☐	☐	☐
5. I get caught up in other people's feelings easily.	☐	☐	☐	☐	☐
6. I find it hard to know when my friends are frightened.	☐	☐	☐	☐	☐
7. I don't become sad when I see other people crying.	☐	☐	☐	☐	☐
8. Other people's feelings don't bother me at all.	☐	☐	☐	☐	☐
9. When someone is feeling 'down' I can usually understand how they feel.	☐	☐	☐	☐	☐
10. I can usually work out when my friends are scared.	☐	☐	☐	☐	☐
11. I often become sad when watching sad things on TV or in films.	☐	☐	☐	☐	☐

	Strongly Disagree	Disagree	Neither Agree nor	Agree	Strongly Agree
12. I can often understand how people are feeling even before they tell me.	☐	☐	☐	☐	☐
13. Seeing a person who has been angered has no effect on my feelings.	☐	☐	☐	☐	☐
14. I can usually work out when people are cheerful	☐	☐	☐	☐	☐
15. I tend to feel scared when I am with friends who are afraid.	☐	☐	☐	☐	☐
16. I can usually realise quickly when a friend is angry.	☐	☐	☐	☐	☐
17. I often get swept up in my friend's feelings.	☐	☐	☐	☐	☐
18. My friend's unhappiness doesn't make me feel anything.	☐	☐	☐	☐	☐
19. I am not usually aware of my friend's feelings	☐	☐	☐	☐	☐
20. I have trouble figuring out when my friends are happy.	☐	☐	☐	☐	☐

Reactive - Proactive Aggression Questionnaire – Child (RPQ - C)

Scoring

Scores (0, 1 or 2) for proactive aggression items (2,4,6,9,10,12,15, 17,18,20,21,23) and reactive items (1, 3, 5,7,8,11, 13,14, 16,19,22) are summated to form proactive and reactive scales. Proactive and reactive scale scores are summated to obtain total aggression scores.

Instructions to subject

There are times when most of us feel angry, or have done things we should not have done. Rate each of the items below by putting a circle around either 0 (never), 1 (sometimes), or 2 (often). Don't spend a lot of time thinking about the items - just give your first response. Make sure you answer all the items.

0 = NEVER
1 = SOMETIMES
2 = OFTEN

How often have you ....

1. Yelled at others when they have annoyed you	0	1	2
2. Had fights with others to show who was on top	0	1	2
3. Reacted angrily when others annoy me	0	1	2
4. Taken things from other kids	0	1	2
5. Gotten angry when frustrated	0	1	2
6. Damaged or broken things for fun	0	1	2
7. Had temper tantrums	0	1	2
8. Damaged things because you felt mad	0	1	2
9. Had a gang fight to be cool	0	1	2
10. Hurt others to win a game	0	1	2
11. Become angry or mad when you don't get your way	0	1	2
12. Used physical force to get others to do what you want	0	1	2
13. Gotten angry or mad when you lost a game	0	1	2
14. Gotten angry when others threatened you	0	1	2
15. Used force to obtain money or things from others	0	1	2
16. Felt better after hitting or yelling at someone	0	1	2
17. Threatened and bullied someone	0	1	2
18. Made prank phone calls for fun	0	1	2
19. Hit others to defend yourself	0	1	2
20. Gotten others to gang up on someone else	0	1	2
21. Carried a weapon to use in a fight	0	1	2
22. Gotten angry or mad or hit others when teased	0	1	2
23. Yelled at others so they would do things for you	0	1	2

Aedan Hanley <aedan.hanley@yahoo.com>
To
d.jolliffe@gre.ac.uk
01/20/14 at 1:12 PM
To: Professor Darrick Jolliffe:

Hello, Dr. Jolliffe. My name is Aedan Hanley. I am a doctoral student in Psychology—Cognition & Instruction at *Grand Canyon University* in Phoenix, Arizona, USA. I am currently in the process of creating my dissertation and its subsequent chapters. My dissertation study topic is as follows: "The Poly-Victimization of Male Children: Cognitive and Affective Empathy as Antidotes for Proactive and Reactive Aggression." Thus, I am seriously considering the questionnaire that you developed along with Dr. Farrington (e.g., The Basic Empathy Scale—or BES) to use with my participants (i.e., male children 5-13 in three differing behavioral modification self-contained educational program settings in and around Phoenix, Arizona, USA).

Are you amenable to sending me a copy for review and possible inclusion in my study? And, would I have your expressed permission to use and implement your assessment scale? If you do agree, could you please attach a copy along with any accompanying scoring guides, if available?
I sincerely thank you in advance for your assistance in helping me complete my dissertation study, and look forward to hearing from you.

Respectfully,

Aedan Hanley, MA, MS, EQ-i, LAC
[redacted] (USA)
Sent: Monday, January 20, 2014 @ 1:10 PM (Arizona Time Zone)

Darrick Jolliffe <D.Jolliffe@greenwich.ac.uk>
To
Aedan Hanley
03/18/14 at 12:37 PM
Dear Aedan,

This went into my junk email folder. Do you still want the empathy scale?
Very sorry.

Darrick

Aedan Hanley <aedan.hanley@yahoo.com>
To
Darrick Jolliffe
03/18/14 at 1:29 PM

My goodness-I am glad you checked your spam instead of what I do and put all in Trash without looking. Thank you so much. Indeed, Dr. Jolliffe, I would love a copy. If you have scales which indicate what certain scores mean in terms of interpreting the scores, this would be tremendously helpful. Being a Likert-type scale assessment, I do not have any knowledge of what certain scores or item-responses indicate exactly. I plan to implement your assessment in Mid to late April, so your timing could not be more perfect in terms of providing support to my dissertation committee overseeing my work with the population I plan to evaluate (e.g., 6 to 13 year old males with diagnosed behavior problems).

So, yes--please email me a copy along with any interpretation of items and or scores responses or worksheets or any follow-up data interpretation really that you have to accompany the BES tool. Thank you again for reaching out. What a wonderful and pleasant surprise. I look forward to hearing from you. Sincerely,

Aedan

Darrick Jolliffe <D.Jolliffe@greenwich.ac.uk>
To
Aedan Hanley
03/18/14 at 1:32 PM

Dear Aedan,

I have attached the scale and the scoring key. I have also attached a form that I would ask you to sign and return to me if you decide to use the scale. This allows me to keep track of who is using the scale and send out results as they become available.

All the best and good luck with your research! Careful with 6 year olds – I have a Spanish researcher who has looked at younger children in Spain and we are getting some odd findings. She developed a parental version to address this (parental report)

Darrick
Professor Darrick Jolliffe
School of Law
University of Greenwich
Old Royal Navy College
London SE10 9LS

Aedan Hanley <aedan.hanley@yahoo.com>
To
araine@sas.upenn.edu
01/20/14 at 1:04 PM
To: Professor Adrian Raine:

Hello, Dr. Raine. My name is Aedan Hanley. I am a doctoral student in Psychology—Cognition & Instruction at *Grand Canyon University* in Phoenix, Arizona. I am currently in the process of creating my dissertation and its subsequent chapters. My dissertation study topic is as follows: "The Poly-Victimization of Male Children: Cognitive and Affective Empathy as Antidotes for Proactive and Reactive Aggression." Thus, I am seriously considering the questionnaire that you developed (e.g., The Reactive-Proactive Aggression Questionnaire—Child, or RPAQ-C) to use with my participants (i.e., male children 5-13 in three differing behavioral modification self-contained educational program settings in and around Phoenix, AZ).
Are you amenable to sending me a copy for review and possible inclusion in my study? And, would I have your expressed permission to use and implement your assessment? If you do agree, could you please also attach a copy along with any accompanying scoring guides, if available?
I sincerely thank you in advance for your assistance in helping me complete my dissertation study, and look forward to hearing from you.

Respectfully,

Aedan Hanley, MA, MS, EQ-i, LAC
[redacted] (USA)

Sent: Monday, January 20, 2014 @ 12:52 PM (Arizona Time Zone)
Adrian Raine <aRaine@sas.upenn.edu>
To
Aedan Hanley
01/21/14 at 5:06 AM

it's fine Aedan, here it is. good luck!
Adrian.

Adrian Raine
Richard Perry University Professor,
Departments of Criminology, Psychiatry, and Psychology.

Jerry Lee Center of Criminology, Room 204,
University of Pennsylvania,
3809 Walnut Street,
Philadelphia, PA 19104.
Tel: (215) 746 2198 Fax: (215) 746 4239 Email: araine@sas.upenn.edu

Web: http://crim.sas.upenn.edu/people/faculty/adrian-raine

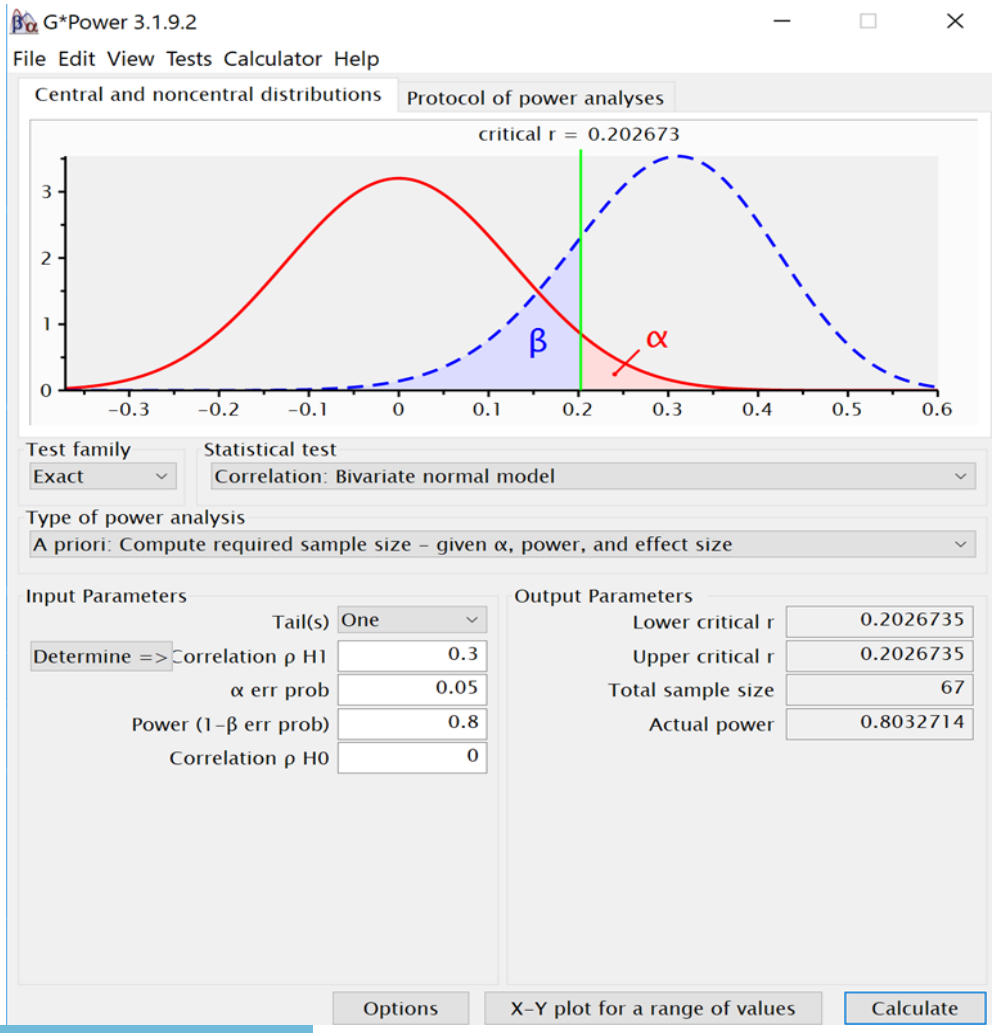
Appendix E.

A Priori and *Post Hoc* G-Power Data Analytics/Screenshot

A Priori Power Analysis

Exact - Correlation: Bivariate normal model
Options: exact distribution
Analysis: A priori: Compute required sample size (*n*:)

Input:	Tail(s)	=	One
	Correlation ρ H1	=	0.3
	α err prob	=	0.05
	Power (1-β err prob)	=	0.80
	Correlation ρ H0	=	0
Output:	Lower critical r	=	0.2026735
	Upper critical r	=	0.2026735
	Total *n*:	=	67
	Actual power	=	0.8032714



***Post Hoc* Power Analysis**

Exact - Correlation: Bivariate normal model
Options: exact distribution
Analysis: Post hoc: Compute achieved power
Input: Tail(s) = One
Correlation ρ H1 = .04
α err prob = 0.05
Total *n*: = 65
Correlation ρ H0 = 0
Output: Lower critical r = 0.2058217
Upper critical r = 0.2058217
Power (1-β err prob) = 0.0919670