2017

Violent Aggression Exposure, Psychoemotional Distress, Aggressive Behavior, and Academic Performance Among Adolescents

Joyce Renee Evans
Walden University

Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Joyce Evans

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Donna Heretick, Committee Chairperson, Psychology Faculty
Dr. Melody Richardson, Committee Member, Psychology Faculty
Dr. Elisha Galaif, University Reviewer, Psychology Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2017

Abstract

Violent Aggression Exposure, Psychoemotional Distress, Aggressive Behavior, and Academic Performance Among Adolescents

by

Joyce Renee' Evans

MS, Coppin State College, 2000

BS, Coppin State College, 1985

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

General Psychology

Walden University

January 2017

Abstract

Sixty percent of youth indicate exposure to violence. Such exposure is a noted risk factor for youths' well-being, including cognitive, emotional, and behavioral development. However, there is a gap in the literature regarding whether exposure to violence predicts impaired academic performance. The purpose of this quantitative study was to test a model with cognitive, behavioral, and emotional sequelae of exposure as mediators of the relationship between exposure to violence and academic performance among adolescents who are at risk for exposure and attend inner-city high schools. Ninety-nine students, primarily female and African-American, in Grades 10 to 12 at two public schools in a major mid-Atlantic metropolitan district completed self-report measures for exposure to violence, aggressive behavior, aggressive cognitions, psychoemotional distress, and academic performance. A series of linear regressions was used for mediational analysis. Path coefficients were interpreted to test the proposed causal model. Consistent with previous research, a weak, but statistically significant bivariate relationship was found between exposure and grade point average (GPA). However, the relationship was indirect, mediated by students' aggressive cognitions: Higher levels of aggressive cognitions provided the best predictors of negative relationships exposure to violence with GPA. These findings have important social change implications. In particular, findings suggest that educators, parents, and mental health professionals can strengthen academic performance among adolescents with higher academic potential who are exposed to violence by offering support for positive coping styles and alternatives to attitudes that normalize aggression.

Violent Aggression Exposure, Psychoemotional Distress, Aggressive Behavior, and Academic Performance Among Adolescents

by

Joyce Renee' Evans

MS, Coppin State College, 2000

BS, Coppin State College, 1985

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

General Psychology

Walden University

January 2017

Dedication

I thank my best friend, confidant, cheering squad, constant encourager, and husband, Charlie Evans. Thank you for providing the encouragement and late night companionship as I researched or wrote over these past few years. I also thank my daughter, Jasmine Keisha Nicole Evans. When I doubted whether my studies were taking too much time away from you, you continuously reminded me to focus on my studies and just how much that you and dad wanted me to receive my doctorate. For the sacrifices, understanding, and unselfish support that you have both provided–I am blessed to have you as my motivation and support system. I love you both more than words could ever express.

Acknowledgments

First, I thank my dissertation chair, Dr. Donna Heretick, for guiding me through this experience and always mentoring and inspiring me towards completion. I appreciate her energy, compassion, dedication, similar research interest, and ability to make me a better researcher and advocate for continued social change. I also thank my co-chair, Dr. Melody Richardson, for her procedural insight and knowledgeable feedback.

I express my sincere appreciation and gratitude to the Board of Education and two public schools within in a major mid-Atlantic metropolitan district, for granting me permission to conduct data for this project. I also personally thank the principals, teachers, and students who agreed to allow me to collect data for this project. They have offered great insights into how exposure to violence and other factors impact their academic performance.

Table of Contents

List of Tables vi

List of Figures vii

Chapter 1: Introduction to the Study 1

Background of the Problem 1

Exposure to Violence and Aggressive Behavior 3

Statement of the Problem 5

Nature of the Study 6

Research Questions and Hypotheses 8

Theoretical or Conceptual Framework 11

Definition of Terms 12

Assumptions and Limitations 14

Assumptions 14

Limitations 15

Significance of the Study 16

Implications for Social Change 16

Summary 16

Chapter 2: Literature Review 18

Developmental Factors of Adolescent Aggression 19

Types of Aggressive Behavior. 21

Physical and Verbal Agression 22

Direct Versus Indirect Aggression 22

Hostile/Reactive Aggression Versus Proactive/Instrumental Aggression.....24
Theoretical Formulation on the Development of Aggression.....26
Social Learning Theory and Aggression.....26
Social Cognitive Models of Aggression.....29
Empirical Evidence of Developmental Patterns of Aggression.....32
Social Cognitive Model of Stress.....34
Exposure to Aggression: Empirical Evidence.....35
Community Violence.....35
Familial Contributors to Voplence.....38
Domestic Violence.....38
Corporal Punishment.....39
Underestimation of Exposure.....42
Multi-factor Exposure.....43
Exposure to Violence and Psychological Distress.....46
Exposure and Aggression in School.....47
Social Patterns and Secondary Effects of Aggression in School.....47
Aggression and Academic Achievement.....48
Exposure to Violence and Academic Performance.....50
Measuring Exposure to Violence in Home, Community, and School.....52
Estimating from Community Demographivs and Statistics.....52
Self-Report Written Questionnaires and Interviews.....52
Interview Techniques.....55

Measuring Aggressive Behavior....56
Measuring Attitudes Towards Violence....57
Measuring Academic Performance....58
Gaps in Literature and Purpose of Study....58
Purpose of Study, Research Questions, Hypotheses, and Design....60
Design....61
Summary and Transition....61
Section 3: Research Method....63
Introduction....63
Research Design and Approach....63
Setting and Population....64
Instrumentation and Measurement....65
Demographic Questionnaire....65
Exposure to violence....65
Indirect Exposure to Violence....66
Aggression....67
Attitudes Towards Violence....68
Psychological Distress....68
Academic Performance....69
Procedures....70
Analyses for Results....70
Analyses to Tes the Study's Research Hypotheses....72

Ethical Consideration for Participation Protection…….……77

Summary and Transition……...77

Chapter 4: Results……..…….....79

Research Questions…….……..……..….....80

Data Collection……..…..…...82

Demographic Characteristics of Respondents 84

Evaluation of Measures Used in Study……..……...91

Descriptive Statistics on Measures……..…….. .92

Tests of Assumptions for Statistical Analses.....94

Assesment of Hypothesized Model……..…….....95

Bivariate Correlations……..97

Evaluation of Proposed Causal Model.....102

Trimmed Model…… ...…….104

Summary and Transition……...106

Chapter 5: Discussions, Conclusion, and Recommendatons…… ...108

Summary of the Findings……..……...109

Interpretation of the Findings…….…….……..…....110

Possible Uniqueness of Results for the Study's Sample 112

Limitations of the Study……...…….…….114

Recommendations……...……...….117

Implications……...…....118

Conclusion…… ..……...120

References……..…122

Appendix A: Demographic Questionnaire……...184

Appendix B: SAVE Questionnaire…….…..186

Appendix C: CREV Questionnaire…….…..190

Appendix D: Buss-Perry Aggression Scale …….195

Appendix E: Attitudes Towards Violence Scale……..196

Appendix F: Kessler Psychological Distress Scale (K-10)……..198

Appendix G: Teacher Participation Request..……...199

Appendix H: Data Collection Request……..200

Appendix I: CREV Usage Approval Letter…….....202

Appendix J: SAVE Usage Approval Letter……..203

Appendix K: ATVS Usage Approval Letter ..……..204

Appendix L: K-10 Usage approval Letter……...…….....205

Principal Approval Letters……..……..208

Baltimore City Public School IRB Approval Letter…….……...212

Walden IRB Approval Letter……213

Appendix M: Scatterplots for Bivariate Correlations ……...……...214

Appendix N: Bivariate Correlations and Multiple Regression Analyses …..…….....215

List of Tables

Table 1. Demographic Characteristics of Respondents…….....86

Table 2. Cronbach Alphas for Internal Consistency of Measurement Instruments….. 92

Table 3. Descriptive Statistics for Measures of Exposure, Aggression, Psychoemotional Distress, and Academic Performance…..……..93

Table 4. Bivariate Correlations among Scores on all Measured Variables……...98

Table 5. Summary of Multiple Regression Analyses for Hypotheses for Hypotheses 1 through 4……..100

Table 6. Simultaneous Multiple Regression Analysis With All Predictors of GPA...104

List of Figures

Figure 1. Proposed relationships between exposure to violence and academic performance with measures used for variables……..8

Figure 2. Respecified model for relationships between exposure to violence and academic performance……...105

Chapter 1: Introduction to the Study

Background of the Problem

Adolescence is a transitional stage of development that occurs between childhood and adulthood and includes emotional, mental, and physical changes that can directly result in aggressive and even violent teenage behavior (Farrington, 1989; Gutgesell & Payne, 2004; Yurgelun-Todd, 2007). *Aggression* and *violence* are terms that are often used interchangeably; however, very distinct characteristics exist. Aggression is defined as any form of behavior that is deliberately intended to cause immediate harm to another individual, while violence is more specifically defined as aggressive behavior that is intended to result in intentional extreme harm (Anderson & Bushman, 2002). Aggressive behavior can be expressed in physical, verbal, indirect, or direct forms (Anderson & Bushman, 2002; Archer & Coyne, 2005; Ferguson, 2010; Pornari & Wood, 2010; Siever, 2008). Moreover, aggressive and violent behavior can be witnessed in the community and in the family. There is extensive research on the negative consequences of exposure to violence (Mrug, Loosier, & Windle, 2008; Spano, Rivera, & Bolland, 2010; Temcheff et al., 2008) and correlational analysis that shows a strong association among exposure to various sources of violence and demonstrations of aggressive behavior in adolescents (McMahon, Felix, Halpert, & Petropoulos, 2009; Salzinger, Rosario, Feldman, & Ng-Mak, 2008; Wei, 2007; et al., 2008). Such exposure to violence and aggression can affect individual cognition regarding aggression (Anderson & Bushman, 2002; Anderson &

Huesmann, 2003; Bandura, 1973a; Benhorin & McMahon, 2008; Bushman & Huesmann, 2010; Crick & Dodge, 1994; Huesmann, 1982, 1986, 1988, 1998; Huesmann & Eron, 1984) and lead to psychoemotional distress among adolescents (Lösel, Bliesener, & Bender, 2007; Ystgaard, 1997). However, consequences of exposure to violence and aggression in other areas of the youths' lives are less obvious. One important area for consideration is the possible effects of exposure to violence and aggression on academic performance. Academic performance is an important aspect of an adolescent's development but also affects later opportunities and self-efficacy during adulthood (Bandura, 1997; van Dinther, Dochy, & Segers, 2011). Results of research into the possible impact of exposure to violence and aggression on academic performance are sketchy, and results are often inconclusive. For example, students in schools or communities with higher rates of violence and aggression often demonstrate lower academic achievement (Baker-Henningham, Meeks-Gardner, Chang, & Walker, 2009; Howard, Budge, & McKay, 2010; Schwab-Stone, 1995). However, it is difficult to know which is the cause and which is the effect in such situations, or if the apparent correlation between exposure and academic underachievement is due to some other unidentified factors(s). Thus, there is an imminent need for more research into the question of the possible mechanisms of the impact of the frequency, source, and type of exposure to violence on academic performance among adolescents. Identifying

and understanding such mechanisms can help educators and communities offer better support and interventions for adolescents faced with this type of risk.

Exposure to Violence and Aggressive Behavior

As noted by Bandura (1969, 1986a, 1986b, 1987, 2001), human behavior is learned by individual observation through modeling. Bandura's social learning theory (SLT) explains human behavior as a continuum of interaction between cognitive, behavioral, and environmental influences. The theoretical frameworks used to explain exposure to familial and community violence are presented in the general aggression model (GAM; Bushman & Anderson, 2002) and the social cognitive information processing model (SCIP; Huesmann, 1988). The GAM is a modern theory of aggression that predicts that aggressive behavior is increased by arousal, cognitions, and affects. The SCIP proposes that aggression is learned by observation, witnessing, and exposure to other factors that underlie acts of aggression. Theoretically, social information processing is a mediational process that may result in aggressive behavior. Dodge (1986) argued that when children are faced with uncertain social situations, they rely on experiences and social cognitions for resolution. Their behavioral response will be informed by their social information processing (Crick & Dodge, 1994). When adolescents are exposed to violence, their behavioral response in other situations may have a higher probability of resulting in an aggressive reaction (Huesmann, 1998). Aluja-Fabregat and Torrubia-Beltri (1998) postulated that aggressiveness is moderated by individualized perception as determined by preference for viewing

violence, personality development, and academic achievement. The operational definition of violence in more general terms is acts of aggression intent on resulting in extreme harm to the extent of death (Anderson & Bushman, 2002).

Despite the demonstrated association between exposure to violence and aggressive behavior (Mrug et al., 2008), not all youth exposed to violence will display aggressive behavior. In fact, aggression is only one possible outcome of exposure to violence. Anderson and Bushman (2002) stated that violence in all forms is aggression but not all acts of aggression are violent. Lazarus (1993) has proposed a social cognitive model of stress that looks at processes of cognitive appraisals, emotional arousal, and various choices for coping. For some, the emotional arousal is overwhelming and coping may be more avoidant. Avoidant coping remains mired in the emotions and tends to be less productive for solving stressful situations and is related to posttraumatic stress disorders and other experiences of psychoemotional distress (Pineles et al., 2011). Others have also noted relationships between exposure to violence and distress (e.g., depression, anxiety; Huesmann, Moise, Podolski, & Eron, 2003; Lösel et al., 2007; Mrug & Windle, 2010; Swearingen & Cohen, 1985). Such emotional distress may be related to lower academic achievement (Henrich, Schwab-Stone, Fanti, Jones, & Ruchkin, 2004; Milam, Furr-Holden, & Leaf, 2010; Patton, Woolley, & Hong, 2011. Thus, more must be understood about how exposure to violence is related to aggression, psychoemotional distress, and, directly or indirectly, to academic performance in adolescents.

Statement of the Problem

The 2008 National Survey of Children's Exposure to Violence reported that 60% of children aged 17 and younger indicated that they were exposed to violence as a witness or victim within a one-year time frame (Finkelhor, Turner, Ormrod, Hamby, & Kracke, 2009). At least one in four children reported an act of violence within the same 1-year time frame and 38% reported at least one life time occurrence of witnessing violence (Finkelhor, Turner, Ormrod, & Hamby, 2009). According to Fontaine, Yang, Dodge, Pettit, and Bates (2009) and Forbes and Dahl (2010), the majority of aggressive behavior occurs during adolescence. A common risk factor for development of adolescent aggression is exposure to violence (Anderson et al., 2003; Howard, Budge, & McKay, 2010; Mrug et al., 2008).

Researchers have indicated that (a) exposure to violent aggression leads to psychoemotional and behavioral problems in youth, and (b) psychoemotional and behavior problems in youth are correlated with lower academic performance, but (c) it is less clear how/if exposure to violence relates to academic performance. Research has not shown a simple direct relationship between exposure to violent aggression and academic performance. Thus, it is important to identify if there are particular effects/correlates of exposure to violent aggression that can then impact academic performance.

The problem that I attempt to address is an ongoing challenge and gap in the literature: how the level, frequency, and types of exposure to

aggression/violence are related to adolescent aggressive behavior, psychoemotional distress, and whether exposure to aggression/violence impedes academic performance. It is still unclear what the path between exposure to violence and academic performance might be.

Nature of the Study

The current study consisted of a quantitative correlational research design. According to Gravetter and Wallanau (2012) and Mertler and Vannatta (2010), a cross-sectional correlational design is used to observe relationships between two or more variables at a given point in time. A quantitative research design was chosen for this study to enable me to examine the statistical relationship between exposure to violence, psychoemotional distress, aggressive behavior, and academic performance at school in a population of adolescents. The data were analyzed using bivariate correlations and regression analyses to determine the relative contribution of various predictive factors of exposure to violence to aggressive behavior, psychoemotional distress, and academic performance.

The participants for this study included teens between the ages of 15 and 18 years old, drawn from a population that was diverse in gender, socioeconomic status, and race/ethnicity. The targeted area of interest included current high school students in Grades ninth through 12th, who were recruited from schools in a major metropolitan school system in the eastern United States. In this quantitative approach, I used inquiry instruments such as surveys to collect

statistical data that are useful in research (Creswell, 2009, p.145). According to Creswell (2009) a quantitative description of a population of attitudes can be obtained from survey results that use data collection that represent a sample of a population. Academic achievement was measured using data from self-reported grade point average (GPA). Frequency and sources of violence that the students were exposed, as well as attitudes towards violence and behaviors related to aggression, were assessed through a self-report questionnaire. Aggression, as well as psychoemotional distress (anxiety/depression), was measured by self-report questionnaires. Other survey questions gathered demographic information. Johnson and Christensen (2008) and Mertens (2010) stated that the data collected in quantitative measurement is reduced to numerical figures that are used in statistical analysis.

Hedström (2008) stated that quantitative studies can substantiate individual behavior through an explanation of individual and environmental variables of each surveyed participant in predicting causal factors of questioned behaviors. According to Mertens (2010), quantitative research is applicable to educational issues such as the proposed data collection of exposure to violence, aggressive behavior, and academic performance at school. Although correlational studies do not prove causation, use of analytic tools such as path analyses, multiple regression, or partial correlation can evaluate possible modeling of direction and strength of associations (Gravetter & Wallnau, 2012). Quantitative research can assist in providing empirical testing of thought and

behavior patterns that are useful in making comprehensive generalizations (Johnson & Onwuegbuzie, 2004; Mertens, 2010). In Chapter 3, the research design, methods used to collect data, analyze data, and evaluate the hypotheses are presented.

Research Questions and Hypotheses

The research questions and hypotheses for this study were based on the evaluation of the model shown in Figure 1:

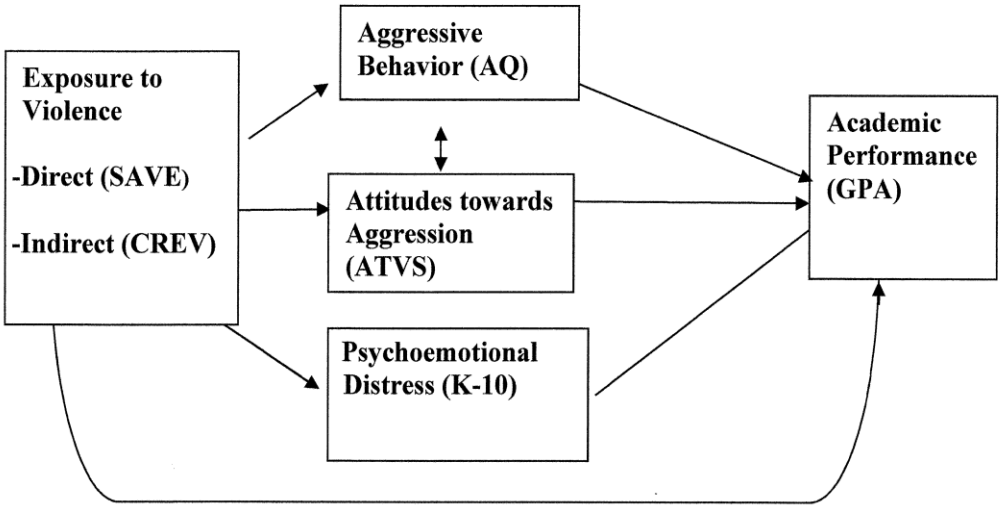


Figure 1. Proposed relationships between exposure to violence and academic performance with measures used for variables.

Exposure to violence may support aggressive behavior, attitudes towards aggression, and psychoemotional distress as predictors of academic performance. Thus, aggressive behavior, attitudes towards aggression, and psychoemotional distress are possible mediator variables between the

relationships of exposure to violence and academic performance. Mediator variables are explored if there is the suspicion that when certain other variables are present, they may serve to create a path through the independent variable that can affect the outcome (Barron & Kenney, 1986; Bennett, 2000). Sources of violence being studied were those encountered in the family and in the community that could be directly or indirectly encountered. Academic performance was measured by GPA.

RQ 1: What is the relationship between the amounts of exposure to violent aggression in the family, community, and school related to academic performance?

$H1_0$: There is no significant relationship between the amount of exposure to violent aggression in the family, community, and school, and academic performance.

$H1_a$: There is a significant relationship between the amount of exposure to violent aggression in the family, community, and school, and academic performance.

RQ2: What is the relationship between the amount of exposure to violent aggression in the family, community, and school, and aggressive behavior, aggressive cognitions, and psychoemotional distress?

$H2_0$: There is no significant relationship between the amount of exposure to violent aggression in the family, community, and school, and aggressive behavior, aggressive cognitions, and/or psychoemotional distress.

$H2_a$: There will be a significant relationship between the amount of exposure violent aggression in the family, community, and school, and aggressive behavior, aggressive cognitions, and/or psychoemotional distress.

RQ3: What is the relationship between aggressive behavior, aggressive cognitions, and/or psychoemotional distress and academic performance?

$H3_0$: There is no significant relationship between the amount of aggressive behavior, aggressive cognitions, and/or psychoemotional distress and academic performance.

$H3_a$: There is a significant relationship between the amount of aggressive behavior, aggressive cognitions, and/or psychoemotional distress and academic performance.

RQ4: Is any apparent relationship between the amount of exposure to violent aggression in the family, community, and school and academic performance mediated by aggressive behavior, aggressive cognitions, and/or psychoemotional distress?

$H4_0$: Any apparent relationship between the amount of exposure to violent aggression in the family, community, and school and academic performance is not mediated by aggressive behavior, aggressive cognitions, and/or psychoemotional distress.

$H4_a$: Any apparent relationship between the amount of exposure to violent aggression in the family, community, and school and academic performance is mediated by aggressive behavior, aggressive cognitions, and/or psychoemotional

distress. That is, the strength of any apparent relationship relationship between exposure to violence and academic performance is dependent upon the amount of aggressive behavior, aggressive cogntions, and/or psychoemotional distress experienced by the students in relation to exposure to violence.

Exposure to violent aggression alone may not be the key predictor of academic performance. Instead, the proposed model predicted that exposure to violent aggression will lead to increased risk of aggressive behavior in school, aggressive attitudes/cognitions, and/or psychoemotional distress that then mediate a relationship between exposure to violent aggression and academic performance.

Theoretical or Conceptual Framework

The theoretical base for the current investigation is SLT, the SCIP model, and a social cognitive model of stress. As noted by Bandura (1977, 1978, 1986a, 1986b, 1987, 2001), human behavior is learned by individual observation through modeling. Bandura's SLT explains human behavior as a continuum of interaction between cognitive, behavioral, and environmental influences. The GAM (Bushman & Anderson, 2002) is a modern theory of aggression that predicts that aggressive behavior is increased by arousal, cognitions, and affects. The SCIP (Huesmann, 1988, 1998) proposes that aggression is learned by observation, witnessing, and exposure to other factors that underlie acts of aggression. Understanding the frequency, the distribution, the sources, and the types of exposure to violent aggression that adolescents are often exposed to in

the community and in the home were explored in order to further understand possible correlations of exposure factors to adolescent aggressive behaviors, psychoemotional distress, and academic performance.

It was also important to consider the emotional impact of exposure to violent aggression. Lazarus (1993) and Lazarus and Folkman (1984) presented a social cognitive model for stress that includes not only cognitive appraisal, but also the emotional reactions to situational stressors. While some may experience emotions such as anger, that may increase the probability of hostile responses, others may experience fear, loss of sense of self-efficacy, depression, and other distressful emotions. Confrontive or avoidant coping remains intertwined with the emotions and often lead to less functional levels and types of behavior (Lazarus, 1999).

Following from these theories, the model that was proposed for study in this research took into account cognitive, behavioral, and emotional sequelae of exposure to violent aggression, that may then mediate the relationship between exposure to violence (environmental stressor) and academic performance (see Figure 1).

Definition of Terms

Academic performance: Mastering subject matter based on acceptable standards relative to GPA in a specified rating period (Fan & Chen, 2001).

Adolescence: Teenagers who chronologically are between the ages of 13 and 18, but their developmental stage may not be at the same maturation level (Farrington, 1989; Gutgesell & Payne, 2004; Yurgelun-Todd, 2007).

Aggression: Any type or form of behavior specifically targeted toward another, specifically intended to cause immediate harm to another (Anderson & Bushman, 2002).

Aggressive behavior: Behavior that is deliberately intended to harm virtually, directly, or indirectly (Carnagey & Anderson, 2004).

Anxiety: Posttraumatic stress symptom relative to exposure to violence (Mrug & Windle, 2010).

Behavioral disorder: Temperamental reaction relative to children's exposure to violence (Gudiño et al., 2011; Turner et al., 2012).

Community violence: Neighborhood crime or violence that occurs in the home, neighborhood, or school that is witnessed or experienced and revealed by self-report, hearsay or neighborhood crime statistics (Fowler, Tompsett, Braciszewski, Jacques-Tiura, & Baltes, 2009; Kliewer & Sullivan, 2008; Scarpa, Haden, & Hurley, 2006).

Direct aggression: Action that involves direct physical contact (Huesmann, Dubow, & Boxer, 2009; Kokko, Pulkkinen, Huesmann, Dubow, & Boxer, 2009; Richardson & Green, 2006).

Exposure: Direct or indirect witnessing of violence (Finkelhor et al., 2009).

Family violence: Parental practices or norms resulting in aggressive behavior (Dodge, Pettit, & Bates, 1994; Osofsky, 1995, 1999; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003).

Indirect aggression: Covert behavior aimed at intentionally harm causing social exclusion or rejection (Card, Stucky, Sawalani, & Little, 2008; Linder & Gentile, 2009).

Mediating/moderating variables: These are variables that change the relationship between a predictor (independent) variable and an outcome (dependent) variable (Baron & Kenny, 1986).

Psychoemotional distress: Emotional distress and anxiety provoked by environmental influence (Kessler et al., 2002).

Violence: Aggression with the intent of resulting in extreme harm (Anderson & Bushman, 2002).

Violent aggression: Forms of behavior that have the intent of causing extreme physical or psychological harm/control (Anderson & Bushman, 2002).

Assumptions and Limitations

Assumptions

The following assumptions were made in this study: First, all of the respondents understood and truthfully responded to the survey instruments. Second, the teachers were actively engaged and assessed their students and the students accurately responded to the assessment surveys.

Limitations

One limitation of this study was that the population of students recruited limited the generalization of results to those in the same socioeconomic neighborhoods. Social desirability bias refers to an individual's desire to overinflate socially acceptable responses in research (Fisher & Katz, 1999). Social desirability may have presented a limitation of this study as a result of an individual's desire to overinflate his/her academic achievement; this may be corroborated or refuted by GPA. The GPA was used to minimize confounders for academic performance. Presser and Stinson (1998) argued that self-report rather than interviewer results are more readily beneficial and reliable. The participants were recruited from urban schools within a large east coast metropolitan public school district. The scope of the study was limited to students in ninth through 12^{th} grade. Students may have provided random responses to the questions. The survey results may have been uniquely influenced by participants from the same locale; as a result, the sample may not be a true random sample because the research was limited to those students whom I had access to invite to participate, and the final group was made up of invited volunteers. It is not known if volunteers were a true sample of the target population in question. Finally, the final sample was largely female and consisted of students who had positive academic histories.

Significance of the Study

Implications for Social Change

The implications for positive social change from this research include gaining a better understanding of how exposure to violent aggression may create specific risks to students, both in terms of aggression and psychoemotional distress, that are not as problematic among students who are not exposed to higher levels of violence. This study will help to clarify where the focus for identification of risks, as well as ways to offer support and intervention, can be directed for children who are exposed to violent aggression. For example, while educators may be aware of disruptive behaviors that accompany aggression, they may be less sensitive to the cognitive and/or psychoemotional burdens that children of violence struggle with. If educators can understand particular risk factors among students who are exposed to violence, they can be proactive in providing interventions that may build resilience and support academic performance.

Summary

Researchers have found that there is a relationship between exposure to sources of violence and aggressive behavior. However, less is known about how the level, frequency, and types of exposure to violent aggression are related to adolescent aggressive behavior and/or cognitions, as well as psychoemotional distress, and whether these factors impede academic performance. The purpose of this study was to explore the path between exposure to violent aggression and

academic performance, by considering possible mediator/moderator variables of aggressive behavior, psychological/cognitive patterns related to aggression, and psychoemotional distress. Participants were students from two high schools in an inner city school system in the eastern United States. Self-report measures were used to assess students' exposure to direct (Screen for Adolescent Violence; Hastings & Kelley, 1997) and indirect violence (Children's Report of Exposure to Violence; Cooley, Turner, & Beidel, 1995), aggressive behavior (Buss-Perry Aggression Questionnaire; Buss & Perry, 1992), aggressive cognitions (Attitude Towards Violence Questionnaire; Funk, Elliott, Urman, Flores, & Mock, 1999), and psychoemotional distress (Kessler Psychological Distress Scale; K-10, Kessler & Mroczek,1994). Indicators of academic performance were measured using current student GPA.

Chapter 2 provides an examination of the literature on exposure to violent aggression, behavioral, cognitive, and emotional secondary impacts of exposure, and academic performance. This review established a clear gap in literature for understanding how exposure to violence may impact academic performance. Chapter 3 describes the methodology used for this study.

Chapter 2: Literature Review

The focus of this dissertation was to examine the relationship between exposure to violence, adolescent aggression, and academic performance. More specifically, particular attention was given to factors, such as exposure to violent aggression that influence the development of psychoemotional distress, aggressive behavior, and/or aggressive cognitions, and how these may secondarily impact academic performance. In this in-depth review, I examined theories and research concerning an association between exposure to violence, psychoemotional distress, aggressive cognitions, and aggressive behavior. In addition, I reviewed theories and research evaluating relationships between aggression and academic performance; research questions were identified, as well as hypotheses, for the research.

To reseach the topic of adolescent aggression, I located literature from various research databases, such as Academic Search Complete, Academic Search Premier, Education: A SAGE Full-Text Collection, Education Research Complete, ProQuest Central, Psychology: A SAGE Full-Text Collection, PsyArticles, PsycINFO, SAGE PREMIER, and SocIndex, through the Walden Library, Google Scholar, Coppin State University Library, Enoch Pratt Library, and the United States Department of Juvenile Justice. The literature review on aggression in teens is covered in many databases, but each database interchangeably used variations of teen, teenagers, aggression in teens, and adolescent as variations of classification. Full text scholarly research were sought

using the following terms or combinations of terms: *adolescent, aggression, cognition, attitudes towards violence, aggressive behavior, adolescence, effects of exposure to violence, violence and aggression, youth, violence, child development, community violence, neighborhood violence, violent exposure, social cognition, family violence, home violence, aggressiveness, violence, general aggression model, depression, stress disorders, posttraumatic stress, cognitive development and adolescent aggression, social information processing, teen, teenager, social information processing, aggression and academic achievement, exposure to violence, adolescent aggression, aggressive behaviors, psychological distress and adolescence, life events*, and *academic achievement*.

Developmental Factors of Adolescent Aggression

Adolescent development ensues after childhood and before adulthood. This group of individuals typically includes teenagers between 13 and 17 years of age (Farrington, 1989). During this stage, physical, emotional, and mental developmental changes occur (Swearingen & Cohen, 1985; Yurgelun-Todd, 2007). This developmental stage has been credited with the biological, physiological, and social changes that can result in changes in many types of behavior, including aggressive behaviors (Gutgesell & Payne, 2004). It is important to focus attention on factors that may be related to individual and situational variations in aggression during adolescence (Hazen, Schlozman, & Beresin, 2008; Valois, MacDonald, Bretous, Fischer, & Drane, 2002), as well as the impact of aggressive cognitions and emotions on behaviors (Boxer, Musher-

Eizenman, Dubow, Danner, & Heretick, 2006; Campbell & Ntobedzi, 2007; Ivory & Kalyanaraman, 2007; Lösel et al., 2007; Mathews, Dempsey, & Overstreet, 2009), including those that impact academic performance (Flannery, Wester, & Singer, 2004; Mathews et al., 2009).

Types of Aggressive Behavior. Aggression is characteristically expressed in behavior that is deliberately intended to harm another person (Anderson & Bushman, 2002; Baron & Richardson, 1994; Berkowitz, 1993; Moyer, 1971). However, discussions of aggression make it clear that it is not an unidimensional phenomenon. Instead, there are many dimensions that have been considered to characterize aggression, and I discuss these here. For example, aggressive behavior can be displayed in many forms. Anderson and Bushman (2002), Ferguson (2010), Pornari and Wood (2010), and Siever (2008) noted that aggression can be displayed physically, verbally, and indirectly. Archer and Coyne (2005) provided **c**omparative definitions related to indirect aggression, relational aggression, and social aggression**.** Richardson and Green (2006) postulated that social aggression occurs as a result of conflicts in response to anger resulting from interactions between people who are acquaintances. The resulting interactions may result in displays of violent aggression. Violent aggression is operationally defined as forms of behavior that have the intent of causing extreme physical or psychological harm/control (Anderson & Bushman, 2002). Examples may include murder, maiming, domestic/partner violence, physical and sexual assault, threats with weapons, other types of severe threats

and menacing creating an atmosphere where there is fear for life or property perpetrated by individuals or groups of individuals, such as gangs. Exposure to violence and aggressive acts that are extended to suggest that experiences of witnessing or exposure to violence in accordance with the concept of *community aggression* may promote the development and use of negative behavior towards others (Aceves & Cookston, 2007).

Physical and verbal aggression. Physical aggression includes behaviors that involve direct contact, such as hitting, slapping, kicking, choking, or stabbing (Huesmann et al., 2009; Kokko et al., 2009; Richardson & Green, 2006). Physical aggression can also lead to bodily harm, resulting from a physical altercation or fighting (Karriker-Jaffe, Foshee, Ennett, & Suchindran, 2008). Crick, Ostrov, and Werner (2006) clarified that physically aggressive acts are deliberate and seek to damage relationships.

Verbal aggression does not include direct physical contact but is, as the name would imply, the use of words to inflict harm. Verbal aggression includes acts such as intimidating, teasing, name calling, and lodging insults (Fite, Goodnight, Bates, Dodge, & Pettit, 2008; Paciello, Fida, Tramontano, Lupinetti, & Caprara, 2008). McCloskey, Lee, Berman, Noblett, and Coccaro (2008) asserted that verbal aggression can also include unprovoked arguing and threatening and signify a developmental trajectory leading to aggressive behavior. Moreover, verbal aggression can be in spoken or written forms.

Direct versus indirect aggression. Direct aggression includes physically or verbally negative behavior and is directed at a specific target; the target is aware of the direct attack (Wallenius, Punamäki, & Rimplelä, 2007; Wallenius & Punamäki, 2008). Examples of direct physical aggression include battling, kicking, biting, slapping, hitting, tripping, pushing, punching, knocking down, fighting, and even shooting (Benenson, Carder, & Geib-Cole, 2008; Nagin & Tremblay, 2005; Wallenius et al., 2007). Direct aggression can also include nonphysical forms, such as insulting or practical jokes aimed at a victim, eye-rolling or other mocking or threatening gestures directed at the victim, noticeably shunning the target, and verbal rejection (Bushman et al., 2009; Coyne, Archer, Eslea, & Liechty, 2008; Kikas, Peets, Tropp, & Hinn, 2009; Walker, 2010; Wallenius, & Punamäki, 2008; Wallenius et al., 2007).

Feshbach (1969, as cited in Card, Stucky, Sawalani, & Little, 2008) defined indirect aggression as a covert or indirect behavior that is aimed at harming the intended victim by causing them to be socially excluded or rejected. The victims are not confronted directly, but their reputation, social status, and/or self-esteem are damaged. Sample tactics in indirect aggression include spreading unpleasant rumors, gossiping, and using negative undertones that would encourage others to shun or devalue someone (Card et al., 2008; Fives, Kong, Fuller, & DiGiuseppe, 2010; Forbes, Zhang, Doroszewicz, & Haas, 2009; Hubbard, McAuliffe, Morrow, & Romano, 2010; Linder & Gentile, 2009; Schmid, 2005). Indirect aggression may also be done through spoken or written

words, such as on Internet web pages, text messaging, in “slam books,” graffiti, and so forth (Kowalski, Limber, & Agatston, 2008).

Relational aggression is related to indirect aggression in that the goal is to manipulate and damage social relationships and status of the target, and this is often accomplished through indirect, covert means **(**Archer & Coyne, 2005; Crick & Grotpeter, 1995; Doyle & DeFago, 2009; Pelligrini & Roseth, 2006; Tackett, Waldman, & Lahey, 2009). Crick and Grotpeter (1995) observed that children display relationally aggressive behaviors when interacting with their peers, and these acts can be predicative of social-psychological adjustment problems in the aggressor. Crick (1996) asserted that relational aggression in children can result in continued social maladjustment through adolescence. Social skills are used to manipulate others in peer groups with the covert intention of negatively impacting individuals.

Other ways of classifying aggressive behavior take into account the style and/or goals of the aggressive behavior. That is, the motive, purpose, emotionality, and objective are taken into account (Ramírez, 2010). These classifications differentiate between hostile aggression and reactive aggression versus proactive and instrumental aggression

Hostile/reactive aggression versus proactive/instrumental aggression. Coie and Dodge (1997) posited that the key features of hostile aggression are (a) emotionality and (b) intent to harm. Provocation can be real or imagined by the aggressor. Bushman and Anderson (2001) further explained hostile aggression as

a thoughtless, unplanned, anger driven act with an imminent desire to aggressively harm someone without regard to the consequences of the behavior. Similarly, Schmidt (2005) explained that hostile aggression occurs when someone unjustifiably commits a harmful act against someone. The perpetrator's intention in displaying hostile aggression is to cause pain or injury on the targeted individual with minimal or apparent less aggressor advantage (Atkins & Stoff, 1993; Atkins, Stoff, Osborne, & Brown, 1993; Bushman & Anderson, 2001; Feshbach, 1964). Hostile aggression is also synonymous with reactive aggression because it can result from retaliation of real or imagined provocation (Pornari & Wood, 2010). Reactive aggression is related with anger as proactive aggression is related to pleasure (Dodge, 1991). Crick and Dodge (1996) and Kempes, Matthys, de Vries, and van Engeland (2010) defined reactive aggression as an impulsive or anger-related response manifested by a perceived, provocation, or retaliation towards another for being hurt or angered.

Hostile/reactive aggression and proactive/instrumental aggression differ by the emotion associated with each behavior (Dodge & Coie, 1987). Proactive/instrumental aggression, by contrast, is planned or deliberate, not reactive to an immediate provocation, and a reward is anticipated (Dodge, Lochman, Harnish, Bates, & Pettit, 1997). Crick and Dodge (1996) emphasized that proactive aggression is centered on Bandura's SLT. That is, proactive/instrumental aggression is more premeditated than reactive to a momentary provocation, is learned through exposure to models of such behavior

who receive positive outcomes (or avoid negative outcomes), and is executed as an instrumental means to a desired outcome. Arsenio, Adams, and Gold (2009) argued that SCIP is relevant in adolescent reasoning and relevant to proactive and reactive aggression (Archer & Coyne, 2005; Crick & Grotpeter, 1995; Doyle & DeFago, 2009; Pellegrini & Roseth, 2006; Tackett, Waldman, & Lahey, 2009).

Theoretical Formulations on the Development of Aggression

Social Learning Theory and Aggression

Social learning theories such as those proposed by Bandura (1977, 1978) have been used in the explanation of the development of various social behaviors through the association between social and environmental influences, learning, and resulting cognitive processes. Aggression, as with other forms of social behavior, can be influenced by these kinds of factors through processes of operant and classical conditioning, as well as observational learning (Anderson & Bushman, 2002; Bandura, 1978; Bushman & Huesmann, 2006; Huesmann & Taylor, 2006). Operant conditioning theory, classical conditioning theory, and observational learning theories can assist in explaining acts of adolescent aggressive behavior.

Thorndike and Skinner (1957) are credited with the development of the operant conditioning theory. The theory is used to explain that the probability that a behavior will be repeated is related to the effect of that behavior, that is, whether it resulted in reward, punishment, or neutral outcomes. Operant

conditioning is used to explain behaviors that are instrumental to achieving an end (Skinner, 1945, 1950, 1954).

Classical conditioning theory emphasizes the impact of exposure to paired associations of our own reactions to a situation (Bandura, 1977; Rescorla, 1988). Natural reactions to a stimulus (e.g., physical pain in response to a physical stressor) become associated with stimuli that were not previously linked to the response (e.g., physical pain in response to thought). Classical conditioning has been referred to as a model of learning that results in a change of attitude, behavior, or emotional reactions as a result of a personal experience or repeated experiences (Annau & Kamin, 1961; Bandura & Rosenthal, 1966; Rescorla & Solomon, 1967).

Observational learning emphasizes that it is not necessary to have immediate experience as an actor for operant and classical conditioning to occur (Bandura, 1977; Huesmann, 1998). Rather, the mere observations of the outcomes/effects of others' behavior and the mere observations of associations can have learning outcomes for the observer, impacting physiological, emotional, cognitive, and behavioral responses (Bandura, 1969). As an example, Bandura (1973a) conducted an experiment using the Bobo doll. During the experiment, children watched a video showing a verbal and physical aggressive attack on a doll. Upon viewing the video, the children were taken to an area containing toys and were told not to touch the toys. The inability to touch the toys resulted in the children displaying anger and frustration. The children were later secured in a

room that contained the same toys as those displayed in the Bobo video. The children imitated the aggressive behavior they observed in the Bobo video. The experiment was used to test the prediction that specific and general aggressive behaviors were more likely to occur through imitation after witnessing aggressive behaviors by others. However, the children who were shown the aggressor being punished for his or her actions did not repeat the behavior, that operant conditioning suggests. Similarly, when children witnessed the aggressor being praised they imitated this behavior; their action also represented an outcome of vicarious operant conditioning. The Bobo experiment demonstrates Skinner's assertion that the effectiveness of reinforcement and punishment in operant conditioning will guide behavior.

Such observational learning can then affect a response to similar cues in the environment, including how to interpret and behave in a similar situation. Indeed, one of the behavioral consequences of observational learning is imitation of behaviors that have been observed (Bandura, 1986, 1987, & 2001). Observational learning, in essence, is the ability to learn how to perform actions by mimicking actions previously seen. The results of observational learning require action based upon acquisition of social and cultural skills that are used to obtain a similar previously witnessed results.

Haviland and Nagin (2005) suggested that acts of violence are observable and responsible for altering normative course of behavior. Similarly, McMahon et al. (2009) and Spano et al. (2010) concluded that adolescent exposure to

violence can result in aggressive behavior. Haynie, Petts, Maimon, and Piquero (2009) stated that adolescent exposure to violence should be considered as a public health problem because it is affecting their behavior and psychological well-being.

Furthermore, Thompson et al. (2011) concluded that aggressive behavior problems are the result of individual developmental perspectives resulting from environmental exposure factors that impact social development. The resulting developmental perspectives are the effect of developmentally aberrant information processing that affects cognition, emotions, and physiological functioning and result in varying types of aggression (Margolin, 2005). Individual aggressive behavior levels vary based on the amount and the number of violent exposure factors.

Social-Cognitive Models of Aggression

Other theorists and researchers have built upon Bandura's initial model regarding social learning and cognitive processes in aggression. Huesmann (1988), Dodge and Crick (1990), Bushman and Anderson (2001), Anderson and Bushman (2002), Ormrod and Rice (2003), and others specifically propose models that describe how, in the process of observing through exposure, cognitive scripts for behavior patterns, attitudes, motivation, and cortical activity are also being formed and reinforced with respect to aggression. They then predict the likelihood of aggressive behaviors, given the situation in interaction

with these specific patterns that the individual brings with him or her to the situation as a function of earlier experiences.

Exposure to violent social environments can be predictive in the formulation of psychological beliefs and behavior about aggression (Fite et al., 2008; Gorman-Smith & Tolan, 1998). Moffitt (1993) stated that a strong correlation exists between childhood exposure to violence and adolescent aggression. The resulting effects of the exposure, cognitive processing and aggressive behavior, are attributed to the child's social information processing (SIP; Calvete & Orue, 2010). As a result, exposure to violence can influence the manner that people rationalize, conceptualize, believe, and respond.

Blakemore, den Ouden, Choudhury, and Frith (2007) stated that the adolescent thought process changes and includes social cognitive process development. Similarly, Dubow, Huesmann, and Boxer (2009) stated that a combination of observation and application of the social learning process influence behavior. Not only is behavior influenced, psychological health and developmental adjustment are threatened (Haynie et al., 2009; Margolin, 2005). The association between adolescent cognition and aggression is facilitated by social information processing (SIP; Calvete & Orue, 2010).

Information processing has been noted as acquiring, retaining, and using information to process information. The result impacts the child's subsequent behavior patterns. Côté, Vaillancourt, Barker, Nagin, and Tremblay (2007) suggested that most children express some form of aggression. The problem is

that some children continue practicing aggressive behavior well into adolescence (Huesmann, Eron, Lefkowitz, & Walder, 1984; Olweus, 1979). The developmental path of cognition and modeled behavior reinforces violence, resulting in aggressive behavior (Benhorin & McMahon, 2008). Aggressive adolescent behavior results from individual social-cognitive information processing (SCIP) or decision making skills (Calvete & Orue, 2011; Crick and Dodge, 1994; Huesmann, 1988), Their SCIP models attempt to explain the development of childhood aggressive behavior, as well as the maintenance of relatively habitual aggressive behavior patterns.

Huesmann's (1998) SIP theory proposes that cognition and decision making processes guide behavior in response to social conflict. In other words, a child's social information processing is formulated by the internalized standards that are developed from a combination of information acquired from various social influences (Anderson & Huesmann, 2003). In particular, Huesmann's model purports that habitually aggressive children demonstrate (a) cognitive patterns (e.g., hostility biases) that support interpretation of a greater variety of situations as provocative, (b) beliefs that support and justify aggression, and (c) aggressive behavioral response patterns (scripts), that are sustained through cognitive rehearsal. Exposure to violence is considered a critical situational factor that can enhance the development and maintenance of these aggression-related social-cognitive information processing systems (Anderson & Bushman, 2002; Huesmann, 1982, 1988, 1997; Huesmann & Eron, 1984). In a sense, the

socialization process begets “scripted impulsivity” and aggressive responses (Fontaine, 2008, p. 26).

Crick and Dodge’s (1994) SIP theory proposed that the information acquired by children from environmental learning is retained, and subsequently used by children to develop scripts that guide decisions that are applied during social interactions. Their model emphasized social skills acquired by children are a result of social adaptation, social reasoning, and social perception. That is, the child’s social behavior follows from his attempt to adapt to his way of viewing the world (e.g., hostile bias) and protecting himself in social-conflict situations (Crick & Dodge, 1994). Crick and Dodge are credited with suggesting that children process social information by perception of stimulus cues. The steps include translating, interpreting, clarifying goals, response construction or access, deciding on the response, behaviors resulting from perceived stimulus, and expectation biases (Anderson & Bushman, 2002; Crick & Dodge, 1994). Huesmann’s (1988) and Crick and Dodge’s (1994) SCIP models are similar in that they both assert that children that show aggressive behavior patterns possess aggressive cognitive information processing styles. These theorists and researchers posited that the aggressive behavior patterns of children result from aggressive beliefs and biases, which are the result of exposure to violence.

Aggression models were further developed in the theoretical framework of the general aggression model (GAM; Anderson & Bushman, 2002). The GAM was developed in an attempt to incorporate the thoughts, moods, and

behaviors associated with violence and aggressive. According to the GAM, both situational and internalized variables influence and affect an individual's aggressive beliefs and determine the resulting aggressive act or behavior.

Empirical Evidence of Developmental Patterns of Aggression

There appears to be a normative developmental pattern for aggression: the norm for most children is to begin and remain relatively non-aggressive (Hartup, 2005). However, the development of childhood aggressive behavior statistically raises the likelihood of adult aggression (Farrington, 1989, 1995, 2003; Farrington, Ttofi, & Coid, 2009; Huesmann, Dubow, & Boxer, 2009; Huesmann et al., 1984; Huesmann & Moise, 1998; Kokko et al., 2009). As a means of testing this hypothesis, in 1960, Eron initiated the Columbia County Longitudinal Study (Eron, Huesmann, Lefkowitz, & Walder, 1972). The original sample was all third graders (males and females), and their families, residing in Columbia County, New York. The sample has been followed for over 40 years (Huesmann, Dubow, & Boxer, 2009). Results have established moderate and consistent relationships, for both males and females, between childhood levels of aggression and aggression through adolescence and into adulthood (Huesmann et al., 2009). In particular, participants maintained their pre-study levels of low or high aggression across time. The study also concluded that highly aggressive participants engaged in negative behavior patterns that included domestic aggression, criminal behavior, and average academic achievement. On the contrary, low aggressive participants continued minimal aggressive behavior.

Social Cognitive Model of Stress

Social cognitive models of aggression identify steps in reacting to environment cues, including aggressive behaviors by others: translating, interpreting, clarifying goals, response construction or access, deciding on the response, behaviors resulting from perceived stimulus, and expectation biases (Anderson & Bushman, 2002; Crick & Dodge, 1994). However, it is also important to consider emotional responses and how these are related to coping responses. Lazarus' (1999; Lazarus & Folkman, 1987) social cognitive model for stress helps to predict how exposure to violence can involve cognitive appraisals that lead to emotional distress, such as depression or anxiety, and a coping reaction. As Lazarus (1993) has noted,

> We found that some coping strategies, such as planful problem solving and positive reappraisal, were associated with changes in emotion from negative to less negative or positive, while other coping strategies, such as confrontive coping and distancing, correlated with emotional changes in the opposite direction, that is, toward more distress. (p. 239).

Thus, some may respond to exposure to aggression with psychoemotional distress and confrontive coping behaviors (e.g., counteraggression), while other may respond with psychoemotional distress and avoidant coping behavior. However, the psychoemotional distress paired with these coping responses can interfere with behavioral functioning.

Exposure to Aggression: Empirical Evidence

As noted earlier, most theories of human aggression emphasize the relationship of situational factors associated with the development and maintenance of aggression, including their impact on social cognition, behavioral scripts, behavioral rehearsal, and reinforcement patterns (Anderson & Bushman, 2002; Bandura, 1983, 2001; Crick & Dodge, 1994, Dodge & Coie, 1987; Huesmann, 1986, 1988, 1998; Huesmann & Eron, 1984). Exposure to aggression and violence is one of the most critical situational factors in all of these models. The 2009 National Survey of Children's Exposure to Violence (NATSCEV) estimated that all children 17 years and younger have witnessed an act of indirect or direct violence at least once in their lifetime (Finkelhor et al., 2009). Spano et al. (2010) argued that continued exposure to violence increases adolescent propensity of engaging in violence. Understanding the relationship between exposure to negative behavior displayed in the family and in the community may assist in explaining the trajectories of social and emotional development and how they affect academic performance at school (Salzinger et al., 2008).

Community Violence

Urban areas in the United States present the highest rate of exposure to community violence (Cooley-Quille, Boyd, Frantz, & Walsh, 2001; Shahinar, Fox, & Leavitt, 2000). However, it is not limited to urban areas (Osofsky, 1995; Overstreet & Mazza, 2003). Exposure to community violence has been linked to reduced behavioral and social competence (Adamson & Thompson, 1998; Wilk,

2002), including anti-social behavior (Miller et al., 1999; Scarpa, 2001; Schwab-Stone et al., 1995, 1999), and with lower school performance (Eitle & Turner, 2002). Other psychological consequences of exposure to community violence that have been identified include low self-esteem, higher levels of psychoemotional distress, and heightened risk symptoms of trauma, including post-traumatic stress disorder (Boney-McCoy & Finkelhor, 1995; Hughes, 1988; Maker, Kemmelmeier, & Peterson, 1998; Martinez & Richters 1993).

Much of the research demonstrating apparent relationships between witnessing community violence and aggressive deviance has focused on high-risk youth, in particular, inner-city, non-white males from lower socioeconomic groups. Few have looked at this relationship with those who are in relatively low-risk groups (Eitle & Turner, 2002). However, when a group of late adolescent low-risk college, rural, predominantly white students was studied, there were similar levels of witnessing and victimization of community violence as the high-risk youth (Scarpa, 2001). Eitle and Turner (2002) studied a larger, more diverse sample initially consisting of 5,370 boys and 554 girls in 6th, 7th, and 8th grades. Fifty percent of the sample consisted of Hispanics, twenty-five percent were African Americans and non-Hispanic, and Whites comprised 25 percent. The study found that African American adolescents experienced an increased exposure to witnessing violence as compared to their Hispanic, non-Hispanic, and White counterparts. The increased exposures to violence predicted increased rates of subsequent criminal behavior (Eitle & Turner, 2002).

Similarly, Scarpa and Haden (2006) asserted that when youth and adolescents fall victim to community violence, they have the propensity for exhibiting subsequent aggressive behavior.

A particularly important finding is that both direct and indirect exposure to community violence can have direct impact on youth. Direct exposure is personally witnessing or being a victim of violence. Indirect exposure is hearing about such violence. The effect of indirect exposure to community violence is the propensity to become involved or attracted to risk-taking activities or crime. Thus, youths and adolescents from inner-city neighborhoods and communities are likely to be exposed to community violence on a regular basis (Farver, Xu, Eppe, Fernandez & Schwartz, 2005; McMahon et al., 2009). Exposure to such environments, that are often the worst neighborhoods, result in the likelihood of unhealthy adolescent development, conduct problems, and aggressive behavior (Chen, 2010; Hart & Marmorstein, 2009; Sommer & Baskins, 1994). Community violence can negatively impact adolescents regardless of whether they are witnesses or direct victims of violence; in either case, the observation and awareness of the behavior associated with the violent acts affect learning, attitudes, and beliefs (Guerra, Huesmann, & Spindler, 2003; Halliday-Boykins & Graham, 2001; Haynie et al., 2009). Continuous exposure to community violence can affect adolescents' SIP, thereby resulting in cognitive processes in reaction to potentially violent cues that seem to justify negative behavior (Anderson, Benjamin, & Bartholow, 1998; Arsenio et al., 2009; Bandura 1973; Latzman &

Swisher, 2005; O'Donnell, Schwab-Stone, & Ruchkin, 2006). Research has suggested that exposure to community and neighborhood violence can affect other aspects of social cognition, including adolescent identity, as well as psychological well-being, further increasing the likelihood of aggressive behavior (Bradshaw & Garbarino, 2004; Bradshaw, Rodgers, Ghandour, & Garbarino, 2009; Chen, 2010; Cooley-Strickland et al, 2009; Cooley-Strickland et al, 2011; Gardner & Brooks-Gunn, 2009; Lambert, Nylund-Gibson, Copeland-Linder, & Ialongo, 2010; McAloney, McCrystal, Percy, & McCartan, 2009; McGee, 2003; Schiavone, 2009). However, others have noted that not all youths who are exposed to community violence display negative or aggressive behaviors, suggesting the role of other individual and situational mediating factors (Buka, Stichick, Birdthistle, & Earls, 2001; Margolin & Gordis, 2004; Valois et al., 2002).

Familial Contributors to Violence

Adolescents can be exposed to varying acts of familial violence. Some of the types of familial violence that adolescents may be subjected to are corporal punishment, domestic violence, or lack of parental involvement (Mahoney, Donnelly, Boxer, & Lewis, 2003). Exposure to violence in the home increases a child's risk for adolescent aggression and can have significant effects on the way a child develops (Dodge et al., 1994; Osofsky, 1995, 1999; Wolfe et al., 2003).

Domestic violence. Exposure to domestic violence occurs for children when they personally hear, witness, or experience the behaviors and aftereffects

of parental altercations (Evans, Davies, & DiLillo, 2008). When children or adolescents are exposed to domestic violence a strong probability exists that the visualization of the act of parental violence will affect their psychological and behavioral development, including aggression and violence (Cantrell, MacIntyre, Sharkey, & Thompson, 1995; Chiodo, Leschied, Whitehead, & Hurley, 2008; Edleson et al, 2007; Evans et al., 2008; Graham-Bermann, Gruber, Howell & Girz, 2009; Holt, Buckley, & Whelan, 2008; Howells & Rosenbaum, 2008; McCloskey & Lichter, 2003; Moylan et al, 2010; Wolfe et al., 2003). An estimated 15.5 million adolescents in the United States are exposed to domestic violence each year (McDonald, Jouriles, Ramisetty-Mikler, Caetano, & Green, 2006).

Corporal punishment. Corporal punishment has been an essential means of parental discipline. Corporal punishment has been defined as "the use of physical force with the intention of causing a child to experience pain but not injury for the purpose of correction or control of the child's behavior" (Straus, 1994, p. 4; Straus & Kaufman-Kantor, 1994). Parental discipline in the form of corporal punishment can influence developmental stages of conduct during childhood (Sheehan & Watson, 2008). For example, if a child is misbehaving, the parent may respond with aggressive behavior and not realize the potential for lasting consequences of his behavior (Huesmann et al., 1984; Huesmann, 1997; Lefkowitz, Huesmann, & Eron, 1978; Mahoney et al., 2003).

The problem is that some parents use some form of punishment as a deterrent to inappropriate behavior, disobedience, or as a means of chastisement without realizing the potential consequences of later disruptive behavior (Caprara, Barbaranelli, Pastorelli, Cermak, & Rosza, 2001; Taylor, Hamvas, & Paris, 2011). The resulting effect could be that children that grow up in an atmosphere exposed to violence are likely to aggress against their children (Hill & Nathan, 2008; Osofsky, 1995, 1999). Several longitudinal studies have been conducted that substantiate consistent correlations between adolescent aggressive behavior and parenting styles (Dunman & Margolin, 2007; Frick & White, 2008; Hoeve et al, 2008; Joussemet et al, 2008; Tolan, Guerra, & Kendall, 1995).

Temcheff et al. (2008) proposed that aggressive behavior patterns acquired during childhood have the likelihood to continue through adulthood and result in violence or aggressive acts against their spouse or own children, thereby renewing a cycle of violence. Georgiou (2008) and Kokkinos and Panayiotou (2007) postulated that parental discipline practices negatively correlate with school because children have a tendency to display aggressive behavior during school activities. The American Humane Association (2011) reported that child discipline should be deliberate and designed to modify or manipulate behavior in a positive manner. Strauss (1994) and Straus, Sugarman, and Giles-Sims (1997) conducted successive national surveys and concluded that physical discipline stops unwanted behavior in the short term but in the long run the action resulted in augmented antisocial behavior and the likelihood of aggression. Discipline is

necessary to set boundaries for acceptable behavior but caregivers and parents should consider type of disciple to administer.

Other parenting practices that occur in the home can affect developmental and psychological variations that affect conduct and behavior in school (Grolnick & Pomerantz, 2009; Laskey & Cartwright-Hatton, 2009; Viding, Fontaine, Oliver, & Plomin, 2009). Fan and Chen (2001) related that the No Child Left Behind Act of 2001 targeted parental involvement as a means of positively affecting student academic achievement. Similarly, Jeynes (2005, 2007) and the U. S. National Center for Educational Statistics (2006) concluded that parental involvement positively affected academic achievement when the involvement included: (a) parental-child communication regarding school function, (b) parental examination of assignments prior to submittal to teachers, (c) parental expression of academic expectations, (d) current or past parental engagement of reading with children, and (e) loving and supportive parent-child relationships, tempered with consequences and discipline.

Jeynes (2005) conducted a meta-analysis of studies on parental involvement and academic achievement, and concluded that students who are scholastically weak experience lack of parental engagement and support. Similarly, students who experienced parental involvement in their school activities showed higher academic achievement, grade point averages (GPAs), and scores on standardized tests. Ingram, Wolfe, and Lieberman (2007) conducted a study that investigated the relationship of parental involvement in

their child's school activities in association with student academic achievement. The study consisted of three Chicago elementary schools and concluded that more increased parental involvement in a child's education at school and reinforced in assignments at home, the more likely a child will have an increased chance for academic success. When parents take an active role in their child's academic process that includes participation in school activities or involvement in projects and assignments, they regularly convey the importance of a good education (Ingram, Wolfe, & Lieberman, 2007). Jeynes (2005) and Pomerantz, Moorman, and Litwack (2007) suggested that when parents are actively involved and collaborate with schools, there is also higher probability of remaining in school. The parental involvement can lessen aggressive behavior and alleviate inappropriate conduct and behavior in school, that also supports sustained participation in school (Comer, 1984).

Underestimation of Exposure

Other issues of concern in understanding the relationship between the sources and types of violence and aggressive behavior among youths are underestimations of the possible effects by caretakers of these children, and the need to understand better the cumulative and interactive effects of sources of exposure (Margolin & Gordis, 2004; Moylan, 2010; Salzinger et al., 2008). Multi-level exposure to violence permeates cognition and can erode social support when the family does not realize the extent of the exposure nor fully understand the immediate and long-term effects of the exposure on our youth

(Margolin & Gordis, 2004). Caregivers fostering a strong, caring, and positive relationship are important for assisting youth in dealing with exposure to violence (Osofsky, 1999).

Lewis et al. (2010) conducted a longitudinal study. The participants were caregivers (875) of undisclosed ages of and adolescents (812) beginning at the age of 12. Caregivers were defined as the primary individuals responsible for the care of the adolescents. This study included mostly unmarried (62%) females (92%) that were the adolescents' biological mothers (64%). The research was collected and incorporated into the Longitudinal Studies of Child Abuse and Neglect (LONGSCAN) to determine if a correlation exists between adolescent witnessed violence and behavior problems. The researchers observed that caregiver and youth reports of witnessed violence and behavioral problems were inconsistent. They concluded that caregivers may not be aware of the amount of violence that adolescents are exposed and may not want to include domestic violence that children have witnessed in their own home. Regardless of the reason for inconsistent exposure opinions of adolescents and caregivers, the research suggested adolescent behavior is impacted by witnessed violence and exposure to violence is related to more aggressive behavior.

Multi-factor Exposure

Multi-factor exposure to violence must be measured in context. Adolescents exposed to violence either by witnessing or victimization respond in varying ways. According to theory and research, internalized standards for

behavior or thoughts (schemas, scripts) may guide the level of aggression displayed by each individual (Dodge & Petitt, 2003; Guerra et al., 2003; Huesmann & Eron, 1984; Salzinger et al., 2008). Allwood and Bell (2008) and McMahon et al., (2009) purported that social behavior results from exposure to violence, learned schema, and cognition that are subsequently conveyed in an aggressive manner. Spano et al. (2010) and Riggs & Kaminski (2010) similarly opined that a connection existed between adolescent exposure to violence and aggressive behavior. Processing of the information associated with witnessing violence guides the individual social problem-solving and results in the manner that the individual processes or thinks about reacting. As a result, the youth come to see aggression as an adaptive strategy (Swisher & Latzman, 2008; Wilkinson & Carr, 2008).

A longitudinal study by Boxer et al. (2008) examined the relationship of exposure to violence, coping, and adjustment. Two studies were conducted: the first study was conducted in a southeastern city and included a sample of 35 children (ages 6-16) who participated in a faith-based afterschool program. The second study was conducted in a southern Midwestern city and in a Northeastern city and included a sample of 70 children (ages 8-15) who participated in the nonprofit afterschool program. Each study was aimed at assessing normative beliefs about aggression. Each study's group was assessed for psychosocial adjustment, exposure to violence, crime, and low-level aggression, and avoidant

coping with exposure to violence. The study concluded that there is a significant correlation between exposure to violence and acts of aggression.

Research indicates that several risk factors contribute to aggressive behavior (Boxer, Goldstein, Musher-Eizenman, Dubow, & Heretick, 2005; Boxer, Huesmann, Bushman, O'Brien, & Moceri, 2009; Lambert, Ialongo, Boyd, & Cooley, 2005). The context of the risk is the everyday association with exposure to violence that may be perpetuated in direct and indirect exposure to multivariable factors associated with media (violent video games), family, and the community environments and further perpetrated via electronic media usuage (Price & Maholmes, 2009). Finkelhor et al. (2009) concluded that more than 60% of children experience daily exposure to some form of violence. In essence, multicontextual exposure may be an epidemiological problem that needs further investigation for ascertaining societal risk factors of adolecent violence (Guerra et al., 2003; Wilson, 2008).

Various sources of exposure to violence can contribute to the psychological and cognitive development of our youth as well as assist in understanding the need to conceptualizing the risk of the effects of exposure to violence and its effects on our youth (Garbarino, 2001; Gudiño et al., 2011; Price & Maholmes, 2009). Acts of aggression, anxiety, depression, and stress can be the resulting effect of the exposure (Buka et al., 2001; Finkelhor, 1995; Kliewer, Lepore, Oskin, & Johnson, 1998). These conditions can result in impairment in school performance (Garbarino, Dubrow, Kostelny, & Pardo, 1992, Hinshaw,

1992; Loveland et al., 2007; Mrug & Windle, 2009; Schwab-Stone et al., 1995; Voisin, Dexter, Neilands, & Hunnicutt, 2011); decreased IQ (Delaney- Black et al., 2002; Boxer et al., 2009; Zahrt & Melzer-Lange, 2011).

Exposure to Violence and Psychological Distress

As previously stated, children are reportedly witnessing or victimized by direct or indirect exposure to violence (Finkelhor et al., 2009, Hurt, Malmud, Brodsky, & Giannetta, 2001; Spano et al., 2010). Exposure to various types and sources of violence has been associated with adolescent developmental processes (Crick & Dodge, 1994; Huesmann, 1997; Margolin & Vickerman, 2007; Osofsky, 1995; Spano et al., 2010; Swearingen & Cohen, 1985). Accordingly, Cohen et al. (2010) have related that exposure to varying types and sources of violence can result in child and adolescent posttraumatic stress symptoms. Evans et al. (2008) and Margolin and Vickerman (2007) surmised that exposure to domestic violence is a contributing factor for PTSD.

Similarly, Graham-Bermann and Seng (2005) and Margolin and Vickerman (2007) asserted that interpersonal exposure to violence is similar to traumatic experiences resulting in posttraumatic stress (PTS) in children and adolescents. Trauma is experienced when someone is exposed to a direct or indirect event that has a psychological or physical effect on them that may result in anxiety or a depressive state (Huang, Xia, Sun, Zhang, & Wu, 2009; Suliman, 2009). Ozer and Weinstein (2004) argued that some adolescents exposed to violence will be traumatized nor show signs of developed PTSD. Li, Howard,

Stanton, Rachuba, and Cross (1998), Matthew, Dempsey, and Overstreet (2009), and Ozkol, Zucker, and Spinazzola (2011) stated that posttraumatic stress symptoms are associated with community violence resulting in a display of inappropriate behaviors such as aggression, that affects the student functioning at school.

Exposure and Aggression in School

Singer and Miller (1999) argued that there is a correlation between exposure to violence and subsequent violent behavior. Farmer (2000) concluded that if children are consistently exposed to violent situations, they have the likelihood of exhibiting aggressive behavior and engaging in anti-social behavior in school. Previous correlational research has shown that exposure to violence may result in an increase of aggressive behavior in school (Guerra, Huesmann, & Spindler, 2003; Schwartz & Proctor, 2000). Similarly, Boxer, Huesmann, Bushman, O'Brien, and Moceri (2009) suggested that adolescents' exposure to media violence is directly related to general aggression or violent behavior displayed in school. Henrich et al. (2004), Milam et al. (2010), and Salzinger et al. (2008) further related school aggression to exposure to community and familial violence.

Social Patterns and Secondary Effects of Aggression in School

Most aggressive students display negative behavior and have friends or associates who behave similar to them (Farmer, 1994; Farmer, 2000; Farmer & Xie, 2007; Farver, 1996). Barth, Dunlap, Dane, Lochman, and Wells (2004) and

Baker, Clark, Maier, and Viger (2008) concluded that peer association both models and reinforces similar behavior. The fact is one disruptive student can affect the entire classroom negatively. The disruption may not only affect the disruptive students' academic performance, but also that of the others in the same environment.

Aggression and Academic Performance

Youth and adolescent exposure to acts of violence has been associated with an array of negative outcomes. One in particular is the relationship between school adaptation and academic success. Understanding the relationship between exposure to various acts of violence resulting in negative behavior may assist in explaining the trajectories of social and emotional development and how they affect academic performance at school (Salzinger et al., 2008). Merrell, Buchanan, and Tran (2006) suggested that exposure to violence can result in aggressive behaviors that are contributing factors of the academic achievement deficits that schools are experiencing. Gentile et al. (2004) and Temcheff et al. (2008) opined that negative behavior or aggression can hinder academic performance and affect academic achievement.

Gentile et al. (2004) used the General Aggression Model (GAM; Bushman & Anderson, 2002) framework as an indicator for aggressive behavior and concluded that adolescents exposed to increased amounts of video game violence were increasingly hostile, experienced frequent arguments with teachers, and performed poorly in school. Similarly, Temcheff et al. (2008)

recruited students from inner-city schools in Montreal in the 1970s. The study known as the Concordia Longitudinal Risk Project examined aggressive behavior patterns as an indirect variable for lowered educational attainment. The study indicated that exposure to violence is problematic and can result in childhood aggression that is predictive of such negative results as academic underachievement, resulting in students dropping out of school.

Barthelemy and Lounsbury (2009) studied relationships between aggression, academic success, and personality, as defined by the Big Five model of personality (McCrae & Costa, 1997). The Big Five model posits five personality dimensions that are thought to be relatively stable across time: agreeableness, conscientiousness, extroversion, neuroticism/emotional stability, and openness. Results indicated that there is a positive relationship between agreeableness, conscientiousness, extraversion, and openness and grades. In contrast, scores on a self-report aggression scale were negatively correlated with grades. When aggression and personality were considered simultaneously, aggression accounted for 13.8% of variance in grade point average, and the Big Five variables added another 7.9% of variance accounted for in grades. In fact, they found that "aggression...was more highly correlated with GPA than were any of the Big Five variables" (Barthelemy & Lounsbury, 2009, p. 167).

Various forms of social aggression have been associated with interfering with academic success. Merrell et al. (2006) and Schwartz, Gorman, Nakamoto, and McKay (2006) explained that relational aggression based behaviors are

intended to harm or damage social relationships. Relational aggression is often practiced in school settings. One way that adolescents' express relational aggression in school settings is through manipulation by getting peers to ignore others in order to manipulate friendships and status. This form of aggression is more covert (Crick & Dodge, 1996; Crick & Grotpeter, 1995; Dodge & Coie, 1987; Swartz, Gorman, Nakamoto, & McKay, 2006). When adolescents display relational aggression, educators must consider familial and extrafamilial influences that contribute to justifying the behavior (Erath, Flanagan, & Bierman, 2008; Hinshaw, 1992; Martin & Marsh, 2006; Merrell et al., 2006). A review of both relationships will conclude that children's and parental aggressive behaviors are reciprocal (Crick, 1996; Patterson, Crosby, & Vuchinich (1992), as cited in Merrell, et al., 2006). Loveland, Lounsbury, Welsh, and Buboltz (2007) demonstrated that physical aggression is predicative of negative behavior and academic associations such as substandard academic performance and increased truancy. An inverse relationship exists between adolescents witnessing violence and academic achievement (Cooley-Strickland et al, 2009).

Exposure to Violence and Academic Performance

Some empirical research suggests a possibly strong relationship between exposure to violence and poor academic performance: Kurtz, Gaudin, Wodarski, and Howing (1993) and Leiter and Johnsen (1994) concluded that when youth are exposed to violence, they are more likely to experience lower tests scores in math and verbal assessments as well as negative interactions with their teachers.

Delaney-Black et al (2002) asserted that elementary school children that have a history of exposure to or victimization of violence score lower on IQ assessments and reading. Baker-Henningham, Meeks-Gardner, Chang, and Walker (2009) conducted research that measured exposure to community violence, school peers displaying aggression, and physical punishment inflicted at an urban school in Jamaica. The study concluded that exposure factors were negatively related to academic achievement in math, reading, and spelling subjects. Similarly, Howard, Budge, and McKay (2010) proposed that children that are repeatedly exposed to violence are more prone to elevated levels of anxiety and aggressive behavior at school that negatively affect academic achievement.

Voisin et al. (2011) conducted research concerning the relationship of exposure to marital and community violence and its effect on academic performance and whether a relationship was mediated by aggressive behaviors. The study included a sample consisted of 563 African American adolescents (ages 13-19) who completed the self-administered University of California at Los Angeles's PTSD Reaction Index Adolescent Version a survey to measure psychological behavior problems. Marital conflict was assessed by the Revised Conflict Tactics Scale, and Community violence was assessed by Lifetime exposure to community violence was assessed by the Exposure to Violence Probe. School achievement was assessed using school records to obtain GPA, standardized tests, and student-teacher connectedness was also assessed. The study concluded that marital and community violence experiences were related

to recent school engagement. However, relationships between violence and school engagement over time were not evaluated. The study emphasized that future research should include an expanded definition of violence in the home to more than marital conflict.

Measuring Exposure to Violence in Home, Community, and School

Several research techniques have been used to evaluate exposure to violence. These include estimating exposure from area crime statistics (Finkelhor et al., 2009; Furr-Holden et al., 2008; O'Donnell, et al., 2006), self-report from youth (written questionnaires, interviews; Cooley et al., 1995; Hurt et al, 2001; Jaffe et al., 1986; Richters & Martinez, 1990; Straus et al., 1996), and reports from other sources (e.g., from parent's/family members/caregivers, teachers; Kolbo, 1996; Straus et al., 1995). These techniques attempt to quantify the exposure to violence and not the specifics relative to the exacerbation of a child's behavior or emotions.

Estimating from Community Demographics and Statistics

Research techniques that have been used to estimate community exposure to violence based on community demographics and statistics are expanding in popularity. One such assessment tool used for this technique is the Neighborhood Inventory for Environmental Typology (NIfETy), Furr-Holden et al. (2008). This study used a stratification system identified with Baltimore City neighborhoods. One of the primary concerns for data gathering was the safety of the raters due to the exposure to various sources of violence. Daytime and nighttime ratings were

conducted in specified neighborhood. The NIfETY uses an epidemiological approach to assess residential characteristics that are quantifiable with exposure to violence (Furr-Holden et al. 2008). The noted limitations of the study included the inability of the raters to determine if the crime could be attributed to the community residents or those from outside the community. Another limitation was the scope of the pilot study that included a 239 block inner city radius and should include measured using rural areas.

Gardner and Brooks-Gunn (2009) conducted a study that hypothesized that exposure to higher crime rates are, in effect, relative to adolescents' community violence exposure. The study used data from the Project on Human Development in Chicago Neighborhoods (PHDCN). Community crime rates were statistically computed using police records based on specified population data tract from the 1990 U.S. Census. A noted limitation of the study was that participant selection bias and statistical methodology. The noted statistical methodology could not account for the variation of the degree of risk for adolescents' exposure to violence. Statistical methodology can result in errors resulting from data collection, analyzing, and interpretation (Stigler, 1992).

Self-Report Written Questionnaires and Interviews

Some frequently used self-report written questionnaires and interviews include the Screen for Adolescent Violence (SAVE), Children's Report of Exposure to Violence (CREV), and My Exposure to Violence (My ETV) questionnaire. Self- report written questionnaires are often used because they are

cost efficient, provide ease of analysis for quantitative data, and the respondent may be at ease and more truthful in written response (Lederman, 1990). However, limitations for self- report written questionnaires include rate of questionnaire return, and response bias (Lederman, 1990). Both questionnaires and interviews can generate quantitative and/or qualitative data and research reliability can be operationalized.

The Screen for Adolescent Violence (SAVE) questionnaire is an assessment tool consisting of a 32-item scale that has been widely used in measuring direct victimization and witnessing adolescent exposure to violence in the home, community, and school (Hastings & Kelley, 1997). The SAVE contains three subscales that include indirect violence, physical/verbal abuse, and traumatic violence (Hastings & Kelley, 1997). This questionnaire allows for quantification of the level of exposure by setting. The instrument includes a Likert-type scale with items rating of zero to four indicating never, hardly ever, sometimes, almost always, and always. For the purposes of the current investigation the three subscales will be used and scored to represent the degree of direct exposure to violence reported by the respondent.

The Children's Report of Exposure to Violence (CREV) questionnaire is an assessment tool consisting of a 29-item scale that has been widely used in measuring lifetime exposure to community violence of children and frequency of victimization (Cooley, Turner, & Beidel, 1995). The CREV includes a Likert-type scale with items rating of zero to four indicating no/never, one time, a few

times, many times, and every day. For the purposes of the current investigation the instrument will be used and scored to represent the degree of indirect exposure to violence reported by the respondent.

Similarly, My Exposure to Violence (My ETV) questionnaire measures both direct and indirect exposure to violence (Selner-O'Hagan, Kindlon, Buka, Raudenbusch, & Earls, 1998). The assessment tool is conducted by interview and is applicable for children age 9 and older. Unlike the SAVE and CREV, My ETV measures lifetime exposure to violence as well as exposure to violence within the last year but does not specify whether exposure to violence includes community violence.

Interview Techniques

Interviews are advantageous because they are structured, interactive, and responsive exchange of information that can provide in-depth information (Howard et al., 1979; Creswell, 2009). However, rigidly fixed questions, possible interview bias, and time constraints may be limitations of interviews (Howard et al., 1979; Creswell, 2009). Interviews are most useful when they can generate both qualitative and quantitative data (Lederman, 1990).

"Things I Have Seen and Heard" is a structured interview questionnaire tool created by Richters and Martinez (1990). This instrument consists of a self-report 15 question survey that describes various forms of violence. The instrument is elementary and the psychometrics is based on age-appropriate questions for students in the 1st and 2nd grades. The children are taught to circle

the corresponding amount of balls relative to the frequency of each type and frequency of exposure. The test-retest reliability reported by the authors over a one week time frame was good *(r* = 0.81). This instrument is regularly used on a younger population of students.

Measuring Aggressive Behavior

Methodological implications for the research of aggressive behavior are inclusive of many causal variables resulting in problematic behavior. Research techniques that have been used to measure aggressive behavior are quite extensive. These techniques include self-report measurements, teacher report, and parent/guardian report measure (Creswell, 2009).

The Buss-Perry Aggression Questionnaire (AQ) is a self-report assessment tool consisting of a 29-item scale that has been commonly used in measuring trait aggressiveness (Buss & Perry, 1992). The AQ contains four subscales measuring anger (7 items), hostility (8 items), physical aggression (9 items), and verbal aggression (5 items) (Buss & Perry, 1992). The instrument includes a Likert-type scale with possible ratings ranging from one to five indicating variables that apply to the respondent. The ratings include extremely uncharacteristic of me, somewhat uncharacteristic of me, neither uncharacteristic nor characteristic of me, somewhat characteristic of me, and extremely characteristic of me. For the purpose of the current investigation the subscales will represent the degree of verbal aggression, anger and hostility reported by the respondent.

Child Behavior Checklist (Achenbach, 1994) is a popular Likert rating scale that is completed by a child's mother, guardian, school teacher or self-report to measure various forms of a child's aggression. The instrument is widely used in subjects between 6 and 18 years of age and measures for aggressive behavior, anxious/depressive behavior, thought problems, and deliberate rule braking behavior. The instrument does not offer a measurement for verbal aggression, anger or hostility.

Measuring Attitudes Towards Violence

Attitudes toward violence have been associated with previous exposure to violence (Bushman & Huesmann, 2006; Fite et al., 2008; Gorman-Smith & Tolan, 1998; Merrell et al., 2006; Moffitt, 1993; Scarpa & Haden, 2006). The assessment of adolescent attitudes towards violence is important in assessing aggressive behaviors (Anderson, Benjamin, Wood, & Bonacci, 2006). One of the most popular assessment tools for measuring adolescent attitudes towards violence is the Attitudes towards Violence Scale (Funk et al., 1992).

The Attitudes towards Violence Scale is a self-report assessment tool for measuring attitudes associated with exposure to violence in adolescents. This assessment tool consists of a 15-item scale that has been used in measuring cultural and reactive violence (Funk et al., 1992). The instrument includes a Likert-type scale with three possible item ratings that include agree (0), disagree (2), and not sure (1; Funk et al., 1992). For the purpose of the current

investigation the scores will represent adolescent self-report measure of attitude toward violence.

Similarly, the Velicer Attitudes towards Violence Scale is a self-report assessment tool that also measures attitudes towards various sources of violence (Velicer, Huckel, & Hansen, 1989). The assessment consists of 46 items that has been used to measure for war violence, penal code violence, corporal punishment, interpersonal violence, and intimate violence (Velicer et al., 1989). The instrument uses a Likert-type scale with a seven-point range from strongly disagree (1) to strongly agree (7). High scores indicate a greater probability of positive attitude towards violence. The scale was tested on 360 psychology students (Velicer et al., 1989).

Measuring Academic Performance

Academic performance has been described as one's ability to master subject matter based on acceptable standards relative to GPA in a specified rating period (Conrad, 2006; Fan & Chen, 2001; Rumberger & Palardy, 2005; Schwartz et al., 2006). Similar to other research (e.g., Noftle & Robins, 2007). For the purpose of this investigation, students' academic performance was measured using self-reported current cumulative GPA scores.

Gaps in the Literature and Purpose of this Study

While there are correlational data to show some type of relationship between exposure to violence and adolescent academic performance, it is not clear if this relationship is direct or if it is mediated by other factors. In

particular, it has been suggested that the reduction in academic performance is related to behavior patterns that interfere with academic performance (Aluja-Fabregat, & Torrubia-Beltri, 1998; Howard et al., 2010; Merrell et al., 2006; Milam et al., 2010; Patton et al., 2011; Salzinger et al., 2008), such as increased absence or time away from studies due to sanctions against aggressive behaviors in the school. In a zero-tolerance environment, direct and hostile aggressive behavior often results in consequences, such as suspension or expulsion (Petras et al., 2011). There is also the suggestion (Aluja-Fabregat, Ballesté-Almacellas, & Torrubia-Beltri, 1999; Kurtz et al. 1993; Leiter & Johnson, 1994) that the aggressive behavior may impair the student's relationship with his or her teachers, that may then impact the teacher's perceptions of the student's academic work. Merrell et al. (2006), Salzinger et al. (2008), and Howard et al. (2010) suggested that aggressive behavior may indirectly result in negative academic performance and consequently affect academic achievement.

Second, exposure to violence also has an emotional impact on youth, from anger, to depression, to anxiety, and other symptoms of acute stress or PTSD. There is some indication that these emotional scars may impact academic performance, again possibly through more absenteeism, lower motivation, and/or cognitive confusion (Matthew et al., 2009; Ozkol et al., 2011). However, do youths who also report such emotional strains but do not report the same types or amount of exposure to violence differ from those who do have higher and/or more varied exposure to violence? Is there something unique for those who are

exposed to certain types of violence? Does the frequency of exposure to violence mediate a difference in the frequency of displayed aggressive behavior? Is exposure to violence directly or indirectly predicative of academic?

Purpose of the Study, Research Questions, Hypotheses, and Design

Investigating exposure to various sources of violence is important to facilitate an understanding of whether there is a relationship between adolescent exposure to violence and academic performance. Research indicates that exposure to violence is negatively correlated with academic performance but does not indicate if there are mediating factors to account for this correlation. The current investigation explored whether exposure to violence impacted attitudes and behaviors related to aggression and psychoemotional distress as mediators of the effect on academic achievement.

Exposure to violence may support aggressive behavior, attitudes towards aggression, and psychoemotional distress as predictors of academic performance. Thus, aggressive behavior, attitudes towards aggression, and psychoemotional distress are mediator variables between the relationships of exposure to violence and academic performance. Mediator variables are explored if there is the suspicion that when certain other variables are present, they may serve to create a path through which the IV can affect the outcome (Barron & Kenney, 1986; Bennett, 2000). Sources of violence being studied are those encountered in the family and in the community that could could be directly or indirectly encountered. Academic performance will be measured by GPA.

Design

A cross-sectional, correlational study was performed to evaluate the relationships among the factors outlined in Figure 1. Participants will include student's in grades 9-12 who attend inner-city public schools in a major metropolitan district in the Eastern United States. Students completed written questionnaires that assessed each of the factors of interest. Further details on methodology are provided in Chapter 3.

Summary and Transition

As acts of violence in our society increase, children and adolescents are subjected to an increase of both witnessing and becoming victims of violence (Finkelhor, et al., 2009; Lewis et al., 2010; Mrug & Windle, 2010). An increase in adolescent exposure to sources of violence results in an increase of aggressive behavior (Benhorin & McMahon, 2008; Ferguson, San Miguel, & Hartley, 2009; Salzinger et al., 2008) and psychoemotional distress (Cohen et al., 2010; Evans, et al., 2008; Huang, et., 2009; Margolin & Vickerman, 2007; Ozer & Weinstein, 2004; Suliman, 2009). Aggressive behavior may negatively affect academic achievement (Howard, Budge, & McKay, 2010; Kurtz et al., 1993; Leiter & Johnsen, 1994; Voisin et al., 2011).

Exposure to various sources and types of violence has the potential to result in aggressive behavior, aggressive attitudes, and psychoemotional distress that could negatively impact academic performance and hinder academic achievement. As indicated in previous research, exposure to violence leads to

psychoemotional, behavioral, and psychoemotional problems in youth, and these themselves are correlated with lower academic performance.

The problem that this study will adress is how direct or indirect the relationship really is between exposure to violence and academic performance. How much does an apparent relationship exposure and academic performance really depend on mediating responses to the exposure, that then increase risks to academic performance? A mediational model (see Figure 1) will be tested. The methodology used in this study is described in chapter 3.

Chapter 3: Research Method

Introduction

In this research study, I explored how exposure to violence and aggression that is witnessed by adolescents in the community and in the family is negatively related to academic performance. In addition, a mediational model (see Figure 1) was proposed and tested that considers a possible indirect relationship between exposure and academic performance, mediated by three possible responses to exposure: increased aggressive behavior and/or aggressive cognitions, and/or increased psychological distress. This chapter includes descriptions of the research design, population, measurement, instruments, procedure and materials, data analysis, as well as ethical considerations.

Research Design and Approach

In this study, I used a cross-sectional correlational design to observe the relationships between two or more variables at a given point in time (Gravetter & Wallanau, 2009), specifically, type and frequency of sources of exposure to violent aggression, aggressive behavior, attitudes towards violence, psychoemotional distress, and academic performance. The data were analyzed using bivariate correlations and regression analyses to determine the relative contribution of various predictive factors to academic performance. The primary predictor in this study was exposure to violence, and the outcome variable was academic performance. Three intervening variables also were considered (psychoemotional distress, aggressive behavior, and aggressive cognitions).

Experimental research was not an option for the current research because of ethical concerns about intentionally exposing youth to violent aggression. Thus, only correlational information, derived from real world experiences, was practical.

Setting and Population

The target population for this study included students in ninth through 12th grades, drawn from volunteers who were currently attended two schools in a major metropolitan school system in the eastern United States. This population was diverse in gender, socioeconomic status, and race/ethnicity. According to The National Center for Education Statistics Common Core of Data for the 2009-2010 school years, there were approximately 23 schools that included regular and vocational curricula with attending students in ninth through 12th grades in the targeted inner city district. The most recent Common Core of Data data reflected a total of 17,513 students, including 8,169 males and 9,344 females. Of these students, there were 78 Native American, 167 Asian, 15,971 Black, 301 Hispanic, and 996 White students. All students attending the schools that agreed to allow the surveys to be distributed were invited to participate.

A power analysis (G*Power; Murphy, Myors, & Wolach, 2012) was conducted to plan for the recommended minimum sample size for a linear multiple regression analysis (fixed model, R^2 deviation from zero) with approximately five variables, alpha = .05, power = .80, and medium effect size (f^2 = .15, where minimum R^2 would be at least .20). Results indicated a minimum

sample size of 92 was required to meet these requirements. The goal was to have roughly equivalent sample sizes from each of the grade levels.

Instrumentation and Measurement

Demographic questionnaire. The demographic questionnaire was designed to solicit information such as age, gender, grade, race, household composition, parental education, and socioeconomic data. Socioeconomic status was measured using a combination of household composition, employment, and school lunch eligibility (see Appendix A). Respondents indicated gender by checking male or female. Age was determined by asking the participant what year he or she was born. Grade was assessed by allowing the participant to make a selection between ninth grade, 10^{th} grade, 11^{th} grade, or 12^{th} grade. Race/cultural group was accessed by allowing the participants to select from choices of Asian, Black, Hispanic, Native American, White, or other ethnic backgrounds.

Exposure to violence. Participants completed the SAVE questionnaire to measure direct exposure to violence in the home, community, and school. This questionnaire is a self-report scale for adolescents consisting of 32 items presented with a Likert-type scale (see Appendix B). Response choices range from rating of 0 to 4 indicating *never, hardly ever*, *sometimes*, *almost always*, and *always*. This instrument was developed using 1,250 inner-city adolescents and resulted in high reliability and validity (Hastings & Kelley, 1997). Good internal reliability was indicated with Cronbach's alpha ranging from .90 to .94:

subscale alphas ranged from .58 to .91. Intercorrelations between subscales ranged from .19 to .93. Test-retest coefficients ranged from .53 to .92. The SAVE has been noted for adequate distinction between groups that have been exposed to low and high levels of violence and establishing reliable test retest reliability, constructs for internal consistency, construct validity, and validity. The scores range from 0 to 160, and the higher the score signifies a greater exposure to violence. Factor analysis was conducted of the scores, and the three factors that were confirmed were indirect violence, physical/verbal abuse, and traumatic violence. Questions from the survey like "Grownups beat me up" display physical abuse, and "I have seen someone get killed" displays traumatic violence.

Indirect exposure to violence. In order to access indirect exposure to violence among adolescents, participants completed the CREV questionnaire. The CREV is a self-report questionnaire that was developed to assess lifetime exposure to community violence of children (ages 9-15) and frequency of victimization. This questionnaire consisted of 29 items (Appendix C). The response scale ranges from 0 to 4 (*no/never* to *every day*). The range of measurement indicated the frequency of exposure to community violence via four modes: hearsay, media, victimization, and witness. This instrument was developed using 228 rural/urban children and reported reliability and validity (Cooley et al., 1995). The CREV has an internal consistency range of .75 -.93, a 2-week test retest reliability of .75, and Cronbach's alpha ranges from 0.91 and

0.93. The CREV has been noted for internal consistency and construct validity. "Have you ever watched somebody being beaten up on TV or in the movies?" is an example of exposure to media violence and "Have you ever seen a stranger being beaten up?" is an example of witnessing violence.

Aggression. Self- reported levels of aggression were measured by the Buss-Perry AQ on four factors: physical aggression, verbal aggression, anger and hostility. The questionnaire consisted of a 29 item Likert-type scale with ratings from 1 to 5 (*extremely uncharacteristic of me* to *extremely characteristic of me*; see Appendix E). Questions such as "Once in a while I can't control the urge to strike another person" and "If somebody hits me, I hit back" are examples of questions asked of the participants as measurements of indicator for physical aggression. The instrument was developed using 1,253 college students and resulted in good psychometric standards (Buss & Perry, 1992). The instrument is also useful with adolescent populations (Santisteban, Alvarado, & Recio, 2007; Santisteban & Alvarado 2009). There is internal consistency of the four factors (the four correlated factors were anger, hostility, physical aggression, and verbal aggression). Cronbach alpha ranged from .72 and .89. The correlation coefficients of the four factors ranged from 0.25 to 0.48. Over a 9-week period, the test-retest reliability correlations ranged between .72 and .80 for the four factors. The test-retest reliability correlations were anger, 0.72, hostility 0.72, physical aggression, 0.80, and verbal aggression 0.76. The overall test-retest

reliability for AQ was 0.80. The AQ has been useful in assessing high school and college personality traits using factor analysis (Buss & Perry, 1992).

Attitudes towards violence. Self-reported attitudes towards violence were measured. The Attitudes towards Violence Scale (ATVS) has been attributed with measuring attitudes toward both culture of violence and reactive violence as a result of cognitive reactions to life experiences (Funk et al., 1999). The culture of violence is reflected in the respondent's attitude towards resistance to change as displayed in questions like, "I could see myself committing a violent crime in 5 years" and "I could see myself joining a gang." Reactive violence is measured in the respondent's response to direct threat such as "If a person hits you, you should hit them back" or "It's okay to beat up a person for badmouthing me or my family." The ATVS consisted of 15 item Likert-type scale with a 5-point rating scale (AppendixE). The possible responses are *strongly disagree, disagree, undecided, agree,* or *strongly agree.* This version of the instrument was developed using 1,266 junior (492) and high school (774) students attending public schools in the inner-city of a Midwestern city and resulted in good reliability and validity (Funk et al., 1999). Internal reliability was indicated with Cronbach's alpha coefficient equal to.86.

Psychological distress. Self-reports of psychological distress within the past 30 days were provided through Kessler's Psychological Distress Scale (K 10; Keesler, 1996). The questionnaire consisted of 10 item Likert-type scale (see Appendix I). Questions such as, "During the last 30 days, about how often did

you feel nervous?", "During the last 30 days, about how often did you feel hopeless?" and "During the last 30 days, about how often did you feel depressed?" are asked of the respondent. The responses range from 1 to 5 (n*one of the time, a little of the time, some of the time, most of the time,* or *all of the time*). The instrument was developed using 1,401 national mail surveys and resulted in good psychometric standards (Kessler et al., 2002). Suggested interpretation of scores is *likely to be well* (10-19), *likely to have a mild disorder* (20-24, *likely to have a moderate disorder* (25-29), and *likely to have a severe disorder* (30-50). The Cronbach's alpha for the Kessler Psychological Distress Scale (K-10) is .93. The K10 is easy to use and score and measure nonspecific psychological distress only (Keesler et al., 2002). A study by Huang et al. (2009) with Chinese high school students found good psychometric qualities for this measure: Cronbach alpha = .89 and there was a strong correlation between the scores on the K-10 with those on the Zung Self-Rating Depression Scale (correlation = .70, $p < .01$). Eacott and Frydenberg (2008) used the K-10 to evaluate psychological distress among Australian adolescents, both before and after an intervention on positive coping. They found that the K-10 scores were reduced significantly ($p < .01$) following the intervention.

Academic performance. Academic performance was quantified and measured based on self-reported data obtained from the participants' GPA. An assessment of this measure provided information on academic performance. GPA is a reliable measure for academic performance and is a descriptive of

academic achievement (Allen & Robbins, 2010; Poropat, 2009; Shipley, Jackson, & Segrest, 2010).

Procedures

Approval of the school board, the authorization of the principal, parental consent, and student assent were required prior to the administering of the questionnaires. Parental informed consent was obtained prior to minor assent. The questionnaires were administered to volunteers who are currently enrolled in high schools in a major metropolitan school system in the eastern United States. The application included a copy of the Information Form, three copies of the Application Cover Page, and a copy of the Institutional Review Board (IRB) authorization letter (Appendix L), and three copies of the proposed research, demographic questionnaire (Appendix A), SAVE questionnaire (Appendix B), CREV questionnaire (Appendix C), AQ (Appendix D), ATVS (Appendix E), and the K-10 (Appendix F).

Analyses for Results

I organized, reviewed, and analyzed the self-adminsitered survey data by applying inferential and descriptive statistics; descriptive statistics were used to organize, simplify, and summarize raw score data from the demographic and other questionnaires into manageable scores to apply to tables or graphs (Gravetter & Wallnau, 2009). I utilized inferential statistics to evaluate the direction and magnitude of relationships between variables. I enteretd all data into a database for analysis using SPSS 16.0 (George & Mallery, 2009). After I

initially screened the data for accuracy, descriptive statistics for each variable were computed. Variables were also prescreened to establish if they met the assumptions for linear, parametric statistical analyses. If the data did not meet the assumptions for linear, parametric statistical analyses, I explored appropriate transformations. It not successful, nonparametric statistics were used (e.g., Pearson correlations versus Spearman Rho correlations; Gravetter & Wallnau, 2012).

I collected the scores from the Likert-type responses of the SAVE questionnaire and presented frequency of occurrences for the provided settings, home, school, and community data. I reported the frequency of exposure to violence relating to victimization, indirect, and direct exposure to violence . Additionally, I used the scores from the CREV questionnaire to measure the frequency of exposure to community violence using four modes: hearsay, media, victimization, and witness. A correlational analysis was used to measure the four variables. The association of the variables was measured for direction of the relationship (Gravetter & Wallnau, 2009).

I graphically depicted the variables on a scatterplot (see Figure 3, Appendix O) to show the relationship among the variables (Gravetter & Wallnau, 2009, p. 522). I also used the Pearson Correlation Coefficient (*r*) to display the strength of linear relationship between two variables (Gravetter & Wallnau, 2009). In addition, I used multivariate linear regression analyses to evaluate the relative contributions of several variables as predictors of a criterion

variable (Green & Salkind, 2008). I analyzed the data collected from the various measures for the respective variables for each hypothesis. Descriptive statistics of the demographics of the participants, as well as for each of the variables, were computed. In addition, bivariate correlations between variables of interest were computed, and regression analyses were performed to identify the strongest predictors of academic performance. I used regression analyses to explore how various variables would serve as mediators for the relationships between/among exposure to violence (and sources) and academic achievement. The mediator variables included aggressive behaviors, attitudes towards aggression/cognitions, and psychoemotional distress.

Analyses to Test the Study's Research Hypotheses

The research questions and hypotheses for this study were based on the evaluationof the following model (see Figure 1). Bivariate correlations were computed first to examine the relationships between all pairs of variables. Regression analyses were employed where multiple predictors were examined for a criterion variable, including for mediator effects (Baron & Kenney, 1986; Bennett, 2000).

I proposed that exposure to violence may support aggressive behavior, attitudes towards aggression, and psychoemotional distress as predictors of academic performance, that then served as mediator variables between the relationships of exposure to violence and academic performance. Mediator variables are explored if there is the suspicion that when certain other variables

are present, they may serve to create a path through that the IV can affect the outcome (Barron & Kenney, 1986; Bennett, 2000). Sources and types of violence being studied are those encountered in the family and in the community that could could be directly or indirectly encountered. Academic performance was measured by GPA.

RQ 1: What is the relationship between the amounts of exposure to violent aggression in the family, community, and school related to academic performance?

Hypothesis

$H1_0$: There is no significant relationship between the amount of exposure to violent aggression in the family, community, and school, and academic performance.

$H1_a$: There is a significant relationship between the amount of exposure to violent aggression in the family, community, and school, and academic performance.

In order to test this hypothesis, in addition to bivariate correlations between the various measures of sources and types of exposure (SAVE, CREV) with the measure for academic performance (GPA), a regression analysis was used to examine the combined percentage of variance in academic performance that accounted for these multivariate predictors, as well as the relative contribution of each measure of an element of exposure for predicting academic performance.

RQ2: What is the relationship between the amount of exposure to various sources and types of violent aggression in the family, community, and school, and aggressive behavior, aggressive cognitions, and psychoemotional distress?

$H2_0$: There is no significant relationship between the amount of exposure to violent aggression in the family, community, and school, and aggressive behavior, aggressive cognitions, and/or psychoemotional distress.

$H2_{a:}$ There will be a significant relationship between the amount of exposure violent aggression in the family, community, and school, and aggressive behavior, aggressive cognitions, and/or psychoemotional distress.

In order to test this hypothesis, in addition to bivariate correlations between the various measures of sources and types of exposure (SAVE, CREV) with the measures of aggressive behavior, aggressive cognitions (ATVS), and/or psychoemotional distress, a separate regression analysis that retains any of the exposure variables that were found to be significant predictors of academic performance were evaluated as the predictors for each of the suspected mediator variables (aggressive behavior, aggressive cognitions, and psychoemotional distress). The potential mediator variables that were found to be signficantly related to (predicted by) exposure variables (R) were retained for further analyses.

RQ3: What is the relationship between aggressive behavior, aggressive cognitions, and/or psychoemotional distress and academic performance?

$H3_0$: There is no significant relationship between theamount of aggressive behavior, aggressive cognitions, and/or psychoemotional distress and academic performance.

$H3_a$: There is a significant relationship between the amount of aggressive behavior, aggressive cognitions, and/or psychoemotional distress and academic performance.

The potential mediator variables that were found to be signficantly related to (predicted by) exposure variables (R) were retained for a regression analysis to evaluate these as predictors of the criterion variable, academic performance.

RQ4: Is any apparent relationship between the amount of exposure to various sources of violent aggression in the family, community, and school and academic performance mediated by aggressive behavior, aggressive cognitions, and/or psychoemotional distress?

$H4_0$: Any apparent relationship between the amount of exposure to violent aggression in the family, community, and school and academic performance is not mediated by aggressive behavior, aggressive cognitions, and/or psychoemotional distress.

$H4_a$: Any apparent relationship between the amount of exposure to violent aggression in the family, community, and school and academic performance is mediated by aggressive behavior, aggressive cognitions, and/or psychoemotional distress. That is, the strength of any apparent relationship relationship between exposure to violence and academic performance is dependent upon the amount

of aggressive behavior, aggressive cogntions, and/or psychoemotional distress experienced by the students in relation to exposure to violence.

That is, exposure to violent aggression alone may not be the key predictor of academic performance. Instead, the proposed model predicted that exposure to violent aggression will lead to increased risk of aggressive behavior in school, aggressive attitudes/cognitions, and/or emotional/psychoemotional distress that then mediated a relationship between exposure to violent aggression and academic performance. Those who report exposure to violent aggression but not elevated levels of aggression, aggressive cognitions, and/or negative emotions would not show the same negative impact of exposure on academic performance as those who do report these.

To test this, a final regression analysis was conducted with academic performance as the criterion variable, and included the following predictor variables: (a) any of the exposure variables that were found to be significantly related to academic performance, (b) any of the potential mediator variables that were found to be significantly related both to exposure variables and to academic performance. If mediator effects existed, the relationship between exposure and academic performance were reduced dramatically with the inclusion of the suspected mediator variables, and the mediator variable(s) would account for a significant proportion of the variance in academic performance (Baron & Kenney, 1986; Bennett, 2000).

Ethical Considerations for Participant Protection

According to Barke (2009) and Blackmer (2010) the core of ethics in research is predicated upon the maintenance of three qualities: appropriateness of research, assurance of scientific integrity, and the protection from harm of human subjects. This research was conducted under the approval of Walden University's IRB (03-0314-0152313). Prior to participating, the permission of the Board of Education for a major metropolitan school system in the eastern United States, the authorization of the school principal, parental consent, and student assent were required prior to administering any questionnaires. All information provided was strictly confidential and anonymous for all participant information was eliminated from the research records once they were coded. In addition, all responses were transported in a secured container and original copies of the completed questionnaires were shredded within 60 days after collection of the data.

Summary and Transition

Research has shown that exposure to violence and aggression leads to psychoemotional and behavioral problems in youth. In addition, psychoemotional and behavior problems in youth are correlated with lower academic performance. However, it is less clear how/if exposure to violence relates to academic performance. Unfortunately, research does not reliably show a simple direct relationship between exposure to violence and academic performance. As a result, it is important to identify if there are particular

effects/correlates of exposure to violent aggression that can then impact academic performance.

Chapter 3 detailed the cross-sectional correlational design that aims to evaluate the research questions and hypotheses for this study, that follow directly from the model that has been proposed regarding mediated relationships between exposure to community violence and academic performance. The mediators were aggressive behavior, attitudes toward aggression, and psychological distress. The SAVE and CREV questionnaires were used to measure exposure to violence. ATVS measured attitudes towards violence. The Buss-Perry Aggression Scale measured aggressive behavior and psychological distress is measured by the Keesler Psychological Distress Test, K-10. GPA was used to measure for academic performance. Participant characteristics, sample size, operational definitions/measures, procedures for implementation, planned analyses, and ethical protection of participants have been described. The results from the planned analyses were further detailed in Chapter 4.

Chapter 4: Results

This chapter provides analysis of the data collected as a part of a quantitative correlational research design to test a model of proposed mediator variables (Barron & Kenney, 1986; Bennett, 2000) that may account for relationships between exposure to violent aggression and academic performance among a sample of high school students. The sources of direct and indirect exposure to aggression and violence studied were those faced in the family and in the community. The proposed intervening variables were aggressive behaviors, aggressive attitudes/cognitions, and psychoemotional distress. The outcome variable was academic performance.

Self-report measures were used to assess students' exposure to direct violence (SAVE; Hastings & Kelley, 1997) and indirect violence (CREV; Cooley et al., 1995), aggressive behavior (Buss-Perry Aggression Questionnaire, BPAQ; Buss & Perry, 1992), aggressive cognitions (AT V S; Funk et al., 1999), and psychoemotional distress (K-10; Kessler & Mroczek, 1994). The operationalization of academic performance was GPA.

The proposed model predicted that exposure to direct/indirect violent aggression leads to increased risk of aggressive behavior, aggressive attitudes/cognitions, and/or psychoemotional distress that mediate a relationship between exposure to violent aggression and academic performance. More specifically, particular attention was given to factors such as exposure to violent aggression, that influence the development of beliefs, behavioral tendencies,

and/or psychoemotional distress, and how these secondarily impact academic performance. The model that predicted relationships between exposure to violence and academic performance is shown in Figure 1.

Research Questions

The research questions for this study and related analyses were as follows:

RQ 1: Is there an apparent relationship between the amounts of exposure to violent aggression in the family, community, and school related to academic performance? Bivariate correlations between the various measures of exposure to direct/indirect violent aggression (SAVE, CREV) with the measure for academic performance (GPA) were conducted. Regression analysis was also conducted to examine the combined percentage of variance in academic performance accounted for by these multivariate predictors, as well as the relative contribution of each measure of an element of exposure for predicting academic performance.

$H1_0$: There is no significant relationship between the amount of exposure to violent aggression in the family, community, and school, and academic performance.

$H1_a$: There is a significant relationship between the amount of exposure to violent aggression in the family, community, and school, and academic performance.RQ2: What is the relationship between the amount of exposure to direct/indirect violent aggression in the family, community, and school, and aggressive behavior, aggressive cognitions, and psychoemotional distress?

Bivariate correlations between direct/indirect violent aggression (SAVEc, CREV) with the measures of aggressive behavior (BPAQ), aggressive cognitions (ATV), and/or psychoemotional distress (K10) were computed. Separate regression analyses were performed to evaluate the relationship of exposure to violence (SAVEc, CREV) to each of the suspected mediator variables (aggressive behavior, aggressive cognitions, and psychoemotional distress).

$H2_{0:}$: There is no significant relationship between the amount of exposure to violent aggression in the family, community, and school, and aggressive behavior, aggressive cognitions, and/or psychoemotional distress.

$H2_a$: There will be a significant relationship between the amount of exposure violent aggression in the family, community, and school, and aggressive behavior, aggressive cognitions, and/or psychoemotional distress.

RQ3: What is the relationship between aggressive behavior (BPAQ), aggressive cognitions (ATV), and/or psychoemotional distress (K10) and academic performance (GPA)? Again, bivariate correlations were computed, and a multiple regression with the three suspected mediator variables predicting GPA.

$H3_0$: There is no significant relationship between theamount of aggressive behavior, aggressive cognitions, and/or psychoemotional distress and academic performance.

$H3_a$: There is a significant relationship between the amount of aggressive behavior, aggressive cognitions, and/or psychoemotional distress and academic performance.

RQ4: Is any apparent relationship between the amount of exposure to direct and indirect aggression/violence in the family, community, and school and academic performance mediated by aggressive behavior, aggressive cognitions, and/or psychoemotional distress? A series of regression analyses were conducted to perform a path analysis to test the proposed causal model of the relationship between exposure to violence and academic performance.

$H4_0$: Any apparent relationship between the amount of exposure to violent aggression in the family, community, and school and academic performance is not mediated by aggressive behavior, aggressive cognitions, and/or psychoemotional distress.

$H4_a$: Any apparent relationship between the amount of exposure to violent aggression in the family, community, and school and academic performance is mediated by aggressive behavior, aggressive cognitions, and/or psychoemotional distress

Data Collection

A power analysis (G*Power; Murphy et al., 2012) was conducted to plan for the recommended minimum sample size for a linear multiple regression analysis (fixed model, R^2 deviation from zero) with approximately five variables, alpha = .05, power = .80, and medium effect size (f^2 = .15, where minimum R^2 would be

at least .20). Results indicated a minimum sample size of 92 was required to meet these requirements.

The sample for this study included 99 adolescents in Grades 10, 11 and 12. Of the respondents, 10.1% represented students in the 10th grade, 44.4% represented students in the 11th grade, and 45.5% represented students in 12th grade. All of the respondents attended two city-wide magnet schools in a major American metropolitan area in a mid-Atlantic state, during the winter 2014/2015 academic year. Prior to soliciting adolescent volunteers, I received approval from Walden University's IRB (03-03-14-0152313), the school board, principal participation, and authorization from participating schools. Parental consent and student assent also were required and obtained prior to the questionnaires being administered to all students who volunteered to participate in the study.

Originally there were 108 surveys returned, but nine were not entered into the analysis as they were missing either parent consent or student assent forms, thereby rendering the data inadmissible. Although each grade level was invited to participate, no students from the ninth grade elected to participate in the study. Both school principals related that this lack of participation for freshmen could have been related to the timing that the surveys were being administered and possible attention focusing on exam preparation and/or other academic related obligations. Of the two high schools that volunteered to participate, one school had an all-female student population and the other had a co-ed population of students. The co-ed school originated as an all-male school

population until 1979. Due to the current population of students, caution should be used in generalizing findings to male students.

Demographic Characteristics of Respondents

As may be noted, the descriptive statistics (see table 1) for the demographic characteristics of the survey respondents.

Table 1

Frequencies in Demographic Characteristics

Variables	Frequency	Percentage
Gender		
Male	30	30.3
Female	69	69.7
Total	99	100
Year of birth		
1996	5	5.1
1997	47	47.5
1998	40	40.4
1999	7	7.1
Total	99	100
Current age		
15	5	5.1
16	39	39.4
17	48	48.5
18	7	7.1
Total	99	100
Grade level		
10	10	10.1
11	44	44.4
12	45	45.5

(table continues)

Total	99	100

GPA		
100-90 (A)	12	12.1
89-80 (B)	54	54.5
79-70 (C)	27	27.3
69-60 (D)	5	5.1
60- Below (F)	1	1
Total	99	100

Race		
African American	74	74.7
Asian	4	4
White Hispanic	1	1
Hispanic-Not White	2	2
White-Not Hispanic	7	7.1
Biracial/Multiracial	10	10.1
Other	1	1
Total	99	100
Lunch participation		
Free lunch	52	52.5
Half price lunch	4	4
Full price lunch	30	30.3
Unknown	13	13.1
Total	99	100
Dwelling		
Apartment	16	16.2
House	82	82.8
Other	1	1
Total	99	100
Household composition		
Mother only	36	36.4

(table continues)

Father only	11	11.1
Mother and father	33	33.3
Grandparent(s) or other relative	1	1
Mother and grandparent/other relative	7	7.1
Mother and her partner who is not related to me	8	8.1
Father and his partner who is not related to me	3	3
Total	99	100

Mother/Female/Guardian education		
Some high school	9	9.1
Graduated high school	29	29.3
Some college	24	24.2
Graduated college	29	29.3
Unknown	7	7.1
Missing	1	1
Total	99	100

Father/Male/Guardian education		
Some high school	9	9.1
Graduated high school	35	35.4
Some college	16	16.2
Graduated college	15	15.2
Unknown	19	19.2
Missing	5	5.1
Total	99	100

Parent/Guardian employed		
Yes	93	93.9
No	5	5.1

(table continues)

Unknown	1	1

Total	99	100
Parent/Guardian employment (FT/PT)		
Full- time	90	90.9
Part-time	2	2
Unknown	5	5.1
Missing	2	2
Total	99	100

More than two thirds (69.7%) of the students were female. The female ratio was higher than in many studies looking at exposure and academic performance among both male and female students (e.g., 50% females; Borofsky, Kellerman, Baucom, Oliver, & Margolin, 2013; 46.6% females; Busby, Lambert, & Ialongo, 2013). The median age of students was 16.58 years, with a range of 15 to 18 years of age. The majority of students (74.7%) were African American. The racial distribution is similar to that found in other studies on exposure to violence and academic performance for mixed ethnicity samples of students in inner-city schools (e.g., 86.3% African American; Busby et al., 2013; 71% African American; Hardaway, Larkby, & Cornelius, 2014). Slightly more than half (56.5%) of students were eligible for the free or half-priced lunch program (free lunch, 52.5%; half-price lunch, 4%; full priced lunch, 30%; unknown, 13%). This SES index compares with other similar studies of adolescents in inner city schools (Hardaway et al., 2014).

The majority of students reported that they reside in a house (82.8%). Roughly equal proportions of the survey participants resided in a household with only their mother (36.4%) or resided with both parents (33.3%). The next largest household compositions are comprised of students who resided with only their father (11.1%), resided with their mother and her partner who is not related to them (8.1 %), or resided with mother and grandparent/other relatives (7.1%), and the smallest living arrangement was comprised of students residing with a grandparent(s) or other relative (1%). Education levels of mothers/female guardians was high, with 29.3% completing high school, 24.2% with some college, and 29.3% graduating college; while 35.4% of fathers/male guardians graduated high school, only 16.2% had some college, and 15.2% graduated from college. Further, employment rate was quite high (93.9%) among parent/guardians, with 90.9% reporting full-time employment. These familial characteristics, such as type of residence, family composition, education levels of parents, and employment levels, were more positive than often is found for inner-city school samples in this area of research (e.g., Finn & Rock, 1997; Hopson & Lee, 2011; Williams & Sanchez, 201). This result is probably due to the fact that although attending an inner-city school, the students included both those who lived within city limits, but also may be from outside city limits. Demographic information did not include information on residence location to allow for further analysis at this level.

The targeted major American metropolitan area in a mid-Atlantic state currently has 48 high schools. The students participating in this study attended two of only seven high schools in this region that require entrance criteria to determine school acceptance. One of the survey schools is attended by all female students and the other participating school is co-ed. Schools with entrance criteria require that all applicants meet predetermined minimum requirements in order to apply. This entrance criterion is determined by calculating a student's "composite score," with components including report card grades, attendance (in some cases), and results on standardized tests. Once the composite scores are calculated, eligible students are accepted in rank order for the number of available openings based on grade level and class size. The top ranked students are accepted.

Both schools participating in this survey were located within the city limits. However, the student attendee pool originated from both city and non-city residents. Non-city residents are categorized by the school system as those whose parent(s) or legal guardian(s) does not reside within the city limits. Students residing within the city limits receive initial consideration for schools requiring entrance criteria and nonresident students are only accepted after all city residents have been accepted and enrolled (Baltimore City Schools, n.d.).

As previously indicated, the Screen for Adolescent Violence (SAVE) questionnaire measures direct exposure to violence in the home, in the community, and in school. This survey was developed using inner-city

adolescents and is noted for distinction between exposure to low and high levels of violence (Hastings & Kelley, 1997); The Children's Report of Exposure to Violence (CREV) questionnaire was developed using rural/urban children and measures frequency of exposure to community violence via four modes: hearsay, media, victimization, and witness (Cooley, Turner & Beadle, 1995).

The student populations in the initial research for both the SAVE and CREV surveys attended public schools. I found that the students participating in the current survey similarly attended public schools. However, the current survey respondents varied from the students used in the original SAVE and CREV surveys when accounting for exposure to violence. For example, only 1.3% of all the respondents that were administered the SAVE questionnaire in the current research noted any significant direct witnessing to victimization or witnessing of exposure to violence in the home, community, and school within the past year. On the other hand, respondents to the CREV questionnaire had slightly elevated responses for indirect exposure to violence. For example, 3% of the respondents had been told about a stranger being chased/threatened, 2.5% had been told about a stranger being robbed, 2.4% had been told about a stranger being killed, and 2.2% had been told about a stranger being shot or stabbed.

The subscales for CREV measured indirect exposure to violence via media, hearsay, witnessing, and victimization. Of the current survey participants, 90.9% had been exposed to violence via some form of media, 54.5% had heard reports of violent acts involving a stranger, 100% had witnessed 1 or more of the

5 violent acts against a stranger, 19.3% had been beaten up, 22.8% had been chased or threatened, 26.4% had been robbed or mugged, and 31.5% had been shot. This indicates that these adolescents experienced some form of community violence within their lifetime.

By comparison, 100% of students in previous similar research using the CREV reported that they had been exposed to violence via some form of media, 93% had heard reports of violent acts involving a stranger, 37% had been beaten up, 19% had been chased or threatened, 9% had been robbed or mugged, and 1% had been shot.in reviewing both the current and previous research, 100% of the participants experienced some form of violence with the higher percentage of exposure been witnessed via media. The current research sample indicated a lower percentage of hearing about violent acts involving a stranger, but higher percentages reported having been chased or threatened.

Evaluation of Measures Used in Study

Cronbach's alpha was computed from participant scores for each of the quantitative scales selected for this study. These are presented in Table 2. All of the scales have acceptable Cronbach alpha values (>.70).

Table 2

Cronbach Alphas for Internal Consistency of Measurement Instruments

Measure	*N*	Cronbach's Alpha
SAVE	99	.929
CREV	99	.906
AQ	99	.911
ATVS	99	.741
K-10	99	.903

Note. *SAVE*: Screen for Adolescent Exposure; *CREV*: Children's Report of Exposure to Violence; *AQ*: Aggression Questionnaire; *ATVS*: Attitudes towards Violence Scale; *K-10*: Kessler Psychological Distress Test

Descriptive Statistics on Measures

Table 3 presents the descriptive statistics for the sum scores and subscales of various variables that were measured. The medians are reported for two of the SAVE subscales due to the presence of high skewness and kurtosis: Threatened with Physical/Verbal Aggression (S = 2.3, K = 5.77) and Threatened with Physical/Verbal Violence *(*S = 2.28, K = 5.84).

Table 3

Descriptive Statistics for Measures of Exposure, Aggression, Psychoemotional Distress, and Academic Performance

Measure	*N*	Mean	Standard Deviation	Skewness	Kurtosis
SAVEc	99	36.78	24.36	0.24	0.09
SAVE-raw	99	37.69	27.29	1.51	3.1
School		13.62			
Home		7.13			
Neighborhood		16.94			
Traumatic violence		3.33	5.56		
Indirect violence		31.17	20.33		
Actual/threatened harm?*		Md =.69		2.3	5.77
Physical/verbal?*		Md = .69		2.28	5.84
CREV	99	32.01	12.81	0.56	-0.07
Media		14.24	2.44		
Report/stranger		7.01	4.51		
Witness/stranger		2.63	2.45		
Report/familiar		5.01	3.58		
Witness/familiar		1.83	2.43		
Victimization		1.29	1.7		
AQ	99	74.36	20.78	0.18	-0.5
ATVS	99	35/91	7.17	0.19	0.62
K-10	99	22.15	8.59	0.58	-0.37
GPA	99	3.72	0.78	0.62	0.89

Note. *SAVE*: Screen for Adolescent Exposure; *SAVEc*: SAVE with corrected values; *CREV*: Children's Report of Exposure to Violence; *AQ*: Aggression Questionnaire; *ATVS*: Attitudes towards Violence Scale; *K-10*: Kessler Psychological Distress Test; *GPA:* current grade point average during the winter 2014/2015 academic year; *SAVE*: Screen for Adolescent Exposure occurrences in school, home, and neighborhood and subscales (indirect violence, traumatic violence, physical/verbal abuse); *CREV*: Children's Report of Exposure to Violence subscales (media, report of stranger, witness of stranger, report of someone familiar, witness of someone familiar, and direct victimization) *Median is reported due to high deviation from normal distribution.

Tests of Assumptions for Statistical Analyses

Initial screening was performed on the scale scores for the various quantitative measures. Basic descriptive statistics, including skewness and kurtosis, were computed in order to evaluate the assumption of normal distribution for further parametric tests. The distribution of raw scores for the SAVE had significantly high levels of skewness (> 1.0) and kurtosis (> 3.0). Inspection of the histogram of the distribution indicated problems with a "heavy" tail and peakedness, relative to the normal distribution (DeCarlo, 1997). In particular, the positive tail included two scores (151, 131) that were more than three standard deviations above the raw mean (M = 37.69, SD = 27.29). There were no outliers for values below the mean, and the distribution was more peaked around the mean. In order to approximate normality, the two extreme high values were corrected to 96, the highest observed value before these outliers. By not discarding higher positive scores the distribution continues to acknowledge the existence of higher values in this population on this dimension (Meyers et al., 2006). In addition, the raw and corrected means did not differ (paired t-test: $t(196) = .25$, $p = .80$). The median for the distribution of corrected scores (SAVEc) is 31, with scores ranging from 0 to 96. Other descriptives for the resulting SAVEc are shown in Table 2. SAVEc data were used for all further analyses.

Table 3 presents the descriptive statistics for the sum scores and subscales of various variables that were measured. The medians are reported for

two of the SAVE subscales due to the presence of high skewness and kurtosis: Threatened with Physical/Verbal Aggression (S = 2.3, K = 5.77) and Threatened with Physical/Verbal Violence *(*S = 2.28, K = 5.84).

Assumptions for linearity for bivariate correlations were assessed using scatterplots. These are found in Appendix O. There were no problems with linearity for bivariate correlations.

Prescreening for multiple linear regression analyses indicated that the assumptions of linearity were met sufficiently and there were no problems with multivariate outliers (Mahalanobis distance test; no value exceeded the critical value, χ^2 (2) = 13.82, for $p < .001$). In addition, collinearity statistics did not indicate problems (VIFs > .01 and VIFs < 10; Meyers et al., 2006). See Appendix P for evaluations of assumptions for these analyses.

Assessment of Hypothesized Model

The general predictor variables are exposure to violence: total scores on the CREV and SAVEc (the higher the score, the higher the level of exposure). The proposed intervening variables are (a) aggressiveness (BPAQ; the higher the score, the higher the aggression); (b) attitudes towards aggression (ATVS; the higher the score, the more favorable the attitudes towards aggression); (c) psychoemotional distress (K-10; the higher the score, the higher the distress). The outcome variable is academic performance (GPA; the higher the score, the better the academic performance).

Bivariate correlations and regression analyses were used to determine the relative contribution of various predictive factors of exposure to violence to aggressive behavior, psychoemotional distress, and academic performance. A path analysis, an application of assumptions of linearity in conjunction with causal theory (Meyers et al., 2006), was used to analyze the causal model. To assess the significance of the relationships stated in the hypotheses, separate simultaneous regression equations were employed. A comparison of the path coefficients examined the relative importance that the exogenous (exposure to violence) and endogenous (intervening) variables had on the dependent variable in the theoretical models (Meyers et al., 2006).

Bivariate correlations were computed between the various measures of sources and types of exposure (SAVEc, CREV) with the measures of aggressive behavior (BPAQ), aggressive cognitions (ATV), and/or psychoemotional distress (K10) with academic performance (GPA). A series of multiple regression analyses were performed to evaluate each of the four research questions, that paralleled step-wise evaluations of a model presented for this study that included proposed mediating variables to help identify ways that exposure to violence/aggression may indirectly predict academic performance. Using a trimmed path analysis to summarize the resultant model, results suggested that attitudes towards aggression may act as a mediator to create an indirect relationship between exposure to aggression in the home and academic performance.

Bivariate Correlations

Table 4 presents the bivariate correlations among scores on all measures. As may be noted, statistically significant positive relationships ($p < .001$) were observed between scores on measures of exposure to aggression/violence (SAVEc, CREV) and the proposed intervening variables, aggressive behavior (BPAQ), attitudes towards aggression (ATVS), and psychoemotional distress (K-10), but weaker statistically significant relationships ($p < .05$) were noted between both SAVEc and CREV scores with GPA. Relationships between the proposed mediating variables (BPAQ, ATVS, and K-10) and the outcome variable, GPA, indicated that only aggressive cognitions (ATVS) was a statistically significant predictor of GPA, $r(98) = -.285$, $p = .004$.

Table 4

Bivariate Correlations Among Scores on all Measured Variables

	GPA	SAVEc	CREV	BPAQ	ATVS	K10
GPA	1					
SAVEc	-.168	1				
Sig.	.049*					
CREV	-.174	.712**	1			
Sig.	.043*	.000				
BPAQ	-.132	.498**	.358**	1		
Sig.	.096	.000	.000			
ATVS	-.332**	.416**	.354**	.454**	1	
Sig.	.001	.000	.000	.000		
K10	-.071	.390**	.391**	.563**	.233*	1
Sig.	.243	.000	.000	.000	.020	

Note. GPA: current grade point average during the winter 2014/2015 academic year; *SAVEc*: SAVE with corrected values; *CREV*: Children's Report of Exposure to Violence; *BPAQ*: Aggression Questionnaire; *ATVS*: Attitudes towards Violence Scale; *K-10*: Kessler Psychological Distress Test

Hypotheses 1-3. As there were statistically significant bivariate relationships among the various predictor and intervening variables, multiple regression analyses were performed to identify relationships when these intercorrelations were taken into consideration and partialed out.

Hypothesis 1. Exposure to violence as predictor of GPA. A multiple regression analysis was performed to simultaneously evaluate total scores on the two measures of exposure to violence (CREV, SAVEc) as predictors of academic performance (GPA; Meyers et al., 2006). Table 5 presents a summary of the results, including standardized prediction coefficients (β).

While scores on the SAVEc and CREV individually showed statistically significant correlations with GPA, when taken together, the measures of exposure to violence (SAVEc and CREV as predictors) did not account for a statistically significant amount of the variance in GPA (F (2, 96) = 1.69, n.s., R^2_{adj} = .014). Thus, only a weak or unstable relationship was observed between measures of exposure to violence and GPA.

Hypothesis 2: Exposure to violence as predictor of aggressiveness, attitudes towards aggression, and/or psychoemotional distress. A simultaneous entry multiple regression analysis was used to evaluate exposure to violence (CREV, SAVEc) as predictors of each of the proposed intervening variables (Meyers et al., 2006). Table 5-presents a summary of the results of these individual analyses, including standardized prediction coefficients (β).

Table 5

Summary of Multiple Regression Analyses for Hypotheses 1 Through 4

DV	Variable entered	*β*	*t*	Sig.	95% Confidence Interval	
					Lower	Upper
Hypothesis 1						
GPA	CREV	-.110	*.77*	n.s.	-.024	.011
	SAVEc	*–*.089	*.62*	n.s.	-.012	.006
Hypothesis 2						
BPAQ	CREV	.008	*.06*	n.s.	-.393	.419
	SAVEc	*.492*	*3.91*	< .001	.207	.633
ATVS	CREV	*.117*	*.89*	n.s.	-.081	.212
	SAVEc	*.333*	*2.53*	.013	.021	.175
K10	CREV	*.230*	*1.75*	(.084, n.s.)	.021	.330
	SAVEc	.226	1.71	(.09, n.s.)	.013	.172
Hypothesis 3						
GPA	BPAQ	*.027*	*.21*	n.s.	-.009	.011
	ATVS	*–.342*	*-3.15*	.002	.061	-.014
	K10	*–.006*	*-.05*	n.s.	-.022	.021
Hypothesis 4						
GPA	SAVEc	-.002	*-.01*	n.s.	-.010	.010
	CREV	*–.076*	*-.54*	n.s.	-.022	.013
	BPAQ	*.034*	*.25*	n.s.	-.009	.011
	ATVS	*–.323*	*-2.83*	.006	-.060	-.011
	K10	*.016*	*.13*	n.s.	-.021	.024
GPA	ATVS	*–.332*	*-3.46*	.001	-.057	-.015

Note. GPA = Current grade point average; CREV = Exposure to community violence; SAVEc = Exposure to home violence; BPAQ = Aggression; ATVS = Attitudes towards aggression; K10 = Psychoemotional distress.

BPAQ. Exposure to violence (SAVEc and CREV as predictors) accounted for a statistically significant amount of the variance in the measure of

aggressiveness (BPAQ: $F(2, 96) = 15.82$, $p < .001$, $R^2_{adj} = .248$). Upon further inspection, only one of the two predictor measures of exposure to violence was a statistically significant predictor of aggressiveness: SAVEc, $t = 3.91$, $p < .001$; CREV, $t = .06$, *n.s.*

ATVS. Exposure to violence (SAVEc and CREV as predictors) also accounted for a statistically significant proportion of the variance in the measure of attitudes towards aggression (ATVS: $F(2, 96) = 10.54$, $p < .001$, $R^2_{adj} = .163$). Again, only scores on the SAVEc statistically significantly predicted attitudes towards aggression: SAVEc, $t = 2.53$, $p = .013$; CREV, $t = .89$, *n.s*.

K10. Finally, exposure to violence (SAVEc and CREV as predictors) also was a statistically significant predictor of psychoemotional distress (K10: $F(2, 96) = 10.39$, $p < .001$, $R^2_{adj} = .161$). However, neither predictor alone was a statistically significant predictor of psychoemotional distress: SAVEc, $t = 1.71$, $p = .09$; CREV, $t = 1.75$, $p = .084$.

Hypothesis 3: Aggressiveness, attitudes towards aggression, and/or psychoemotional distress as predictors of academic performance. A simultaneous entry multiple regression was employed to evaluate BPAQ, ATVS, and K10 as predictors of GPA. Once again, no problems were noted for multilinearity nor for multicollinearity.

Results indicated that the three-predictor model explained a statistically significant proportion of variance in GPA: $F(3, 95) = 3.92$, $p = .011$; Adj. $R^2_{adj} = .082$.

However, of the three predictors, only ATVS was a statistically significant unique predictor of GPA. Increases in ATVS were correlated with decreases in GPA. (See Table 5).

Hypothesis 4: Evaluation of Proposed Causal Model

Hypothesis 4 tested the causal model presented in Figure 1, as shown at the beginning of this chapter, that hypothesized that effects of exposure to violence on academic performance were generally indirect, mediated by the impact of exposure to violence on students' aggression and/or psychoemotional health, that then have more direct impact on academic performance.

A path analysis, an application of multiple regression analysis in conjunction with causal theory (Meyers et al., 2006), was used to analyze the causal model proposed in Figure 1. To assess the significance of the relationships stated in the hypotheses, separate simultaneous regression equations were employed. A comparison of the path coefficients examined the relative importance that the exogenous (exposure to violence) and endogenous (intervening) variables had on the dependent variable in the theoretical models (Meyers et al., 2006).

In the first standard simultaneous multiple regression for the path analysis, academic performance (current GPA) was regressed on exposure to violence (CREV, SAVEc) and the three intervening variables (BPAQ, ATVS, and K10). Results of the first structural equation are shown in Table 6. The

predictors accounted for a statistically significant portion of the variance in academic performance, F (5, 93) = 2.42, p = .042.

R^2 = .339; R^2_{adj} = .067). In this analysis, only attitudes towards aggression (ATVS) provides a statistically significant unique contribution to the prediction of academic performance based on alpha = .05. None of the other predictors offered a unique contribution to predicting academic performance. The standardized prediction coefficient (β) for ATVS indicated that a one standard deviation increase in ATVS is associated with a decrease of -.323 standard deviations in academic performance, while controlling for the other variables.

The remaining separate standard multiple regression analyses required for the path analysis regressed each of the intervening variables (BPAQ, ATVS, or K10) on exposure to violence (CREV, SAVEc). These analyses already were completed and discussed in assessment of Hypothesis 2 (see results in Table 5).

Table 6

Simultaneous Multiple Regression Analysis with All Predictors of GPA

		Coefficients				
		Unstandardized		Standardized		
DV	Variable	*b*	*Std. Error*	*B*	*t*	*Sig.*
GPA	SAVEc	-.000	.005	-.002	-.012	*ns*
	CREV	-.005	.009	-.076	-.535	*ns*
	BPAQ	.001	.005	.034	.253	*ns*
	ATVS	-.035	.012	-.323	-2.834	.006
	K10	.001	.011	.016	.128	*ns*

Note. Dependent Variable: CURR GPA (current grade point average during the winter 2014/2015 academic year)
Predictor Variables: *SAVE*: Screen for Adolescent Exposure; *SAVEc*: SAVE with corrected values; *CREV*: Children's Report of Exposure to Violence; *AQ*: Aggression Questionnaire; *ATVS*: Attitudes towards Violence Scale; *K-10*: Kessler Psychological Distress Test.

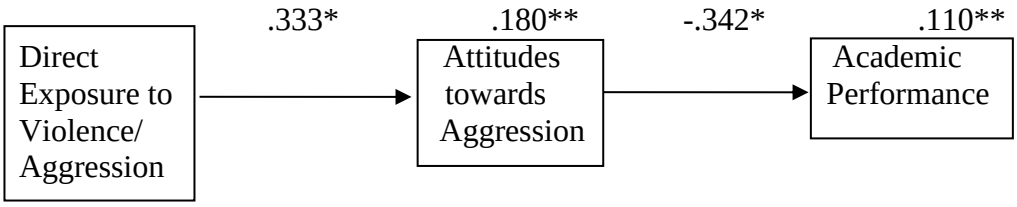
Resulting Trimmed Model

Results from analyses indicated the following:

1. The paths from measures of exposure to violence (CREV and SAVEc) to GPA failed to achieve practical strength (i.e., β values were less than .3; Meyers et al., 2006) and statistical significance;
2. Only attitudes towards aggression (ATVS) showed practical strength and statistical significance in predicting GPA;
3. Only scores on the (SAVEc) showed practical strength and statistical significance in predicting attitudes towards aggression (ATVS).

Given the statistically nonsignificant paths, a respecified model was evaluated next (Meyers et al., 2006). GPA was regressed on ATVS (R^2 = .110,

R^2_{Adj} = .101, (F (1, 97) = 11.99, p = .001; β = -.332, t = -3.46, p = .001, 95% Confidence Interval: Lower = -.057, Upper = -.015). ATVS was then regressed on SAVEc (R^2 = .173, R^2_{Adj} = .165, (F (1, 97) = 20.33, p < .001; β = .416, t = 4.51, p < .001, 95% Confidence Interval: Lower = .069, Upper = .177). The respecified model is presented in Figure 2.



** Beta coefficient (β); ** R^2*

Figure 2. Respecified model for relationships between exposure to violence and academic performance.

Exposure to violence (as operationally defined by the SAVEc) accounted for 18% of the variance in attitudes towards aggression, and attitudes towards aggression accounted for 11% of the variance in academic performance. Every one standard deviation increase in exposure to violence in the home was associated with a .333 standard deviation increase in attitudes towards aggression. Further, every one standard deviation increase in attitudes towards aggression was associated with a -.342 standard deviation decrease in academic performance.

Chapter Summary and Transition

Chapter 4 presents a review of the research questions and hypotheses posed for the current study, as well as the analyses to evaluate the proposed model for relationships between exposure to violence/aggression and academic performance among a sample of adolescents from two schools within a school district in a major metropolitan area in the mid-Atlantic area of the United States. Bivariate correlations were computed between the various measures of sources and types of exposure (SAVEc, CREV) with the measures of aggressive behavior (BPAQ), aggressive cognitions (ATV), and/or psychoemotional distress (K10) with academic performance (GPA). Initial results of the bivariate correlations indicated weak, but statistically significant, relationships between exposure to direct and indirect exposure to violence and academic performance. A series of multiple regression analyses was performed to evaluate each of the four research questions, that paralleled step-wise evaluations of the model presented for this study that included proposed mediating variables to help identify ways in that exposure to violence may indirectly predict academic performance. Using a trimmed path analysis to summarize the resultant model, results suggested that attitudes towards aggression may act as a mediator to create an indirect relationship between exposure to aggression in the home and academic performance.

Chapter 5 will present a summary of the study, assessment of the hypotheses, interpretation, prescription, and conclusions drawn from the survey

results. Further detailed are the limitations of the study, future recommendations for continued research, and social implications of current findings.

Chapter 5: Discussions, Conclusion, and Recommendations

This chapter consists of four components: first, the purpose and nature of the purposed study; second, the interpretation of the findings, an explanation of direct/indirect exposure to violence, and its possible impact on academic performance; third, the limitations and implications of the study; fourth, recommendations for future research and implications for positive social change; finally, implications applicable for practice.

The purpose of this quantitative study was to test a model with cognitive, behavioral, and emotional sequelae of exposure as mediators of the relationship between exposure to violence (environmental stressor) and academic performance among adolescents. I explored the path between frequency of types of exposure to violent aggression and academic performance by considering possible mediator variables of aggressive behavior, emotional states, and psychological/cognitive patterns related to aggression, and using self-report nominations collected from high school students.

Historically, previous researchers have found that, in general, direct exposure to violence has more significant negative impact on children's physical, emotional, and behavioral well-being than indirect exposure (Schwartz & Proctor, 2000). Further, direct exposure to interpersonal violence (either as a witness or as a victim) has a more negative impact on children than exposure to community violence (Perkins & Graham-Bermann, 2012).

Further, while there are conflicting reports, some have reported observations of students in schools or communities with higher rates of violence and aggression often demonstrating lower academic achievement (Baker-Henningham et al., 2009; Howard et al., 2010; Schwab-Stone, 1995). However, the current state of the literature does not provide a clear path to explain relationships between exposure to violence and academic performance. In the current study, I set out to respond to this gap in the literature by exploring three possible intervening variables that may mediate apparent relationships between exposure to violence and aggression and academic performance. Specifically, I explored how the level, frequency, and types of exposure to aggressive violence relate to adolescent students' aggressive behavior, aggressive cognitions, psychoemotional distress, and whether these intervening variables mediate any apparent relationships between exposure and academic performance. I proposed a model (see Figure 1 from Chapter 1) to predict and help explain any apparent relationships between exposure to violence and academic performance, including these intervening variables.

Summary of Findings

As initially predicted, exposure to violent aggression alone was not the key predictor of academic performance. The proposed model predicted that exposure to violent aggression would lead to increased risk of aggressive behavior in school, aggressive attitudes/cognitions, and/or psychoemotional distress that then mediates a relationship between exposure to violent aggression

and academic performance. The standard multiple regression analyses required for the path analysis were conducted for scores obtained on the various variables. Of the measured variables in the proposed model, only exposure to violence in the family (SAVEc) showed a positive relationship, with practical strength and statistical significance in predicting attitudes towards aggression (ATVS) and only attitudes towards aggression (ATVS) showed a negative relationship, with practical strength and statistical significance in predicting GPA.

Interpretation of the Findings

Despite previous extensive research on the negative association of direct and indirect exposure to violence and well-being among youth, one ongoing question is whether and how exposure to aggression and violence may impact academic performance. Prior researchers have been equivocal as to whether a direct or indirect relationship may exist between exposure and academic performance. While several researchers (Baker-Henningham et al., 2009; Gentile et al., 2004; Gorman-Smith & Tolan, 1998; Howard et al., 2010; Schwab-Stone, 1995; Temcheff et al., 2008) found statistically significant correlations between scores on exposure and academic performance, others have found either weak or statistically nonsignificant relationships (Ozer & Weinstein, 2004; Schwartz & Gorman, 2003). In the current study, I showed a statistically significant, yet weak, bivariate relationships between exposure to violent aggression and academic performance.

However, results of the current study have supported previous suggestions that apparent relationships between exposure and academic performance may be mediated or moderated by other factors. For example, Kurtz et al. (1993) and Leiter and Johnsen (1994) concluded that when youth are exposed to violence, they are more likely to experience lower tests scores in math and verbal assessments, while also demonstrating more negative interaction with their teachers. Howard et al. (2010) proposed that children who are repeatedly exposed to violence are more prone to elevated levels of anxiety and aggressive behavior at school, that negatively affects academic achievement (Borofsy et al. 2013). The model tested in this study followed Howard et al.'s (2010) suggestion, providing an assessment of both of aggressive behaviors and cognitions, as well as psychoemotional distress, as possible mediators between exposure to violence and academic performance.

Data demonstrated good internal consistency for the survey measures. Bivariate correlations indicated that exposure to violence provided a weak prediction for academic performance ($p < .05$). However, exposure predicted more positive attitudes towards aggression ($r = .35$, $p < .001$), as well as higher aggressive behavior ($r = .36$, $p < .001$), and psychoemotional distress ($r = .39$, $p < .001$). Of the intervening variables, only attitudes towards aggression predicted GPA ($r = -.29$, $p = .004$). Path analysis using multiple regression indicated that attitudes towards aggression served as a significant mediator variable for the relationship between exposure to violence and academic performance. SAVEc

and CREV scores indicated somewhat lower levels of direct exposure, but slightly higher levels of indirect exposure, to violence, compared with students in similar studies. However, analyses identified aggressive cognitions as a statistically significant mediator between exposure and academic performance. Interestingly, the sample's background as academic performers may have placed them at lower risk for other mediating effects of exposure to violence. Recommendations for future research are discussed.

That being stated, students who are exposed to violence in the home, neighborhood, community, and/or through the media are at risk for developing attitudes that accept aggression as a part of life. These kinds of attitudes presume a threatening, adversarial environment, and may further dampen students' energy for academic activities. In addition, such attitudes and beliefs may rob children of hope and distract them from interest in their future and how academic performance may serve future goals.

Possible Uniqueness of Results for the Study's Sample

The study also offers new information on a different subset of the school population than those usually studied, that is, students in high crime and exposure neighborhoods who also are at risk academically (e.g., Busby et al., 2013; Hardaway et al., 2014; Olszewski-Kubilius & Clarenbach, 2012; Vaillancourt & McDougall, 2013). In this study, I gathered data from adolescents who reside in various areas of a major metropolitan area, may have lower exposure to severe levels of aggressive violence (community, school, and/or home), are more likely to

come from a stabile household composition, have a higher socioeconomic status and also have a background of a higher GPA than those students studied in previous research.

It is very possible that results suggest processes unique to the students examined in this research, as compared to students with demographics who are typically studied. For example, the students in this research who already have demonstrated their academic potential prior to acceptance in the host schools may possess higher resilience in the face of exposure and experience positive support from family, teachers, peers, and others, higher academic motivation, better emotional resources for coping with psychoemotional distress, and/or better social skills that may inhibit aggressive acting out, even in the presence of aggressive cognitions. Importantly, all of these factors may contribute to greater school engagement.

School engagement is conceptualized as having emotional, behavioral, and cognitive components (Fredricks, Blumenfeld, & Paris, 2004). Borofsky et al. (2013) found that school engagement acted as a mediator between exposure to community violence and adolescents' academic performance. Borofsky et al. found that psychological distress (emotional component) mediated the relationship between exposure and school engagement, however, and similar to the current study, psychological distress did not mediate the relationship between exposure and GPA, nor predict GPA. They did not consider possible relationships between school engagement and attitudes towards aggression

(cognitive component) or aggressive behaviors (behavioral component) as mediators between exposure and academic performance. Future research considering school engagement and its relationships to exposure to violence and other mediators is warranted.

Limitations of the Study

The first area of limitations relates to sampling. As noted above, one limitation of this study is that the population of students who were recruited limits generalization of results to other samples of students. The majority of the respondents were African American and female. This population of students provided a unique situation in that their schools recruited students from within and outside of the city limits, from an unanticipated socioeconomic, household composition, and parental/guardian educational background. In addition, of the surveyed students, one high school was comprised of all female students, and both populations of students attend public schools with an emphasis on college preparatory course of study. The educational opportunity afforded this population of students is only available to students who maintain a specific GPA prior to application to request school attendance. However, of the students who participated, their exposure to violence was roughly similar to that reported by others (Cooley et al., 1995; Hastings & Kelley, 1997).

Theoretically, the GAM (Anderson & Bushman, 2002) considers both individual and situational factors in predicting aggression and its correlates. Although I examined individual differences in aggressiveness, psychoemotional

distress, and aggressive cognitions as possible mediators between exposure and academic performance, other key variables may need to be added to increase successful prediction. For example, previous researchers have found that many individually different patterns of mental health, neurocognition, and learning can arise after violence exposure (Perkins & Graham-Bermann, 2012). Researchers have identified relationships between exposure to community and family violence and development of learning difficulties, that can impact academic success, such as those related to reading, vocabulary, and comprehension, as well as memory, speed of language processing speed, attention, and other executive functioning skills (De Bellis, Hooper, Woolley, & Shenk, 2009; El-Hage, Gaillard, Isingrini, & Belzung, 2006; McCoy, Raver, & Sharkey, 2015; Ratner et al., 2006). I also did not consider possible individual differences in the students' previous academic performance patterns, that may predict individual differences in current academic performance, nor did the study consider age of first exposure to family and community violence, that has been found to predict types and severity of symptoms that children may demonstrate, such as externalizing behaviors (English et al., 2005).

Future research and analysis should consider the possible impact of additional individual and demographic factors, such as gender, age, socioeconomic status, learning difficulties, age of first exposure, and support mechanisms to evaluate both moderators and mediators in the possible effect of exposure to aggressive violence on academic achievement.

A second limitation of the study is that the initial population of students sought to participate in the research was limited to students in ninth through 12th grade. None of the ninth grade students participated in the study. The loss of an entire group of anticipated participants can result in a reduction of magnitude of correlation and grade-specific internal validity.

A third limitation in this research may be the length of the various questionnaires. The survey instrument included six surveys (demographic, SAVE, CREV, AQ, ATVS, K-10). All of the surveys consisted of Likert responses except the demographic questionnaire. A limitation of this questionnaire is the clarity of the categories. Currently, scholars are including sex and gender measurements parallel with contemporary gender theories (Westbrook & Saperstein, 2015). The demographic questionnaire did not provide specifications of whether the partner was of the same or opposite sex. The questionnaire only alluded to traditional marriage household composition but should have provided for consistency in same-sex marriages.

The fourth limitation of this study may be social desirability bias. This limitation refers to an individual's desire to overinflate socially acceptable responses in research (Fisher & Katz, 1999). In the current study, an individual's desire to overinflate his/her academic achievement may have presented self-report bias as well as a confounder for actual GPA. GPA was self-reported based on a provided range, and thus the results may not have represented actual academic performance. GPA was not corroborated or refuted by standardized

means. While it was assumed that the students were answering honestly, students may have exaggerated or otherwise distorted their experiences. Furthermore, generalization of results may be limited.

Finally, the resulting sample was primarily female and lower in academic risk, both in terms of their academic history and the schools they attended, that selected students with such academic backgrounds. Other samples often are made up of students who have less positive academic histories and, perhaps, are also limited by learning and/or behavior disorders.

Recommendations

This research may assist educators and mental health professionals to better understand the special challenges associated with students who are exposed to violence. Providing a better understanding of how exposure to violent aggression may create specific risks to students, both in terms of aggression and psychoemotional distress, may allow them to offer adequate support and interventions for the well-being and academic achievement of youth. In addition, the research may assist in clarifying where the focus for identification of risks, as well as ways to offer support and intervention. Proactive interventions have been shown to build resilience and support academic performance.

This research adds important breadth to the current literature by examining and providing statistical relationship between exposure to violence, psychoemotional distress, aggressive behavior, aggressive cognitions, and its academic performance at school in a population of adolescents. The results of the

two final schools that agreed to participate in the study provided an unusual sample for research in this area. Frequently, study participants not only have higher risks of exposure, but also have histories of lower academic performance, that also may be related to learning and/or behavioral disorders. By contrast, although attending inner city schools and at risk for exposure, the students in these schools were selected to attend because of their positive academic records. For other researchers interested in this field of study, the results of the current research may encourage ongoing study of other specific mediators, as well as possible moderators, for investigation of relationships between exposure to violence and aggression and academic performance. Such research can inform stakeholders for development of programs and other interventions to build resilience, engagement, and other positive cognitive, emotional, and behavioral patterns that can support academic achievement in the face of exposure to violence and aggression.

Implications

Results of this study have implications for positive social change that may occur on a number of levels. First, results have academic significance as they inform an existing body of academic theory and research. Contemporary social-cognitive theories of aggression (e.g., Huesmann, 1988, 1998) describe multiple potential cognitive and affective intervening variables in processes related to aggression. In general, cognitive-affective behavioral processes related to aggression may consume considerable energy and distract one from other life

activities. Results of the current study appear to support Ng-Mak et al.'s (2002, 2004) pathologic adaptation model that suggests that some children cope with exposure to community violence by cognitively normalizing and accepting violence. While Ng-Mak et al. (2002, 2004) proposed that this cognitive normalization often leads to aggressive behavior, aggressive behavior was not observed in the current sample of students to be a meaningful mediator between exposure and academic performance. Boxer et al. (2008) have demonstrated a dual path model that includes some normalization of aggression and aggressive behavior, avoidant coping, and psychoemotional distress, after repeated exposure to community violence and aggression. It would appear beneficial to devote more academic attention to studying coping mechanisms among the students similar to those in the current research, that is, students who are exposed to community and family violence but also have stronger academic skills. For these students, neither aggressive behavior nor psychoemotional distress mediated between exposure and academic performance. The use of avoidant coping, as suggested by Boxer et al., or the employment of other forms of coping, such as proactive engagement with positive support systems in their families, communities and/or schoolsmay have mediated between exposure and academic performance.This research will have implications for positive social change by assisting educators and mental health professionals to better understand the special challenges associated with students who are exposed to violence. A better understanding of how exposure to violent aggression may create specific risks to

students, both in terms of aggression and psychoemotional distress may allow them to offer adequate support and interventions for the well-being and academic achievement of our youth. In addition, this research may assist in clarifying where to focus identification of risks, as well as ways to offer support and intervention. Proactive interventions may build resilience and support academic performance.

This study's results clearly have particular positive social significance because they alert parents, community members, teachers and school administrators, mental health professionals, and policy makers to the role of resilience among students with higher academic potential who are exposed to violence but do not underperform academically. We must accept this is an opportunity to design and provide activities, both for prevention and intervention, that can support resilience. By mobilizing families, peers, schools, and communities, we can nurture youth with stronger potentials to reach their academic goals in spite of the risks from exposure to violence.

Conclusion

Results indicated, among the students studied, attitudes towards aggression were the critical mediator to explain the relationship between exposure and academic performance. Results may have limited generalizability due to the unique characteristics of the sample. Although not intended, this study's sample differed from those typically observed in this area of research. Other typical samples often are only male or tend to have a relatively larger proportion of

males than the current sample; further, those students often have histories of high academic risk, possibly due both to environment and factors such as learning or behavioral disorders. By contrast, the current study's sample, was primarily female, attended high schools where entrance was predicated on good academic skills. Families also appeared to be more intact and stable than may be the case for other samples.

Accepting attitudes towards aggression/violence served as the significant mediator of academic performance for students exposed to violence. Normalization of aggression may distract students from engagement in school and rob them of hope and interest in how academic performance may serve future goals. However, were other resilience factors also at work for these students? Did family structure encourage engagement and motivation for academic success? Were these students less frequently challenged with learning and/or behavioral disorders than other samples? Did they employ coping skills that protected them from negative reactions such as psychoemotional or behavioral problems? Results of the current study leave us with these important challenges for future research and applications to support our students who live in the shadow of exposure to violence in their homes, communities, and schools.

References

Aceves, M. J. & Cookston, J. T. (2007). Violent victimization, aggression, and parent- adolescent relations: Quality parenting as a buffer for violently victimized youth. *Journal of Youth and Adolescence*, *36*(5), 635-647. doi:10.1007/s10964-006-9131-9

Achenback, T. M. (1994). *Manual for the Child Behavior Checklist/2-3 and 1992 Profile*. Burlington, VT: University of Vermont Department of Psychiatry.

Adamson, J. L. & Thompson, R. A. (1998). Coping with interparental verbal conflict by children exposed to spouse abuse and children from nonviolent homes. *Journal of Family Violence*, *13,* 212-32. doi: 10.1023/A:1022896804777

Allen, J. & Robbins, S. (2010). Effects of interest–major congruence, motivation, and academic performance on timely degree attainment. *Journal of Counseling Psychology*, *57*(1), 23. doi:10.1037/a0017267

Allwood, M. & Bell, D. (2008). A preliminary examination of emotional and cognitive mediators in the relations between violence exposure and violent behaviors in youth. *Journal of Community Psychology*, *36*(8), 989-1007. doi:10.1002/jcop.20277

Aluja-Fabregat, A., Ballesté-Almacellas, J., & Torrubia-Beltri, R. (1999). Self-reported personality and school achievement as predictors of teachers perceptions of their students. *Personality and Individual Differences*,

27(4), 743-753. doi:10.1016/S0191-8869(98)00276-1

Aluja-Fabregat, A. & Torrubia-Beltri, R. (1998). Viewing of mass media violence, perception of violence, personality and academic achievement. *Personality and Individual Differences*, *25*(5), 973-989. doi:10.1016/S0191-8869(98)00122-6

Anderson, C. A., Benjamin, A. J., & Bartholow, B. D. (1998). Does the gun pull the trigger? Automatic priming effects of weapon pictures and weapon names. *Psychological Science*, *9*(4), 308-314. doi:10.1111/1467-9280.00061

Anderson, C. A., Benjamin Jr, A. J., Wood, P. K., & Bonacci, A. M. (2006). Development and testing of the Velicer Attitudes Toward Violence Scale: Evidence for a four-factor model. *Aggressive Behavior*, *32*(2), 122-136. doi:10.1002/ab.20112

Anderson, C. A. & Bushman, B. J. (2002). Human aggression. *Annual Review of Psychology*, *53*, 27–51. doi:10.1146/annurev.psych.53.100901.135231

Anderson, C. A. & Huesmann, L. R. (2003). Human aggression: A social-cognitive view. In M. A. Hogg & J. Cooper (Eds.) *The Handbook of Social Psychology, Revised Edition* (pp. 296-323). London, England.

Annau, Z. & Kamin, L. J. (1961). The conditioned emotional response as a function of intensity of the U. S. *Journal of Comparative and Physiological Psychology*, *54*, 428-432. doi:10.1037/h0042199

Archer, J. & Coyne, S. M. (2005). An integrated review of indirect, relational,

and social aggression. *Personality and Social Psychology Review, 9*, 212 –230. doi:10.1207/s15327957pspr0903_2Arsenio, W. F., Adams, E., & Gold, J. (2009). Social information processing,

moral reasoning, and emotion attributions: Relations with adolescents' reactive and proactive aggression. *Child Development, 80*(6), 1739–1755. doi:10.1111/j.1467-8624.2009.01365.x

Atkins, M. S. & Stoff, D. M. (1993). Instrumental and hostile aggression in childhood disruptive behavior disorders. *Journal of Abnormal Child Psychology, 21*, 165-178. doi:10.1007/BF00911314

Atkins, M. S., Stoff, D., Osborne, M., & Brown, K. (1993). Distinguishing instrumental and hostile aggression: Does it make a difference? *Journal of Abnormal Child Psychology, 21*, 355-365. doi:10.1007/BF01261598

Baker, J. A., Clark, T. P., Maier, K. S., & Viger, S. (2008). The differential influence of instructional context on the academic engagement of students with behavior problems. *Teaching and Teacher Education, 24*, 1876–1883. doi:10.1016/j.tate.2008.02.019

Baker-Henningham, H., Meeks-Gardner, J., Chang, S., & Walker, S. (2009). Experiences of violence and deficits in academic achievement among urban primary school children in Jamaica. *Child Abuse and Neglect, 33*(5), 296-306. doi:10.1016/j.chiabu.2008.05.011

Baltimore City Schools (n.d.). *Academic entrance criteria*. Retrieved fromhttp://www.baltimorecityschools.org/Page/24677

Bandura, A. (1969). Social learning of moral judgments. *Journal of Personality and Social Psychology, 11*, 275-279. doi:10.1037/h0026998

Bandura, A. (1973a). *Aggression: A social learning theory analysis*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1973b). Institutionally sanctioned violence. *Journal of Clinical Child Psychology, 2*, 23-24. doi:10.1080/15374417309532525

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 191-215. doi:10.1037/0033-295X.84.2.191

Bandura, A. (1978). Social learning theory of aggression. *Journal of Communication, 28,* 12–29. doi:10.1111/j.1460-2466.1978.tb01621.x

Bandura, A. (1983). Psychological mechanisms of aggression. In R. G. Geen & E. Donnerstein (Eds.), *Aggression: Theoretical and empirical reviews* (pp. 11-40). New York, NY: Academic Press.

Bandura, A. (1986a). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall. doi:10.1521/jscp.1986.4.3.359

Bandura, A. (1986b). The explanatory and predictive scope of self-efficacy theory. *Journal of Clinical and Social Psychology, 4*, 359-373. doi:10.1521/jscp.1986.4.3.359

Bandura, A. (1987). *Self-efficacy: The exercise of control*. New York, NY: W.H. Freeman.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*, 1-26. doi:10.1146/annurev.psych.52.1.1

Bandura, A. & Rosenthal, T. L. (1966). Vicarious classical conditioning as a function of arousal level. *Journal of Personality and Social Psychology, 3*, 54-62. doi:10.1037/h0022639

Baron, R. A. & Richardson, D. R. (1994). *Human aggression*. New York, NY: Plenum.

Baron, R. M. & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality & Social Psychology, 51*, 1173-1182. doi:10.1037/0022-3514.51.6.1173

Barth, J. M., Dunlap, S. T., Dane, H., Lochman, J. E., & Wells, K. C. (2004). Classroom environment influences on aggression, peer relations, and academic focus. *Journal of School Psychology, 42*, 115–133. doi:10.1016/j.jsp.2003.11.004

Barthelemy, J. & Lounsbury, J. (2009). The relationship between aggression and the big five personality factors in predicting academic success. *Journal of Human Behavior in the Social Environment, 19*(2), 159-170. doi:10.1080/10911350802687125

Benenson, J. F., Carder, H. P., & Geib-Cole, S. J. (2008). The development of

boys' preferential pleasure in physical aggression. *Aggressive Behavior, 34*(2), 154-166. doi:10.1002/ab.20223

Benhorin, S. & McMahon, S. (2008). Exposure to violence and aggression: Protective roles of social support among urban African American youth. *Journal of Community Psychology, 36*(6), 723-743. doi:10.1002/jcop.20252

Bennett, J. A. (2000). Mediator and moderator variables in nursing research: Conceptual and statistical differences. *Research in Nursing & Health, 23*, 415-420. doi:10.1002/1098-240X(200010)23:5<415::AID-NUR8>3.0.CO;2-H

Berkowitz, L. (1993). Aggression: Its causes, consequences, and control. Philadelphia, PA: *Temple University Press.*

Blackmer, J. (2010). The ethical obligations of researchers in protecting the rights of human research subjects. *World Medical & Health Policy, 2*(3), Article 6. doi:10.2202/1948-4682.1100

Blakemore, S., den Ouden, H., Choudhury, S., & Frith, C. (2007). Adolescent development of the neural circuitry for thinking about intentions. *Social Cognitive and Affective Neuroscience, 2*(2), 130-39. doi:10.1093/scan/nsm009

Boney-McCoy, S. & Finkelhor, D. (1995). Psychosocial sequelae of violent victimization in a national youth sample. *Journal of Consulting and Clinical Psychology, 63*, 726-7369. doi:10.1037/0022-006X.63.5.726

Borofsky, L. A., Kellerman, I., Baucom, B., Oliver, P. H., & Margolin, G. (2013). Community violence exposure and adolescents' school engagement and academic achievement over time. *Psychology of Violence*, *3*(4), 381. doi:10.1037/a0034121

Boxer, P., Goldstein, S. E., Musher-Eizenman, D., Dubow, E. F., & Heretick, D. (2005). Developmental issues in school-based aggression prevention from a social-cognitive perspective. *Journal of Primary Prevention, 26*, 383–400. doi:10.1007/s10935-005-0005-9

Boxer, P., Huesmann, L. R., Bushman, B. J., O'Brien, M., & Moceri, D. (2009). The role of violent media preference in cumulative development risk for violence and general aggression. *The Journal of Youth Adolescence, 38*, 417-428. doi: 10.1007/s10964-008-9335-2

Boxer, P., Musher-Eizenman, D., Dubow, E. F., Danner, S. A., & Heretick, D. M. L. (2006). Assessing teachers' perceptions for school-based aggression prevention programs: Applying a cognitive-ecological framework. *Psychology in the Schools, 43*(3), 331-344. doi:10.1002/pits.20144

Bradshaw, C. P. & Garbarino, J. (2004). Social cognition as a mediator of the influence of family and community violence on adolescent development: Implications for intervention. In J. Devine, J. Gilligan, K. A. Miczek, R. Shaikh, & D. Pfaff (Eds.), Youth violence: Scientific approaches to

prevention (pp. 85–105). New York, NY: New York Academy of Sciences. doi:10.1196/annals.1330.005

Bradshaw, C. P., Rodgers, C., Ghandour, L., & Garbarino, J. (2009). Social-cognitive mediators of the association between community violence exposure and aggressive behavior. *School Psychology Quarterly, 24*(3), 199-210. doi:10.1037/a0017362

Buka, S. L., Stichick, T. L., Birdthistle, I., & Earls, F. J. (2001). Youth exposure to violence: Prevalence, risks, and consequences. *American Journal of Orthopsychiatry, 71*, 298–310. doi:10.1037/0002-9432.71.3.298

Busby, D. R., Lambert, S. F., & Ialongo, N. S. (2013). Psychological symptoms linking exposure to community violence and academic functioning in African American adolescents. *Journal of Youth and Adolescence, 42*(2), 250-262. doi:10.1007/s10964-012-9895-z

Bushman, B. J. & Anderson, C. A. (2001). Is it time to pull the plug on hostile versus instrumental aggression dichotomy? *Psychological Review, 108*(1), 273. doi:10.1037/0033-295X.108.1.273

Bushman, B. J. & Anderson, C. A. (2002). Violent video games and hostile expectations: A test of the General Aggression Model. *Personality and Social Psychology Bulletin, 28,* 1679-1689. doi:10.1177/014616702237649

Bushman, B. J., Baumeister, R. F., Thomaes, S., Ryu, E., Begeer, S., & West, S. G. (2009). Looking again, and harder, for a link between low self-esteem

and aggression. *Journal of Personality*, *77*(2), 427-446. doi:10.1111/j.1467-6494.2008.00553.x

Bushman, B. J. & Huesmann, L. R. (2006). Short-term and long-term effects of violent media on aggression in children and adults. *Archives of Pediatrics & Adolescent Medicine*, *160*(4), 348-352. doi:10.1001/archpedi.160.4.348

Bushman, B. J. & Huesmann, L. R. (2010). Aggression. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology* (5th ed., Ch. 23, pp. 833-863). New York, NY: John Wiley & Sons. doi:10.1080/13552601003690518

Buss, A. H. & Perry, M. (1992). The Aggression Questionnaire. *Journal of Personality and Social Psychology, 63*, 452-459. doi:10.1037/0022-3514.63.3.452

Calvete, E. & Orue, I. *(*2010*).* Cognitive schemas and aggressive behavior in adolescents: The mediating role of social information processing. *Spanish Journal of Psychology, 13,* 189–200. doi:10.1017/S1138741600003772

Calvete, E. & Orue, I. (2011). The impact of violence exposure on aggressive behavior through social information processing in adolescents. *American Journal of Orthopsychiatry, 81*(1), 38–50. doi:10.1111/j.1939-0025.2010.01070.x

Campbell, A. & Ntobedzi, A. (2007). Emotional intelligence coping and psychological distress: A partial least square approach to developing a predictive model. *Electronic Journal of Applied Psychology, 3*(1), 39-54. doi:10.7790/ejap.v3i2.91

Cantrell, P.J., MacIntyre, D.I., Sharkey, K.J., & Thompson, V. (1995). Violence in the marital dyad as a predictor of violence in the peer relationships of older adolescents/young adults. *Violence and Victims, 10,* 35–41.

Cantrell, P. J., MacIntyre, D .I., Sharkey, K. J., & Thompson, V. (1995). Violence in the marital dyad as a predictor of violence in the peer relationships of older adolescents/young adults. *Violence and Victims, 10,* 35–41. Retrieved from http://www.springerpub.com/violence-and-victims.html

Caprara, G. V., Barbaranelli, C., Pastorelli, C., Cermak, I., & Rosza, S. (2001). Facing guilt: Role of negative affectivity, need for reparation, and fear of punishment in leading to prosocial behaviour and aggression. *European Journal of Personality, 15,* 219-237. doi:10.1002/per.402.abs

Card, N. A., Stucky, B. D., Sawalani, G. M.& Little, T. D. (2008). Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Development, 79*(5), 1185–1229. doi:10.1111/j.1467-8624.2008.01184.x

Carnagey, N. L. & Anderson, C. A. (2004). Violent video game exposure and aggression. *Minerva Psichiatrica*, *45*(1), 1-18.

Chen, W.Y. (2010). Exposure to community violence and adolescents' internalizing behaviors among African American and Asian American adolescents. *Journal of Youth and Adolescence, 39*(4), 403-13. doi;10.1007/s10964-009-9427-7

Child Discipline. (2011). American Humane Association: The nation's voice for the protection of children & animals. Retrieved from: http://www.americanhumane.org/children/stop-child-abuse/fact-sheets/child-discipline.html

Chiodo, D., Leschied, A. W., Whitehead, P. C., & Hurley, D. (2008). Child welfare practice and policy related to the impact of children experiencing physical victimization and domestic violence. *Children and Youth Services Review*, *30*(5), 564-574. doi:10.1016/j.childyouth.2007.11.008

Cohen, J. A., Bukstein, O., Walter, H., Benson, R. S., Chrisman, A., Farchione, T. R., Hamilton, J., Keable, H., Kinlan, J., & Schoettle, U. (2010). Practice parameter for the assessment and treatment of children and adolescents with posttraumatic stress disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, *49*(4), 414-430. doi:10.1016/j.jaac.2009.12.020

Coie, J. D. & Dodge, K. A. (1997). Aggression and antisocial behavior. In W. Damon & N. Eisenberg (Eds). *Handbook of Child Psychology, Vol. 3:*

Social, emotional and personality development. (pp. 779-862). New York, NY: Wiley.

Comer, J. (1984). Home-school relationships as they affect the academic success of children. *Urban Society, 16,* 323-337. doi:10.1177/0013124584016003006

Conard, M. A. (2006). Aptitude is not enough: How personality and behavior predict academic performance. Journal of Research in Personality, 40, 339-346. doi:10.1016/j.jrp.2004.10.003

Cooley-Quille, M., Boyd, R. C., Frantz, E., & Walsh, J. (2001). Emotional and Behavioral impact of exposure to community violence in inner-city adolescents. *Journal of Clinical Child Psychology*, *30*(2), 199-206. doi:10.1207/S15374424JCCP3002_7

Cooley-Strickland, M., Griffin, R.., Darney, D., Otte, K., & Ko, J. (2011). Urban African American youth exposed to community violence: A school-based anxiety preventive intervention study. *Journal of Prevention and Intervention in the Community*, *39*(2), 149-166. doi:10.1080/10852352.2011.556573

Cooley-Strickland, M., Quille, T., Griffin, R., Stuart, E., Bradshaw, C., & Furr-Holden, D. (2009). Community violence and youth: affect, behavior, substance use, and academics. *Clinical Child and Family Psychology Review*, *12*(2), 127-156. doi :10.1007/s10567-009-0051-6

Cooley, M. R., Turner, S. M., & Beidel, D. C. (1995). Assessing community violence: Children's Report of Exposure to Violence. *Journal of the American Academy of Child and Adolescent Psychiatry*, *34*(2), 201-208. doi:10.1097/00004583-199502000-00015

Cote, S. M., Vaillancourt, T., Barker, E. D., Nagin, D., & Tremblay, R. E. (2007). The Joint development of physical and indirect aggression: Predictors of continuity and change during childhood. *Development and Psychopathology*, *19*(1), 37-55. doi:10.1017/S0954579407070034

Coyne, S. M., Archer, J., Eslea, M., & Liechty, T. (2008). Adolescent perceptions of indirect forms of relational aggression: Sex of perpetrator effects. *Aggressive Behavior, 34*, 577-583. doi:10.1002/ab.20266

Creswell, J. W. (2009). *Research design: Qualitative, quantitative and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Crick, N. R. (1996). Relational aggression: The role of intent attribution, feelings of distress and provocation type. *Development and Psychopathology, 7*, 313-322. doi:10.1017/S0954579400006520

Crick, N. R.., & Dodge, K. A. (1994). A review and reformulation of social information- processing mechanisms in children's social adjustment. *Psychological Bulletin*, *115*, 74-101. doi:10.1037/0033-2909.115.1.74

Crick, N. R. & Dodge, K. A. (1996). Social information processing deficits in reactive and proactive aggression. *Child Development, 67*(3), 993-1002. doi:10.2307/1131875

Crick, N. R. & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development*, *66*(3), 710–722. doi:10.2307/1131945

Crick, N. R., Ostrov, J. M., & Werner, N. E. (2006). A longitudinal study of Relational aggression, physical aggression, and children's social-psychological adjustment. *Journal of Abnormal Child Psychology, 34,* 131 – 142. doi:10.1007/s10802-005-9009-4

De Bellis M., Hooper S., Woolley D., & Shenk C. (2009) Demographic, maltreatment, and neurobiological correlates of PTSD symptoms in children and adolescents. *Journal of Pediatric Psychology, 11,* 1–8.

DeCarlo, L. T. (1997). On the meaning and use of kurtosis. *Psychological Methods, 2*(3) 292-307. doi:10.1037/1082-989X.2.3.292

Delaney-Black, V., Covington, C., Ondersma, S. J., Nordstrom-Klee, B., Templin, T., Ager, J., Janisse, J., & Sokol, S. J. (2002). Violence exposure, trauma, and IQ and/or reading deficits among urban children. *Archives of Pediatrics and Adolescent Medicine, 156*(3), 280–285. doi:10.1001/archpedi.156.3.280

Dodge, K. A. (1986). A social information processing model of social competence in children. *In* M. Perlmutter *(Ed.), The Minnesota Symposia*

on Child Psychology: Vol. 18. Cognitive perspectives on children's social and behavioral development (pp. 77–125). Hillsdale, NJ: Erlbaum.

Dodge, K. A. (1991). The structure and function of reactive and proactive aggression. In D. J. Pepler & K. H. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 201-218). Hillsdale, NJ: Lawrence Erlbaum Associates.

Dodge, K. A. & Coie, J. D. (1987). Social-information-processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology, 53,* 1146–1158. doi:10.1037/0022-3514.53.6.1146

Dodge, K. A. & Crick, N. R. (1990). Social information processing bases of aggressive behavior in children. *Personality and Social Psychology Bulletin, 53,* 1146-1158. doi:10.1177/0146167290161002

Dodge, K. A., Lochman, J. E., Harnish, J. D., Bates, J. E., & Pettit, G. S. (1997). Reactive and proactive aggression in school children and psychiatrically impaired chronically assaultive youth. *Journal of Abnormal Psychology, 106,* 37-51. doi:10.1037/0021-843X.106.1.37

Dodge, K. A. & Pettit, G. S. (2003). A biopsychological model of the development of chronic conduct problems in adolescence. *Developmental Psychology, 39,* 349-371. doi:10.1037/0012-1649.39.2.349

Dodge, K. A., Pettit, G. S., & Bates, J. E. (1994). Effects of physical maltreatment on the development of peer relations. *Development and*

Psychopathology, 6, 43-55. doi:10.1017/S0954579400005873

Doyle, H. S. & DeFago, J. (2009). Relational aggression and child outcomes. *The Ohio School Psychologist, 54*(3), 1–12.

Dubow, E., Huesmann, L., & Boxer, P. (2009). A social-cognitive- ecological framework for understanding the impact of exposure to persistent ethnic-political violence on children's psychosocial adjustment. *Clinical Child and Family Psychology Review*, *12*(2), 113-126. doi:10.1007/s10567-009-0050-7

Duman, S. & Margolin, G. (2007). Parents' aggressive influences and children's aggressive problem solutions with peers. *Journal of Clinical Child and Adolescent Psychology, 36*, 42-55. doi:10.1080/15374410709336567

Eacott, C. & Frydenberg, E. (2008). At-Risk students in a rural context: benefits and gains from a Coping Skills Program. *Australian Journal of Guidance and Counselling, 18*(02). 160-181. doi:10.1375/ajgc.18.2.160

Edleson, J. L., Ellerton, A. L., Seagren, E. A., Kirchberg, S. L., Schmidt, S.O., & Ambrose, A. T. (2007). Assessing child exposure to adult domestic violence. *Children and Youth Services Review, 29*(7), *961-971*. doi:10.1016/j.childyouth.2006.12.009

Eitle, E. & Turner, R. J. (2002). Exposure to community violence and young adult crime: The effects of witnessing violence, traumatic victimization, and other stressful life events. *Journal of Research in Crime and Delinquency*, *39*(2), 214-237. doi:10.1177/002242780203900204

El-Hage, W., Gaillard, P., Isingrini, M., Belzung C. Trauma-related deficits in Working memory. *Cognitive Neuropsychiatry*. 2006;11(1):33–46. doi:10.1080/13546800444000164

English, D. J. et al. (2005). Maltreatment's wake: The relationship of maltreatment dimensions to child outcomes. *Child Abuse & Neglect, 29*(5), 597–619. doi:10.1016/j.chiabu.2004.12.008

Erath, S. A., Flanagan, K. S., & Bierman, K. L. (2008). Early adolescent school adjustment: Associations with friendship and peer victimization. *Social Development, 17*(4), 853–870. doi:10.1111/j.1467-9507.2008.00458.x

Eron, L. D., Huesmann, L. R., Lefkowitz, M. M., & Walder, L. O. (1972). Does Television violence cause aggression? *American Psychologist*, *27*(4), 253. doi:10.1037/h0033721

Evans, S. E., Davies, C., & DiLillo, D. (2008). Exposure to domestic violence: A meta-analysis of child and adolescent outcomes. *Aggression and Violent Behavior 13*,131–140. doi:10.1016/j.avb.2008.02.005

Fan, X. T. & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13,* 1-22. doi:10.1023/A:1009048817385

Farmer, T. (2000). The social dynamics of aggressive and disruptive behavior in school: Implications for behavior consultation. *Journal of Educational and Psychological Consultation*, *11*, 299–321.

doi:10.1080/10474412.2000.9669417

Farmer, T. W. & Xie, H. L. (2007). Aggression and school social dynamics: The good, the bad, and the ordinary. *Journal of School Psychology, 45*, 461–478. doi:10.1016/j.jsp.2007.06.008

Farrington, D. P. (1989). Early predictors of adolescent aggression and adult violence. *Violence and Victims, 4*(2), 79-100. Retrieved from http://www.springerpub.com/violence-and-victims.html

Farrington, D. P. (1995). The development of offending and antisocial behavior from childhood: Key findings from the Cambridge study in delinquent development. *Journal of Child Psychiatry Psychology, 360,* 929–964. doi:10.1111/j.1469-7610.1995.tb01342.x

Farrington, D. P. (2003). Key results from the first forty years of the Cambridge Study in delinquent development. In: Thornberry TP, Krohn MD (eds.). Taking Stock of Delinquency: An Overview of Findings from Contemporary Longitudinal Studies. New York, NY: Kluwer/Plenum, pp. 137–183. doi:10.1007/0-306-47945-1_5

Farrington, D. P., Ttofi, M. M., & Coid, J. W. (2009). Development of adolescence-limited, late onset, and persistent offenders from age 8 to age 48. *Aggressive Behavior 35*(2), 150-163. doi:10.1002/ab.20296

Farver, J. A. M. (1996). Aggressive behavior in preschooler's social networks: Do birds of a feather flock together? *Early Childhood Research Quarterly, 11*, 333–350. doi:10.1016/S0885-2006(96)90011-3

Farver, J., Xu, Y., Eppe, S., Fernandez, A., & Schwartz, D. (2005). Community violence, family conflict, and preschoolers' socioemotional functioning. *Developmental Psychology, 41*(1), 160-170. doi:10.1037/0012-1649.41.1.160

Ferguson, C. J., San Miguel, C., & Hartley, R. D. (2009). A multivariate analysis of youth violence and aggression: The influence of family, peers, depression and media violence. *Journal of Pediatrics, 155,* 904–908. doi:10.1016/j.jpeds.2009.06.021

Ferguson, C. J. (2010). Genetic contributions to antisocial personality and behavior: A meta-analytic review from an evolutionary perspective. *The Journal of Social Psychology*, *150*(2), 160-180. doi:10.1080/00224540903366503

Ferster, C. B. & Skinner, B. F. (1957). *Schedules of Reinforcement.* New York, NY:Appleton-Century-Crofts.

Feshbach, N. D. & Feshbach, S. (1969). The relationship between empathy and aggression in two age groups. *Developmental Psychology, 1*, 102-107. doi:10.1037/h0027016

Feshbach, S. (1964). The function of aggression and the regulation of aggressive drive, *Psychological Review, 71*(4), 257-272. doi:10.1037/h0043041

Finkelhor, D. (1995). The victimization of children. *American Journal of Orthopsychiatry, 65*(2), 177–193. doi:10.1037/h0079618

Finkelhor, D., Turner, H., Ormrod, S., & Hamby, S. L. (2009). Violence, abuse, and crime exposure in a national sample of children and youth. *Pediatrics*, *124* (5), 1411-1423. doi:10.1542/peds.2009-0467

Finkelhor, D., Turner, H., Ormrod, R., Hamby, S., & Kracke, K. (2009). Children's exposure to violence: a comprehensive national survey. US Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention. Retrieved from http://www.ncjrs.gov/pdffiles1/ojjdp/227744.pdf

Finn, J. D. & Rock, D. A. (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology*, *82*(2), 221. doi: 10.1037/0021-9010.82.2.221

Finkelhor D., Turner H., Ormrod R., Hamby S., & Kracke, K. (2009). Children's exposure to violence: a comprehensive national survey. US Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention. Retrieved from http://www.ncjrs.gov/pdffiles1/ojjdp/227744.pdf

Fisher, R. J. & Katz, J. E. (1999). Social-desirability bias and the validity of self-reported values. *Psychology & Marketing*, *17*(2), 105-120. doi:10.1002/(SICI)1520-6793(200002)17:2<105::AID-MAR3>3.0.CO;2-9

Fite, J. E., Goodnight, J. A., Bates, J. E., Dodge, K. A., & Pettit, G. S. (2008). Adolescent aggression and social cognition in the context of personality:

impulsivity as a moderator of predictions from social information processing. *Aggressive Behavior, 34*(5), 511–520. doi:10.1002/ab.20263

Fives, C., Kong, G., Fuller, J., & DiGiuseppe, R. (2010). Anger, aggression, and irrational beliefs in adolescents. *Cognitive Therapy and Research, 10*, 1-10. Retrieved from http://www.springer.com/medicine/journal/10608

Flannery, D. J., Wester, K. L., & Singer, M. I. (2004). Impact of exposure to violence in school on child and adolescent mental health and behavior. *Journal of CommunityPsychology, 32*, 559-573. doi:10.1002/jcop.20019

Fontaine, R. G. (2008). On-line social decision making and antisocial behavior: Some essential but neglected issues, *Clinical Psychology Review, 28*(1), 17-35. doi:10.1016/j.cpr.2007.09.004

Fontaine, R. G., Yang, C., Dodge, K., Pettit, G. S., & Bates, J. E. (2009). Development of response evaluation and decision (RED) and antisocial behavior in childhood and adolescence. *Developmental Psychology, 45*(2), 447-459. doi:10.1037/a0014142

Forbes, E. E. & Dahl, R. E. (2010). Pubertal development and behavior: Hormonal activation of social and motivational tendencies. *Brain and Cognition, 72*(1), 66-72. doi:10.1016/j.bandc.2009.10.007

Forbes, G., Zhang, X., Doroszewicz, K., & Haas, K. (2009). Relationships between individualism–collectivism, gender, and direct or indirect aggression: a study in China, Poland, and the US. *Aggressive Behavior, 35*(1), 24–30. doi:10.1002/ab.20292

Fowler, P. J., Tompsett, C. J., Braciszewski, J. M., Jacques-Tiura, A. J., & Baltes, B. B. (2009). Community violence: A meta-analysis on the effect of exposure and mental health outcomes of children and adolescents. *Development and Psychopathology*, *21*, 227-259. doi:10.1017/S0954579409000145

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of educational research, 74*(1), 59-109. doi:10.3102/00346543074001059

Frick, P. J. & White, S. F. (2008). Research review: The importance of callous-unemotional traits for developmental models of aggressive and antisocial behavior. *Journal of Child Psychology and Psychiatry, 49*, 359-375. doi:10.1111/j.1469-7610.2007.01862.x

Funk, J. B., Elliott, R., Urman, M., Flores, G., & Mock, R. (1999). The Attitudes towards Violence scale: A measure for Adolescents. *Journal of Interpersonal Violence,* 14 (11), 1123-1136. doi:10.1177/088626099014011001

Furr-Holden, C., Smart, M., Pokorni, J., Ialongo, N., Leaf, P., Holder, H., & Anthony, J. (2008). The NIfETy method for environmental assessment of neighborhood-level indicators of violence, alcohol, and other drug exposure. *Prevention Science,9*(4), 245-55. doi:10.1007/s11121-008-0107-8

Garbarino, J. (2001). An ecological perspective on the effects of violence on children. *Journal of Community Psychology, 29*(3), 361–378. doi:10.1002/jcop.1022

Garbarino, J., Dubrow, N., Kostelny, K., & Pardo, C, (1992). *Children in danger: Coping with the consequences of community violence.* San Francisco: Jossey-Bass.

Gardner, M. & Brooks-Gunn, J. (2009). Adolescents' exposure to community violence: Are neighborhood youth organizations protective? *Journal of Community Psychology, 37,* 505-525. doi:10.1002/jcop.20310

Gentile, D. A., Lynch, P. J., Linder, J. R., & Walsh, D. A. (2004). The effects of violent video game habits on adolescent hostility, aggressive behaviors, and school performance. *Journal of adolescence*, *27*(1), 5-22. doi:10.1016/j.adolescence.2003.10.002

George, D. & Mallery, P. (2009). *SPSS for Windows Step by Step: A Simple Guide and Reference, 16.0 Update.* (9th ed) Boston: Allyn and Bacon.

Georgiou, S. N. (2008), Bullying and victimization at school: The role of mothers. *British Journal of Educational Psychology, 78*(1), 109–125. doi:10.1348/000709907X204363

Gorman-Smith, D. & Tolan, P. (1998). The role of exposure to community violence and developmental problems among inner-city youth. *Development and Psychopathology, 10,* 101-116. doi:10.1017/S0954579498001539

Graham-Bermann, S. A., Gruber, G., Girz, L., & Howell, K. H. (2009). Factors discriminating among profiles of resilient coping and psychopathology in children exposed to domestic violence. *Child Abuse & Neglect, 33,* 648-660. doi:10.1016/j.chiabu.2009.01.002

Graham-Bermann, S. A. & Seng, J. (2005). Violence exposure and traumatic stress symptoms as additional predictors of health problems in high-risk children. *The Journal of Pediatrics, 146*(3), 349-354. doi:10.1016/j.jpeds.2004.10.065

Gravetter, F. J. & Wallnau, L. B. (2012). *Statistics for the Behavioral Sciences* (9th ed). Mason, OH: Cengage Learning.

Green, S. B. & Salkind, N. J. (2008). *Using SPSS for Windows and Macintosh: Analyzing and understanding data* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

Grolnick, W. S. & Pomerantz, E. M. (2009). Issues and challenges in studying parental control: Toward a new conceptualization. *Child Development Perspectives, 3*(3), 165–170. doi:10.1111/j.1750-8606.2009.00099.x

Gudiño, O. M., Nadeem, E., Kataoka, S. H., & Lau, A. S. (2011). Reinforcement sensitivity and risk for psychopathology following exposure to violence: A vulnerability-specificity model in Latino youth. Child Psychiatry & Human Development.

Guerra, N. G., Huesmann, L. R., & Spindler, A. (2003). Community violence exposure, social cognition, and aggression among urban elementary school children. *Child Development, 74*(5), 1507 – 1522. doi:10.1111/1467-8624.00623

Gutgesell, M. E. & Payne, N. (2004). Issues of adolescent psychological development in the 21st Century. *Pediatrics in Review 25*(3), 79-85. doi:10.1542/pir.25-3-79

Halliday-Boykins, C. A. & Graham, S. (2001). At both ends of the gun: Testing the relationship between community violence exposure and youth violent behavior. *Journal of Abnormal Child Psychology, 29*, 383-402. doi:10.1023/A:1010443302344

Hardaway, C. R., Larkby, C. A., & Cornelius, M. D. (2014). Socioemotional adjustment as a mediator of the association between exposure to community violence and academic performance in low-income adolescents. *Psychology of violence*, *4*(3), 281. doi:10.1037/a0036375

Hart, D. & Marmorstein, N. R. (2009). Neighborhoods and genes and everything in between: Understanding adolescent aggression in social and biological contexts. *Development and Psychopathology, 21*, 961-973. doi:10.1017/S0954579409000510

Hartup, W. W. (2005). The development of aggression: Where do we stand? In R. E. Tremblay, W. W. Hartup, & J. Archer (eds.), *Developmental Origins of Aggression* (pp. 3-25). New York, NY: Guilford press.

Hastings, T. L. & Kelley, M. L. (1997). Development and validation of the Screen for Adolescent Violence Exposure (SAVE). *Journal of Abnormal Child Psychology, 25*(6), 511-520. doi:10.1023/A:1022641916705

Haviland, A. & Nagin, D. S. (2005). Causal inference with group-based trajectory models. *Psychometrika, 70,* 1–22. doi:10.1007/s11336-004-1261-y

Haynie, D., Petts, R., Maimon, D., & Piquero, A. (2009). Exposure to violence in adolescence and precocious role exits. *Journal of Youth and Adolescence, 38* (3), 269-286. doi:10.1007/s10964-008-9343-2

Hazen, E., Schlozman, S., & Beresin, E. (2008). Adolescent psychological development: A review. *Pediatrics in Review, 29,* 161-168. doi:10.1542/pir.29-5-161

Hedström, P. (2008) Studying mechanisms to strengthen causal inferences in quantitative research. In J. M. Box-Steffensmeier, H. E. Brady and D. Collier (eds) *The Oxford handbook of political methodology*. Oxford,: Oxford University Press.

Henrich, C. C., Schwab-Stone, M., Fanti, K., Jones, S. M., & Ruchkin, V. (2004). The association of community violence exposure with middle-school achievement: A prospective study. *Journal of Applied Developmental Psychology, 25*(3), 327-348. doi:10.1016/j.appdev.2004.04.004

Hill, J. & Nathan, R. (2008), Childhood antecedents of serious violence in adult male offenders. *Aggressive Behavior, 34*(3), 329–338. doi:10.1002/ab.20237

Hinshaw, S. (1992). Externalizing behavior problems and academic underachievement in childhood and adolescence: Causal relationships and underlying mechanisms. *Psychological Bulletin*, *111*(1), 127-155. doi:10.1037/0033-2909.111.1.127

Hoeve, M., Blokland, A., Dubas, J. S., Loeber, R., Gerris, J. R. M., & van der Laan, P. H. (2008). Trajectories of delinquency and parenting styles. *Journal of Abnormal Child Psychology, 36*(2), 223-235. doi:10.1007/s10802-007-9172-x

Holt, S., Buckley, H., & Whelan, S. (2008). The impact of exposure to domestic violence on children and young people: A review of the literature. *Child Abuse & Neglect*, *32*(8), 797-810. doi:10.1016/j.chiabu.2008.02.004

Hopson, L. M. & Lee, E. (2011). Mitigating the effect of family poverty on academic and behavioral outcomes: The role of school climate in middle and high school. *Children and Youth Services Review, 33*(11), 2221-2229. doi: 10.1016/j.childyouth.2011.07.006

Howard, G. S., Ralph, K. M., Gulanick, N. A., Maxwell, S. E., Nance, D. W., & Gerber, S. K. (1979). Internal invalidity in pretest-posttest self-report evaluations and a re-evaluation of retrospective pretests. *Applied Psychological Measurement, 3*(1), 1- 23.

doi:10.1177/014662167900300101

Howard, K. A. S., Budge, S. L., & McKay, K. M. (2010). Youth exposed to violence: The role of protective factors. *Journal of Community Psychology, 38* (1), 63-79. doi:10.1002/jcop.20352

Howells, N. & Rosenbaum, A. (2008). Examination of sex differences and type of violence exposure in a mediation model of family violence. *Journal of Emotional Abuse, 8*(1/2), 123-138. doi:10.1080/10926790801985991

Huang, J. P., Xia, W., Sun, C. H., Zhang, H.Y., & Wu, L. J. (2009). Psychological distress and its correlates in Chinese adolescents." *Australian and New Zealand Journal of Psychiatry,* 43(7), 674-680. doi:10.1080/00048670902970817

Hubbard, J. A., McAuliffe. M. D., Morrow, M. T., & Romano, L., J. (2010). Reactive and proactive aggression in childhood and adolescence: Precursors, outcomes, processes, experiences, and measurement. *Journal of Personality, 78*(1), 95-118. doi:10.1111/j.1467-6494.2009.00610.x

Huesmann, L. R. (1986). Psychological processes promoting the relation between exposure to media violence and aggressive behavior by the viewer. *Journal of Social Issues, 42*(3), 125-139. doi:10.1111/j.1540-4560.1986.tb00246.x

Huesmann, L. R. (1988). An information processing model for the development of aggression. *Aggressive Behavior, 14*(1), 13–24. doi:10.1002/1098-2337(1988)14:1<13::AID-AB2480140104>3.0.CO;2-J

Huesmann, L. R. (1998). The role of social information processing and cognitive schema in the acquisition and maintenance of habitual aggressive behavior. In R.G. Green & E. Donnerstein (Eds.) *Human aggression: Theories, research, and implication for social policy (*pp. 73-109). San Diego: Academic Press.

Huesmann, L. R., Dubow, E. F., & Boxer, P. (2009). Continuity of aggression from childhood to early adulthood as a predictor of life outcomes: Implications for the adolescent-limited and life-course-course-persistent models. *Aggressive Behavior, 35*(2), 136-149. doi:10.1002/ab.20300

Huesmann, L. R. & Eron, L. D. (1984). Cognitive processes and the persistence of aggressive behavior. *Aggressive Behavior, 10*(3), 243-251. doi:10.1002/1098-2337(1984)10:3<243::AIDAB2480100308>3.0.CO;2-6

Huesmann, L. R., Eron, L. D., Lefkowitz, M. M., & Walder, L. O. (1984). The stability of aggression over time and generations. *Developmental Psychology, 20*, 1120-1134. doi:10.1037/0012-1649.20.6.1120

Huesmann, L. R. & Moise, J. (1998). The stability and continuity of aggression from early childhood to young adulthood. *Youth violence: Prevention, intervention, and social policy*, 73-95.

Huesmann, L. R., Moise-Titus, J., Podolski, C. L., & Eron, L. D. (2003). Longitudinal relations between children's exposure to TV violence and

their aggressive and violent behavior in young adulthood: 1977-1992. *Developmental Psychology, 39*(2), 201. doi:10.1037/0012-1649.39.2.201

Huesmann, L. R. & Taylor, L. D. (2006). The role of media violence in violent behavior. *Annu. Rev. Public Health*, *27*, 393-415. doi: 10.1146/annurev.publhealth.26.021304.144640

Hughes, H. M. (1988). Psychological and behavioral correlates of family violence in child witness and victims. *American Journal of Orthopsychiatry, 58*, 77-90. doi:10.1111/j.1939-0025.1988.tb01568.x

Hurt, H., Malmud, E., Brodsky, N.L., & Giannetta, J. (2001). Exposure to violence: Psychological and academic correlates in child witnesses. *Archives of Pediatrics & Adolescent Medicine, 155*, 1351-1356. doi:10.1001/archpedi.155.12.1351

Ingram, M., Wolfe, R. B., & Lieberman, J. M. (2007). The role of parents in high-achieving schools serving low-income, at-risk populations. *Education and Urban Society, 39*(4), 479-497. doi:10.1177/0013124507302120

Ivory, J. D. & Kalyanaraman, S. (2007). The effects of technological advancement and violent content in video games on players' feelings of presence, involvement, physiological arousal, and aggression. *Journal of Communication*, *57*(3), 532-555.doi:10.1111/j.1460-2466.2007.00356.x

Jaffe, P., Wolfe, D., Wilson, S., & Zak, L. (1986). Similarities in behavioral and social maladjustment among child victims and witnesses to family

violence. *American Journal of Orthopsychiatry,* 56(1), 142-146. doi:10.1111/j.1939-0025.1986.tb01551.x

Jeynes, W. H. (2005). A meta-analysis of the relation of parental involvement to urban elementary school student academic achievement. *Urban Education, 40*(3), 237-269. doi:10.1177/0042085905274540

Jeynes, W. H. (2007). The relationship between parental involvement and urban secondary school student academic achievement: A meta-analysis. *Urban Education, 42*(1), 82-110. doi:10.1177/0042085906293818

Johnson, R. B. & Christensen, L. B. (2008). *Educational research: Quantitative, qualitative, and mixed approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Johnson, R. B. & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher, 33*(7), 14-26. doi:10.3102/0013189X033007014

Joussemet, M., Vitaro, F., Barker, E. D., Côté, S., Nagin, D. S., Zoccolillo, M., & Tremblay, R. E. (2008). Controlling parenting and physical aggression during elementary school. *Child Development, 79*(2), 411–425. doi:10.1111/j.1467-8624.2007.01133.x

Karriker-Jaffe, K. J., Foshee, V. A., Ennett, S. T., & Suchindran, C. (2008). The development of aggression during adolescence: Sex differences in trajectories of physical and social aggression among youth in rural areas. *Journal of Abnormal Child Psychology, 36*(8), 1227-1236. doi:10.1007/s10802-008-9245-5

Kempes, M., Matthys, W., de Vries, H., & van Engeland, H. (2010). Children's aggressive responses to neutral peer behavior: A form of unprovoked reactive aggression. *Psychiatry Research, 176*(2), 219-223. doi:10.1016/j.psychres.2008.08.006

Kessler, R. C. (1996). *Kessler's 10 Psychological Distress Scale*. Boston, MA: Harvard Medical School.

Kessler, R. C., Andrews, G., Colpe, l. J., Hiripi, E., Mroczek, D. K., Normand, S. L. T.,Walter, E. E., & Zaslavsky, M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine, 32*(6), 959-976. doi:10.1017/S0033291702006074

Kessler, R. & Mroczek, D. (1994). Final version of our non-specific psychological distress scale [memo dated 3/10/94]. Ann Arbor: Survey Research Center of the Institute for Social Research, University of Michigan.

Kikas, E., Peets, K., Tropp, K., & Hinn, M. (2009). Associations between verbal reasoning, normative beliefs about aggression, and different forms of aggression. *Journal of Research on Adolescence, 19*(1), 137–149. doi:10.1111/j.1532-7795.2009.00586.x

Kliewer W., Lepore, S. J., Oskin, D., & Johnson, P. D. (1998). The role of social and cognitive processes in children's adjustment to community violence. *Journal of Consulting and Clinical Psychology. 66*(1), 199-209.

doi:10.1037/0022-006X.66.1.199

Kliewer, W. & Sullivan, T. N. (2008). Community violence exposure, threat appraisal, and adjustment in adolescents. *Journal of Clinical Child & Adolescent Psychology, 37*(4), 860-873. **doi:10.1080/15374410802359718 10.1080/15374410802359718**

Kokkinos, C. & Panayiotou, G. (2007). Parental discipline practices and locus of control: relationship to bullying and victimization experiences of elementary school students. *Social Psychology of Education, 10*(3), 281-301. doi:10.1007/s11218-007-9021-3

Kokko, K., Pulkkinen, L., Huesmann, L. R., Dubow, E. F., & Boxer, P. (2009). Intensity of aggression in childhood as a predictor of different forms of adult aggression: A two-country (Finland and the United States) Analysis. *Journal of Research on Adolescence, 19*(1), 9–34. doi:10.1111/j.1532-7795.2009.00579.x

Kolbo, J. R. (1996). Risk and resilience among children exposed to family violence. *Violence & Victims, 11 (2),* 113-128.

Kowalski, R. M., Limber, S. P., & Agatston, P. W. (2008). *Cyber bullying: Bullying in the digital age*. Oxford, UK: Blackwell Publishing. doi:10.1002/9780470694176

Kurtz, P. D., Gaudin, J. M., Wodarski, J. S., & Howing, P. T. (1993). Maltreatment and the school-aged child: School performance consequences. *Child Abuse & Neglect, 17,* 581–589.

doi:10.1016/0145-2134(93)90080-O

Lambert, S. F., Lalongo, N. S., Boyd, R. C., & Cooley M. R. (2005). Risk factors for community violence exposure in adolescence. *Journal of Community Psychology, 36* (1-2), 29-48. doi:10.1007/s10464-005-6231-8

Lambert, S. F., Nylund-Gibson, K., Copeland-Linder, N., & Ialongo, N. S. (2010). Patterns of community violence during adolescence. *American Journal of Community Psychology, 46,* 289–302. doi:10.1007/s10464-010-9344-7

Laskey, B. J. & Cartwright-Hatton, S. (2009). Parental discipline behaviors and beliefs about their child: associations with child internalizing and mediation relationships. *Child Care Health Development, 35*(5), 717-727. doi:10.1111/j.1365-2214.2009.00977.x

Latzman, R. D. & Swisher, R. R. (2005). The interactive relationship among adolescent violence, street violence, and depression. *Journal of Community Psychology, 33*(3), 355–371. doi:10.1002/jcop.20051

Lazarus, R. S. (1993). Coping theory and research: Past, present, and future. *Psychosomatic Medicine, 55,* 234-247. doi:10.1097/00006842-199305000-00002

Lazarus, R. S. (1999). Hope: An emotion and a vital coping resource against despair. *Social Research,* 653-678. Retrieved from http://www.jstor.org/journal/socialresearch

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: NY. Springer Publishing.

Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality*, *1*(3), 141-169. doi:10.1002/per.2410010304

Lederman, L. C. (1990). Assessing educational effectiveness: The focus group interview as a technique for data collection 1. *Communication Education*, *39*(2), 117-127. doi:10.1080/03634529009378794

Lefkowitz, M. M., Huesmann, L. R., & Eron, L. D. (1978). Parental punishment: A longitudinal analysis of effects. *Archives of General Psychiatry*, *35*(2), 186-191. doi:10.1001/archpsyc.1978.01770260064007

Leiter, J. & Johnsen, M. C. (1994). Child maltreatment and school performance. *American Journal of Education, 102,* 154–189. doi:10.1086/444063

Lewis, T., Kotch, J., Thompson, R., Litrownik, A. J., English, D. J., Proctor, L. J., Runyan, D. K., & Dubowitz, H. (2010). Witnessed violence and youth behavior problems: A multi-informant study. *American Journal of Orthopsychiatry, 80*(4), 443–450. doi:10.1111/j.1939-0025.2010.01047.x

Li, X., Howard, D., Stanton, B., Rachuba, L., & Cross, S. (1998). Distress symptoms among urban African American children and adolescents: A psychometric evaluation of the Checklist of Children's Distress Symptoms. *Archives of Pediatrics & Adolescent Medicine. 152*(6), 569–577. doi:10.1001/archpedi.152.6.569

Linder, J. R. & Gentile, G. A. (2009). Is the television rating system valid? Indirect, verbal, and physical aggression in programs viewed by fifth grade girls and associations with behavior. *Journal of Applied Developmental Psychology, 30*(3), 286-297. doi:10.1016/j.appdev.2008.12.013

Lösel, F., Bliesener, T., Bender, D. (2007). Social information processing, experiences of aggression in social contexts, and aggressive behavior in adolescents. *Criminal Justice and Behavior, 34*(3), 330-347. doi:10.1177/0093854806295833

Loveland, J., Lounsbury, J., Welsh, D., & Buboltz, W. (2007). The validity of physical aggression in predicting adolescent academic performance. *British Journal of Educational Psychology, 77*(1), 167-176. doi:10.1348/000709905X79563

Mahoney, A., Donnelly, W. O., Boxer, P., & Lewis, T. (2003). Marital and severe parent- to-adolescent physical aggression in clinic-referred families: Mother and adolescent reports on co-occurrence and links to child behavior problems. *Journal of Family Psychology, 17,* 3–19. doi:10.1037/0893-3200.17.1.3

Maker, A. H., Kemmelmeier, M., & Peterson, C. (1998). Long-term psychological consequences in women of witnessing parental physical conflict and experiencing abuse in childhood. *Journal of Interpersonal Violence, 13*(5), 574-589. doi:10.1177/088626098013005002

Margolin, G. (2005). Children's exposure to violence exploring developmental pathways to diverse outcomes. *Journal of Interpersonal Violence, 20*(1), 172-181. doi:10.1177/0886260504268371

Margolin G. Gordis E. B. (2004). Children's exposure to violence in the family and community. *Current Direction in Psychological Science 13*(4), 152–155. doi:10.1111/j.0963-7214.2004.00296.x

Margolin, G. & Vickerman, K. (2007). Posttraumatic stress in children and adolescents exposed to family violence: I. Overview and issues. *Professional Psychology, Research and Practice, 38,* 613–619. doi:10.1037/0735-7028.38.6.613

Martin, A. J. & Marsh, H. W. (2006). Academic resilience and its psychological and educational correlates: A construct validity approach. *Psychology in the Schools, 43,* 267–282. doi:10.1002/pits.20149

Martinez, P. & Richters, J. E. (1993). The NIMH Community Violence Project: II. Children's distress symptoms associated with violence exposure. In D. Reiss, J. E. Richters, M. Radke-Yarrow, & D. Scharff (Eds.), Children and violence (pp. 22–35). New York, NY: Guilford Press. doi:10.1080/00332747.1993.11024618

Mathews, T., Dempsey, M., & Overstreet, S. (2009). Effects of exposure to community violence on school functioning: The mediating role of

posttraumatic stress. *Behavior Research and Therapy, 47*(7), 586-591. doi:10.1016/j.brat.2009.04.001

McAloney, K., McCrystal, P., Percy, A., & McCartan, C. (2009). Damaged youth: Prevalence of community violence exposure and implications for adolescent well-being in post-conflict Northern Ireland. *Journal of Community Psychology, 37*(5), 635–648. doi:10.1002/jcop.20322

McCloskey, M. S., Lee, R., Berman, M. E., Noblett, K. L., & Coccaro, E. F. (2008). The relationship between impulsive verbal aggression and intermittent explosive disorder. *Aggressive Behavior, 34,* 51–60. doi:10.1002/ab.20216

McCloskey, L. A. & Lichter, E. L. (2003). The contribution of marital violence to adolescent aggression acts across different relationships. *Journal of Interpersonal Violence, 18*(4), 390–412. doi:10.1177/0886260503251179

McCoy, D. C., Raver, C. C., & Sharkey, P. (2015). Children's cognitive performance and selective attention following recent community violence. *Journal of Health and Social Behavior, 56*(1), 19-36. doi:10.1177/0022146514567576

McCrae, R.R. & Costa, P.T. (1997) Personality trait structure as a human universal. *American Psychologist, 52,* 509-516. doi:10.1037/0003-066X.52.5.509

McDonald, R., Jouriles, E. N., Ramisetty-Mikler, S., Caetano, R., & Green, C. E. (2006). Estimating the number of American children living in partner-violent families. *Journal of Family Psychology 20*(1), 137-142. doi:10.1037/0893-3200.20.1.137

McGee, Z. (2003). Community violence and adolescent development: An examination of risk and protective factors among African American youth. *Journal of Contemporary Criminal Justice*, *19*, 293–314. doi:10.1177/1043986203254527

McMahon, S., Felix, E., Halpert, J., & Petropoulos, L. (2009). Community violence exposure and aggression among urban adolescents: testing a cognitive mediator model. *Journal of Community Psychology*, *37*(7), 895-910. doi:10.1002/jcop.20339

Merrell, K. W., Buchanan, R., & Tran, O. K. (2006). Relational aggression in children and adolescents: A review with implications for school settings. *Psychology in the Schools, 43*, 345–360. doi:10.1002/pits.20145

Mertens, D. M. (2010). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods* (3rd edition). SAGE Publications, Inc.

Mertler, C. A. & Vannatta, R. A., (2010). Advanced and multivariate statistical methods: Practical application and interpretation (4th ed.). Los Angeles, CA: Pyrczak.

Meyers, L. S., Gamst, G., & Guarino, A. J. (2006). Applied multivariate

research: Design and interpretation. Thousand Oaks, CA: Sage.

Milam, A. J., Furr-Holden, C. D. M., & Leaf, P. J. (2010). Perceived school and neighborhood safety, neighborhood violence and academic achievement in urban school children. *Urban Review*, *42*(5), 458-467. doi:10.1007/s11256-010-0165-7

Miller, L. S., Wasserman, G. A., Neugebauer, R., Gorman-Smith, D., & Kamboukos, D. (1999). "Witnessed community violence and antisocial behavior in high-risk urban boys." *Journal of Clinical Child Psychology, 2*, 2-11. doi:10.1207/s15374424jccp2801_1

Moffitt, T. E. (1993). Adolescent-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review 100*(4), 674–701. doi:10.1037/0033-295X.100.4.674

Moyer, K. E. *The Physiology of Hostility*, (Markham, Chicago, 1971).

Moylan, C. A., Herrenkohl, T. I., Sousa, C., Tajima, E. A., Herrenkohl, R. C., & Russo, M. J. (2010). The effects of child abuse and exposure to domestic violence on adolescent internalizing and externalizing behavior problems. *Journal of Family Violence, 25*(1), 563-63. doi:10.1007/s10896-009-9269-9

Mrug, S., Loosier, P. S., & Windle, M. (2008). Violence exposure across multiple contexts: Individual and joint effects on adjustment. *American Journal of Orthopsychiatry, 78*(1), 70–84. doi:10.1037/0002-9432.78.1.70

Mrug, S. & Windle, M. (2009). Bidirectional influences of violence exposure and adjustment in early adolescence: Externalizing behaviors and school connectedness. *Journal of Abnormal Child Psychology*, *37*(5), 611-623. doi:10.1007/s10802-009-9304-6

Mrug, S. & Windle, M. (2010). Prospective effects of violence exposure across multiple contexts on early adolescents' internalizing and externalizing problems. *Journal of Child Psychology and Psychiatry, 51*(8), 953-961. doi:10.1111/j.1469-7610.2010.02222.x

Murphy, K., Myors, B., & Wolach, A. (2012). *Statistical power analysis: A simple and general model for traditional and modern hypothesis tests*. Routledge Academic.

Nagin, D. S. & Tremblay, R. E. (2005). What has been learned from group-based? trajectory modeling? Examples from physical aggression and other problem behaviors. *The ANNALS of the American Academy of Political and Social Science, 602*(1), 82-117. doi:10.1177/0002716205280565

Ng-Mak, D. S., Salzinger, S., Feldman, R., & Stueve, A. (2002). Normalization of violence among inner-city youth: a formulation for research. *American Journal of Orthopsychiatry, 72*(1), 92. doi:10.1037/0002-9432.72.1.92

Ng-Mak, D. S., Salzinger, S., Feldman, R. S., & Stueve, C. (2004). Pathologic adaptation to community violence among inner-city youth. *American Journal of Orthopsychiatry, 74*(2), 196. doi:10.1037/0002-9432.74.2.196

Noftle, E. E. & Robins, R. W. (2007). Personality predictors of academic outcomes: big five correlates of GPA and SAT scores. *Journal of personality and social psychology, 93*(1), 116. doi:10.1037/0022-3514.93.1.116

O'Donnell, D. A., Schwab-Stone, M. E., & Ruchkin, V. (2006). The mediating role of alienation in the development of maladjustment in youth exposed to community violence. *Development and Psychopathology, 18,* 215–232. doi:10.1017/S0954579406060123

Olszewski-Kubilius, P. & Clarenbach, J. (2012). Unlocking Emergent Talent: Supporting High Achievement of Low-Income, High Ability Students. *National Association for Gifted Children (NJ1).*

Olweus D. (1979). The stability of aggressive reaction patterns in males: A review. *Psychological Bulletin 86,* 852–875. doi:10.1037/0033-2909.86.4.852

Ormrod, J. E. & Rice, F. P. (2003). *Lifespan development and learning*. Boston, MA: Pearson Custom Publishing.

Orue, I., Bushman, B. J., Calvete, E., Thomaes, S., Orobio de Castro, B., & Hutteman, R. (2011). Monkey see, monkey do, monkey hurt: Longitudinal effects of exposure to violence on children's aggressive behavior. *Social Psychological and Personality Science, 2*(4), 432-437. doi:10.1177/1948550610396586

Osofsky, J. D. (1995). The effect of exposure to violence on young children. *American Psychologist, 50*(9), 782-788. doi:10.1037/0003-066X.50.9.782

Osofsky, J. D. (1999). The future of Children: Domestic violence and children. *The Impact of Violence on Children, 9*(3), 33-49. doi:10.2307/1602780

Osofsky, J. D. (Ed.). (2004). *Young children and trauma: Intervention and Treatment.* New York, NY: Guildford Publications.

Osofsky, J. D., & Fenichel, E. (1994). *Caring for infants and toddlers in violent environments: Hurt, healing and hope.* Washington, DC: Zero to Three Press.

Overstreet, S. & Mazza, J. (2003). An ecological=transactional understanding of community violence: Theoretical perspectives. *School Psychology Quarterly, 18*(1), 66-87. doi:10.1521/scpq.18.1.66.20874

Ozer, E. J. & Weinstein, R. S. (2004). Urban adolescents' exposure to community violence: The role of support, school safety, and social constraints in a school-based sample of boys and girls. *Journal of Clinical Child and AdolescentPsychology, 33*(3), 463-476 doi:10.1207/s15374424jccp3303_4

Ozkol, H., Zucker, M., & Spinazzola, J. (2011). Pathways to aggression in urban elementary school youth. *Journal of Community Psychology, 39*(6), 733–748. doi:10.1002/jcop.20464

Paciello, M., Fida, R., Tramontano, C., Lupinetti, C., & Caprara, G. V. (2008). Stability and change of moral disengagement and its impact on aggression and violence in late adolescence. *Child Development, 79*(5), 1288–1309. doi:10.1111/j.1467-8624.2008.01189.x

Patterson, G. R., Crosby, L., & Vuchinich, S. (1992). Predicting risk for early police arrest. *Journal of Quantative Criminology, 8,* 333–355. doi:10.1007/bf01093639

Patton, D. U., Woolley, M. E., & Hong, J. S. (2011). Exposure to violence, student fear, and low academic achievement among African American males in the critical transition to high school. *Children and Youth Services Review, 34*(2), 388-395. doi:10.1016/j.childyouth.2011.11.009

Pelligrini, A. D. & Roseth, C. (2006). Relational aggression and relationships in preschoolers: A discussion of methods, gender differences, and function. *Applied Developmental Psychology, 27,* 269–276. doi:10.1016/j.appdev.2006.02.007

Perkins, S. & Graham-Bermann, S. (2012). Violence exposure and the development of school-related functioning: Mental health, neurocognition, and learning. *Aggression and Violent Behavior, 17*(1), 89-98. doi:10.1016/j.avb.2011.10.00

Petras, H., Masyn, K. E., Buckley, J. A., Ialongo, N. S., & Kellam, S. (2011). Who is most at risk for school removal? A multilevel discrete-time

survival analysis of individual- and context-level influences. *Journal of Educational Psychology, 103*(1), 223-237. doi:10.1037/a0021545

Pineles, S. L., Mostoufi, S. M., Ready, C. B., Street, A. E., Griffin, M. G., & Resick, P. A. (2011). Trauma reactivity, avoidant coping, and PTSD symptoms: a moderating relationship? *Journal of abnormal psychology, 120*(1), 240. doi:10.1037/a0022123

Pomerantz, E. M., Moorman, E. A., & Litwack, S. D. (2007). The how, whom, and why of parents' involvement in children's academic lives: More is not always better. *Review of Educational Research, 77*(3), 373-410. doi:10.3102/003465430305567

Pornari, C. D. & Wood, J. (2010). Peer and cyber aggression in secondary school students: The role of moral disengagement, hostile attribution bias, and outcome expectancies. *Aggressive Behavior, 36*(2), 81-94. doi:10.1002/ab.20336

Poropat, A. E. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Psychological Bulletin, 135*(2), 322. doi:10.1037/a0014996

Presser, S. & Stinson, L. (1998). Data collection mode and social desirability bias in self-reported religious attendance. *American Sociological Review*, 137-145. doi:10.2307/2657486

Price, L. & Maholmes, V. (2009). Understanding the nature and consequences of children's exposure to violence: Research perspectives. *Clinical Child*

and Family Psychology Review, 12(2), 65-70. doi:10.1007/s10567-009-0057-0

Ramírez, J. M. (2010). The usefulness of distinguishing types of aggression by function. *International Social Science Journal, 61*(200-201), 263–272. doi:10.1111/j.1468-2451.2011.01762.x

Ratner H, Chiodo L, Covington C, Sokol R, Ager J, Delaney-Black V. Violence exposure, IQ, academic performance, and children's perception of safety. Merrill-Palmer Quarterly. 2006, 52:264–287. doi:10.1353/mpq.2006.0017

Rescorla, R. A. (1988). Pavlovian conditioning: It's not what you think it is. *American Psychologist, 43*, 151-160. doi:10.1037/0003-066X.43.3.151

Rescorla, R. A., & Solomon, R. L. (1967). Two-process learning theory: Relationships between Pavlovian conditioning and instrumental training. *Psychological Review, 74*(3), 151-182. doi:10.1037/h0024475

Richardson, D. S. & Green, L. R. (2006). Direct and indirect aggression: Relationships as social context. *Journal of Applied Social Psychology, 36*(10), 2492- 2508. doi:10.1111/j.0021-9029.2006.00114.x

Richters, J. E. & Martinez, P. (1990). Things *I have seen and heard: A structured interview for assessing young children's violence exposure.* Rockville, MD: Child and Adolescent Disorders Research Branch, National Institute of Mental Health.

Riggs, S. A. & Kaminski, P. (2010). Childhood emotional abuse, adult attachment, and depression as predictors of relational adjustment and psychological aggression. *Journal of Aggression, Maltreatment and Trauma*, *19*(1), 75–104. doi: 10.1080/10926770903475976

Rumberger, R. W. & Palardy, G. J. (2005). Test scores, dropout rates, and transfer rates as alternative indicators of high school performance. *American Educational Research Journal*, *42*(1), 3-42. doi:10.3102/00028312042001003

Salzinger, S., Rosario, M., Feldman, R., & Ng-Mak, D. (2008). Aggressive behavior in response to violence exposure: Is it adaptive for middle-school children? *Journal of Community Psychology*, *36*(8), 1008-1025. doi:10.1002/jcop.20275

Santisteban, C. & Alvarado, J. M. (2009). The Aggression Questionnaire for Spanish Preadolescents and Adolescents: AQ-PA. *The Spanish Journal of Psychology*, *12*(1), 320-326. doi:10.1017/S1138741600001712

Santisteban, C., Alvarado, J. M., & Recio, P. (2007). Evaluation of a Spanish version of the Buss and Perry aggression questionnaire: Some personal and situational factors related to the aggression scores of young subjects. *Personality and Individual Differences*, *42*(8), 1453-1465. doi:10.1016/j.paid.2006.10.019

Scarpa, A. (2001). Community violence exposure in a young adult sample: Lifetime prevalence and socioemotional effects. *Journal of Interpersonal Violence, 16*(1), 36-53. doi:10.1177/088626001016001003

Scarpa, A. & Haden, S. C. (2006). Community violence victimization and aggressive behavior: the moderating effects of coping and social support. *Aggressive Behavior, 32*(5), 502–515. doi:10.1002/ab.20151

Scarpa, A., Haden, S. C., & Hurley, J. (2006). Community violence victimization and symptoms of posttraumatic stress disorder: the moderating effects of coping and social support. *Journal of Interpersonal Violence, 21*(4), 446-469. doi:10.1177/0886260505285726

Schiavone, D. B. (2009). The effects of exposure to community violence on aspects of adolescent identity development. *Journal of Child and Adolescent PsychiatricNursing*, *22*(2), 99–105. doi:10.1111/j.1744-6171.2009.00178.x

Schmid, J. (2005). The vengeance puzzle- retributive justice or hostile aggression? *Aggressive Behavior*, *31*(6), 589-600. doi:10.1002/ab.20041

Schwab-Stone, M. E., Ayers, T. S., Kasprow, W., Voyce, C., Barone, C., Shriver, T., & Weissberg, R. P. (1995). "No Safe Haven: A study of violence exposure in an urban community. *Journal of the American Academy of Child and Adolescent* Psychiatry 34(10), 1343-52. doi:10.1097/00004583-199510000-00020

Schwab-Stone, M., Chuansheng, C., Greenberger, E., Silver, D., Lichtman, J., Voyce, C. (1999). No safe haven II: The effects of violence exposure on urban youth. *Journal of the American Academy of Child and Adolescent Psychiatry*, *38*(4), 359-367. doi:10.1097/00004583-199904000-00007

Schwartz, D., & Gorman, A. H. (2003). Community violence exposure and children's academic functioning. *Journal of Educational Psychology*, *95*(1), 163. doi:10.1037/0022-0663.95.1.163

Schwartz, D., Gorman, A., Nakamoto, J., & McKay, T. (2006). Popularity, social acceptance, and aggression in adolescent peer groups: Links with academic performance and school attendance. *Developmental Psychology*, *42*, 1116–1127. doi:10.1037/0012-1649.42.6.1116

Schwartz, D. & Proctor, L. J. (2000). Community violence exposure and children's social adjustment in the school peer group: The mediating roles of emotion regulation and social cognition. *Journal of Consulting and Clinical Psychology*, *68*(4), 670-683. doi:10.1037/0022-006X.68.4.670

Schwartz, J. P., Hage, S. M., Bush, I., & Burns, L. K. (2006). Unhealthy parenting and potential mediators as contributing factors to future intimate violence: A review of the literature. *Trauma Violence Abuse*, *7*(3), 206-221. doi:10.1177/1524838006288932

Selner-O'Hagan, M. B., Kindlon, D. J., Buka, S. L., Raudenbush, S. W., & Earls, F. J. (1998). Assessing exposure to violence in urban youth. *Journal of Child Psychology and Psychiatry*, *39*(2), 215-224.

doi:10.1017/S002196309700187X

Shahinfar, A., Fox, N., & Leavitt, L. (2000). Preschool children's exposure to violence: Relation of behavior problems to parent and child reports. *American Journal of Orthopsychiatry, 70,* 115–125. doi:10.1037/h0087690

Sheehan, M. J. & Watson, M. W. (2008), Reciprocal influences between maternal discipline techniques and aggression in children and adolescents. *Aggressive Behavior, 34*(3), 245–255. doi:10.1002/ab.20241

Shipley, N. L., Jackson, M. J., & Segrest, S. (2010). The effects of emotional intelligence, age, work experience, and academic performance. *Research in Higher Education Journal (9),* 1-18.

Siever, L. J. (2008). Neurobiology of aggression and violence. *American Journal of Psychiatry, 165*(4), 429-442. doi:10.1176/appi.ajp.2008.07111774

Singer, M. I., & Miller, D. B. (1999). Contributors to violent behavior among elementary and middle school children. *Pediatrics, 104*(4), 878-894. doi:10.1542/peds.104.4.878

Skinner, B. F. (1945). The operational analysis of psychological terms. *Psychological Review,* 52, 270-277, 291-94. doi:10.1037/h0062535

Skinner, B. F. (1950). Are theories of learning necessary? *Psychological Review,* 57, 193-216. doi:10.1037/h0054367

Skinner, B. F. (1954). The science of learning and the art of teaching. *Harvard Educational Review,* 24, 86-97. Retrieved from PsycINFO

Sommers, I. & Baskin, D. R. (1994). Factors related to female adolescent initiation into violent street crime. *Youth Soc*iety, *25*, 468–489. doi:10.1177/0044118X94025004003

Spano, R., Rivera, C., & Bolland, J. M. (2010). Are chronic exposure to violence and chronic violent behavior closely related developmental processes during adolescence? *Criminal Justice and Behavior, 37*(10), 1160-1179. doi:10.1177/0093854810377164

Stigler, S. M. (1992). "A historical view of statistical concepts in psychology and educational research". *American Journal of Education 101* (1), 60–70. doi:10.1086/444032

Strauss, J. & Thomas, D. (1995). Human resources: Empirical modeling of household and family decisions. *Handbook of development economics, 3*, 1883-2023. doi:10.1016/S1573-4471(05)80006-3

Straus, M. A. (1994). Beating the devil out of them: Corporal punishment in American families and its effect on children. Boston: Lexington.

Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised Conflict Tactics Scales (CTS2): Development and preliminary psychometric data. *Journal of Family Issues, 17*, 283-316. doi:10.1177/019251396017003001

Straus, M. A., Sugarman, D. B., & Giles-Sims, J. (1997). Spanking by parents and subsequent anti-social behavior of children. *Archives of Pediatrics & Adolescent Medicine 151,* 761-767**.**

doi:10.1001/archpedi.1997.02170450011002

Suliman, S., Mkabile, S. G., Fincham, D. S., Ahmed, R., Stein, D. J., & Seedat, S. (2009). Cumulative effect of multiple trauma on symptoms of posttraumatic stress disorder, anxiety, and depression in adolescents. *Comprehensive Psychiatry,50*(2), 121-127. doi:10.1016/j.comppsych.2008.06.006

Swearingen, E. M. & Cohen, L. H. (1985). Life events and psychological distress: A prospective study of young adolescents. *Developmental Psychology, 21*(6), 1045-1054. doi:10.1037/0012-1649.21.6.1045

Swisher, R. R. & Latzman, R. D. (2008), Youth violence as adaptation? Introduction to the special issue. *Journal of Community Psychology, 36*(8), 959–968. doi:10.1002/jcop.20274

Tackett, J. L., Waldman, I. D., & Lahey, B. B. (2009). Etiology and measurement of relational aggression: A multi-informant behavior genetic investigation. *Journal of Abnormal Psychology*, *118*(4), 722–733. doi:10.1037/a0016949

Taylor, C. A., Hamvas, L., & Paris, R. (2011). Perceived instrumentality and normativeness of corporal punishment use among black mothers. *Family Relations, 60*(1), 60–72. doi:10.1111/j.1741-3729.2010.00633.x

Temcheff, C. E., Serbin, L. A., Martin-Storey, A., Stack, D. M., Hodgins, S., Ledingham, J., & Schwartzman, A. E. (2008). Continuity and pathways

from aggression in childhood to family violence in adulthood: A 30-year longitudinal study. *Journal of Family Violence, 23*(4), 231–242 doi:10.1007/s10896-007-9147-2.

Thompson. R., Tabone, J. K., Litrownik, A. J., Briggs, E. C., Hussey, J. M., English, D. J., & Dubowitz. (2011). Early adolescent risk behavior outcomes of childhood externalizing behavioral trajectories. *The Journal of Early Adolescence*, *31*(2), 234-257. doi:10.1177/0272431609361203

Tolan, P. H., Guerra, N. G., & Kendall, P. C. (1995). A developmental ecological perspective on antisocial behavior in children and adolescents: Toward a unified risk and intervention framework. *Journal of Consulting and Clinical Psychology*, *63,* 579–584. doi:10.1037/0022-006X.63.4.579

Turner, H. A., Finkelhor, D., Ormrod, R., Hamby, S., Leeb, R. T., Mercy, J. A., & Holt, M. (2012). Family context, victimization, and child trauma symptoms: Variations in safe, stable, and nurturing relationships during early and middle childhood. *American Journal of Orthopsychiatry, 82*(2), 209–219. doi:10.1111/j.1939-0025.2012.01147.x

U. S. Department of Education. (2006). *Parent and family involvement in education: 2002–03; and the parent survey (Parent: 1999) and the parent and family involvement in education survey (PFI: 2003) of the nation household education surveys programs*. Washington, DC: National Center for Education Statistics.

U.S. Department of Health and Human Services. *Risk Factors for Youth Violence. Youth Violence: A Report of the Surgeon General.* Washington, DC: US Department of Health and Human Services, Office of the Surgeon General, SAMHSA; 2001

Vaillancourt, T., Hymel, S., & McDougall, P. (2013). The biological underpinnings of peer victimization: Understanding why and how the effects of bullying can last a lifetime. *Theory into Practice*, *52*(4), 241-248. doi:10.1080/00405841.2013.829726

Valois, R. E, MacDonald, J. M., Bretous, L., Fischer, M. A., & Drane, J. W. (2002). Risk factors and behaviors associated with adolescent violence and aggression. *American Journal of Health Behavior*, *26*(6), 454-464. doi:10.5993/AJHB.26.6.6

van Dinther, M., Dochy, F., & Segers, M. (2011). Factors affecting students' self-efficacy in higher education. *Educational Research Review*, *6*(2), 95-108. doi:10.1016/j.edurev.2010.10.003

Velicer, W. F., Huckel, L. H., & Hansen, C. E. (1989). A measurement model for measuring attitudes toward violence. *Personality and Social Psychology Bulletin*, *15*(3), 349-364. doi:10.1177/0146167289153006

Viding, E., Fontaine, N. M. G., Oliver, B. R., & Plomin, R. (2009). Negative parental discipline, conduct problems, and callous- unemotional traits: Monozygotic twin differences study. *The British Journal of Psychiatry, 195*, 414-419. doi:10.1192/bjp.bp.108.061192

Voisin, D. R., Neilands, T. B., & Hunnicutt, S. (2011). Mechanisms linking violence exposure and school engagement among African American adolescents: Examining the roles of psychological problem behaviors and gender. *American Journal of Orthopsychiatry, 81*(1), 61–71. doi:10.1111/j.1939-0025.2010.01072.x

Walker, H. M. (2010). Relational aggression in schools: Implications for future research on screening intervention and prevention. *School Psychology Review, 39*(4), 594–600. Retrieved from naspjournals.org

Wallenius, M., & Punamäki, R.-L. (2008). Digital game violence and direct aggression in adolescence: a longitudinal study of the roles of sex, age, and parent-child communication. *Journal of Applied Developmental Psychology, 29*(4), 286-294. doi:10.1016/j.appdev.2008.04.010

Wallenius, M., Punamäki, R.-L., & Rimpelä, A. (2007). Digital game playing and direct and indirect aggression in early adolescence: The roles of age, social intelligence, and parent-child communication. *Journal of Youth and Adolescence, 36*, 325-336. doi:10.1007/s10964-006-9151-5

Wei, R. (2007). Effects of playing violent videogames on Chinese adolescents' pro-violence attitudes, attitudes toward others, and aggressive behavior. *Cyberpsychology & Behavior, 10*(3), 371-380. doi:10.1089/cpb.2006.9942

Westbrook, L. & Saperstein, A. (2015). New categories are not enough rethinking the measurement of sex and gender in social surveys. *Gender & Society*, *29*(4), 534-560. doi:10.1177/0891243215584758

Wilk, T. L. (2002). Exposure to community violence and the psychosocial adjustment of one sample of young urban children. College Park: Md

Wilkinson, D. & Carr, P. (2008). Violent youths' responses to high levels of exposure to community violence: What violent events reveal about youth violence. *Journal of Community Psychology*, *36*(8), 1026-1051. doi:10.1002/jcop.20278

Wilson, B. J. (2008). Media and children's aggression, fear, and altruism. *The Future of Children*, *18*(1), 87-118. doi: 10.1353/foc.0.0005

Wilson, H. W., Stover, C. S., & Berkowitz, S. J. (2009). Research review: The relationship between childhood violence exposure and juvenile antisocial behavior: a meta-analytic review. *Journal of Child Psychology and Psychiatry*,*50*(7), 769- 779. doi:10.1111/j.1469-7610.2008.01974.x

Wolfe, D. A., Crooks, C. V., Lee, V., McIntyre-Smith, A., & Jaffe, P. G. (2003). The effects of children's exposure to domestic violence: A meta-analysis and critique. *Clinical Child & Family Psychological Review*, *6*(3), 171–187. doi:10.1023/A:1024910416164

Ybarra, M. L., Diener-West, M., Markow, D., Leaf, P. J., Hamburger, M., & Boxer, P. (2008). Linkages between internet and other media violence

with seriously violent behavior by youth. *Pediatrics, 122*(5), 929 -937. doi:10.1542/peds.2007-3377

Ystgaard, M. (1997). Life stress, social support and psychological distress in late adolescence. *Social Psychiatry and Psychiatric Epidemiology*, *32*(5), 277-283. doi:10.1007/BF00789040

Yurgelun-Todd, D. (2007). Emotional and cognitive changes during adolescence, *Current Opinion in Neurobiology*, *17*(2), Cognitive Neuroscience, Pages 251-257. doi: 10.1016/j.conb.2007.03.009

Zahrt, D. M., & Melzer-Lange, M. D. (2011). Aggressive behavior in children and adolescents. *Pediatrics in Review*, *32*(8), 325 -332. doi:10.1542/pir.32-8-325

Appendix A: Demographic Questionnaire

Please check the appropriate block or fill in the blank for each question about yourself.

1. What is your gender?

   Male ☐ Female ☐

2. What year were you born? (Only one number per box)

   19 ☐☐

3. What is your current age? _____ years old

4. What is your race?

   African American/Black ☐

   Asian ☐

   Hispanic ☐

   Native American ☐

   White ☐

   Other ☐

5. What grade are you in this year?

   9th grade ☐ 10th grade ☐ 11th grade ☐ 12th grade ☐

6. Do you participate in?

   Free lunch ☐ half-price lunch ☐ Full-price lunch ☐ Unknown ☐

7. Where do you live?

   Apartment ☐ House ☐ Shelter ☐ Other ☐

8. Who do you live with?

   Mother only ☐ Father only ☐ Mother and Father ☐

   Grandparent(s) ☐ Mother and grandparent/other relatives ☐

   Mother and partner not related to me

   Father and partner not related to me ☐ Guardian ☐ Other ☐

9. What level of education did they complete?

   Mother/Female guardian:

   Some high school ☐ Graduated high school ☐ Some college ☐

   Graduated college ☐ Unknown ☐

   Father/Male guardian:

   Some high school ☐ Graduated high school ☐ Some college ☐

   Graduated college ☐ Unknown ☐

10. Does your parent/guardian work? (If yes, answer question 10).

    Yes ☐ No ☐

11. Do they work?

    Full-time ☐ Part-time ☐ Unknown ☐

12. What is your current GPA (grade point average)?

    100-90 ☐ 89-80 ☐ 79-70 ☐ 69-60 ☐ below 60 ☐

Appendix B: Save Questionnaire

Screen for Adolescent Violence Exposure (SAVE)

We are interested in hearing about your experiences of bad things that you have seen, heard of, or that happened to you. Please read and answer the following statements about violent things that happened at home, or in your neighborhood or school. For each statement, please circle the number that best describes how often these things have happened. For example, if you "have seen someone beaten up…at home" sometimes you would circle the number 2.
Remember seen means in person, do NOT count things you have seen on television.

	How often it happens				
	Never	Hardly Ever	Some times	Almost Always	Always
1. I have seen someone carry a gun					
-at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
2. I have seen the police arrest someone					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
3. I have seen a kid hit a grownup					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
4. I have seen a grownup hit a kid					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
5. I have heard about someone getting shot					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
6. I have seen someone carry a knife					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4

7. I have seen people scream at each other					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
8. I have seen someone get beat up					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
- at my school					
9. I have heard about someone getting killed					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
10. I have heard about someone getting attacked by a Knife					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
11. I have heard about someone getting beat up					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
12. I hear gun shots					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
13. I have run for cover when some started shooting					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
14. I have heard of someone carrying gun					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
15. Someone has pulled a gun on me					

- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
16. I have seen someone get killed					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
17. Someone has pulled a knife on me					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
18. I have had shots fired at me					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
19. I have seen someone get shot					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
20. I have been shot					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
21. I have seen someone pull a gun on someone else					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
22. I have seen someone pull a knife on someone else					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
23. I have been badly hurt					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4

24. I have seen someone get attacked with a knife					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
25. I have seen someone get hurt badly					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
26. Grownups beat me up					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
27. Someone my age has threatened to beat me up					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
28. Grownups hit me					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
29. Grownups threaten to beat me up					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
30. Someone my age hits me					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
31. Grownups scream at me					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
32. I have been attacked with a knife					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4

Appendix C: Children's Report of Exposure to Violence (CREV)

These following questions ask about violence. Violence occurs when somebody attacks or hurts another person. The following questions are about things that could have happened while you were at home, while you were at school, or while you were
in your neighborhood. Make sure you answer each question by putting a circle around the statement relates to you. Please raise your hand if you not understand a question.
Some questions ask about violence that you saw on TV or in the movies. This means that it did not happen in real life. Some questions ask about violence that you heard happened to someone else. This means that somebody told you this happened in real life. Other questions ask about violence.

THESE QUESTIONS ASK ABOUT VIOLENCE AGAINST A STRANGER. A STRANGER IS SOMEBODY YOU DON"T KNOW.

Has a stranger (anyone you didn't know) been beaten up (or slapped, kicked, bitten, hit, punched)?

1. Have you ever watched somebody being beaten up on TV or in the movies?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

2. Has anyone ever told you that a stranger was beaten up?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

3. Have you ever seen a stranger being beaten up?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has a stranger (anyone you didn't know) been chased (had somebody come after them to hurt them) or threatened (or warned) to have their bodies badly or seriously hurt?

4. Have you ever watched somebody being chased or seriously threatened on TV or in the movies?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

5. Has anyone ever told you that a stranger was chased or seriously threatened?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

6. Have you ever seen a stranger being chased or seriously threatened?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has a stranger (anyone you didn't know) been robbed (or held up) or mugged?

7. Have you ever watched somebody being robbed or mugged on TV or in the movies?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

8. Has anyone ever told you that a stranger was robbed or mugged?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

9. Did you see a stranger being robbed or mugged?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has a stranger (somebody you didn't know) been shot (or hit with a bullet from a gun) or stabbed with a knife?

10. Have you ever watched somebody being shot or stabbed on TV or in the movies?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

11. Has anyone ever told you that a stranger was shot or stabbed?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

12. Have you ever seen a stranger being shot or stabbed?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has a stranger (anyone you didn't know) been killed (shot, stabbed, or beaten to death)?

13. Have you ever watched somebody being killed on TV or in the movies?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

14. Has anyone ever told you about a stranger being killed?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

15. Have you ever seen a stranger seen a stranger being killed?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

16. Has anyone ever told you about somebody you know being beaten up?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

17. Have you ever seen somebody you know being beaten up?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has anyone you know (a friend, relative, parent) been chased (had somebody come after them to hurt them) or threatened (or warned) to have their bodies badly or seriously hurt?

18. Has anyone ever told you that somebody you know was chased or seriously threatened?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

19. Have you ever seen somebody you know being chased or seriously threatened?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

20. Has anyone ever told you about somebody you know being robbed or mugged?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

21. Have you seen somebody you know being robbed or mugged?

No Never	One Time	A Few	Many	Every Day

		Times	Times	
0	1	2	3	4

Has anyone you know (a friend, relative, parent) been shot (hit with a bullet from a gun) or stabbed with a knife?

22. Has anyone ever told you about somebody you know being shot or stabbed?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

23. Have you ever seen somebody you know being shot or stabbed?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Has anyone you know (a friend, relative, parent) been killed (shot, stabbed, or beaten to death)?

24. Has anyone ever told you about somebody you know being killed?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

25. Have you ever seen somebody you know being killed?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

THESE QUESTIONS ASK ABOUT VIOLENCE THAT HAS HAPPENED TO YOU.

26. Have you ever been beaten up (slapped, kicked, bitten, hit, punched)?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

27. Have you ever been chased (had somebody come after you to hurt you) or threatened (or warned) to have your body badly or seriously hurt?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

28. Have you ever been robbed (or held up) or mugged?

No Never	One Time	A Few	Many	Every Day

		Times	Times	
0	1	2	3	4

29. Have you ever been shot (hit with a bullet from a gun or stabbed with a knife)?

No Never	One Time	A Few Times	Many Times	Every Day
0	1	2	3	4

Appendix D: Buss-Perry Aggression Questionnaire

Using the 5 point scale shown below, indicate how uncharacteristic or characteristic each of the following statements is in describing you. Place your rating in the box to the right of the statement.

1 = extremely uncharacteristic of me
2 = somewhat uncharacteristic of me
3 = neither uncharacteristic nor characteristic of me
4 = somewhat characteristic of me
5 = extremely characteristic of me

1) Once in a while I can't control the urge to strike another person.
2) Given enough provocation, I may hit another person.
3) If somebody hits me, I hit back.
4) I get into fights a little more than the average person.
5) If I have to resort to violence to protect my rights, I will.
6) There are people who pushed me so far that we came to blows.
7) I can think of no good reason for ever hitting a person.
8) I have threatened people I know.
9) I have become so mad that I have broken things.
10) I tell my friends openly when I disagree with them.
11) I often find myself disagreeing with people.
12) When people annoy me, I may tell them what I think of them.
13) I can't help getting into arguments when people disagree with me.
14) My friends say that I'm somewhat argumentative.
15) I flare up quickly but get over it quickly.
16) When frustrated, I let my irritation show.
17) I sometimes feel like a powder keg ready to explode.
18) I am an even-tempered person.
19) Some of my friends think I'm a hothead.
20) Sometimes I fly off the handle for no good reason.
21) I have trouble controlling my temper.
22) I am sometimes eaten up with jealousy.
23) At times I feel I have gotten a raw deal out of life.
24) Other people always seem to get the breaks.
25) I wonder why sometimes I feel so bitter about things.
26) I know that "friends" talk about me behind my back.
27) I am suspicious of overly friendly strangers.
28) I sometimes feel that people are laughing at me behind me back.
29) When people are especially nice, I wonder what they want.

1-9 Physical Aggression; 10-14 Verbal Aggression; 15-21 Anger; 22-29 Hostility. Anderson, C.A., & Dill, K.E. (2000).

Appendix E: The Attitudes Towards Violence Scale

Below is a list of statements about violence. Please read each statement carefully and answer it by circling the response that best fits your own personal beliefs. Don't just tell us what you think we want to hear! We want to know what you really think.

1. It's good to have a gun.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

2. It's okay to beat up a person for bad mouthing me or my family.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

3. I think parents should tell children to use violence if necessary.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

4. It's okay to use violence to get what you want.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

5. If a person hits you, you should hit them back.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

6. It's okay to carry a gun or knife if you live in a rough neighborhood.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

7. It's okay to do whatever it takes to protect myself.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

8. If someone tries to start a fight with you, then you should just walk away from them.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

9. People who use violence get respect.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

10. Carrying a gun or knife would help me feel safer.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

11. Lots of people are out to get you.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

12. I could see myself committing a violent crime in the next five years.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

13. I could see myself joining a gang (or staying in one if you are now).

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

14. I'm afraid of getting hurt by violence.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

15. I try to stay away from places where violence is likely.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

Appendix F: Kessler Psychological Distress Scale

K10 Test

These questions concern how you have been feeling over the past 30 days. Tick a box below each question that best represents how you have been.

1. During the last 30 days, about how often did you feel tired out for no good reason?
1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time 5. All of the time

2. During the last 30 days, about how often did you feel nervous?
1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time 5. All of the time

3. During the last 30 days, about how often did you feel so nervous that nothing could calm you down?
1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time 5. All of the time

4. During the last 30 days, about how often did you feel hopeless?
1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time 5. All of the time

5. During the last 30 days, about how often did you feel restless or fidgety?
1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time 5. All of the time

6. During the last 30 days, about how often did you feel so restless you could not sit still?
1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time 5. All of the time

7. During the last 30 days, about how often did you feel depressed?
1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time 5. All of the time

8. During the last 30 days, about how often did you feel that everything was an effort?
1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time 5. All of the time

9. During the last 30 days, about how often did you feel so sad that nothing could cheer you up?
1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time 5. All of the time

10. During the last 30 days, about how often did you feel worthless?
1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time 5. All of the time

AppendixG: Teacher Participation Request

Teacher Participation Request Letter

July 24, 2013

Dear Teacher,

My name is Joyce Evans, and I am writing to ask for your assistance as I complete my doctoral dissertation at Walden University. I have obtained the principal's support to collect data for my research project entitled Adolescent Exposure to Violent Aggression as Related to Psychological Distress, Aggressive Behavior, and Academic Performance among Adolescents. I am investigating gender, socioeconomic status, types of exposure, and frequency of exposure as predictors of aggressive behavior and academic achievement. Your participation in this study is voluntary and your identity will remain private and completely confidential. No identifying information linking you to your survey will be collected or retained. The knowledge gained from your participation in this study may be beneficial to other high school students, teachers, and counselors because their exposure to violence could predict their academic success and assist teachers in trying to reduce aggression in the classroom to assist with their academic achievement. Any reports of the results of this study to professionals will describe group data, without identification of individual participants.

I am requesting your cooperation in the data collection process. I propose to collect data between September 04, 2013 and October 4, 2013. I will coordinate the exact times of data collection with you in order to minimize disruption to your instructional activities.

This research has been approved by the Institutional Review Board of Walden University and a public school system in a mid-Atlantic metropolitan district . There are no known risks associated with this study.

I would like to take this opportunity to thank you in advance for your participation and assistance in this research endeavor. If you have questions related to this study, please do not hesitate to contact me. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-800-925-3368, extension 1210.

Sincerely,
Joyce Evans,
Doctoral Candidate
Walden University

Appendix H: Data Collection Request

Data Collection Coordination Request

July 24, 2013

Dear Teacher,

I have obtained the principal's support to collect data for my research project entitled Adolescent Exposure to Violent Aggression as Related to Psychological Distress, Aggressive Behavior, and Academic Performance among Adolescents.

I am requesting your cooperation in the data collection process. I propose to collect data September 4, 2013 – October 4, 2013. I will coordinate the exact times of data collection with you in order to minimize disruption to your instructional activities.

If you agree to be part of this research project, I would ask that you would allow me to distribute and collect the following questionnaires during homeroom period:

- Complete a demographic questionnaire
- Complete the Children's Report of Violence questionnaire
- Complete the Screen for Adolescence Violence questionnaire
- Complete the Aggression questionnaire
- Complete the Attitudes towards Violence questionnaire
- Kessler Psychological Distress questionnaire

The questionnaires can be completed within 3 or less homeroom periods and therefore not be disruptive to any instructional lessons negating the need to plan for make – up work or missed class time.

If you prefer not to be involved in this study, that is not a problem at all.

If circumstances change, please contact me.

Thank you for your consideration. I would be pleased to share the results of this study with you if you are interested.

I am requesting your signature to document that I have cleared this data collection with you.

Sincerely,
Joyce Evans, Doctoral Candidate

Printed Name of Teacher _____

Date _____

Teacher's Written or Electronic* Signature _____

Researcher's Written or Electronic* Signature _____

Electronic signatures are regulated by the Uniform Electronic Transactions Act. Legally, an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically.

Appendix I: CREV Usage Approval Letter

Subject : FW: Children's Report of Exposure to Violence
Date : Thu, Dec 01, 2011 04:46 PM CST
From : "XXX, Michele" <XXX@jhsph.edu>
To : "XXX@waldenu.edu" <XXX@waldenu.edu>
Attachment : CREV-R_INSTRUCTIONS_FOR_ADMINISTRATION.doc
CREV-R_2009_with_WV.docx
CREV-Parent.doc

Dear Joyce,

Congratulations on your progress in your doctoral studies. It sounds like you've chosen an excellent and intriguing topic for your dissertation. I am gladly providing a copy of the CREV (with the optional World Violence items)and scoring instructions. I've also included the parent version of the CREV, as I'm not sure whether you'll be assessing both students and parents. Please let me know the results of your research, particularly if you write a manuscript from your dissertation. Best of luck!

Sincerely yours,

Michele
Dr. Michelle XXX

My name is Joyce Evans and I am a doctoral student in the General Psychology program at Walden University. My dissertation topic is "Adolescent Exposure to Violence as Related to Aggressive Behavior and Academic Achievement." The purpose of this study is to investigate gender, socioeconomic status, types of exposure, and frequency of exposure as predictors of aggressive behavior and academic achievement.

I am requesting permission to use your Children's Report of Exposure to
Violence (CREV) survey instrument in my dissertation research as well as requesting a current copy to administer to the adolescents being surveyed.

I look forward to hearing from you and I am providing my contact information in the event that you require anything further of me.

Thank you,
Name: Joyce Evans

AppendixJ: SAVE Usage Approval Letter

From : Katie [XXX@gmail.com]
Date : 09/24/2012 12:10 PM
To : XXX@waldenu.edu
Subject : Re: Screen for Adolescent Violence Exposure (SAVE) Scale

Hi Joyce,

I am one of Dr. Kelley's graduate students. Attached you will find a copy of the Screen for Adolescent Violence Exposure (SAVE) measure as well as an article on its development. These are the only two pieces of information I have on it, but I have inquired with Dr. Kelley about any other information she has available. If I receive that, I will forward it to you. Let me know if you have any questions.

Good luck!
Thanks,
Katie

Clinical Psychology Doctoral Program | Louisiana State University
Psychology, B.S. | University of Central Florida, 2009

From: XXX<XXX@waldenu.edu>
Date: Monday, September 24, 2012 12:20 AM
To:XXX<XXX@lsu.edu>
Subject: Screen for Adolescent Violence Exposure (SAVE) Scale

Dear Dr. XXX,
My name is Joyce Evans, and I am a doctoral student in the General Psychology program at Walden University. I am planning a study to investigate the relationships between adolescent exposure to various sources of violence, aggressive behavior, psychological distress, and academic performance. I have desperately been attempting to locate you or Dr. Hastings to obtain permission to use the Screen for Adolescent Violence Exposure (SAVE) Scale as it appears to be a good measurement for my study. Would it be possible for me to receive a copy of the instrument, the scoring manual, including any information on reliability and validity, and a related bibliography so we could review it for my study?
I would very much appreciate whatever information and recommendations you could share with me.
Most cordially,
Joyce Evans

Appendix K: ATVS Usage Approval Letter

Subject : Re: attitudes towards violence scale
From : XXX@gmail.com>
Return-Path : XXX@gmail.com>
Date : Wed, 30 May 2012 12:26:40 -0400
To : XXX@waldenu.edu
Subject : Re: attitudes towards violence scale
Date : Wed, May 30, 2012 11:26 AM CDT
From : **XXX@gmail.com>**
To : XXX@waldenu.edu

Attachment : manusfinal.rtf
Scoring_the_Adolescent_ATV_Scale.doc
The_Attitudes_Towards_Violence_Scale.doc

Here's what we have. I know it was used in a few grant-funded projects, but I have not done a recent lit review to see if any published studies came out of them.
Good luck with your project!
Jeanne
On Fri, May 25, 2012 at 5:29 AM,XXX<XXX@gmail.com> wrote:
Joyce: Robert XXX passed on your note about the ATV scale. I can send you the scale, but am out of town until next week. We have no formal bibliography, though it has been used in several studies.
My name was formerlyXXX, sorry you had trouble reaching me.
Regards, Jeanne XXX

Appendix L: K-10 Usage Approval Letter

From : XXX" < XXX@hcp.med.harvard.edu>
Subject : **RE: Permission to Use Kessler Psychological Distress Scale (K10)**
Date : Mon, Sep 24, 2012 12:29 AM CDT
From : **"XXX" < XXX@hcp.med.harvard.edu>**
To : XXX@waldenu.edu>

CC : XXX < XXX@hcp.med.harvard.edu>

Joyce - You have my permission to use the scale. Good luck with your work. XXX
Jerry - Please send Joyce a copy of the IJMPR special issue. R
XXX, Ph.D.
McNeil Family Professor of Health Care Policy
Department of Health Care Policy
Harvard Medical School

From: XXX [XXX@waldenu.edu]
Sent: Monday, September 24, 2012 12:46 AM
To: XXX**Subject:** Permission to Use Kessler Psychological Distress Scale (K10)
Dear Dr.XXX,
My name is Joyce Evans, and I am a doctoral student in the General Psychology program at Walden University. I am planning a study to investigate the relationships between adolescent exposure to various sources of violence, aggressive behavior, psychological distress, and academic performance. Information at http://www.hcp.med.harvard.edu/ncs/k6_scales.php referenced The Kessler Psychological Distress Scale
K-10, this appears to be a good measurement for my study. Would it be possible for me to receive a copy of the instrument, the scoring manual, and a related bibliography so we could review it for this study, including any information on reliability and validity?
I would very much appreciate whatever information and recommendations you could share with me.
Most cordially,
Joyce Evans

Subject : RE: Permission to Use Kessler Psychological Distress Scale (K10)
Date : Mon, Sep 24, 2012 10:37 AM CDT
From : **"XXX." <XXX@hcp.med.harvard.edu>**
To : **XXX@waldenu.edu>**

Attachment : IJMPR_Screening_for_Serious_Mental_Illness.pdf
Erratum_PA507.pdf
PA287.pdf
PA275.pdf
PA284_Screening_for_SMI.pdf

Joyce,
The K-10 is available on the website that you mentioned in your email. I've attached a copy of the issue of the International Journal of Methods in Psychiatric Research that Ron mentioned along with a few other articles. Please let me know if you need anything else.
Thanks,
XXX

XXX
Department of Health Care Policy
Harvard Medical School
180 Longwood Avenue

From: XXX, Ronald
Sent: Monday, September 24, 2012 1:30 AM
To: XXX
Cc:XXX
Subject: RE: Permission to Use Kessler Psychological Distress Scale (K10)

Joyce - You have my permission to use the scale. Good luck with your work. Ron Kessler

Jerry - Please send Joyce a copy of the IJMPR special issue. R

XXX, Ph.D.
McNeil Family Professor of Health Care Policy
Department of Health Care Policy
Harvard Medical School

From: joyce evans
Sent: Monday, September 24, 2012 12:46 AM
To:XXX**Subject:** Permission to Use Kessler Psychological Distress Scale (K10)
Dear Dr.XXX,

My name is Joyce Evans, and I am a doctoral student in the General Psychology program at Walden University. I am planning a study to investigate the relationships between adolescent exposure to various sources of violence, aggressive behavior, psychological distress, and academic performance. Information at http://www.hcp.med.harvard.edu/ncs/k6_scales.php referenced The Kessler Psychological Distress Scale
K-10, this appears to be a good measurement for my study. Would it be possible for me to receive a copy of the instrument, the scoring manual, and a related bibliography so we could review it for this study, including any information on reliability and validity?

I would very much appreciate whatever information and recommendations you could share with me.

Most cordially,
Joyce Evans

October 21, 2014

Joyce Evans. PhD Candidate
Walden University
C/O College of Social and Behavioral Sciences
155 Fifth Avenue, Suite 100
Minneapolis, MN 55401

Dear Joyce Evans,

Our school is pleased to participate in assisting with your doctoral research project entitled, "*Exposure to Violent Aggression as Related to Psychological Distress, Aggressive Behavior, and Academic Performance among Adolescents*". I understand that this project is designed to investigate gender, socioeconomic status, types of exposure, and frequency of exposure as predictors of aggressive behavior and academic achievement. The target population for this research project is high school students in grades 9-12.

As a participating school in this doctoral research project, I agree to the following:

1. Identifying the most efficient means of voluntary recruiting and communicating survey and research intent to parents
2. Identifying the most efficient means to ensure that voluntary parent consent forms are distributed and signed
3. Active cooperation in recruiting teachers who will be willing to allow me admittance to their classroom to obtain student assent administer surveys to their students
4. Identifying appropriate days and times to administer surveys to students between October 31, 2014 and November 30, 2014

I understand that the principal investigator will:

1. Monitor the administration and collection of the survey material after obtaining parent consent and student assent.
2. Ensure IRB approvals are obtained from and Walden University
3. Obtain parental consent and student assent prior to administering survey instrument to obtain outcome data.

My understanding is that there are no known risks associated with this study and that every effort will be taken to ensure that confidentiality and sensitivity are maintained. All Surveys (demographic questionnaire, Screen for Adolescent Violence (SAVE), Children's Report of Exposure to Violence (CREV), Buss-Perry Aggression Questionnaire (AQ), Attitudes towards Violence Scale (ATVS), and Kessler's Psychological Distress Scale (K 10) collected relate to non-specific lifetime experiences. However, if any participant feels agitated, anger, shame, fear, or any other feeling as a result of the content of the survey questions and there is not a school counselor centrally located at their school, they can contact:

I understand that the knowledge gained from my participation in this study may be beneficial to other high school students, teachers, and counselors in understanding how exposure to violence may predict students' academic success. If mechanisms are identified, teachers and counselors may use such information to develop interventions to reduce aggression in the classroom to support academic achievement.

I further understand that no identifying information linking the participant to their survey will be collected or retained as all data collected will be identified by a unique code. Any reports of the results of this study to professionals will describe group data, without identification of individual participants. All names will be removed and data will be electronically stored and maintained in a locked safe for the required Walden University requirement of five years.

I look forward to working with you doctoral research project.

Sincerely,

February 12, 2015

Joyce Evans, PhD Candidate
Walden University
C/O College of Social and Behavioral Sciences
155 Fifth Avenue, Suite 100
Minneapolis, MN 55401

Dear Joyce Evans,

Our school is pleased to participate in assisting with your doctoral research project entitled, "*Exposure to Violent Aggression as Related to Psychological Distress, Aggressive Behavior, and Academic Performance among Adolescents*". I understand that this project is designed to investigate gender, socioeconomic status, types of exposure, and frequency of exposure as predictors of aggressive behavior and academic achievement. The target population for this research project is high school students in grades 9-12.

As a participating school in this doctoral research project, I agree to the following:

1. Identifying the most efficient means of voluntary and communicating survey and research intent to parents.
2. Identifying the most efficient means to ensure that voluntary parent consent forms are distributed and signed.
3. Active cooperation in selecting teachers and classrooms that will be willing to participate in allowing me to obtain student assent and administer surveys to their students.
4. Identifying appropriate days and times to administer surveys to students between February 16, 2015 and March 16, 2015.

I understand that the principal investigator will:

1. Monitor the administration and collection of the survey material after parent consent and student assent.
2. Ensure that IRB approvals are obtained from and Walden University.
3. Obtain parental consent and student assent prior to administering survey instrument to obtain outcome data.

My understanding is that there are no known risks associated with this study and that every effort will be taken to ensure that confidentiality and sensitivity are maintained. All Surveys (demographic questionnaire, Screen for Adolescent Violence (SAVE), Children's Report of Exposure to Violence (CREV), Buss-Perry Aggression Questionnaire (AQ), Attitudes towards Violence Scale (ATVS), and Kessler's Psychological Distress Scale (K10) collected relate to non-specific lifetime experiences. However, if any participant feels agitated, anger, shame, fear, or any other feeling as a result of the content of the survey questions and there is not a counselor centrally located at their school, they can contact:

I understand that the knowledge gained from my participation in this study may be beneficial to other high school students, teachers, and counselors in understanding how exposure to violence may predict students' academic success. If mechanisms are identified, teachers and counselors may use such information to develop interventions to reduce aggression in the classroom to support academic achievement.

I further understand that no identifying information linking the participant to their survey will be collected or retained as all data collected will be identified by a unique code. Any reports of the results of this study to professionals will describe group data, without identification of individual participants. All names will be removed and data will be electronically stored and maintained in a locked safe for the required Walden University requirement of five years.

I look forward to working with you doctoral research project.

PUBLIC SCHOOLS

November 21, 2014 0000133

Joyce R. Evans

Dear Ms. Evans:

IRB# 0000133

TITLE OF PROPOSAL: *Exposure to Violent Aggression as Related to Psycho-emotional Distress, Aggressive Behavior, and Academic Performance among Adolescents*

This is to notify you of the approval of your project by the Office of Achievement and Accountability (OAA) Institutional Review Board (IRB) for the Protection of Human Subjects. It's the opinion of this Board that you have provided adequate safeguard for the rights and welfare of participants selected for this study. Your proposal seems to be in compliance with OAA's Federal Wide Assurance 00008794 and DHHS Regulations for the Protection of Human Subjects.

Date of Review: 04/25/14

Your approval is valid until 11/20/15. Please note that the assigned IRB number must be displayed on the Informed Consent Form and copies of that form should be submitted to OAA IRB. All research members of this project who will have any interactions with students must be fingerprinted by Schools Human Capital Office.

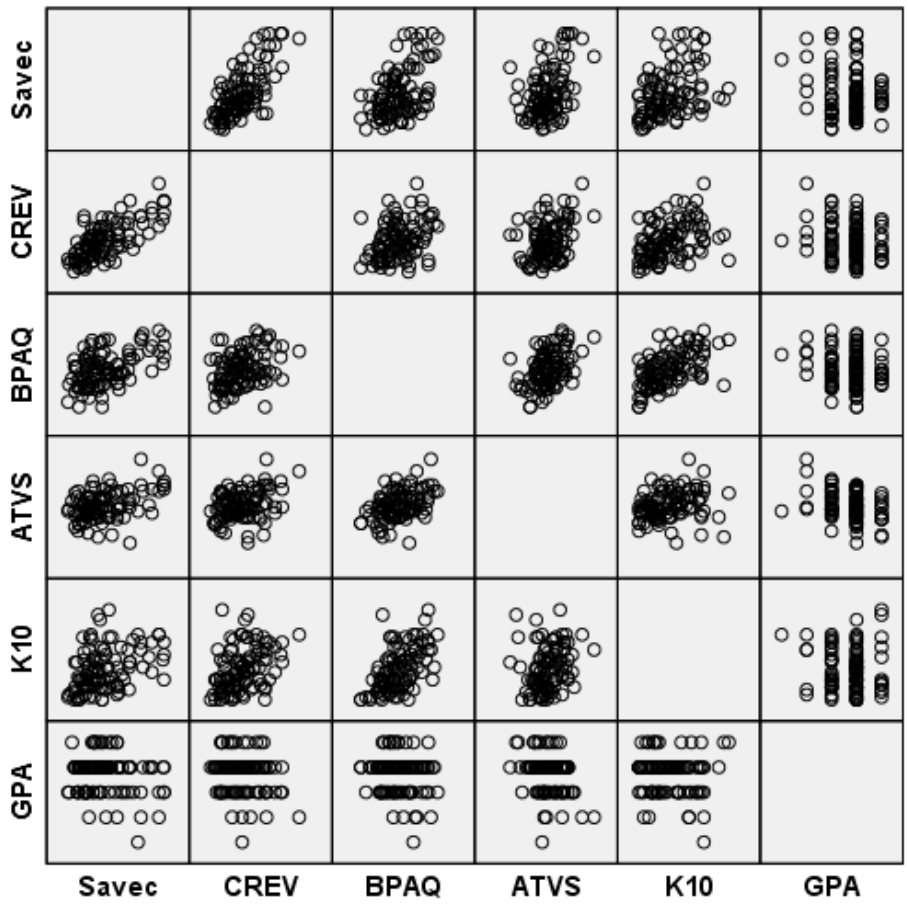
This project should be conducted in full compliance with all applicable sections of the IRB Guidelines. The IRB should be notified immediately of any proposed changes. You should also report any unanticipated problems involving risks to participants or others to the IRB. For projects that continue beyond one year from the starting date, the IRB will request continue review and update of the research project. Your study will be due for continue review as indicated above. The investigator must also advise the IRB when this study is completed or discontinued.

If you have any questions, please contact the IRB Chair at
Thank you for your interest in

Respectfully,

IRB Chair

Appendix M: Scatterplots of Bivariate Correlations for Continuous Variables



Appendix N: Bivariate Correlations and Regression Analyses

Bivariate Correlations and Regression: Predictors are SAVEc and CREV; DV is reversed current GPA

Descriptive Statistics

	Mean	Std. Deviation	N
code values reversed for low GPA = low value	3.72	.783	99
CREV	32.01	12.813	99
SAVEc	36.78	24.361	99

Correlations

		code values reversed for low GPA = low value	CREV	SAVEc
Pearson Correlation	code values reversed for low GPA = low value	1.000	-.174	-.168
	CREV	-.174	1.000	.712
	SAVEc	-.168	.712	1.000
Sig. (1-tailed)	code values reversed for low GPA = low value	.	.043	.049
	CREV	.043	.	.000
	SAVEc	.049	.000	.
N	code values reversed for low GPA = low value	99	99	99
	LCREV	99	99	99
	SAVEc	99	99	99

Regression Analysis: GPA regressed on SAVEc and CREV

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	SAVEc CREV[b]	.	Enter

a. Dependent Variable: code values reversed for ow GPA = low value

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.185[a]	.034	.014	.778	.034	1.693	2	96	.189

a. Predictors: (Constant), SAVEc, CREV

b. Dependent Variable: code values reversed for low GPA = low value

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.047	2	1.023	1.693	.189[b]
	Residual	58.034	96	.605		
	Total	60.081	98			

a. Dependent Variable: code values reversed for low GPA = low value

b. Predictors: (Constant), SAVEc, CREV

Coefficients[a]

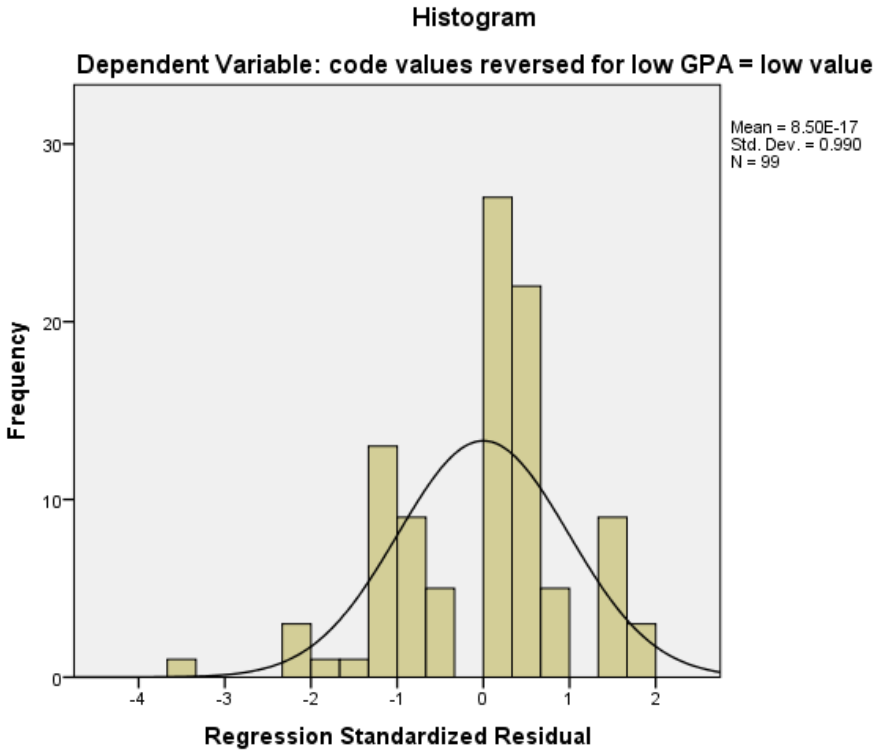
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		Collinearity Statistics
		B	Std. Error	Beta			Zero-order	Partial	Tolerance
1	(Constant)	4.038	.213		18.928	.000			
	CREV	-.007	.009	-.110	-.771	.442	-.174	-.078	.493
	SAVEc	-.003	.005	-.089	-.624	.534	-.168	-.064	.493

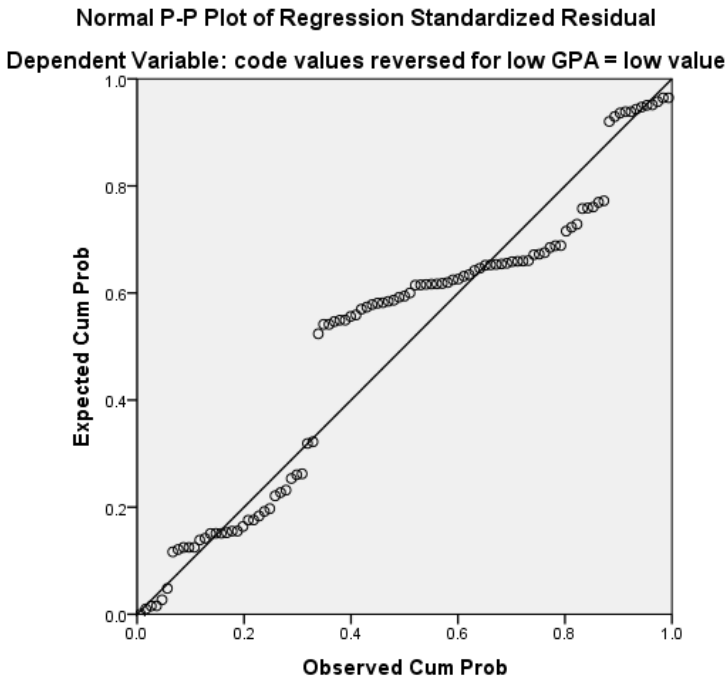
a. Dependent Variable: code values reversed for low GPA = low value

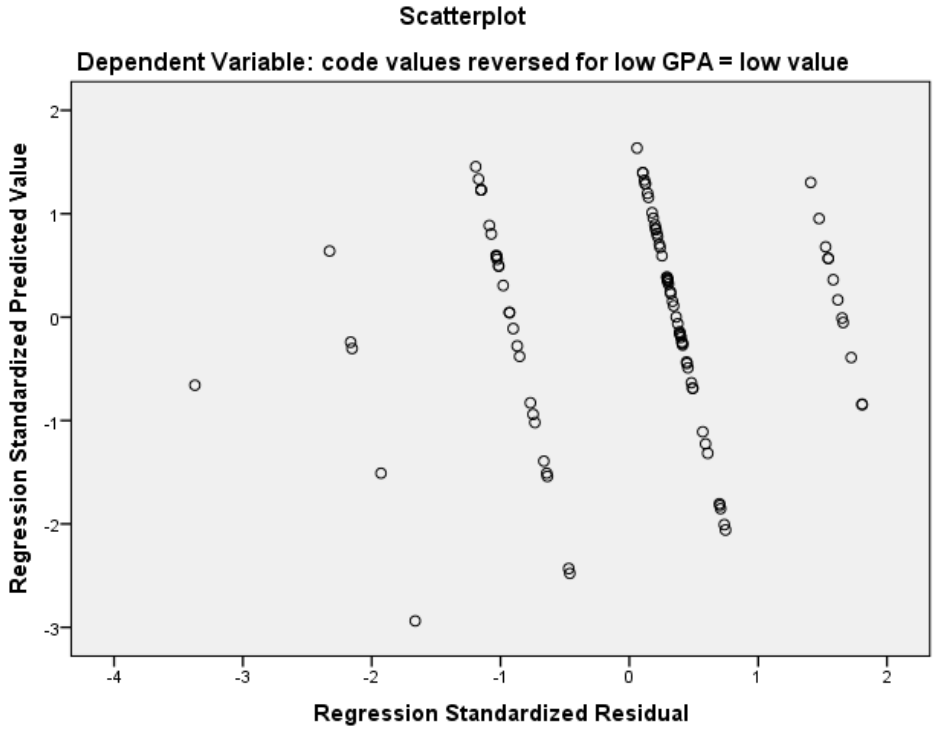
Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	CREV	SAVEc
1	1	2.790	1.000	.02	.01	.02
	2	.165	4.110	.39	.00	.47
	3	.044	7.933	.60	.99	.51

a. Dependent Variable: code values reversed for low GPA = low value


Histogram
Dependent Variable: code values reversed for low GPA = low value
Mean = 8.50E-17
Std. Dev. = 0.990
N = 99
Frequency
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: code values reversed for low GPA = low value
Expected Cum Prob
Observed Cum Prob



Regression: SAVEc and CREV predicting BPAQ

Descriptive Statistics

	Mean	Std. Deviation	N
BPAQ	74.36	20.784	99
CREV	32.01	12.813	99
SAVEc	36.78	24.361	99

Correlations

		TOTAL BPAQ	TOTAL CREV	SAVEc
Pearson Correlation	BPAQ	1.000	.358	.498
	CREV	.358	1.000	.712
	SAVEc	.498	.712	1.000
Sig. (1-tailed)	BPAQ	.	.000	.000
	CREV	.000	.	.000
	SAVEc	.000	.000	.
N	BPAQ	99	99	99
	CREV	99	99	99
	SAVEc	99	99	99

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	SAVEc CREV[b]	.	Enter

a. Dependent Variable: BPAQ

b. All requested variables entered.

Model Summaryb

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.498[a]	.248	.232	18.212	.248	15.817	2	96	.000

a. Predictors: (Constant), SAVEc, CREV

b. Dependent Variable: BPAQ

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10492.620	2	5246.310	15.817	.000[b]
	Residual	31842.289	96	331.691		
	Total	42334.909	98			

a. Dependent Variable: BPAQ

b. Predictors: (Constant), SAVEc, CREV

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	58.513	4.997		11.709	.000					
	CREV	.013	.204	.008	.062	.951	.358	.006	.005	.493	2.028
	SAVEc	.420	.108	.492	3.905	.000	.498	.370	.346	.493	2.028

a. Dependent Variable: BPAQ

Collinearity Diagnostics[a]

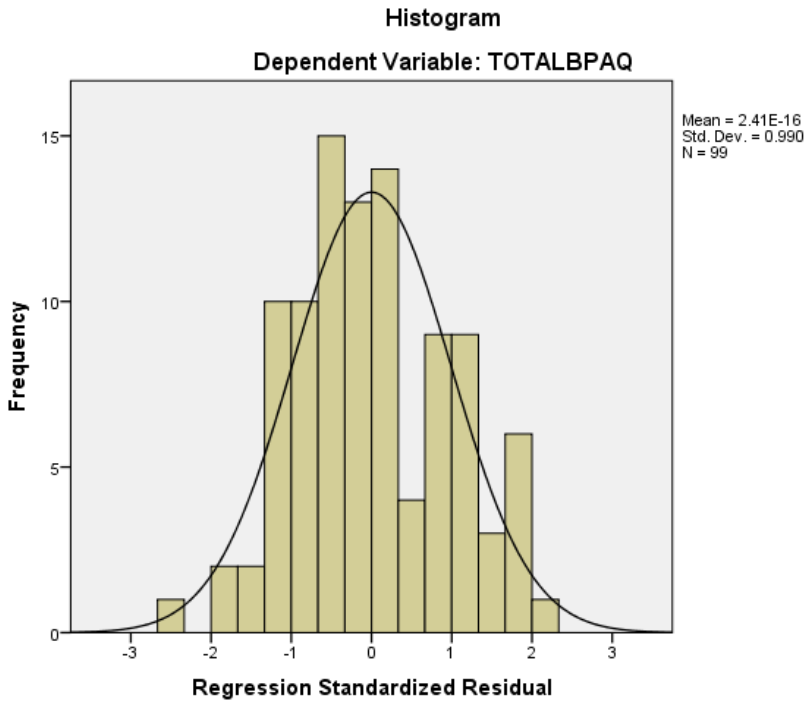
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	CREV	SAVEc
1	1	2.790	1.000	.02	.01	.02
	2	.165	4.110	.39	.00	.47
	3	.044	7.933	.60	.99	.51

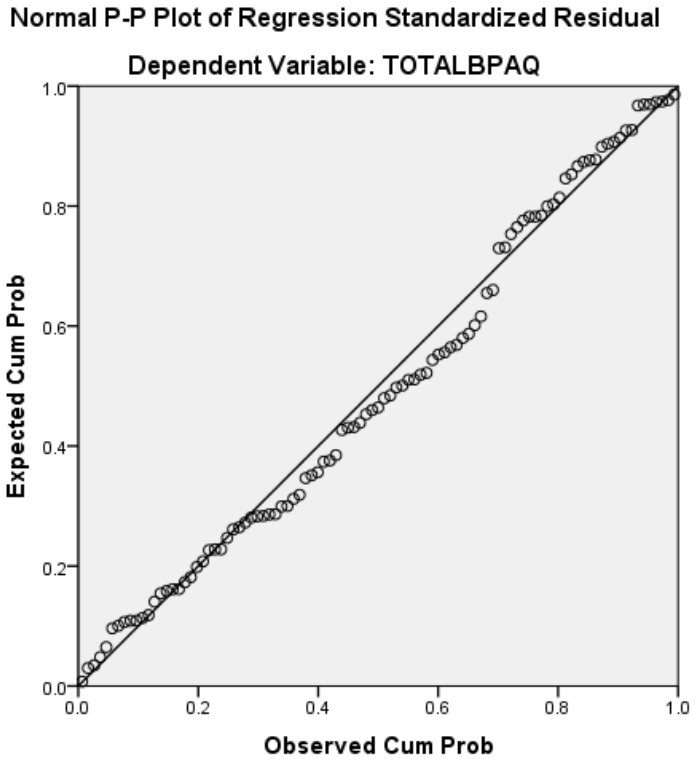
a. Dependent Variable: BPAQ

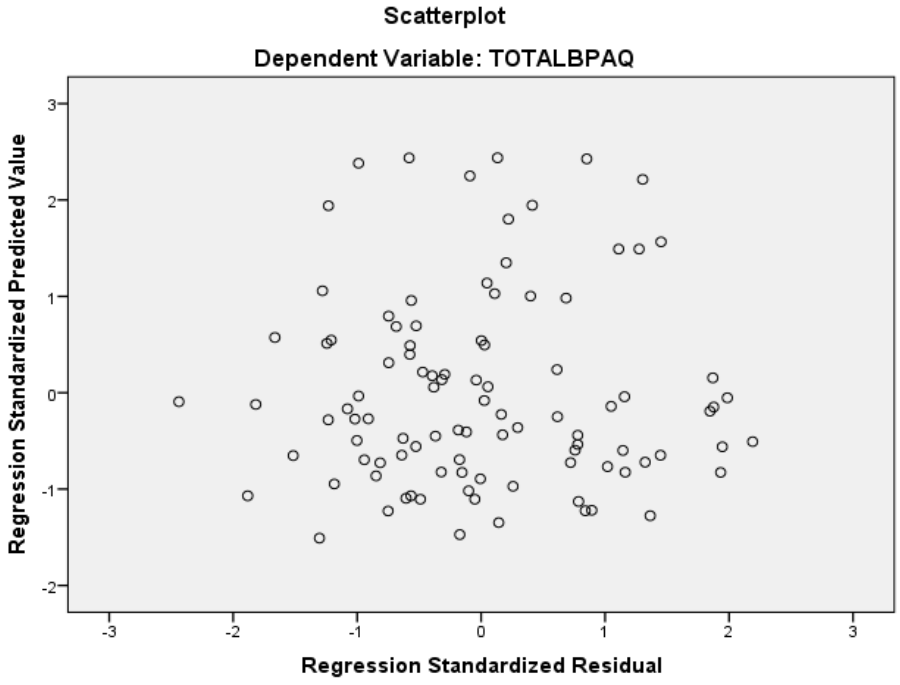
Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation
Predicted Value	58.75	99.59	74.36	10.347
Residual	-44.399	39.889	.000	18.026
Std. Predicted Value	-1.509	2.438	.000	1.000
Std. Residual	-2.438	2.190	.000	.990

a. Dependent Variable: BPAQ







REGRESSION: SAVEc and CREV predicting ATVS

Descriptive Statistics

	Mean	Std. Deviation	N
ATVS	35.91	7.173	99
CREV	32.01	12.813	99
SAVE	36.78	24.361	99

Correlations

		ATVS	CREV	SAVEc
Pearson Correlation	ATVS	1.000	.354	.416
	CREV	.354	1.000	.712
	SAVEc	.416	.712	1.000
Sig. (1-tailed)	ATVS	.	.000	.000
	CREV	.000	.	.000
	SAVEc	.000	.000	.
N	ATVS	99	99	99
	CREV	99	99	99
	SAVEc	99	99	99

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	SAVEc, CREV[b]	.	Enter

a. Dependent Variable: ATVS

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.424a	.180	.163	6.562	.180	10.542	2	96	.000

a. Predictors: (Constant), SAVEc, CREV

b. Dependent Variable: ATVS

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	907.967	2	453.983	10.542	.000b
	Residual	4134.215	96	43.065		
	Total	5042.182	98			

a. Dependent Variable: ATVS

b. Predictors: (Constant), SAVEc, CREV

Coefficientsa

Model		Unstan Coefficients		Stand Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constan	30.205	1.801		16.775	.000					
	CREV	.066	.074	.117	.890	.375	.354	.091	.082	.493	2.028
	SAVEc	.098	.039	.333	2.529	.013	.416	.250	.234	.493	2.028

a. Dependent Variable: ATVS

Collinearity Diagnostics[a]

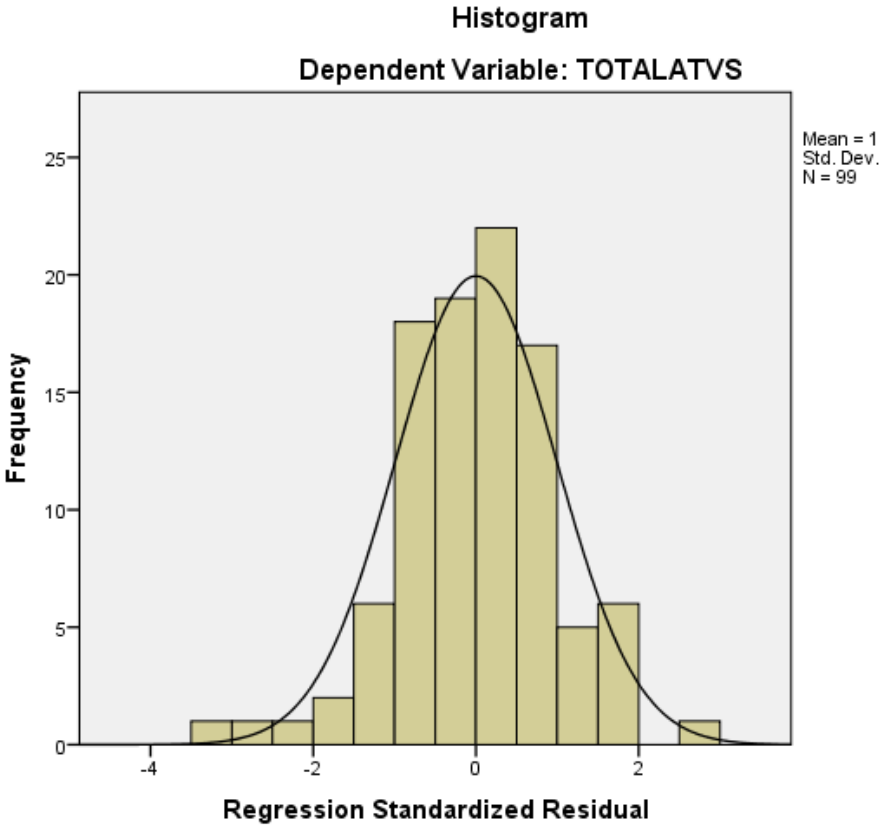
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	CREV	SAVEc
1	1	2.790	1.000	.02	.01	.02
	2	.165	4.110	.39	.00	.47
	3	.044	7.933	.60	.99	.51

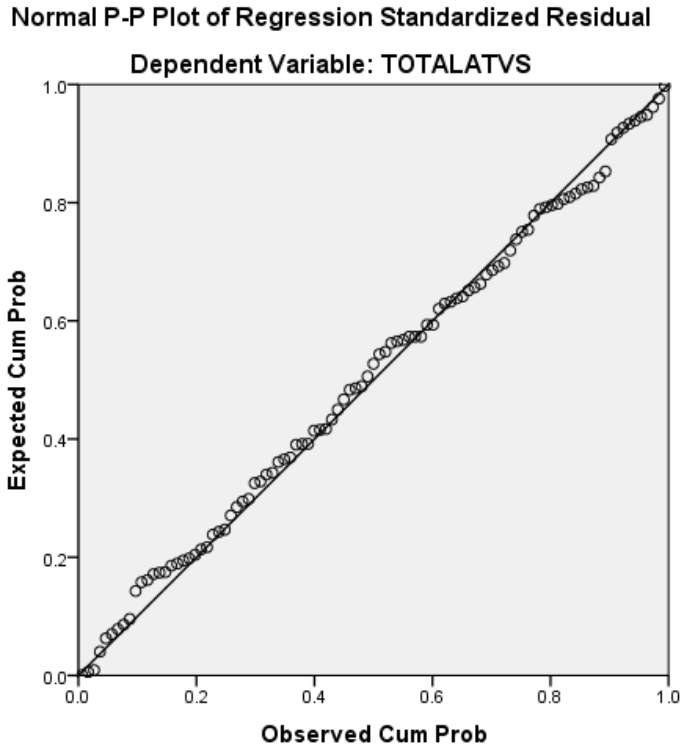
a. Dependent Variable: ATVS

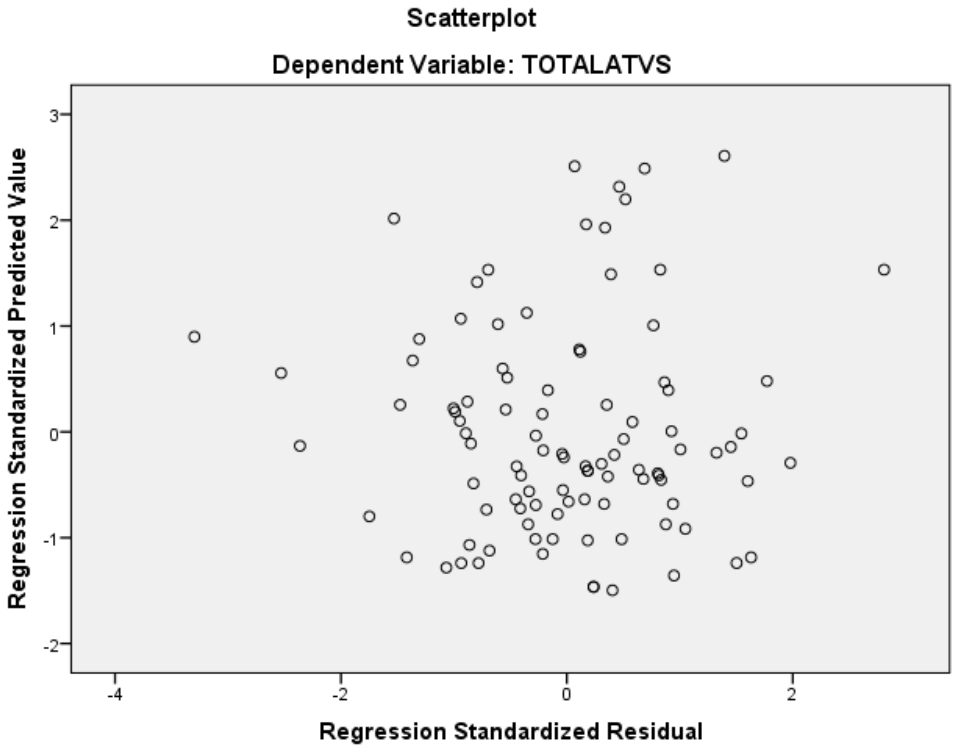
Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	31.35	43.85	35.91	3.044	99
Residual	-21.643	18.426	.000	6.495	99
Std. Predicted Value	-1.497	2.608	.000	1.000	99
Std. Residual	-3.298	2.808	.000	.990	99

a. Dependent Variable: ATVS




Normal P-P Plot of Regression Standardized Residual
Dependent Variable: TOTALATVS
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0


Scatterplot
Dependent Variable: TOTALATVS
Regression Standardized Predicted Value
Regression Standardized Residual
3
2
1
0
-1
-2
-4
-2
0
2

Regression: SAVEc and CREV predicting K10

Descriptive Statistics

	Mean	Std. Deviation	N
K10	22.15	8.590	99
CREV	32.01	12.813	99
SAVEc	36.78	24.361	99

Correlations

		K10	CREV	SAVEc
Pearson Correlation	K10	1.000	.391	.390
	CREV	.391	1.000	.712
	SAVEc	.390	.712	1.000
Sig. (1-tailed)	K10	.	.000	.000
	CREV	.000	.	.000
	SAVEc	.000	.000	.
N	K10	99	99	99
	CREV	99	99	99
	SAVEc	99	99	99

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	SAVEc CREV[b]	.	Enter

a. Dependent Variable: K10

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.422[a]	.178	.161	7.869	.178	10.390	2	96	.000

a. Predictors: (Constant), SAVEc, CREV

b. Dependent Variable: K10

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1286.627	2	643.314	10.390	.000[b]
	Residual	5944.100	96	61.918		
	Total	7230.727	98			

a. Dependent Variable: K10

b. Predictors: (Constant), SAVEc, CREV

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance
1	(Constant)	14.283	2.159		6.615	.000				
	CREV	.154	.088	.230	1.748	.084	.391	.176	.162	.493
	SAVEc	.080	.046	.226	1.712	.090	.390	.172	.158	.493

a. Dependent Variable: K10

Collinearity Diagnostics[a]

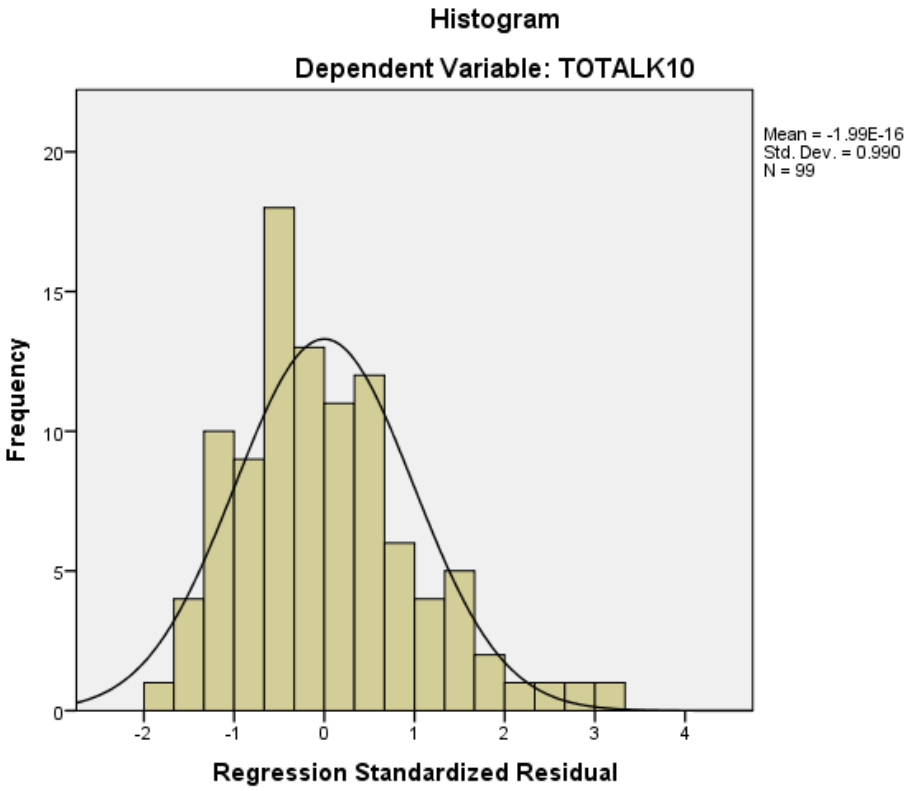
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	CREV	SAVEc
1	1	2.790	1.000	.02	.01	.02
	2	.165	4.110	.39	.00	.47
	3	.044	7.933	.60	.99	.51

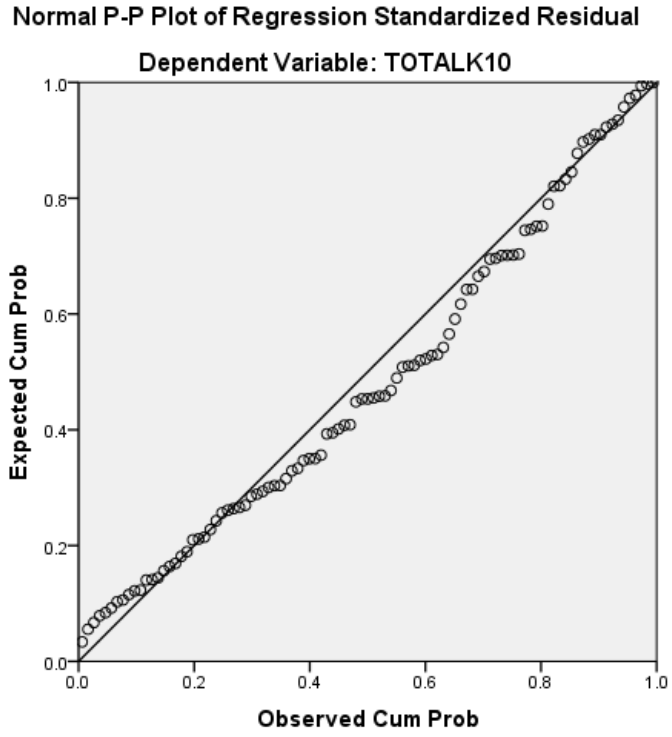
a. Dependent Variable: K10

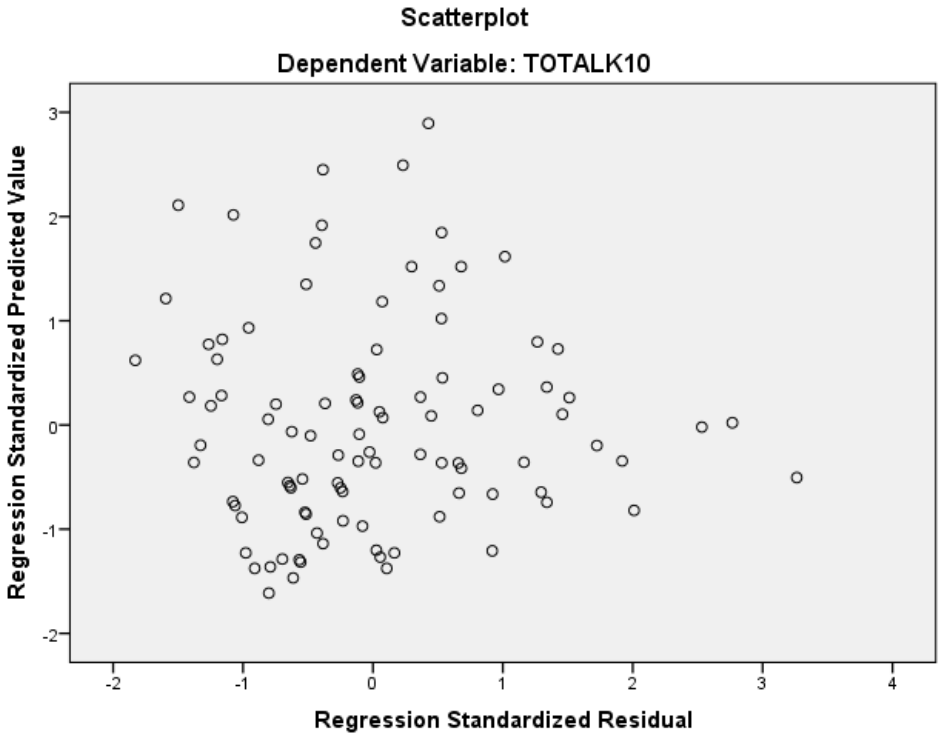
Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	16.30	32.64	22.15	3.623	99
Residual	-14.400	25.676	.000	7.788	99
Std. Predicted Value	-1.614	2.895	.000	1.000	99
Std. Residual	-1.830	3.263	.000	.990	99

a. Dependent Variable: K10




Normal P-P Plot of Regression Standardized Residual
Dependent Variable: TOTALK10
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0


Scatterplot
Dependent Variable: TOTALK10
Regression Standardized Predicted Value
Regression Standardized Residual
-2
-1
0
1
2
3
4

Regression: BPAQ, ATVS, and KQ10 as predictors of Rev Curr GPA

Descriptive Statistics

	Mean	Std. Deviation	N
code values reversed for low GPA = low value	3.72	.783	99
BPAQ	74.36	20.784	99
ATVS	35.91	7.173	99
K10	22.15	8.590	99

Correlations

		reversed for low GPA = low value	BPAQ	ATVS	K10
Pearson Correlation	reversed for low GPA = low value	1.000	-.132	-.332	-.071
	BPAQ	-.132	1.000	.454	.563
	ATVS	-.332	.454	1.000	.233
	K10	-.071	.563	.233	1.000
Sig. (1-tailed)	code values reversed for low GPA = low value	.	.096	.000	.243
	BPAQ	.096	.	.000	.000
	ATVS	.000	.000	.	.010
	K10	.243	.000	.010	.
N	code values reversed for low GPA = low value	99	99	99	99
	BPAQ	99	99	99	99
	ATVS	99	99	99	99
	K10	99	99	99	99

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	K10, ATVS, BPAQ[b]	.	Enter

a. Dependent Variable: code values reversed for low GPA = low value

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.332[a]	.110	.082	.750	.110	3.932	3	95	.011

a. Predictors: (Constant), K10, ATVS, BPAQ

b. Dependent Variable: code values reversed for low GPA = low value

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.636	3	2.212	3.932	.011[b]
	Residual	53.444	95	.563		
	Total	60.081	98			

a. Dependent Variable: code values reversed for low GPA = low value

b. Predictors: (Constant), K10, ATVS, BPAQ

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	4.997	.407		12.281	.000					
	BPAQ	.001	.005	.027	.211	.833	-.132	.022	.020	.573	1.746
	ATVS	-.037	.012	-.342	-3.151	.002	-.332	-.308	-.305	.793	1.261
	K10	-.001	.011	-.006	-.054	.957	-.071	-.006	-.005	.683	1.465

a. Dependent Variable: code values reversed for low GPA = low value

Collinearity Diagnostics[a]

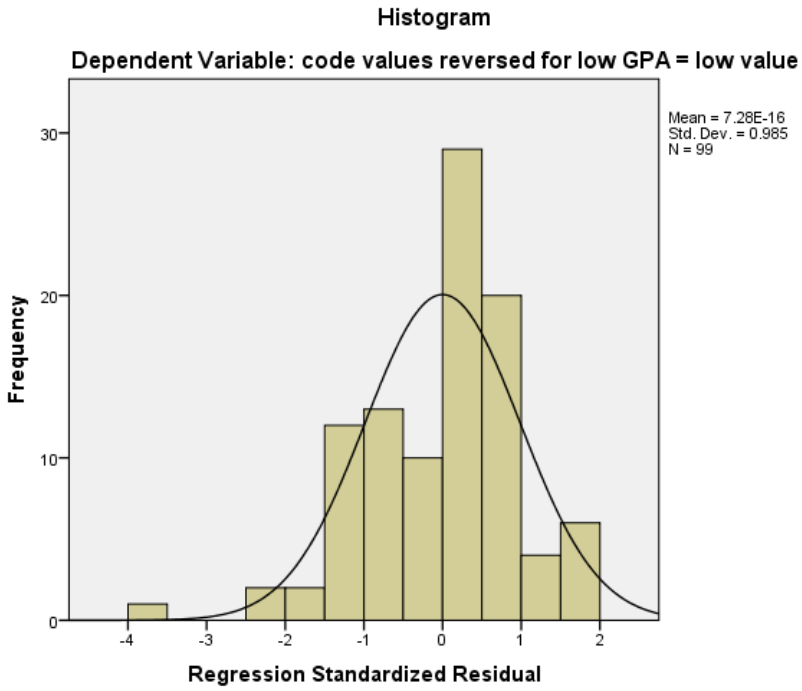
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	BPAQ	ATVS	K10
1	1	3.865	1.000	.00	.00	.00	.01
	2	.084	6.785	.07	.00	.06	.68
	3	.032	10.926	.21	.88	.01	.27
	4	.018	14.568	.72	.11	.93	.04

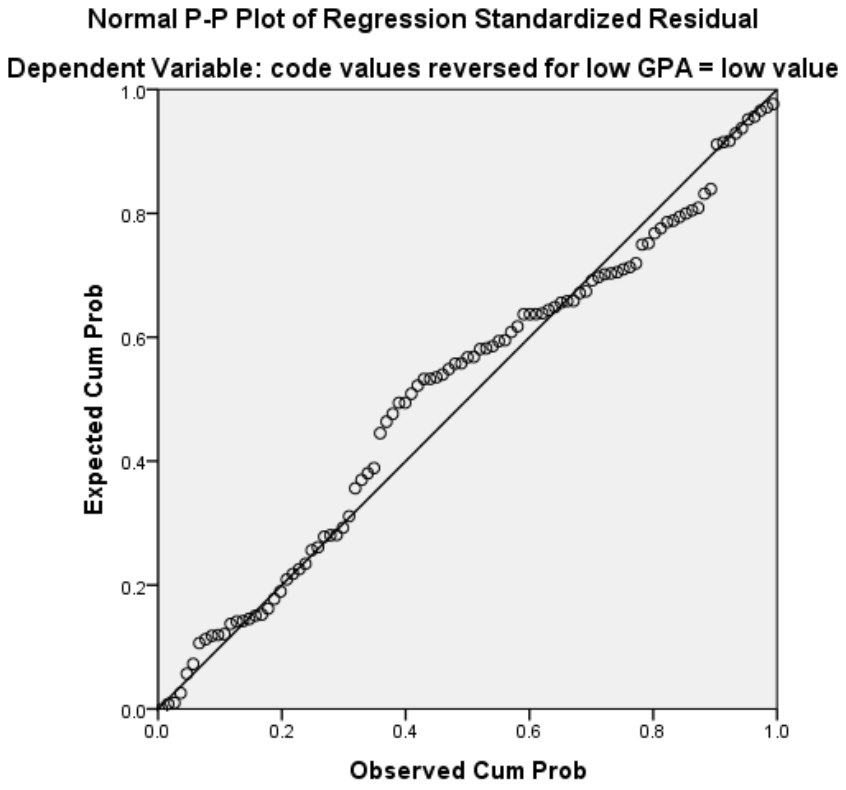
a. Dependent Variable: code values reversed for low GPA = low value

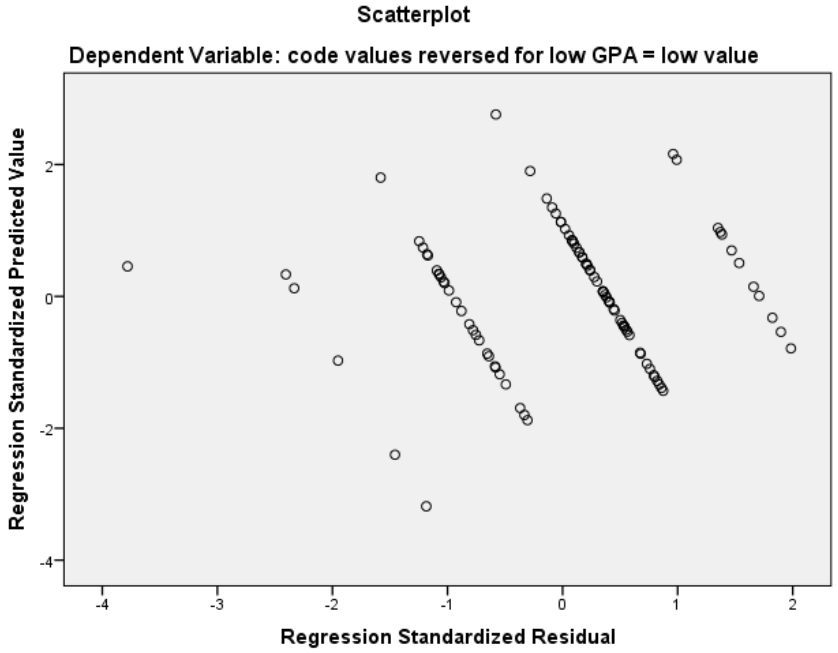
Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.89	4.44	3.72	.260	99
Residual	-2.836	1.488	.000	.738	99
Std. Predicted Value	-3.183	2.759	.000	1.000	99
Std. Residual	-3.781	1.984	.000	.985	99

a. Dependent Variable: code values reversed for low GPA = low value




Normal P-P Plot of Regression Standardized Residual
Dependent Variable: code values reversed for low GPA = low value
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0


Scatterplot
Dependent Variable: code values reversed for low GPA = low value
Regression Standardized Predicted Value
Regression Standardized Residual
-4
-3
-2
-1
0
1
2

Regression: Hierarchical: Step 1 only exposure scores; step 2 added 3 intervening variables; DV = Reversed current GPA

Descriptive Statistics

	Mean	Std. Deviation	N
code values reversed for low GPA = low value	3.72	.783	99
SAVEc	36.78	24.361	99
CREV	32.01	12.813	99
BPAQ	74.36	20.784	99
ATVS	35.91	7.173	99
K10	22.15	8.590	99

Correlations

		GPA = low value	SAVEc	CREV	BPAQ	ATVS	K10
Pearson Correlation	GPA = low value	1.000	-.168	-.174	-.132	-.332	-.071
	SAVEc	-.168	1.000	.712	.498	.416	.390
	CREV	-.174	.712	1.000	.358	.354	.391
	BPAQ	-.132	.498	.358	1.000	.454	.563
	ATVS	-.332	.416	.354	.454	1.000	.233
	K10	-.071	.390	.391	.563	.233	1.000
Sig. (1-tailed)	GPA = low value	.	.049	.043	.096	.000	.243
	SAVEc	.049	.	.000	.000	.000	.000
	CREV	.043	.000	.	.000	.000	.000
	BPAQ	.096	.000	.000	.	.000	.000
	ATVS	.000	.000	.000	.000	.	.010
	K10	.243	.000	.000	.000	.010	.
N	GPA = low value	99	99	99	99	99	99

	SAVEc	99	99	99	99	99	99
	CREV	99	99	99	99	99	99
	BPAQ	99	99	99	99	99	99
	ATVS	99	99	99	99	99	99
	K10	99	99	99	99	99	99

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	CREV, SAVEt[b]	.	Enter
2	K10, ATVS, BPAQ[b]	.	Enter

a. Dependent Variable: code values reversed for low GPA = low value

b. All requested variables entered.

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.185[a]	.034	.014	.778	.034	1.693	2	96	.189
2	.339[b]	.115	.067	.756	.081	2.837	3	93	.042

a. Predictors: (Constant), CREV, SAVEc

b. Predictors: (Constant), CREV, SAVEc, K10, ATVS, BPAQ

c. Dependent Variable: code values reversed for low GPA = low value

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.047	2	1.023	1.693	.189[b]
	Residual	58.034	96	.605		
	Total	60.081	98			
2	Regression	6.913	5	1.383	2.418	.042[c]
	Residual	53.168	93	.572		
	Total	60.081	98			

a. Dependent Variable: code values reversed for low GPA = low value

b. Predictors: (Constant), CREV, SAVEc

c. Predictors: (Constant), CREV, SAVEc, K10, ATVS, BPAQ

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	4.038	.213		18.928	.000					
	SAVEc	-.003	.005	-.089	-.624	.534	-.168	-.064	-.063	.493	2.028
	CREV	-.007	.009	-.110	-.771	.442	-.174	-.078	-.077	.493	2.028
2	(Constant)	5.008	.439		11.405	.000					
	SAVEc	-5.933E-005	.005	-.002	-.012	.990	-.168	-.001	-.001	.418	2.390
	CREV	-.005	.009	-.076	-.535	.594	-.174	-.055	-.052	.469	2.134
	BPAQ	.001	.005	.034	.253	.801	-.132	.026	.025	.528	1.896
	ATVS	-.035	.012	-.323	-2.834	.006	-.332	-.282	-.276	.733	1.365
	K10	.001	.011	.016	.128	.898	-.071	.013	.013	.637	1.571

a. Dependent Variable: code values reversed for low GPA = low value

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	BPAQ	-.064[b]	-.554	.581	-.057	.752	1.330	.425
	ATVS	-.312[b]	-2.922	.004	-.287	.820	1.220	.462
	K10	.008[b]	.075	.940	.008	.822	1.216	.478

a. Dependent Variable: code values reversed for low GPA = low value

b. Predictors in the Model: (Constant), CREV, SAVEc

Collinearity Diagnostics[a]

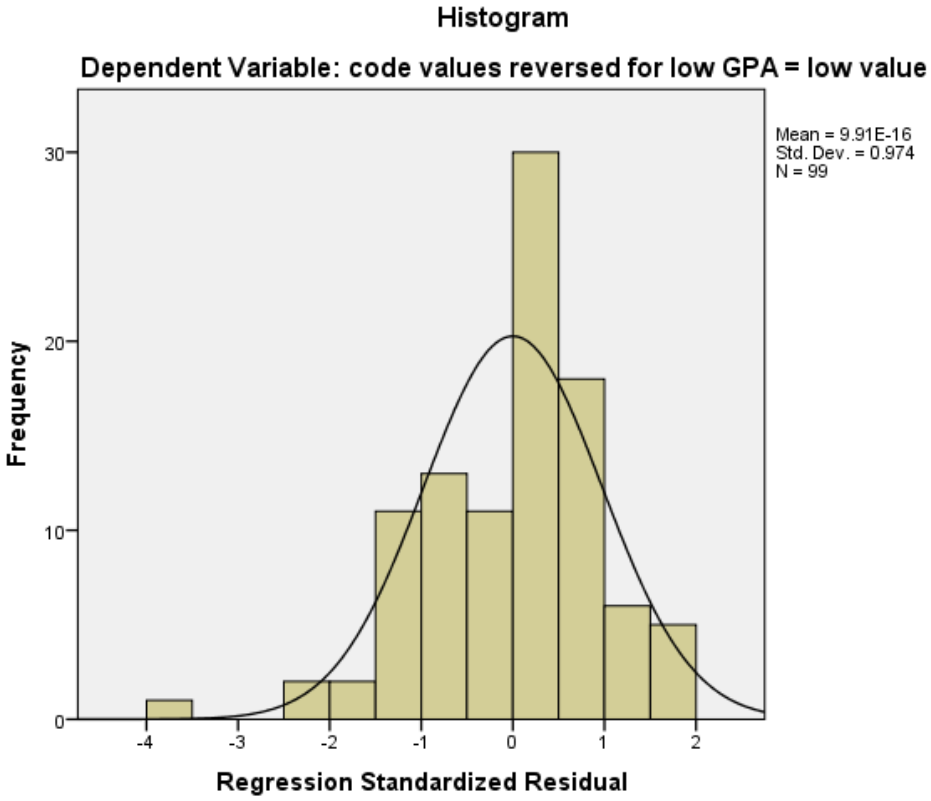
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	SAVEc	CREV	BPAQ	ATVS	K10
1	1	2.790	1.000	.02	.02	.01			
	2	.165	4.110	.39	.47	.00			
	3	.044	7.933	.60	.51	.99			
2	1	5.602	1.000	.00	.00	.00	.00	.00	.00
	2	.214	5.119	.02	.39	.02	.01	.01	.01
	3	.084	8.172	.04	.00	.04	.01	.05	.67
	4	.057	9.926	.00	.29	.70	.12	.02	.05
	5	.026	14.549	.13	.23	.22	.86	.07	.23
	6	.017	18.206	.81	.09	.01	.01	.85	.03

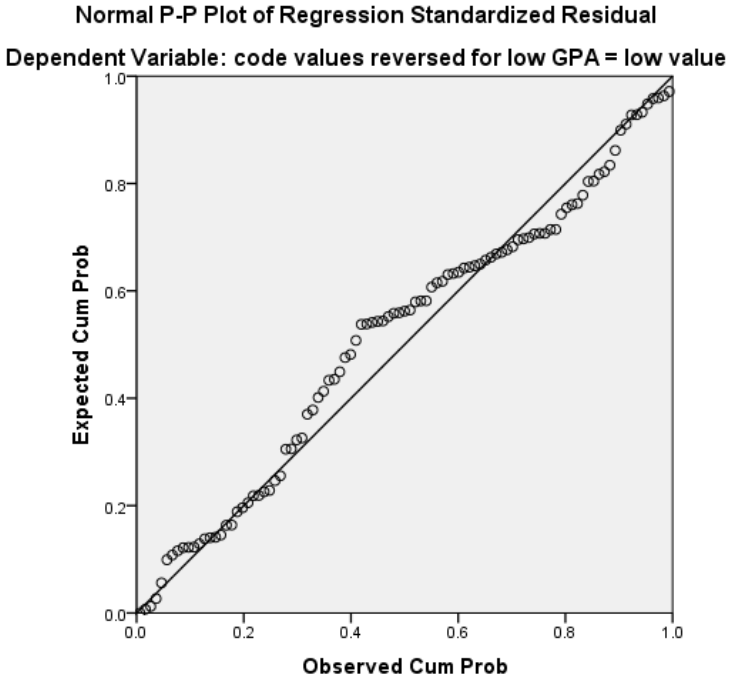
a. Dependent Variable: code values reversed for low GPA = low value

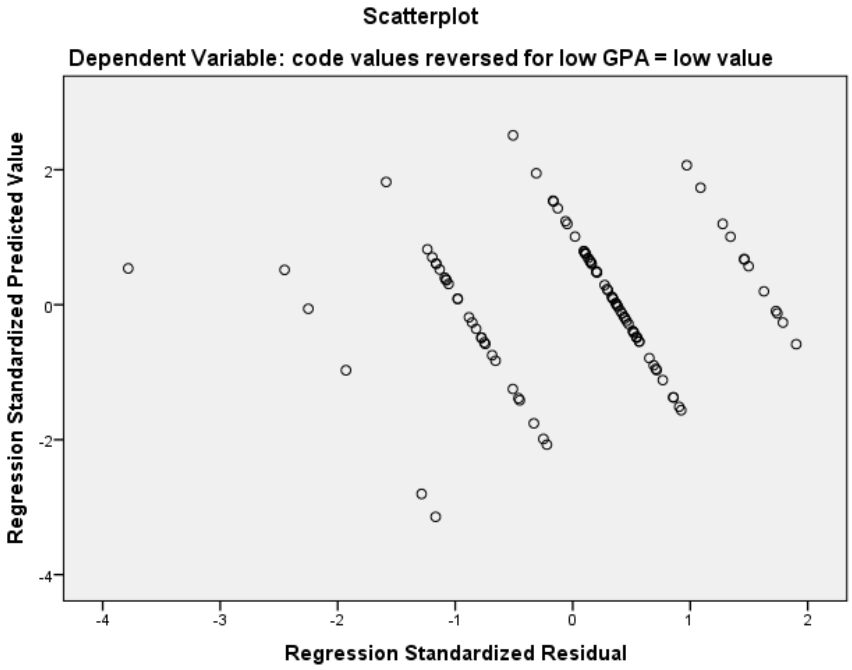
Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.88	4.38	3.72	.266	99
Residual	-2.860	1.438	.000	.737	99
Std. Predicted Value	-3.143	2.511	.000	1.000	99
Std. Residual	-3.783	1.902	.000	.974	99

a. Dependent Variable: code values reversed for low GPA = low value


Histogram
Dependent Variable: code values reversed for low GPA = low value
Mean = 9.91E-16
Std. Dev. = 0.974
N = 99
Frequency
30
20
10
0
-4
-3
-2
-1
0
1
2
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: code values reversed for low GPA = low value
Expected Cum Prob
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
Observed Cum Prob


Scatterplot
Dependent Variable: code values reversed for low GPA = low value
Regression Standardized Predicted Value
Regression Standardized Residual
2
0
-2
-4
-4
-3
-2
-1
0
1
2