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Impact of violence exposure on urban middle school students

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IMPACT OF VIOLENCE EXPOSURE ON URBAN MIDDLE SCHOOL STUDENTS

by

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Dedication

To Ken,

and Kelly, Patrick, and Colin,

In recognition of their wonderful patience and support.

And

To my parents,

In recognition of so many things.

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CHAPTER I

INTRODUCTION

Urban adolescents, and particularly minority adolescents, have captured the concern of educators, researchers, and national health administrators over the past several decades due to the multiple risk factors presumed to impact upon their development and functioning. Motivation and academic achievement of these youngsters have long been areas of concern. Constructs such as attributional style, self-concept, and future orientation, theoretically presenting potential as explanatory cognitive processes, have been heavily researched in recent years. Unfortunately, these constructs offer little explanatory power regarding the motivation of urban adolescents in general and African-American adolescents in particular, in terms of academic achievement (see a review by Graham, 1994). Graham (1994) posits that "the next step in the motivational sequence postulated by attribution theory...*involves an examination of the* distinct affective and cognitive consequences ... *which result from* particular self-ascriptions" (Graham, 1994, p.93). "Affect and expectancy then relate directly to achievement-related behavior" (Graham, 1994, p.93).

Attribution theory involves understanding the causal beliefs of individuals. This theory, as set forth in the reformulated learned helplessness model of Abramson, Seligman, and Teasdale (1978) posits that experiencing the uncontrollability of events leads to the creation of explanatory cognitions for these events. Individuals develop consistent patterns of attributions over time, presumably as a result of their unique experiences and interactions within their environment. An individual's attributional style therefore, is his/her predictable and regular pattern of cognitions about the causes of events (Peterson et al,

1982) and the establishment of a particular attributional style is a *developmental* process.

Perhaps understanding the "distinct affective and cognitive consequences" arising from particular self-ascriptions can be best accomplished through an understanding of the experiences which contribute to the development of a particular attributional style and the affect associated with that development. An exploration of those early events and circumstances which result in the formulation of certain patterns of causal beliefs may lend insight into the cognitive and affective processes and behaviors which occur when these beliefs are activated.

Recent research (Fingerhut and Kleinman, 1990; Finkelhor and Dzuiba-Leatherman, 1994; Osofsky, 1995) conducted in urban settings demonstrates that urban children, particularly those of lower socioeconomic status and minority races, experience an early (and ongoing) environment infused with events and circumstances which place them developmentally at risk for psychological harm. Aside from the prevalence of poverty and single-parent or parent-absent homes, urban environments disproportionately represent arenas for violence.

Violent crime pervades the media. Daily newscasts, headlines, and conversations highlight the increasing incidence of violent acts perpetrated on a daily, almost hourly, basis. Although a national phenomena, violence is particularly acute in urban neighborhoods (e.g. Gladstein et al., 1992; Richters & Martinez, 1993) and disproportionately affects minority youth (Bureau of Justice Statistics, 1990, 1991). African American adolescents, particularly males, are more often the victims of, and have more exposure to, violence than do Caucasian adolescents. Chronic violence exposure, as defined by Osofsky (1995), entails "frequent and continual exposure to the use of guns,

knives, drugs, and random violence." Myriad studies detail the prevalence and frequency of child witnesses to violent events (Richters & Martinez, 1993; Osofsky, Wewers, et al, 1993). The epidemic proportion of violence in our urban areas is becoming recognized as an area of national health concern. Research designed to assess the prevalence of victimization, likelihood of perpetration, and frequency of exposure to community violence has increased significantly over the past decade. However, discerning the impact of victimization and exposure on the development and psychological functioning of youth represents a complex and largely unexplored terrain.

Martinez and Richters (1993) report that violence exposure is associated with distress symptoms in both younger and older children. Victimization by or witnessing of violence both in the community or within the home are reliably related to greater levels of distress symptoms. Distress symptoms described by these authors as "classic" include: intrusive thoughts, fear of recurrence, anxieties, difficulty concentrating, depression, psychosomatic disturbances, sleep disturbances, and other symptoms associated with post-traumatic stress disorder. Logically and intuitively, these symptoms are hypothesized to constrict children's lives both at school and at home (Osofsky et al, 1993) and to impinge upon youngsters' ability to function effectively within the classroom. Theorists and researchers emphasize the disruption of normal developmental processes effected when children are exposed repeatedly to violent events.

Research supports the supposition that academic functioning is impacted by violence exposure. Osofsky (1995) points out that school-age children and preschoolers exposed to chronic violence are "less likely to explore their physical environment and play freely, showing less motivation to master their environment"(p.784). Boney-McCoy and

Finkelhor (1995) in their national telephone survey of 2000 youths ages 10-16 years, found that those youths who had been victims of an assault were more likely than non-victimized youth to demonstrate school difficulties (among other symptoms), even after controlling for other sources of distress. Shakoor and Chalmers (1991) found general negative effects on school performance, cognition, and memory in a sample of children who had witnessed violent events. Kliewer, Lepare, Oskin, and Johnson (1998) found that violence exposure was associated with intrusive thinking, anxiety, and depression in a sample of 99 8-12 year olds in Richmond, Virginia.

Richters and Martinez point out that "children whose parents are unaware of their distress symptoms may be at heightened risk for developing maladaptive coping responses, and for overgeneralizing initially adaptive distress reactions to situations and contexts in which those responses are maladaptive" (Martinez & Richters, 1993, p.32). Similarly, Kliewer et al (1998) found that violence exposure had the greatest effect on those children with low levels of social support or high strains. The full short term and long term effects of chronic violence exposure on children and adolescents remain to be learned. However, logical areas of exploration would include children's ability to experience and modulate arousal, their self-concept, causal attributions for positive and negative events, and their beliefs about their likelihood of surviving into adulthood, among others.

Statement of the Problem

Previous research has yielded inconsistent findings regarding the relationship between particular cognitive sets and poor achievement outcomes in urban youth. However, the contribution of significant environmental and experiential factors to the development of a particular "cognitive style" and the associated affect and expectancies

have yet to be examined.

An examination of the role played by exposure to chronic violence on the development of attributional style, self-esteem, future orientation, and general psychological well-being may assist in elucidating the relationship between attributional style and motivation (and subsequently school achievement) in urban populations, as chronic violence exposure may represent a common and critical developmental link between the affective and cognitive domains for many of the youth in the urban populations. The effects of chronic violence exposure must be addressed in the context of their impact on normal and crucial developmental processes and challenges facing children and adolescents. Only through an understanding of the role played by these traumatic experiences on the development of adaptive and/or maladaptive cognitive and affective functioning can theories progress to explain how the relationship between affect and cognition will influence complex cognitive processes such as motivation and achievement strivings.

The purpose of the present study is to assess the relationship between the level of exposure to violence and the attributional style, self-esteem, future orientation, academic status, and general psychological well-being (as measured by the presence or absence of distress symptoms) in a sample of urban adolescents, with the goal of increasing understanding and awareness regarding the developmental effects of chronic exposure to violence. Additionally, through an exploration of the relationships between exposure to chronic violence and these particular variables, insights may be gained into the development of cognitive processes which impact upon adolescents motivation for academic achievement.

"We must not let ourselves forget childhood trauma just because the problem is so vast." (Terr, 1991 , p.10).

Research Questions

1. Are there differences in self-esteem, attributional style, hopelessness, future orientation, distress symptoms, and academic functioning among middle school children who have been exposed to different levels of violence after removing the effects of exposure to intrafamily violence?

2. Is there a relationship between frequency of exposure to violence and self-esteem, attributional style, hopelessness, future orientation, distress symptoms, and academic functioning after removing the effects of exposure to intrafamily violence?

3. Is exposure to violence associated with the expression of a characteristic pattern of cognitions: a higher than average self-esteem, an external attributional style, high level of hopelessness, and low future orientation?

4. Is the effect of exposure to violence on academic functioning mediated by distress symptoms and/or a specific cognitive style?

5. Is there a relationship between the participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, frequency of violence exposure and the participants' gender, ethnicity, maternal presence in the home, maternal education, and grade level?

CHAPTER II

REVIEW OF THE LITERATURE

The subsequent review of the literature documents the theoretical and empirical foundations for the present study. Areas pertinent to the present research include: research on prevalence rates and consequences of violence exposure, attribution theory and research, research related to adolescent self-esteem and future orientation/hopelessness, as well as some current literature related to academic achievement of urban youngsters. Summaries of developmental theories as they relate to the preceding areas of adolescent development are also presented.

Exposure to Violence Research

Preliminary research in this country on the effects of violence exposure in children began in the late 1970's (Terr, 1979) and 1980's (Pynoos et al, 1987) and focused primarily on assessing the psychological functioning of children who had been directly exposed (either through victimization or witnessing) to a single traumatic event. Incidents such as the 1984 Los Angeles, California sniper attack at an elementary school and the Chowchila bus kidnapping received national media attention and captured the interest of the research and clinical communities as well. Research stemming from work with the child victims of these and similar incidents established much of the currently available knowledge base regarding the effects of exposure to violence and post-traumatic stress disorder in children.

Lenore Terr (1991, p.11), in her work with the child victims of the Chowchila bus kidnapping, defined childhood psychic trauma as: *"the mental result of one sudden external blow or a series of blows, rendering the young person helpless and breaking past ordinary coping and defensive operations."* Terr (1991) reports four characteristics of

traumatized children which endure over time and which are of particular importance: 1.) strongly visualized or otherwise repeatedly perceived memories, 2.) repetitive behaviors, 3.) trauma-specific fears, and 4.) changed attitudes about people, aspects of life, and the future.

Pynoos and his colleagues in their 1987 study of the children who were victimized in the Los Angeles elementary school sniper attack, were among the first to document the occurrence of post-traumatic stress disorder in school-age children. The authors interviewed the students immediately after the attack regarding their experience and were able to administer standardized assessment instruments within one month after the incident to 159 of the elementary school students. Findings indicated a positive correlation between proximity to the violence and the type and number of PTSD symptoms. The sex, age, or ethnicity of the students did not exert a significant influence on the symptomatology. The most highly exposed children demonstrated the full range of PTSD symptoms including: intrusive imagery, emotional constriction (as manifested by lessened interest in play, feeling distant from others, and not wishing to be aware of their feelings), and avoidance. Other symptoms manifested by the children were fear and anxiety, reported by more than 60% across all levels of exposure, and disturbed sleep and concentration difficulties. The latter two symptoms differentiated severe from moderate reactions, with the more severe reactions reporting these symptoms in addition to the others mentioned (Pynoos, 1987). At 14 month follow-up, level of exposure remained the primary predictor of ongoing PTSD (Nader et al, 1990). In another follow up study of these children, Pynoos and Nader (1990) found ongoing effects of exposure on cognition including problems with concentration, poor school performance and learning difficulties;

reduced impulse control, changes in personality, and increased risk-taking behaviors. Additionally, these youngsters also experienced radically changed views regarding the safety and security of relationships (Pynoos & Nader, 1990). Another interesting finding of these authors with particular implications for the development of cognitive processes (such as self-esteem) is that at two year follow-up, children who were most exposed (i.e. closest to the violence) had altered their memories of the event in such a way so as to reduce their own life-threat. That is, when these children recounted the attack, they placed themselves further from the violence than they had actually been and committed other memory errors such as not mentioning their own injury, neglecting to recount moments of direct danger, or situating themselves in a safe location (Pynoos & Nader, 1989).

Kliewer, Lepore, Oskin, and Johnson (1998) examined the relationship between community violence exposure and psychological well-being in a sample of 99 8-12 year old children from moderate- to high-violence areas in Richmond, Virginia. These authors found that violence exposure was associated with intrusive thinking, anxiety, and depression. Intrusive thinking partially mediated associations between violence exposure and internalizing symptoms. Violence exposure was found to have the highest effect on those children with low levels of social support or high levels of strain. Those youngsters high in intrusive thinking demonstrated greater internalizing symptoms when there were fewer social supports (Kliewer et al, 1998).

Concerns Related to Chronic Exposure

The foregoing information addresses results obtained from research conducted with children who had been exposed (primarily) to one traumatic event. Data gained from

such studies can prove instructive in initial efforts to assess the effects of chronic violence exposure, however, repeated exposure to violent events presents a much more complex issue. For example, Pynoos and Nader (1988) found that for children exposed to an additional violent event in the year following the sniper attack, such exposure often led to an exacerbation or renewal of symptomatology leading to their conclusion that "*the effects of each episode (of violence exposure) can be additive and seriously deplete the child's inner resources*"(p. 471).

This finding becomes extremely disturbing in light of recent trends in crime levels in this country. In recent years, violence has become a pervasive phenomenon in the United States. Levels of violent crime have increased dramatically over the past two decades and rates in the U.S. far exceed those in other developed countries (Fingerhut & Kleinman, 1990). Crime levels are particularly acute in urban areas and violence statistics indicate that these crimes disproportionately affect youth. Recent research on prevalence rates indicates that adolescents, particularly urban adolescents, may be at a significantly higher risk than the general population for becoming either victims of or witness to, violent crime. Homicide by firearm is the second leading cause of death for adolescents from 15 through 19 years and in 1988, firearm homicide rates for both African-American and White adolescents exceeded the total for all natural causes of death combined (Christofel, 1990).

Despite the overwhelming indications of the obvious increase of violent crime in our society, it has only been recently that researchers in the field of psychology have begun to address the issues related to chronic violence. Not suprisingly, initial efforts in the area focused on circumscribing and defining the problem by assessing prevalence rates

(Fitzpatrick & Boldizar,1993; Schubiner et al, 1993). Efforts then turned toward an assessment and exploration of the psychological consequences of direct victimization (e.g., Boney-McCoy & Finkelhor, 1995). An even more recent development in psychological research has been the recognition and acknowledgment of the potential psychological impact of witnessing violent events. Incidents such as the school sniper attack have highlighted the potential for negative consequences which may evolve from simply witnessing violence (Pynoos et al, 1987). Pynoos and Nader (1990) and others state that in such situations the witness also becomes a victim on the premise that witnessing a violent act is a traumatic experience in and of itself. The term "covictimization" has been coined by Shakoor and Chalmers (1991) to denote this type of experience. These authors define covictimization as "the experience of directly observing the violent assault of another person" (Shakoor & Chalmers, 1991, p.233). Indeed, the work of Pynoos and his colleagues (1987) with the children who had witnessed the sniper attack indicates that distress symptoms of the witnesses to the attack varied with the proximity of the witness to the shooting and level of acquaintanceship with the victim. Research focused on assessing the psychological sequaelae of co-victimization in youth is sparse, however, it represents a rapidly expanding area of interest and research as many recognize the need to understand and provide treatment for the co-victims, as well as the victims, of violence. Friedlander (1993) emphasizes the importance of viewing children's experience with violence as *"a specific and distinctively potent developmental disorganizer in the course of their psychological growth" (p.68).*

Prevalence Rates

Despite the recency of efforts directed toward quantifying exposure to violence

(both through direct victimization and witnessing) in urban children and adolescents and the varied methodologies and assessment instruments, one overwhelmingly consistent finding in such research indicates that at a minimum, approximately one in five urban youngsters has directly witnessed at least one extremely violent crime (a shooting, stabbing, or homicide), regardless of the youngster's age at the time of the assessment (range from five years to 17), with some studies reporting incidences as high as one in two youngsters or higher. For example, Shakoor and Chalmers (1989) report that in a survey of 1000 Chicago middle and high school students, 23% report witnessing a murder. Similarly, Dyson (1990) in a survey of 539 elementary school children in that city, 33% reported having witnessed a shooting, while 31% indicated having witnessed a stabbing. Bell and Jenkins (1991), also in Chicago, report that one third of their inner-city sample of school age children had witnessed a homicide and two thirds had witnessed a serious assault. Freeman et al (1993) in a survey completed by 223 students in an inner-city midwest grade school report that 57 of these students (25%) spontaneously described a traumatic event which they had witnessed. More recently still, Schwab-Stone et al (1995) report that in their sample of 2,248 sixth, eighth, and tenth graders in an urban public school system, more than 40% reported exposure to a shooting or stabbing in the past year.

Effects of Violence Exposure

Clearly and intuitively, such an experience (either victimization or co-victimization) will have some type of an impact on these youngsters. However as indicated previously, research directly aimed at the exploration of the type and magnitude of such effects is minimal. Osofsky (1995) reports that even in the earliest phases of infant and toddler

development, clear associations have been found between exposure to violence and post-traumatic symptoms and disorders. Exposure to trauma interferes with the normal development of trust and the later emergence of autonomy through exploration (Osofsky & Fenichel, 1994). Pynoos (1993) reports that exposure to violence results in increases in anxiety and sleep disturbances in school-age children, as well as attentional problems, difficulty concentrating, and intrusive thoughts. Both of these age groups (toddlers and school-age children) are less likely to explore their physical environments, play freely, or demonstrate motivation to master their environment, according to Osofsky (1995) and others. Pynoos and colleagues (1987) also report clinical evidence which suggests that children exposed to violence are significantly more likely than those not exposed to suffer from a variety of social and emotional problems including low self-esteem, learned helplessness, anger, and aggression.

Some of the most ambitious research to date which focuses on correlates and sequelae of violence exposure with urban youth has been conducted collaboratively by research teams in Washington, D.C. at the National Institute of Mental Health (Martinez & Richters, 1993; Richters & Martinez, 1993) and in New Orleans at Louisiana State University Medical Center (Osofsky et al, 1993).

Richters and Martinez (1993), in the first publication of their two part NIMH Community Violence Project, document results of their initial efforts to assess violence exposure rates among young children (ages 6-10 years) in a "moderately violent" inner-city community in the Washington, D.C. area and discuss the relationship between characteristics of children and their families associated with patterns of violence exposure. The second part of the study (Martinez & Richters, 1993) focuses on an assessment of

distress symptoms and fear associated with reported violence exposure. These authors utilized multiple sources of data including parent-reports and child self-reports of exposure to violence, parent and teacher reports of child behavior, and parent-report and child self-report measures of distress symptoms. Findings of the Community Violence Project indicate that these children were 3 to 4 times more likely to witness acts of violence than to actually be victimized themselves. Reports of victimization and witnessing violence (either in the home or within the community) were reliably associated with level of distress symptoms. However, these authors found a striking tendency for parents to disagree with their children's reports of both levels of exposure to violence (Richters & Martinez, 1993) and distress symptoms (Martinez & Richters, 1993) when pairwise comparisons were made, despite significant correlations in group comparisons. Explanations offered for this finding highlighted the fact that discrepancies almost always occurred in the direction of children indicating higher levels of exposure and symptomatology than their parents report for them, which may be due to: (a) parents simply being unaware of events witnessed by their children due to lack of reporting such exposure, or (b) parents repressing information about violence exposure as either an active or passive coping strategy (Richters & Martinez, 1993). Parents from the most violent homes were the least likely to agree with their children's rating of their distress symptoms and parent-child agreement for both specific symptoms and general distress was poor across all groups. Such findings, according to these authors, indicate the need to obtain direct reports from children when assessing violence exposure and distress symptoms related to such exposure (Martinez & Richters, 1993).

Osofsky, Wewers, Hann, and Fick (1993) in a collaborative study conducted in

New Orleans implemented a similar design in an area designated as "highly violent". A significant difference in the two designs was the reliance by Osofsky et al (1993) on mother reported exposure and distress. No self-report measures were administered to the 53 nine to twelve year old students comprising the sample group. Mothers in this study were interviewed and administered measures of violence exposure, behavioral functioning, and stress symptoms (all relating to their child), and a measure of family conflict. Results of the Survey of Exposure to Community Violence yielded information about how often children had: (a) heard about, (b) witnessed, and (c) been victimized by, various forms of violence. In this sample, 72% of the children had seen a knife or a gun being used, 40% had seen a dead body, and 26% had witnessed a shooting. One of the 53 children had been stabbed and two had been raped. Hearing about violence was more prevalent than witnessing for all categories except "use of a weapon". Hearing about this form of violence was only slightly less common than witnessing (69.8% hearing about compared with 71.7% witnessing). Results yielded strong and significant relationships between exposure to both community violence and family conflict and children's distress symptoms. Correlations between hearing about and witnessing community violence and distress symptoms were r=.48 and r=.42, respectively. The correlation between severe family conflict and children's distress was .61. Significant relationships were not found between violence exposure and reported behavior problems, but correlations emerged between level of family conflict and behavior problems. Authors suggest that the range of scores on the behavior measure was very limited which may have contributed to the lack of significant association with violence exposure or that family conflict may be a mediating variable on the impact of community violence exposure (Osofsky et al., 1993).

Other Studies Linking Exposure to Violence and Distress Symptoms

The correlation between violence exposure and distress symptoms (symptoms associated with post-traumatic stress disorder) is the most examined and clearly supported relationship present in the exposure to violence literature. Singer et al. (1995) demonstrated a significant and consistent relationship between violence exposure and trauma symptoms in a diverse sample of 9th through 12th graders in and urban area of Cleveland, Ohio. Horowitz, Wiene, and Jekel (1995) in a sample of adolescent girls in New Haven, Connecticut found a positive correlation between number of violent events to which the girls had been exposed and severity of PTSD scores. Similarly, Fitzpatrick and Boldizar (1993) report that greater frequency of exposure to violence in their sample of 221 seven to eighteen year old African-American adolescents was associated with higher levels of reported PTSD symptoms as well.

Exposure to Violence and Cognitive Processes

Whereas studies linking distress symptoms and violence have increased relatively rapidly in number over the past decade, research focused on assessing particular cognitive processes or cognitive styles associated with violence exposure is rare. Many researchers, clinicians, and theorists have documented anecdotal evidence of such associations and/or hypothesized such links based on prevailing developmental theories (Lorion & Saltzman, 1993; Osofsky, 1995; Richters, 1993). For example, Lorian and Saltzman (1993) stated that *"it appears that exposure to chronic danger typically necessitates developmental accommodations with pervasive effects on interpersonal, cognitive, behavioral, and psychological processes"* (p. 57). Osofsky (1995) theorized that the development of intense emotions which may be engendered by exposure to violence can interfere with the

usual course of development of emotional regulation and cites research by Lewis (1991) which suggests that self-attributions of shame, ineffectiveness or blame can lead to negative self-images that may challenge adaptive functioning. Osofsky (1995) also hypothesizes that the impact of chronic community violence on parents can exert a debilitating influence on their own functioning and ability to adequately parent. Overwhelmed or traumatized parents may communicate helplessness and hopelessness to their youngsters. Additionally, Richters (1993) emphasizes his view that children's exposure to violence can and will influence *"their images of themselves, their beliefs in a just and benevolent world, (and) their beliefs about the likelihood of surviving into adulthood"* (p. 5), among other processes.

The few studies which document specific links between cognitive processes and violence exposure tend to emphasize cognitive processes as they are associated with depressive symptomology, rather than evaluating the presence or absence of specific cognitive styles, per se. Specifically, cognitive theories of depression (Beck, 1970) suggest the presence of a depressive cognitive triad characterized by a negative view of the self, the world, and the future. Other theories, such as the learned helplessness model (Abramson, Seligman, and Teasdale, 1975), assert that an externalizing attributional style for negative events can lead to the development of a sense of helplessness which is associated with depression. Rather than assessing the extent to which children exposed to violence exhibit these types of cognitive styles, the existing research has employed measures of depression which yield ancillary information about the presence or absence of specific cognitive styles. For example, Freeman et al (1993) document differences between exposed and non-exposed children in level of self-esteem and worries about death

or injury in their study of depression correlates in "normal" school-age children, with exposed children demonstrating symptoms of lower self-esteem and increased worries about death or injury when compared with non-exposed children. The sole dependent measures employed in this study include a clinical assessment and administration of the Children's Depression Rating Scale, Revised. Similarly, Fitzpatrick and Boldizar (1993) report that the majority of youth (50.8%) in their sample of 221 inner-city youth report a sense of a foreshortened future or sense of being in danger. These data were obtained through analyzing responses on a measure of PTSD symptomatology.

Several exceptions can be noted to this indirect assessment of cognitive style. Schwab-Stone et al (1995) report that adolescents exposed to high levels of violence were more likely to demonstrate lowered personal expectations for the future. A finding which was based on a subscale designed to assess future orientation specifically, rather than depression and/or trauma symptoms. Hinton-Nelson et al (1996) document another attempt to directly assess children's level of hope in relationship to exposure to violence. In contrast with the results of Schwab-Stone et al. (1995) these authors found that overall, children exposed to violence demonstrated levels of hope consistent with other non-exposed group levels. However, children who were most exposed were the most likely to predict a violent death for themselves. Additionally, differences were found between those youth who had only witnessed violence and those who had been victimized, with those youth who had not been personally victimized demonstrating the highest levels of hope (Hinton-Nelson et al., 1996). The authors suggest that this finding represents perceptions held by these youth regarding their own invulnerability to certain negative life events. Contradictory findings of studies such as these indicate the need for ongoing efforts to

assess cognitive styles directly, rather than relying on one or two questions within an instrument to presume the presence of certain thought processes in youngsters exposed to violence.

Demographic Variables Affecting Violence Exposure and Symptomatology

Results of studies which examine the influence of demographic variables on violence exposure levels and outcomes have yielded few consistent trends. Fitzpatrick and Boldizar (1993) found significant differences between the genders in amount of violence exposure, with males more often being victimized and co-victimized when compared with females. Other demographic variables assessed (including presence of primary males and/or primary females, and age) were not significantly related to levels of exposure. However, these authors did find that those youth living with a primary parental figure (male or female) tended to report fewer PTSD symptoms than those youth who did not (Fitzpatrick & Boldizar, 1993).

Richters and Martinez (1993) also examined several potential mediators of exposure to violence including: parents educational level, income level, marital status, and family living arrangement. Their findings indicated that only family living arrangements accounted for significant differences in exposure levels with those participants who resided in houses and had been living in the district for a greater period of time being exposed more often to violent events. More significantly in terms of the consequences of exposure, these authors found that the relationship between violence exposure and distress symptoms was mediated by maternal educational level for both younger and older children (Martinez & Richters, 1993).

Bell and Jenkins (1993) report the absence of a linear relationship between age and

witnessing violent events among 7 to 15-year olds, even when looking at only the most extreme incidents of violence (e.g. shootings and stabbings).

In terms of ethnic differences, the majority of the studies reviewed report ethnic distributions among samples which are 90% or more African-American (Osofsky et al, 1993; Richters & Martinez, 1993). In a study conducted by Hinton-Nelson and colleagues (1996) with a sample which was 79% African-American, comparisons between African-American and other ethnic groups combined yielded no significant differences between groups in either exposure levels or responses on dependent measures. Conversely, Schwab-Stone et al (1995) demonstrated several significant effects due to demographic variables in their study of over 2,200 6th, 8th, and 10th graders in an urban setting. These authors found that males were more often exposed to violent events than were females, that participants from lower socio-economic backgrounds were more often exposed, and that both Hispanic and African-American students demonstrated higher levels of exposure than did Caucasian students (Schwab-Stone et al., 1995).

Demographic variables predicted to exert an influence upon exposure levels and subsequent cognitive and psychological functioning in the present study include gender, maternal presence in the home and maternal education. Analyses will also examine the effects of SES and ethnicity, although no significant effects are hypothesized in the impact of these variables upon either exposure levels or functioning in the present sample.

Methodological Issues

Several methodological issues emerge in reviewing the current literature on violence exposure in children. First, given the necessity of relying on self-report data

regarding both violence exposure and distress symptoms, the use of reliable measures of these constructs is crucial in making future contributions to the existing body of knowledge and in validating previous findings. The majority of the studies reviewed above employed self-report measures designed by the authors for use in a specific study and offer little or no reliability data. Richters and Martinez (1993) report modest test-retest reliability in their assessment instrument for very young children, but none for their survey of older children. Despite the use of the Survey of Exposure to Community Violence (Richters & Saltzman, 1990) in many of the published articles on violence exposure, no subsequent reliability or validity data has been published to date. This may be due, in part, to the modifications made by each author to the SECV which made it impossible to make generalizations about overall reliability of the instrument. In an effort to address this deficit in psychometrically sound violence measures, Cooley-Quille and colleagues developed the Children's Report of Exposure to Violence (CREV) (Cooley et al, 1995). Reliability and validity data for this instrument are available and are detailed in the subsequent methodology section of this document.

A second concern related to assessment of cognitive styles associated with violence exposure is the reliance on instruments which do not purport to assess the presence or absence of a particular cognitive style per se, but rather provide incidental information about certain patterns or isolated cognitions. This study will focus on a direct assessment of particular cognitive styles: self-esteem, attributional style, and future orientation, which are hypothesized to be impacted by violence exposure.

A third concern involves the extent to which available information on the long-term effects of violence exposure is dependent on cross-sectional research. While some

studies [primarily the work of Pynoos et al. (1987, 1988, 1990) and Terr (1979, 1991)] offer follow up data, the vast majority of the research relies on concurrent assessment of violence exposure and symptomatology, offering little insight into the factors which might exacerbate or mediate the effects of such exposure. Longitudinal research on sequelae of violence exposure is indicated, but such an endeavor is beyond the scope of the current study.

One concern related to methodology in exposure to violence research involves efforts to discriminate between intrafamily and community violence. Many studies conducted to date have attempted to measure occurrences of violence within the home independent of violence within the community (Martinez & Richters, 1993; Osofsky, 1993; Richters & Martinez, 1993). Although this type of information, regarding the location and perpetrators of violent events, is important and could be critical in developing appropriate interventions for youth, it appears to be less relevant in assessing the immediate impact of violence exposure and the psychological and cognitive consequences of such exposure. Based on the currently available literature, it appears that children who are exposed frequently and/or repeatedly to violent events, regardless of the locale or perpetrator, may be more likely to demonstrate severe symptoms of trauma (Fitzpatrick & Boldizar, 1993; Horowitz et al, 1995). Furthermore, exposure to family violence and/or conflict may be an important mediating variable in determining long-term effects of violence exposure. It is believed that youths who are most frequently exposed to violent events (in any setting) may be those most likely to demonstrate enduring changes in cognitive, psychological, and emotional development.

Summary

The foregoing review of exposure to violence literature clearly indicates that urban youth in the United States are frequent witnesses to extremely violent events and that for many of these youth, such exposure is not an isolated incident but a more frequent and ongoing phenomenon. Further, the few studies attempting to assess sequelae of violence exposure in children and adolescents have demonstrated significant relationships between violence exposure and multiple negative outcomes.

The aim of the present study goes beyond much of the previous literature to address concerns documented by Osofsky (1995), Richters et al. (1993), and others (Friedlander, 1993; Lorian & Saltzman, 1993). Exposure to violence may place youngsters at risk for psychological harm. This study will attempt to illuminate the effects of chronic violence exposure on several cognitive processes critical for adaptive functioning in adolescence and adulthood: self-esteem, attributional style, and future orientation. Traumatic incidents mitigate functioning and impact psychological and affective processes in the short term. One hypothesis of the present study focuses on the likelihood that frequent exposure to such events at a young age can lead to enduring changes in cognitive processes, which although initially adaptive in allowing these children to cope with the trauma, may become "entrenched, resistant to change, and overgeneralized to situations in which they are maladaptive" (Martinez & Richters, 1993). It is the premise of this study that these changes may endure and/or be predictive of functioning in academic and other settings, beyond the level of "symptomatology" or "characterisitics" of PTSD or depression.

Additionally, effects of exposure to violence on academic performance can be

mediated by many variables. This study will focus on an exploration of the relative importance of roles played by cognitive styles, independent of distress symptoms, in the academic functioning of young adolescents.

Cognitive Style Variables

Protective Style and Self Esteem

Taylor and Brown (1988) assert that "overly positive self-evaluations, exaggerated perceptions of control or mastery, and unrealistic optimism are characteristics of normal human thought" (p.193). These authors further state that "Positive illusions may be especially useful when an individual receives negative feedback or is otherwise threatened and may be especially adaptive under these circumstances" (p. 193). In research examining positive biases, Greenwald (1981) has demonstrated that positive biases are more apparent as threats to the self increase.

Given the foregoing literature on the prevalence and consequences of exposure to violence in children, it appears that "threats to the self" abound in violent urban areas. Hence, one may interpret the assertions of Greenwald (1981) and Tayler and Brown (1988) to imply that these children could demonstrate significant positive biases--a fact which has not been supported in the available literature. Research indicates that children who have been exposed to traumatic events do not demonstrate exaggerated perceptions of personal control or unrealistic optimism, and provides evidence that an external locus of control and feelings of hopelessness or pessimism are associated with high levels of violence exposure (Schwab-Stone et al., 1995). However, the relationship between exposure to violence and self-esteem has received less support in empirical studies.

The literature on psychic trauma suggests that children exposed to traumatic events manifest "depressive correlates such as low self-esteem" (Terr, 1979). The few empirical studies which cite low self-esteem as a correlate with violence exposure have assessed the construct of self-esteem through subscale items on measures of depression (Freeman et al., 1993), which may not be as reliable in assessing global self-worth as are other measures specific to that construct (e.g., Coopersmith Self-Esteem Inventory, Rosenberg Self-Esteem Scale, etc.). Interestingly also, Harter (1989), in her research on the developmental assessment of self-esteem has noted that

> although the relationship between self-worth and depressed affect is quite strong, there does exist a very small subgroup of children who report depressed affect but *without* accompanying low self-worth. . . These two groups of children with depressed affect, those with and those without low self-worth, are reminiscent of Freud's (1916) distinction between mourning and melancholia. In melancholia one suffers from depression accompanied by low self-esteem (as exemplified by our larger group). In mourning, depression may be due to the loss of significant others, but is not accompanied by negative self-attitudes (as in our smaller group with adequate self-worth, where lack of social support is the primary correlate)(p.95).

Empirical research by Kazdin, French, Unis, Esveldt-Dawson, and Sherich (1983) found comparable ratings on the Coopersmith Self-Esteem Inventory for depressed and non-depressed children, which also called into question the supposition that low self-esteem necessarily preceeds depression.

Intuitively, experience with traumatic events in childhood would predict low self-esteem, particularly if (as previously described) such children demonstrate high levels of distress and/or depression subsequent to such exposure. How is it that experiences which lead to high levels of distress and/or depressive symptoms may not necessarily lead to feelings of diminished self-esteem? The theory set forth by Taylor and Brown suggests

that individuals learn to manage negative feedback by filtering incoming information through social and cognitive filters which allow them to construct and/or monitor incoming information. Following Taylor and Brown (1988), under such conditions of adversity, it may be highly adaptive (at least under such ongoing conditions) if these youngsters were to demonstrate and maintain an unrealistically positive view of the self. This finding may be particularly crucial for these children given the abundance of negative experiences which have illustrated their lack of ability to exercise control over negative events in their lives and their unlikelihood of obtaining positive outcomes in the future.

Self-ésteem emerges throughout the psychological literature as a construct which profoundly influences the course of development and level of achievement of the individual. Defined as "the evaluative beliefs about the self maintained by an individual," the concept of self esteem encompasses the subjective attitudes one expresses towards the self based on a personal judgement of his or her own worthiness (Coopersmith, 1967). In her work on the development of self-esteem, Harter and her colleagues (Harter, 1985b; Harter, 1989) have demonstrated that both individual assessments of one's competence and the incorporations of others' opinions about the self play a role in the development of self-esteem. Taylor and Brown cite evidence that individuals tend to "construct" their environment in such a way that the opinions they are exposed to are likely to be positive and to support their previous conceptions of self (Taylor & Brown, 1988). Youngsters exposed to repeated experiences of violence are likely to have great difficulty managing negative feedback, even if they employ the "cognitive filters" described by Taylor and Brown (1988). Hence, it is possible that they exert a great deal of energy into "protecting" their concept of self. These children may construct their social realities and

peer groups in such a way as to maximize positive, self-affirming feedback as a self-protective strategy. Several findings in the current research on violence exposure, as well as results of other research with urban adolescents suggest that young adolescents may actively engage in efforts to protect their sense of self (Martinez & Richters, 1993; Wood, Hillman, & Sawilowsky, 1995).

Research with a sample of urban middle school children identified as at-risk for negative outcomes due to academic failure and poor school achievement demonstrated higher than average levels of self-esteem when compared with other groups (Wood, Hillman, & Sawilowsky, 1995). Martinez and Richters (1993) found that fifth and sixth grade boys exposed to high levels of violence demonstrate a "developmental shift toward bravado" which was not present in the younger children in their sample. Despite a high level of both externalizing behavior problems and distress symptoms on parent report measures, these youngsters reported few distress symptoms on self-report measures and were more likely to engage in boastful or bragging behaviors (Martinez & Richters, 1993). Also indicative of potential self-protective strategies is the finding by Nader and Pynoos (1988) that children of both genders committed memory errors related to incidents of violence exposure which placed them further from danger than they had actually been. Such strategies are consistent with the "normal" developmental "myth of invulnerability" in adolescence described by Elkind (1975). Many youngsters in this developmental stage demonstrate both verbally and behaviorally a belief in their own uniqueness and invulnerability to negative outcomes. For children exposed to chronic violence, such a belief may be crucial to their continued ability to cope with the realities of their environment.

Attribution Theory and Research

Attribution theory involves efforts to understand the types of causal explanations created by individuals in response to events. The reformulated learned helplessness model of Abramson, Seligman, and Teasdale (1978) posits that experiencing the uncontrollability of events leads individuals to create explanatory cognitions for these events. Attributions are called into play whenever individuals seek to explain occurrences in their lives, either vicariously or directly experienced. Consistent attributional patterns develop over time leading an individual to develop and demonstrate a fairly predictable and regular pattern of cognitions which Peterson et al (1982) refer to as that individual's characteristic "attributional style" or "explanatory style." That is, the development of an attributional style is a process which occurs in response to the unique experiences of the individual.

The reformulated learned helplessness model (Abramson, Seligman, & Teasdale, 1978) hypothesizes attributions along three dimensions:

1. *Internal–External*: the causes of events are perceived as being due to characteristics of the individual/traits (Internal) or the environment/situation in which the event occurs (External).

2. *Stable–Unstable*: the causes of events are presumed to be enduring over time (Stable) or transient/temporary (Unstable).

3. *Global–Specific*: the causes of events are presumed to be operative across many or all situations (Global) or only in one circumscribed setting or type of setting (Specific).

Various studies have looked at the development of attributions. What motivates individuals to engage in attributional activity and does attributional style change over time? Pittman and Pittman (1980) found that a lack of control instigated an increase in attributional activity. Another hypothesis which has received attention in the literature is

that of "expectancy disconfirmation" (Kelley, 1971). This hypothesis emphasizes that atypical or unexpected events are more likely to result in attributional activity than those events which "fit" with an individuals world view or predictions. Other factors, such as frustration/failure and preserving self-esteem (Moore et al, 1979), have been hypothesized to provide motivation for attributional searches. In young children attributional activity is likely to be high as these children seek to gain a sense of mastery or control over their environment, to increase their ability to make accurate predictions about the outcomes of events, and to define a sense of self.

Research by Wong and Weiner (1981), using a self-probe method to assess attributional activity, indicates that frustration and expectancy discomfirmation indeed promote attributional activity. These authors also found significant evidence that stressful events (personal tragedy, interpersonal conflict, and natural catastrophes, etc.) also stimulate attributional searches. Wong and Weiner (1981) assert that novel and unknown events tend to have an instigating effect and state that *"young children are generally inquisitive, not only because they have not yet developed an adequate structure of causal beliefs and knowledge but also because many experiences are still new to them" (p.661).*

Evidence that children's attributional styles may change over time is indicated in that children's ability to identify "traits" as stable and enduring characteristics of themselves and/or others increases substantially over middle childhood (Harter, 1983; Rotenberg, 1982). Rotenberg (1982) found that even when young children made "trait"-type attributions (internal/stable/global), when questioned they demonstrated that they did not view these "traits" as enduring or pervasive qualities in the sense of "stable and global". Further evidence of this lack of cognitive differentiation between trait and state is

provided by Rholes, Blackwell, Jordan, and Walter (1980) who found that external attributions and "helpless" behaviors/deficits correlate more highly among older children (grades 3-5) than among younger children (kindergarten and 1st graders).

In response to exposure to violence, an externalizing attributional style may initially develop as children recognize the reality that the occurrence of violence perpetrated by others is not within their control. Repeated exposure to violence across multiple settings and with multiple perpetrators (as is the case in chronic community violence), may lead to a very "reality-based" pattern of attributions characterized as external, stable, and global using the dimensions provided by Peterson et al (1982). Nolen-Hoeksema, Gingus, and Seligman (1992) refer to this as a "pessimistic explanatory style" because individuals with this type of style believe that they have little ability to effect change. Negative outcomes are viewed as stable, permanent, and pervasive whereas positive outcomes are viewed as unstable, transient, and externally caused.

In a landmark longitudinal study, Nolen-Hoeksema, Gingus, and Seligman (1992) explored the relationship between negative life-events, depression, and attributional style in children. This five-year longitudinal study of 508 third grade children (at the onset of the study) examined several hypotheses which are of particular importance to the present study. The authors looked at whether the relationships among explanatory style, negative life events, and depression change as children's cognitive capabilities increase. Nolen-Hoeksema et al (1992) also explored the *"scar hypothesis"* (Lewinsohn et al., 1981) which states that an episode of depression in children may lead to permanent changes in explanatory style.

Results of this study indicate that in young children, depression can lead to

enduring changes in explanatory style. Both depression and negative life events led to a deterioration or a lack of improvement in explanatory style which could not be attributed to an increase in depressive symptomatology. In younger children, only negative life events (and not explanatory style) were predictive of future depression, leading the authors to suggest that depression *associated with* early negative life events may lead to the establishment of a pessimistic explanatory style (Nolen-Hoeksema et al, 1992). Later in the lives of these children, explanatory style became a significant predictor of depression. Implications of these findings suggest that children exposed to negative life events at a young age (below the 5th grade) are at a greater risk for experiencing a depressive episode when compared with children who are not exposed to negative life events, regardless of their cognitive style. As children grow, however, and cognitive capabilities increase, explanatory style becomes more stable and plays a stronger role in the development of depressive symptoms.

These findings have obvious and direct implications for the present study. Youngsters who have previously been exposed to violent events are likely to demonstrate significant symptoms of depression. Inasmuch as these youths are repeatedly exposed, the duration and intensity of depressive symptomology may lead to the enduring types of changes in explanatory/attributional style discussed by Nolen-Hoeksema and her colleagues (1992) which may persist independent of the continued manifestation of depressive and/or PTSD symptomatology. These young adolescents may come to demonstrate pessimistic explanatory styles which are resistant to change and which may also place them at risk for future psychopathology and associated maladaptive behaviors.

Future Orientation

Negative expectancies about the future (hopelessness) have been theoretically and empirically linked with, and are believed to underlie, a variety of psychological disorders (Beck, 1988). In cognitive theories of depression, thoughts characterized by negative views of the self, world, and the future, the "cognitive triad of depression", are considered central to the disorder (Beck, 1976). Individuals who suffer from depression are presumed to exhibit high levels of hopelessness and are more likely to endorse statements which indicate affective, motivational, and cognitive manifestations of negative expectancies (Kazdin, 1987; Rotheram-Borus & Trautman, 1988; Steer et al, 1993). Kazdin, Rodgers, and Colbus (1986) assert that hopelessness is of interest beyond its demonstrated correlation with depression. These authors state that negative expectations may result from a variety of stressful events which may occur during the course of development, whether or not depression also appears. Kazdin et al. (1986), in their assessment of the psychometric properties of a hopelessness scale for children, found that high scores on a valid measure of hopelessness were not reliably associated with particular psychiatric diagnosis or with severity of dysfunction in general. Perhaps not suprisingly, a relationship has been demonstrated to exist between hopelessness and violence exposure in children (Schwab-Stone et al., 1995; Fitzpatrick & Boldizar, 1992).

Terr (1991) states that "the sense of a severely limited future, along with changed attitudes about people and life, appears to be important in trauma and extreme stress disorders originating in childhood. The limitation of future perspective is particularly striking in traumatized children because ordinary youngsters exhibit almost limitless ideas about the future" (p.13). There is also evidence in the empirical literature which

demonstrates that children exposed to high levels of violence experience higher levels of hopelessness and a more negative outlook regarding the future than do those children who do not experience violence as frequently (Schwab-Stone et al., 1995). Recall also, that the majority (51%) of those youth in the Fitzpatrick and Boldizar (1992) sample who were exposed to violent events endorsed statements indicating a sense of a foreshortened future.

Nurmi (1989) conceptualized future orientation along three constructs: (a.) the individual's belief that he/she can exert control over the realization of their hopes and/or fears; (b.) the individual's hopefulness/ lack of hope for the future; and (c.) the level of optimism (belief that the individual will realize his/her hopes. These constructs parallel three components assessed by the Beck Hopelessness Scale (Beck, 1993): (a) resignation to the futility of changing the future; (b) the possibility of a hopeful future; and (c) the acceptance of the inevitability of a hopeless future. In Nurmi's (1989) longitudinal and cross-sectional design study of "normal" 11 to 15 year olds in Finland, he found that youngsters are motivated to resolve those issues considered the foremost "developmental tasks" of adolescence (decisions and actions involving future occupation, higher education, selection of a mate, etc.) and invest effort in planning and evaluating their endeavors to do so. Nurmi also found evidence which indicates that adolescents' future orientation reflects a "cultural prototype." That is, youngsters typically indicated that they anticipated achievement of particular developmental tasks at the age at which it is deemed culturally appropriate. Thus, Nurmi concluded that cultural knowledge about expected life-span development may play an important role shaping adolescents' views of their personal future (Nurmi, 1979).

Children living in extremely violent environments may not negotiate the earlier developmental tasks successfully, making it difficult for them to address the challenges presented by adolescence with any measure of success (Osofsky, 1995). Environments infused with violence may not facilitate the transmission of cultural norms and expectations from one generation to the next. Parents, themselves perhaps traumatized and overwhelmed, may instead communicate feelings of powerlessness and hopelessness to their children (Osofsky, 1995).

Summary

Research focusing on explorations of the prevalence and sequelae of violence exposure among urban youth has begun to increase in breadth and depth only over the past decade. Results of this impetus have yielded a wealth of diverse information about the pervasive cognitive and psychological effects on children of exposure to traumatic events. Evidence suggests that exposure to only a single traumatic event can exert an enduring influence on a child's functioning, yet little is known about the enduring and/or cumulative effects of chronic violence exposure.

While several studies have demonstrated links between violence exposure and various cognitive constructs, little attention has been given to an examination of the relationship between frequency of violence exposure and the cognitive styles most typically associated with both concepts of psychopathology (Beck, 1967/1993) and well-being (Taylor & Brown, 1988): locus of control, self-esteem, and future orientation.

The present study represents an attempt to assess the impact of chronic violence exposure on adolescents' feelings of self-esteem, characteristic explanatory style, and future orientation (hopelessness), not as correlates of PTSD or depression but as

independent constructs. A second goal of this study is to examine the potential roles played by both distress symptoms and cognitive style as mediators of academic functioning.

Based on a review of the relevant literature, the following research questions and hypotheses are posited:

Research Questions and Associated Hypotheses:

1. Are there differences in self-esteem, attributional style, hopelessness, future orientation , distress symptoms, and academic functioning among middle school children who have been exposed to different levels of violence after removing the effects of exposure to intrafamily violence?

   H_1: Middle school children who have been exposed to different levels of violence in the community will differ in self-esteem, attributional style, hopelessness, future orientation, distress symptoms, and academic functioning after removing the effects of exposure to intrafamily violence.

   H_{1a}: Children exposed to higher levels of violence in the community will demonstrate higher self-concept scores as measured by the Coopersmith Self-Esteem Inventory.

   H_{1b}: Children exposed to higher levels of violence will demonstrate a more externalizing attributional style as measured by the Attributional Style Questionnaire.

   H_{1c}: Children exposed to higher levels of violence will demonstrate a more hopeless future orientation as measured by the Beck Hopelessness Scale and future orientation index.

   H_{1d}: Children exposed to higher levels of violence will demonstrate a greater number of distress symptoms as measured by the Trauma Symptom Checklist for Children.

   H_{1e}: Children exposed to higher levels of violence will demonstrate less adaptive academic functioning as measured by their GPA, # of missed classes, and their teacher rated problem behaviors as measured by the Teacher Report Form of the CBCL.

2. Is there a relationship between frequency of exposure to violence and self-esteem, attributional style, hopelessness, future orientation, distress symptoms, and academic functioning after removing the effects of exposure to intrafamily violence?

   H_2: Self-concept, attributional style, future orientation, distress symptoms, and academic functioning are related to the frequency of exposure to violent events as measured by the Children's Report of Exposure to Violence after removing the effects of intrafamily violence.

3. Is exposure to violence associated with the expression of a characteristic pattern of cognitions: a higher than average self-concept, an external attributional style, high level of hopelessness, and low future orientation?

   H_3: A participant's pattern of cognitions (as evidenced by his/her scores on the CSI, ASQ, and BHS) will predict membership in either the high violence exposure or low violence exposure group.

4. Is the effect of exposure to violence on academic functioning mediated by distress symptoms and/or a specific cognitive style?

   H_4: The effect of exposure to violence on academic functioning is mediated by a pattern of cognitions and/or distress symptoms.

5. Is there a relationship between the participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, frequency of violence exposure and the participants' gender, ethnicity, maternal presence in the home, maternal education, and SES?

   H_{5a}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to their gender.

   H_{5b}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to their ethnicity.

   H_{5c}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to a maternal presence in the home.

   H_{5d}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to their mother's level of

education.

H_{5e}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to their grade level.

CHAPTER III

METHODOLOGY

This chapter addresses the methodological procedures implemented in this study and includes sections pertaining to: research design, variables, participants, instrumentation, data collection procedures, and data analysis.

Research Design

This study utilized a non-experimental, correlational research design. The independent variable in this study was not manipulated, nor was treatment provided for the participants of the study. The goal of the present study was to facilitate an examination of the relationship between children's frequency of exposure to violence and their attributional style, future orientation, and self-concept, as well as generalized distress symptoms.

A second goal of this study involved examining whether particular cognitive styles are associated with a pattern of academic success or failure, as suggested in current literature regarding the academic achievement of urban youngsters.

Variables

Independent Variables

"Exposure to violence" includes an assessment of each child's exposure (either through victimization, by witnessing, or by others' reports of incidents) to violent acts either in the home environment or within the community. Children's exposure to violence was quantified for frequency level. Scores obtained on the Children's Report of Exposure to Violence (Cooley et al., 1994) were used to generate an index of frequency. Community violence is defined as "*deliberate acts (inflicted by an aggressor) intended to cause physical harm against a person or persons in the community*" (p. 202, Cooley et

al., 1994). Each item asks whether a particular act has been witnessed or experienced by the respondent, the relationship of the victim to the respondent, and the frequency of exposure to that particular act.

Moderating Variable

Intrafamily violence was assessed by the youngsters' responses on the modified version of the Conflict Tactics Scales (Straus, 1979). Intrafamily violence can be operationally defined as "*the use of physical force against a person (or persons) within the family.*" This measure was designed to elicit information about the types of conflict resolution tactics used within the home, ranging from discussion or reasoning to violence, and the frequency with which these tactics are employed.

Dependent Variables

Seven constructs encompass the dependent variables which were employed in this study. They included single measures of attributional style, future orientation, hopelessness, self-esteem, and generalized distress symptoms; as well as two measures of factors contributing to academic success including: grade point average and classroom behavior. The first five variables were assessed using four questionnaires, all self-report, paper and pencil instruments, whereas the first measure of academic success factors (GPA) was obtained from the participants' academic records and the second (classroom behavior) was assessed using a questionnaire distributed to each participant's block team leader (a school-designated teacher).

Attributional style may be operationally defined as the characteristic perceptions of an individual regarding the causes, controllability, and generalizablity of outcomes of life events. The Children's Attributional Style Questionnaire (CASQ) developed by Seligman

et al (1985) assesses an individual's characteristic attributional tendencies for negative and positive events along three causal dimensions: internal versus external, stable versus unstable, and global versus specific. This widely used instrument was selected as the measure of attributional style for this study.

The second and third dependent variables in this study were the participants' level of hopelessness and future orientation, or more specifically, the individual's beliefs about: a.) his/her ability to effect a positive or desired outcome in the future, and b.) the likelihood of living into adulthood and/or middle age. These constructs were assessed using the Beck Hopelessness Scale developed by Beck (1978) and two additional questions inserted into the measure regarding the strength of the participant's belief that he or she will live to be a particular age (25 and 50 years).

The next dependent variable, self-esteem, can be defined as a composite of one's self-concept related to evaluations of domain specific competencies and one's overall sense of global self-worth. This construct was assessed using the Coopersmith Self-Esteem Inventory (1987), a measure widely used with young adolescents.

The fourth dependent variable, generalized distress symptoms, was assessed using the Trauma Symptom Checklist for Children (Briere, 1996). Distress symptoms can be operationally defined as cognitive, emotional, or behavioral manifestations of subjective feelings of distress and most commonly encompass symptomatology associated with post-traumatic stress disorder, depression, and anxiety.

Two measures of academic functioning were assessed. One factor, most recent semester grade point average is a discrete number and was extracted from participants' academic files. The second, classroom behavior, was assessed using the Teacher Report

Form of Achenbach's Child Behavior Checklist (1991). This measure yields eight subscale and three composite T-scores: internalizing symptomology, externalizing symptomology, and total score.

Participants

The participants in this study included young adolescents in the seventh, and eighth grades attending one urban midwestern middle school from whom parental consent was obtained. McKinley Middle School is located in Flint, Michigan. Flint is located in Genessee County in the southeastern portion of lower Michigan. This school district was selected due to its urban locale and the willingness of administrators in this district to facilitate the exploration of sequelae to violence exposure. While 50% of Flint's 134,000 residents are white, nearly 75% of the 25,000 students in the school system are members of a minority or ethnic group: 69.1 percent are African-American, 2.2 percent are Hispanic, 2.6 percent are American Indian, and 0.5 percent are Asian. More than half (65.0%) of Flint's students live at or below the poverty. The district operates four middle schools. McKinley Middle School was chosen for several reasons. Because it services a large number of seventh and eighth grade students in the district, selection of this school alone allowed for an adequate sample size to be obtained. Power analysis (Cohen, 1976) indicated that a sample size of 175 students would allow for detection of weak effects.

More importantly, of the district's middle schools, the McKinley student population is the most representative of the student population in this district, in general, in terms of the distribution of race, gender, and socioeconomic status of it's students. The enrollment at McKinley Middle School for the 1997-98 academic year totals 805 students. Sixth graders represent 22.9% of the student body, seventh graders, 38.6%, and

eighth graders, 38.3%. The ethnic distribution of McKinley students for the 1996-1997 academic year was as follows: African-American, 45.5%, White, 49.2%, American Indian, 3.5%, Hispanic, 1.3%, and Asian, 0.5%. McKinley Middle School is located in the southern-most portion of Flint and services children living in central and southern Flint. See Table 1 and Figure 1 for demographic profiles of the McKinley Learning Zone.

Table 1*

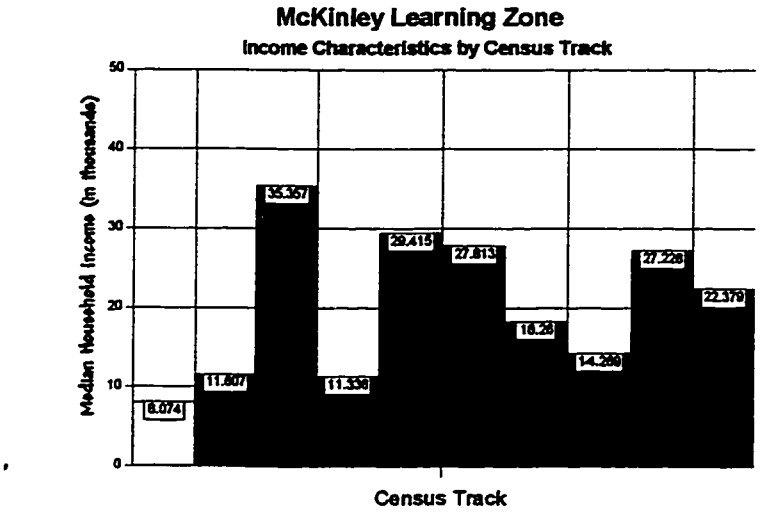
McKinley Learning Zone Neighborhood Profile

Population Characteristics	% of Population	Range of Percentages across Census Tracks
Race:		
White	81.41	36.59% to 95.63%
Black	15.34	.25% to 57.05%
American Indian	.72	.19% to 2.15%
Asian	.78	.17% to 3.00%
Other	1.18	.18% to 3.39%
Sex:		
Female	52.58%	39% to 71%
Male	47.42%	29% to 61%
Age:		
0-4 years	8.90%	7% to 14%
5-17 years	17.31%	11% to 25%
18-24 years	12.30%	7% to 17%
65 and older	14.10%	8% to 28%
Education:		
High School Grad or higher	71.20%	61% to 85%
Bachelor's Degree or higher	11.00%	4% to 25%
Female Headed Households	24.00%	14% to 49%
Income characteristics:	% of population:	Range in Percentages across Census Tracks:
Unemployed:	*14.60%*	*7% to 32%*
Persons below poverty level:	*27.30%*	*7% to 52%*
Female headed households below poverty level with children under the age of 18	*60.30%*	*24% to 85%*

* All data based on statistics taken from the 1990 Census. McKinley Learning Zone is counted along 10 census tracks.

** Percentages are averaged across all census tracks.

Figure 1



Although this particular school district was selected as the site for this study as indicated above, an initial exploration of the crime rate and incidences in this area yielded startling results. According to 1994-1995 Violent Crime Statistics (Criminal Justice Information Services, 1995) and an analysis of the 1994 Uniform Crime Report (Michigan Department of State Police, 1994), Flint had a crime rate more than four times the national average for the offenses of murder, rape, and aggravated assault in 1994, and 3.6 times the national average for robbery (Table 2).

Table 2

Crime Rates for Violent Crime

	National Crime Rate*	Flint, MI Crime Rate*
Murder	9.00	43.30
Rape	39.30	150.70
Robbery	237.70	872.40
Aggravated Assault	427.60	1917.90

**Crime rate equals (incidence x 100,000)/ population of area.*

Demographic information is provided for participants based on their responses on the demographic sheet. Participants socioeconomic status was assessed using the methods described by Hollingshead (1975). For inclusion in this study, participants were enrolled in full-time regular education classes and have attended a school in the same district for no less than two years.

Participation in the study was voluntary, with assurances provided of confidentiality. In order to ensure confidentiality, participants were assigned a code number by the experimenter which was used on all questionnaires for identification, rather than using student names. A student assent form which explained the current study and clarifies the research requirements was included with each participant's set of questionnaires. Students were requested to sign a consent form indicating their willingness to partcipate in the study. This signature also allowed the researcher to match students' grade point averages and Teacher Report Forms with the appropriate data sets. If an individual chose not to participate, he or she did not have to complete the instruments and was not penalized in any way for non-participation.

Instruments

The instruments that were used in this study included:

- Children's Report of Exposure to Violence (See Appendix A)
- Conflict Tactics Scales (See Appendix A)
- Children's Attributional Style Questionnaire (CASQ) (See Appendix A)
- Beck Hopelessness Scale (BHS) (See Appendix A)
- Future Orientation Index (FOI) (See Appendix A)
- Coopersmith Self-Esteem Inventory (CSI) (Appendix A)
- Trauma Symptom Checklist for Children (Appendix A)
- Academic Success Measure (GPA) (See Appendix B)
- Teacher Report Form-The Child Behavior Checklist (TRF) (Appendix B)
- Demographic instrument to be completed by students (Appendix C)

Children's Report of Exposure to Violence (CREV)

The Children's Report of Exposure to Violence (CREV) is a 32 item self-report questionnaire developed to serve as a screening instrument for children (ages 9 through 15 years) to assess exposure to community violence. Twenty-nine of the 32 items comprising the instrument ask respondents to indicate their lifetime exposure to various specific acts of violence within the community. The children are asked whether they have "ever" been exposed to a particular act of violence and instructed to indicate their responses on a 5-point Likert scale using the following categories: no/never (0), one time (1), a few times (2), many times (3), or every day (4). The remaining three items are not scored, but provide an opportunity for each respondent to indicate other violent experiences that were not specifically assessed in the previous questions. The CREV is suitable for individual or

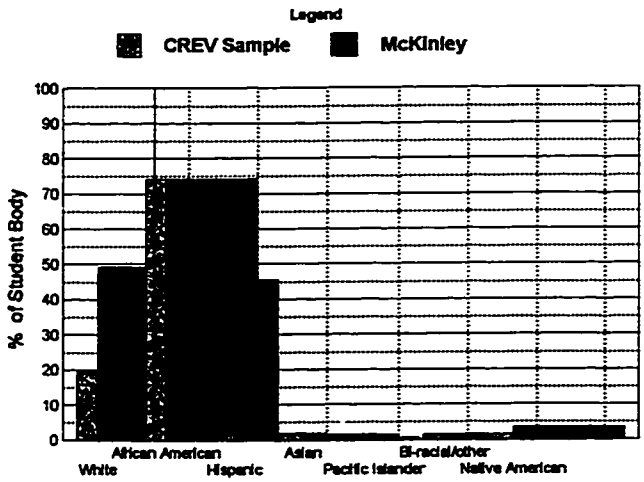
group administration with an approximate group administration time of 20 minutes. A practice question is included with the instrument ("Have you ever eaten ice cream?") to familiarize the children with the Likert scale format. According to Cooley et al. (1995), the mean score for this scale was 37.2 (sd=16.1), with a range from 3 to 78. In the present study, scores in the upper third of the range were considered to reflect high exposure to violence, with scores in the lower third indicating low exposure to violence. For the purpose of the present study, descriptive statistics on the students' scores for the CREV were obtained, with groups formed using the 33rd and 66th percentile scores (scores of 28 and 42, respectively) as the cutting point.

This instrument was designed to assess exposure to violence through four modes: Media Exposure (television or film exposure), Reported (other people's reports of occurrence), Witnessed (violence that is directly witnessed) and Victim (directly experienced violence). The CREV includes three categories of victims: strangers, familiar persons, and the self. The instrument is divided into sections that identify and define the victim of the violence and each item specifies the mode of exposure.

The development and exploration of the psychometric properties of the CREV (Cooley et al, 1995) utilized a sample of 228 children who attended public elementary and middle schools in urban and rural communities in South Carolina. All of the children attended school in one district (fourth through seventh grade). The mean age of the sample was 11.40 years (range 9 through 15 years). Among the 228 subjects, 50.9% were female. The ethnic distribution of the sample was as follows: African-American (74.1%), Caucasian (19.7%), Hispanic (1.8%), Native American (1.3%), Asian (1.3%), and other (bi-racial) (1.8%). This distribution is fairly similar to that of the McKinley student body (See Figure 2).

Figure 2

Comparison of CREV Sample and McKinley Student Body Ethnicity



An exploratory factor analysis using an oblique rotation of the CREV (Cooley et al, 1995) indicated that two independent factors "Direct Exposure Factor" and a "Media Exposure Factor" emerged explaining 42.9% of the variance in exposure to violence. Twenty-four items loaded on the Direct Exposure Factor and included items related to real-life acts of violence through witnessing or vicarious exposure (being told of violent incidents). Five items loaded on the Media Exposure Factor which was comprised solely of items from the Media content area.

Test-retest reliability of the instrument (following a two week interval) was calculated using a subsample of the participants (Cooley et al, 1995). Using Pearson correlation coefficients, the test-retest reliability for the Total score was .75, .78 for the Direct Exposure factor, and .52 for the Media Exposure Factor (all p values $<.001$).

The intercorrelations among the CREV factors and total score were determined by Pearson coefficients (all $p<.001$). Correlation between the Direct Exposure Factor and

the Total score was .98; Media Exposure factor and Total score was .56, and between Direct and Media Exposure was .44.

Internal consistency reported for the CREV using Cronbach's alpha coefficient indicates a Direct Exposure item to total correlations range from .15 to .66 with an overall alpha of .93. For the Media Exposure factor, the item to total correlations ranged from .48-.53 with an overall alpha of .75. The factor to Total score correlations ranged from .44 to .98 with an overall alpha coefficient of .78.

Scoring methods for this instrument yield several indices including: a.) a Total score (a frequency index); b.) scale and subscale scores including: Media Scale, Reported Scale (subscales= stranger and familiar), Witnessed Scale (subscales=stranger and familiar), and Victim Scale; and c.) two factor scores (Media and Direct Exposure Factors).

For purposes of this study, only the Total score was used in analyses. The Total score provides a frequency measure with a possible range of scores from 0 through 116 calculated by summing the scores for each of the 29 Likert scale items.

Pilot Test. A pilot test was conducted using students at a second middle school in Flint, Michigan that was similar in demographic characteristics to the study school. The sample consisted of 60 seventh grade students with diverse ethnic backgrounds. The majority of students in the pilot study were female (58%). Approximate completion time for the CREV ranged from 7 to 10 minutes. Students were able to complete the instrument by reading the printed directions, with no additional assistance required from the researcher.

The obtained mean score on the CREV for this sample was 41.30 (sd=17.60), with

actual scores ranging from 4 to 81. Higher scores on this scale indicate greater exposure to violence. The mean score obtained for this group was slightly higher than the mean score obtained for the Cooley et al. (1995) sample indicating that the students in the pilot test reported higher exposure to violence.

To determine the internal consistency as a measure of reliability of the instrument with these students, Cronbach alpha coefficients were obtained. The alpha coefficient for the Direct Exposure factor was .93 and .81 for the Indirect Exposure factor. The alpha coefficient for the Total scale was .93. The correlation between scores on the Direct Exposure factor and Indirect Exposure factor was .40 which provides evidence of the independence between these two scales.

Conflict Tactics Scale (CTS)

The Conflict Tactics Scale (CTS)(Straus, 1979) is a 19 item face-valid instrument which purports to measure responses to conflict by various family members. Respondents are asked to indicate (a) whether, and (b) how often, they and other family members engaged in each of nineteen behaviors described during the past year. The items can be repeated for any family role relationship (Straus, 1979). Items assess the presence and prevalence of attempts to resolve conflict related to three different strategies: discussion or reasoning, verbal aggression, and physical aggression/violence. Straus (1979) noted that the instrument has been fairly effective in avoiding socially appropriate response biases. This observation has been attributed to the ordering of items from most to least acceptable responses to violence and the presentation of physically aggressive acts in the context of more legitimate responses to family conflict.

For purposes of this study, respondents were asked to indicate the occurrence and frequency of each of 19 behaviors for both "self or another child" and "parent or other

adult in the home." Consistent with the Form N format used by Straus (1979), youngsters were asked to indicate whether the event or behavior has "ever happened in the home" (0=no, 1=yes). If the response was affirmative, the student was asked to indicate the frequency of occurrence during the past year for each of the above categories. Responses range from 0 to 6 (0=never, 1=once, 2=twice, 3=three to five times, 4=six to ten times, 5=11-20 times, and 6= more than twenty times).

Scores were obtained for each item by multiplying the response regarding occurrence by the frequency response. Item scores were then summed to obtain a score for each of the three conflict tactics scales: reasoning, verbal aggression, and physical aggression/violence.

Internal consistency of the CTS scale scores range from .51 to.76 for the Reasoning Subscale; .77 to .88 for the Verbal Aggression Subscale; and .62 to .88 for the Violence Scale (Straus, 1979). The ranges of internal consistency coefficients resulted from calculations based on responses from respondents in various role-relationships.

Validity of this instrument was indicated by the fact that the rate of severe physical assault found by nine different investigators using this instrument identified more cases of within home violence than were known to child protective service agencies. Straus and Hamby (1997) also summarized results of six studies which demonstrated substantial agreement between different members of the same family, indicating concurrent validity of the instrument.

Straus, Hamby, Finkelhor, Moore, and Runyan (1997) reported that in their review of 93 studies which used the CTS as a measure of child maltreatment, "almost all" provide evidence of construct validity in that they report findings which are consistent with previously established empirical findings on family violence (Straus et al., 1997).

Children's Attributional Style Questionnaire (CASQ)

The Children's Attributional Style Questionnaire (CASQ) is based upon the reformulated learned helplessness model of Abramson, Seligman, and Teasdale (1978) and was developed by Seligman et al (1984). This questionnaire purports to measure attributional style along the dimensions of internal-external, stable-unstable, and global-specific. The CASQ is a self-report measure of explanatory style. Each item on the CASQ includes a sentence describing a good or bad event, such as "You get an A on a test," and two phrases describing possible causes of that event, such as "because I am smart," and "because I am good at the subject the test was in." Respondents are asked to imagine the event happening to them and to check off which of the two causes describes why that event would happen to them. The CASQ includes 24 good events and 24 bad events that have to do with achievement in various domains (school, sports, peer acceptance, etc) and relationships. The CASQ provides separate measures of the child's tendency to choose internal, stable, and global explanations for positive events and for negative events. The responses are organized by dividing positive and negative events and combining responses with the internal, stable, and global dimensions yielding a total of six subscales: (1) Internal Positive, (2) Internal Negative, (3) Stable Positive, (4) Stable Negative, (5) Global Positive, and (6) Global Negative.

Composite scores are calculated to indicate the individual's characteristic attributional style for positive events and for negative events by summing the scores for the appropriate subscales (positive or negative). A index of overall attributional style is calculated by subtracting the composite negative score from the composite positive score. The lower the overall style score, the more the child explains bad events in terms of

internal, stable and global causes, while explaining good events in terms of external, unstable, and specific causes. Cronbach's alphas for the composite positive scale, composite negative scale, and overall explanatory style are .71, .66, and .73, respectively (Seligman et al., 1984).

Seligman et al. (1984) in their study of attributional style and depression among 96 third through sixth grade children, found that the reliability of the CASQ composite scores (characteristic attributions for positive and negative events) was strong (rs=.71, .66 ps<.001) over a six month test/re-test interval. In another study by Nolen-Hoeksema, Girgus, and Seligman (1986) of 168 third through fifth graders, the stability of composite explanatory style scores was .52 over a one year period. These results suggest that attributional style among children may be a somewhat stable individual characteristic, just as it is among adults (Peterson et al., 1982).

Coopersmith Self-Esteem Inventory (CSI)

The Coopersmith Self-Esteem Inventory (CSI) (1987) is designed to measure attitudes toward the self in a variety of areas. The respondent indicates whether a particular statement is characteristically "like me" or "not like me" for each of the 58 items included on the inventory. Fifty of the items are used in computing the total score, with the remaining eight items constituting a lie scale. Subscale scores are also derived related to areas of personal experience, including social, academic, personal, and the family. Internal consistency of this instrument appears strong when used with young adolescents in an urban setting. Wood, Hillman, and Sawilowsky (1994), in a study of 117 urban African-American adolescents identified as at-risk for academic failure, report a Cronbach alpha for the total scale of .82, with a coefficents of .76 and .47 for the short form and Lie

Scale, respectively.

Johnson, Redfield, Miller, and Simpson (1983) report internal consistency coefficients ranging from .61-.71 for the subscales, with an overall alpha of .86 for the total test in their sample of 105 fifth graders.

Johnson et al. (1983) demonstrated convergent validity of the Coopersmith. Pearson product-moment correlations between this instrument and two other measures of self-esteem, one self-report (the Piers-Harris Children's Self-Concept Scale) and one teacher report (the Behavioral Academic Self-Esteem Scale - BASE), are .63 and .47 respectively, both positive and significant ($p<.01$). Discriminant validity was indicated by the lack of a significant correlation between the Coopersmith and a measure of social desirability ($r=.17$, $p>.05$), demonstrating that CSI scores do not reflect measures of social desirability.

Trauma Symptom Checklist For Children (TSCC)

The Trauma Symptom Checklist for Children (TSCC)(Briere, 1996) is a 54-item pencil and paper assessment instrument which includes two validity scales (Underresponse and Hyperresponse), six clinical scales (Anxiety, Depression, Anger, Post-traumatic Stress, Dissociation, and Sexual Concerns). Form A of the TSCC includes 44 of the original 54 items, omitting 10 items which comprise the Sexual Concerns subscale. This form of the measure was chosen for use in the present study due to comments from the students in the pilot study relating to discomfort with questions relating to sexual concerns. The TSCC purports to measure post-traumatic stress and related symptomatology in children who have experienced traumatic events (witnessing violence, major losses, natural disasters, etc.). The instrument is normed for use with children ranging from eight to sixteen years and is suitable for individual or group administration.

Respondents are asked to indicate their endorsement of specific trauma-related symptoms on a four-point scale. Working time for this instrument is approximately 15 minutes.

Forms are hand-scored and accompanying Profile Forms allow for conversion of raw scores to age- and sex-appropriate T scores. The TSCC scales are internally consistent (a coefficients range from .77 to .89 in the standardization sample) and exhibit reasonable convergent, discriminant, and predictive validity in normative and clinical samples. Convergent validity was assessed through administration of the TSCC to five clinical samples concurrently with other assessment measures commonly used with clinical populations (CBCL; Achenbach, 1989; and the CDI; Kovacs, 1983). The TSCC tends to correlate most highly with the CBCL Youth Self-Report Form as might be expected given the self-report format of the instrument. See Table 3 for correlations of TSCC with CBCL and CDI scores reported by Briere and Lanktree (1995).

Table 3

Correlations of TSCC Clinical Scales with CBCL and CDI Scores

	Trauma Symptom Checklist for Children — Clinical Scales					
Instrument	ANX	DEP	PTS	SC	DIS	ANG
CBCL-PI	.16	.22*	.23*	.08	.09	.08
CBCL-PE	.31**	.26*	.22*	.21*	.13	.27*
CBCL-YI	.78**	.82**	.75**	.51**	.68**	.55**
CBCL-YE	.47**	.48**	.53**	.62**	.65**	.68**
CDI	.54**	.73**	.64**	.45**	.60**	.59**

*p<.05 **p<.01. (Briere & Lanktree, 1995).
CBCL= Child Behavior Checklist P=Parent; Y=Youth; I=Internalizing; E=Externalizing.
CDI= Children's Depression Inventory.
ANX=anxiety; DEP=depression; PTS=post-traumatic stress;SC=sexual concerns; DIS=dissociation; ANG=anger
(Briere & Lanktree, 1995)

The TSCC was standardized on a group of more than 3,000 inner-city, urban, and

suburban children and adolescents from the general population. Data from trauma and child abuse centers are also provided in the manual (Briere, 1996).

For purposes of this study, a Total Distress Index was calculated for each participant by summing the raw scores. This index reflects the extent to which the respondent endorsed various distress symptoms and frequency data. In each analysis, the Total Distress Index was used.

Beck Hopelessness Scale (BHS)

The Beck Hopelessness Scale (BHS) is a self-report instrument designed to assess three major aspects of hopelessness: feelings about the future, loss of motivation, and expectations. The 20 item true/false format allows respondents the opportunity to either endorse a pessimistic statement or deny an optimistic statement. This instrument requires approximately 5 minutes for completion.

The BHS was originally developed to measure pessimism in psychiatric populations considered to be suicidal risks, but it has been used subsequently with adolescent and adult normal populations (Greene, 1981; Johnson & McCutcheon, 1981). The instrument adheres closely to Stotland's (1969) conception of hopelessness in which the operative cognitive schemas are characterized by negative expectations for both the short- and long-term future. Specifically, hopeless individuals endorse a pervasive set of beliefs related to their lack of ability to effect or receive positive outcomes in the future.

Scores on this face-valid instrument range from 0 to 20 with a score of twenty indicating the highest level of hopelessness. General guidelines for interpretation of this instrument indicate that scores of 0 to 3 are within the minimal range, 4-8 is mild, 9-14 is moderate, and greater than 14 is severe (Beck & Steer, 1993). In two samples of mixed-diagnoses patients at the Center for Cognitive Therapy (N=21 and N=99,

respectively), reported test-retest reliability coefficients were.69 and .66, respectively ($p<.001$) (Beck & Steer, 1993).

Concurrent validity of this instrument was demonstrated by Beck (1974). Beck (1974) examined the relationship between clinical ratings of hopelessness and BHS scores in two samples. Clinicians rated 23 outpatients in a general medical practice and 62 hospitalized patients who had recently attempted suicide on an 8-point rating scale indicating level of hopelessness. Correlations with the BHS were .74 ($p<.001$) in the general practice sample and .62 ($p<.005$) in the attempted suicide sample. The interrater reliability of the two judge-clinicians was .86 ($p<.001$). Additionally, the correlation between the Beck Depression Inventory Pessimism item and the BHS was .63 ($p<.001$) for the seven normative samples (Total N= 1301).

Discriminant validity of the BHS when used with adolescents is supported by Topol and Resnikoff (1982). These authors compared BHS scores across three samples of adolescents: 30 hospitalized suicide attempters, 35 psychiatric inpatients, and 35 suburban high school students, matched for race and SES. The BHS scores indicated that the suicide attempters described a greater degree of hopelessness than either of the other two groups.

Future Orientation Index (FOI)

This index consists of two items, using a four-point Likert scale, with ratings ranging from "1" for "strongly disagree" to "4" for "strongly agree," designed to assess the participant's belief that he/she will live to the ages of 25 and 50 years. A neutral point was not included to force the participants to indicate a clear belief. This instrument was used in a pilot study at a second middle school in Flint, Michigan which is similar in demographic makeup to McKinley Middle School. The instrument was completed by 30

seventh grade students from diverse ethnic backgrounds. All students were able read and complete each item with no difficulty.

Academic Success and Attendance Measures

This measure includes each participant's grade point average for the most recent semester available (either Fall or Winter, 1996-97 academic year). Middle school personnel provided this information to the researcher from the school's computer database.

Teacher Report Form of The Child Behavior Checklist (TRF)

The Teacher Report Form of the Child Behavior Checklist (TRF)(Achenbach, 1991) is designed to obtain teachers' reports of their pupils' adaptive functioning and problems in a standardized format. It provides an efficient and economical means for comparing a particular child's school functioning with the functioning of a normative sample of peers. The format consists of 112 items inquiring about the presence and level of problems evidenced by the pupil. The teacher is asked to indicate whether each item is: 0-not true, 1-somewhat or sometimes true, or 2- very true or often true regarding a particular child. Space is allotted for the teacher to record up to 3 additional problems which are not calculated as part of the total score.

This instrument is amenable to computer scoring. Scores generated include eight syndrome scale scores which are converted to T-scores, two composite T-scores reflecting internalizing and externalizing syndrome totals, respectively, and a total T-score. The instrument has been normed on a national sample of 7 to 18 year old students representative of the student population within the 48 contiguous states with respect to SES, ethnicity, region, and urban-suburban-rural residence. Mean test-retest reliability of this instrument for the problem scales is .92. Content validity of the instrument is good.

Achenbach and his colleagues compared a group of 1,275 students who had been referred for services due to behavioral/emotional problems with a group of demographically matched pupils who had never been referred. The referred students obtained significantly higher scores on nearly all of the problem scales and significantly lower scores on all of the adaptive functioning scales than did the nonreferred students, demonstrating that TRF items address mental health characteristics. Correlations between the TRF and the Conners Revised Teacher Rating Scale indicate strong construct validity. The TRF scales correlate .80 to .83 with the Conners Conduct Problems, Inattention/Passivity, and Total problem scores (Achenbach, 1991).

Demographic Instrument

A face sheet was included with each set of questionnaires which employed a forced-choice format for responses to multiple demographic questions. Completed demographic instruments provide data on: gender, age, racial identity, grade, and length of time in the school district; as well as information regarding parent's ages, occupations, and educational levels, marital status, and living situation. The forced choice format facilitated consistency across response sets. (See Appendix G).

Data Collection Procedures

The researcher contacted the Director of Research and Testing in the Flint, Michigan school district to obtain permission to use middle school students from that district in a study of the effects of violence exposure on cognitive style and academic functioning. Once permission was granted, the researcher obtained a list of middle schools in the district, along with a brief description of each school. McKinley Middle School was

selected due to the fact that it is the most representative of the entire district in terms of the ethnic breakdown of the students. Both grade levels to be included in the study (seventh and eighth) were represented in the student body and enrollment is large enough to ensure that an adequate sample size was obtained.

Following preliminary approval of data collection procedures by the Directory of Research and Testing, the researcher contacted the principal at the middle school to discuss the procedural issues related to data collection. Prior to the data collection, the researcher met with the school's teachers to provide them with information about the purpose and relevance of this study, the procedures for administering the instruments, and the type of information to be collected. The researcher met with the teachers and principal at a staff meeting to review this information and respond to questions. School personnel (through the Department of Research and Testing) provided the researcher with a student roster and their addresses.

Parental consent forms were mailed to the students' homes three weeks prior to data collection for parents to review. Parents were informed as to the purpose of the study and general procedures to be employed in the study, as well as potential risks associated with participation. Based on research by MacGregor and McNamara (1995) which studied the return procedures involving parent consent forms with adolescent populations which found that even when consent forms are mailed to the homes, the return rate for active consent forms was 6.4%, despite the mention in a cover letter of incentives provided for children when the consent was returned and that of Levine (1995) who noted that relying on active consent forms can drastically reduce the number of participants, as well as potentially biasing results of a study, and per policy of the Flint

School District Department of Research, parents were asked to complete and return the form only if they did not wish their child to participate in the study.

Permission letters were mailed to all parents of the 640 seventh and eighth grade students enrolled at McKinley middle school as of September 5, 1997. Letters requested that parents who did not want their child to participate respond either verbally or in writing to the McKinley School principal or to the investigator. Three of the letters were returned through the mail indicating that the student was either no longer enrolled at McKinley or no longer living at the stated address. One parent called the investigator to request that her child not be included in the study and eighteen (twelve seventh grade and six eighth grade) parents returned the consent form indicating that they did not consent to their child's participation. The principal of the school then randomly selected four intact homerooms from each of the two grade levels. "Intact" represents that no students within that homeroom had been prohibited from participating by their parents. At the time of data collection, the principal read aloud the list of students who were not permitted to participate to ensure that none of them had inadvertently been selected for participation.

The student component of data collection was accomplished in two sessions held on the same day in consecutive 75-minute blocks. Students were brought to the administration site (the school cafeteria) by grade level. The four seventh grade homerooms entered the site at 8:15 a.m. just following attendance. The four eighth grade homerooms were ushered in at 9:40 a.m. Instrument packets were provided to each student as they were seated at the oblong tables. The researcher assigned a 3-digit identification number to each instrument in the packet prior to distribution. The purpose of this coding was to assure that instruments would be identifiable if they became separated

from the packet.

To maximize standardization in data collection procedures, the researcher read a brief introduction and prepared statement regarding the purpose of the study and encouraging student participation aloud to students before distributing the questionnaire packets. Each participant was provided with a packet containing the six questionnaires to be completed, as well as a demographic sheet and a Student Assent Form. Questionnaires were presented in counter-balanced order to eliminate any confounding factors resulting from order effects. All participants were informed that the researcher would be available during data collection for questions or consultation should procedural issues arise. Students were asked to place their completed packets in the provided envelope, seal the envelope, and place them in a box provided at the front of the cafeteria at the end of the data collection period. Boxes were collected immediately by the researcher at the end of the period. All student data collection was completed during the designated 75 minute periods. Students who were absent from class during these periods were not included in the study. To maximize compliance with instructions provided by the researcher and to encourage student participation, all students who completed the instrument packet in the prescribed manner were entered into a drawing for a $50.00 prize. Students were informed of this drawing prior to completing the instruments, and the researcher checked all forms for completeness and appropriateness prior to entering the students' name into the drawing. The drawing was held at the school eight days following the data collection period, when the researcher returned to collect the TRF forms from the teachers, with the prize awarded at that time.

McKinley utilizes blocking, whereby a team of teachers is assigned to a particular

"block" of students. Each team has a teacher who is designated as the "leader." Team leaders completed the TRF forms for students within their respective blocks. The teachers were provided with TRF forms for participants in his/her block. Each teacher was requested to complete his/her TRFs within the week. The researcher returned to the school to collect the completed TRF forms eight days following student data collection. One teacher had failed to complete her TRF forms at that time. The principal of the school mailed them to the researcher the following week.

The final data collection procedure was to obtain the grade point average from the most recent semester of the 1996-97 school year. Clerical staff at the middle school provided the researcher with a listing of students by class and their grade point averages from the two 1996-97 academic semesters

Data Analysis

The data obtained for each student were entered into a data file for statistical analyses using the SPSS—Windows Version 7.5. A description of the sample uses frequency distributions and measures of central tendency and dispersion. The hypotheses were tested using inferential statistical analyses, including multiple analysis of variance, one-way analysis of variance, Pearson product moment correlations, stepwise multiple regression analysis, and linear discriminant function analysis. All decisions on the statistical significance of the findings were made using an alpha level of .05. The specific tests that were used to test each of the hypotheses are presented in Figure 2.

Figure 3

Statistical Analysis

<table>
<tr><th>Hypotheses</th><th>Variables</th><th>Statistical Analysis</th></tr>
<tr><td colspan="3">1) Are there differences in self-esteem, attributional style, future orientation , distress symptoms, and academic functioning among middle school children who have been exposed to different levels of violence after removing the effects of exposure to intrafamily violence?</td></tr>
<tr><td>H_1: Middle school children who have been exposed to different levels of violence will differ in self-esteem, attributional style, hopelessness, future orientation , distress symptoms, and academic functioning after removing the effects of exposure to intrafamily violence.

H_{1a}: Children exposed to higher levels of violence in the community will demonstrate higher self-concept scores as measured by the Coopersmith Self-Esteem Inventory.

H_{1b}: Children exposed to higher levels of violence will demonstrate a more externalizing attributional style as measured by the Attributional Style Questionnaire.

H_{1c}: Children exposed to higher levels of violence will demonstrate a more hopeless future orientation as measured by the Beck Hopelessness Scale and future orientation index.

H_{1d}: Children exposed to higher levels of violence will demonstrate a greater number of distress symptoms as measured by the Trauma Symptom Checklist for Children.

H_{1e}: Children exposed to higher levels of violence will demonstrate less adaptive academic functioning as measured by their GPA, # of missed classes, and their teacher rated problem behaviors as measured by the Teacher Report Form of the CBCL.</td><td><u>Independent Variable:</u>
Exposure to violence status:
High Exposed
Low Exposed

<u>Dependent Variables:</u>
Coopersmith Global Self-Esteem Score

Scores on the ASQ
• Positive Internality
• Negative Internality
• Positive Stability
• Negative Stability
• Positive Globality
• Negative Globality

Beck Hopelessness Scale:
• Hopelessness Index
• Future Orientation Index

TSCC Total Score

Grade Point Average

Number of Missed Days

TRF/CBCL Scores
• Internalizing Total
• Externalizing Total
• Overall Total

<u>Covariate</u>
CTS Intrafamily Violence Scale
• Parent or Other Adult
• Student or Other Child</td><td>A MANCOVA was used to determine if there are differences among the respondents for self-esteem, attributional style, future orientation, distress symptoms, and academic functioning relative to the students' exposure to violence after removing the effects of exposure to intrafamily violence.

If a statistically significant difference was found on the MANCOVA, univariate F tests were interpreted to determine which of the dependent variables considered separately is contributing to the significant result.</td></tr>
<tr><td colspan="3">2.) Is there a relationship between frequency of exposure to violence and self-esteem, attributional style, future orientation, distress symptoms, and academic functioning after removing the effects of intrafamily violence?</td></tr>
</table>

Hypotheses	Variables	Statistical Analysis
H_2: Self-concept, attributional style, future orientation, distress symptoms, and academic functioning are related to the frequency of exposure to violent events as measured by the Children's Report of Exposure to Violence after removing the effects of intrafamily violence.	CSI Total Score ASQ Scores Beck Hopelessness Scale Score Future Orientation Index TSCC Score Academic Functioning Measure Children's Report of Exposure to Violence Total Partial correlation CTS - Intrafamily Violence	Partial correlations were used to determine the strength and direction of the relationships between CSI total score, ASQ scores, Beck Hopelessness scores, Future Orientation Index, TSCC Score, and Academic Functioning Measure with children's report of exposure to violence total score
3.) Is exposure to violence associated with the expression of a characteristic pattern of cognitions: a higher than average self-concept, an external attributional style, high level of hopelessness, and low future orientation?		
H_3: A participant's pattern of cognitions (as evidenced by his/her scores on the CSI, ASQ, and BHS) will predict membership in either the high violence exposure or low violence exposure group.	<u>Predictor Variables:</u> CSI Total ASQ Scores BHS Index Future Orientation Index <u>Outcome Variables:</u> Group membership as determined by split halves on the CREV: High exposed Low exposed	A linear discriminant function analysis was performed to predict group membership (high vs. low violence exposure) based on the three predictor variables of self-concept, attributional style, hopelessness, and future orientation.
4.) Is the effect of exposure to violence on academic functioning mediated by distress symptoms and/or a specific cognitive style?		
H_4: The effect of exposure to violence on academic functioning is mediated by a pattern of cognitions and/or distress symptoms.	<u>Dependent Variables:</u> Academic functioning Composite z-scores <u>Independent Variable:</u> CREV Score Cognitive Style Variables (bivariate) TSCC Total Distress Index	A stepwise regression analysis was used to identify the effect of exposure to violence on academic functioning and the presence of mediating variables: distress symptoms and cognitive style.
5.) Is there a relationship between the participants' self-concept, attributional style, future orientation, academic functioning, distress symptoms, frequency of violence exposure and the participants' gender, ethnicity, maternal presence in the home, maternal education, and SES?		
H_{5a}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to their gender.	<u>Dependent Variables:</u> CSI Score ASQ Scores BHS Index Future Orientation Index Academic Functioning Composite TSCC Score CREV Score <u>Independent Variable:</u> Gender	A MANOVA was used to determine if there are differences among the respondents for self-esteem, attributional style, hopelessness, future orientation, distress symptoms, and academic functioning relative to their gender. If a statistically significant difference was found on the MANOVA, univariate F tests

Hypotheses	Variables	Statistical Analysis
		were interpreted to determine which of the dependent variables considered separately is contributing to the significant result.
H_{5b}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to their ethnicity.	Dependent Variables: CSI Score ASQ Scores BHS Index Future Orientation Index Academic Functioning Composite TSCC Score CREV Score Independent Variable: Ethnicity	A MANOVA was used to determine if there are differences among the respondents for self-esteem, attributional style, hopelessness, future orientation, distress symptoms, and academic functioning relative to the students' ethnicity . If a statistically significant difference was found on the MANOVA, univariate F tests were interpreted to determine which of the dependent variables considered separately is contributing to the significant result.
H_{5c}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to a maternal presence in the home.	Dependent Variables: CSI Score ASQ Scores BHS Index Future Orientation Index Academic Functioning Composite TSCC Score CREV Score Independent Variable: Maternal presence in home	A MANOVA was used to determine if there are differences among the respondents for self-esteem, attributional style, hopelessness, future orientation, distress symptoms, and academic functioning relative to maternal presence in the home. If a statistically significant difference was found on the MANOVA, univariate F tests were interpreted to determine which of the dependent variables considered separately is contributing to the significant result.
H_{5d}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to their mother's level of education.	Dependent Variables: CSI Score ASQ Scores BHS Index Future Orientation Index Academic Functioning Composite TSCC Score CREV Score Independent Variable: Maternal education	A MANOVA was used to determine if there are differences among the respondents for self-esteem, attributional style, hopelessness, future orientation, distress symptoms, and academic functioning relative to the level of maternal education.

Hypotheses	Variables	Statistical Analysis
		If a statistically significant difference was found on the MANOVA, univariate F tests were interpreted to determine which of the dependent variables considered separately is contributing to the significant result.
H_{5e}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to their grade level.	Dependent Variables: CSI Score ASQ Scores BHS Index Future Orientation Index Academic Functioning Composite TSCC Score CREV Scores Independent Variable: Grade level	A MANOVA was used to determine if there are differences among the respondents for self-esteem, attributional style, hopelessness, future orientation, distress symptoms, and academic functioning relative to socioeconomic status of the student's family. If a statistically significant difference was found on the MANOVA, univariate F tests were interpreted to determine which of the dependent variables considered separately is contributing to the significant result.

CHAPTER IV

RESULTS OF STATISTICAL ANALYSIS

Chapter IV presents the results of the statistical analyses that were used to test each of the hypotheses and answer the research questions. These analyses are divided into two sections. The first section is a descriptive analysis of the personal characteristics of the participants in the study. The analysis performed on each of the items is a frequency distribution. The second section summarizes the results of the inferential statistical procedures that were performed to test each of the hypotheses. The statistical significance of each of the inferential tests was determined using an alpha level of 0.05.

Descriptive Analysis

A total of 224 middle school students from one urban midwestern middle school participated in this study. Participants were selected in the following manner. Permission letters were mailed to all parents of seventh and eighth grade students enrolled at McKinley middle school as of September 5, 1997 (N=640). Letters requested that parents who did not want their child to participate respond either verbally or in writing to the McKinley School principal or to the investigator. Three of the letters were returned through the mail indicating that the student was either no longer enrolled at McKinley or no longer living at the stated address. One parent called the investigator to request that her child not be included in the study and 18 (12 seventh grade and 6 eighth grade) parents returned the consent form indicating that they did not consent to their child's participation. The principal of the school then randomly selected four intact homerooms from each of the two grade levels. "Intact" represents that no students within that homeroom had been prohibited from participating by their parents. All participants were

enrolled in either seventh or eighth grade. The total number of participants from each grade level is presented in Table 4.

Table 4

Frequency Distribution
Students' Grade Level

Grade Level	Frequency	Percent
Seventh Grade	112	50.9
Eighth Grade	108	49.1
Total	220	100.0

Missing=4

A similar number of students were in the seventh (n=112, 50.9%) and eighth grades (n=108, 49.1%). Four students did not indicate their grade level on the survey.

All students were asked to complete a demographic information sheet to provide the researcher with background information about each participant. Each of the items on the demographic questionnaire has been summarized and is presented in the form of a frequency distribution.

Students were asked to indicate their gender by circling either "boy" or "girl". The summarized results of this item are presented in Table 5.

Table 5

Frequency Distribution
Students' Gender

Gender	Frequency	Percent
Male	98	44.5
Female	122	55.5
Total	220	100.0

Missing=4

Ninety-eight (44.5%) students indicated that their gender was male. One hundred twenty-two (55.5%) reported that their gender was female. Four students did not respond to this item.

Participants were asked to report their age by circling the number corresponding to their age in years. The summarized results of this item are presented in Table 6.

Table 6

Frequency Distribution
Students' Age in Years

Age in Years	Frequency	Percent
11	7	3.2
12	68	31.2
13	88	40.4
14	48	22.0
15	7	3.2
Total	218	100.0

Missing=6

The largest number of students (n=88, 40.4%) indicated that they were 13 years of age. Sixty-eight (31.2%) students indicated that they were 12 years old and 48 (22.0%) indicated that they were 14 years old. Seven (3.2%) students reported that they were 11

years old and an equal number (N=7, 3.2%) indicated their age as 15 years. The mean age of the participants was 12.91 (sd=.89) years, with a median of 13 years. Six students failed to provide their age when completing the demographic questionnaire.

Students were asked to indicate their race by circling one or more of the options provided on the demographic questionnaire. The results of the responses are provided in Table 7.

Table 7

Frequency Distribution
Students' Race

Race	Frequency	Percent
African-American	89	40.6
White	94	43.0
Asian	2	0.9
Hispanic	7	3.2
Native American	14	6.4
Other (biracial, other minority)	13	5.9
Total	219	100.0

Missing=5

Ninety-four students (43.0% of the sample) reported that they were Caucasian. Eighty-nine students (40.6%) indicated that they were African-American, while 7 Hispanics made up 3.2% of the sample. Fourteen students (6.4%) circled Native American and thirteen (5.9%) circled "other". Two students indicated that they were Asian (0.9%). Five students failed to respond to this item on the questionnaire.

Participants were asked to indicate their primary caregiver. Results of the responses are summarized in Table 8.

Table 8

Frequency Distribution
Students' Primary Caregiver

Primary Caregiver	Frequency	Percent
Mother	113	52.1
Father	14	6.5
Both parents	72	33.2
Grandparent	9	4.1
Foster parent	4	1.8
Other relative	4	1.8
Other non-relative	1	0.5
Total	217	100.0

Missing=7

The greatest number of students (n=113, 52.1%) indicated that they live with their mother; 72 (33.2%) with both parents, and 14 (6.5%) with father only. Of the remaining students, 9 reported living with a grandparent (4.1%), 4 (1.8%)with a foster parent, and the same number (n=4, 1.8%) with another relative (non-parent/grandparent). Finally, 1 student (0.5%) reported living with an adult "other" than a relative or foster parent and 7 students failed to respond to this item.

Participants were asked to indicate the number of adults (over age 21) currently living in their home. Table 9 presents the summarized results of this item.

Table 9

Frequency Distribution
Number of Adults Living At Home

Number of Adults in Home	Frequency	Percent
One	62	29.0
Two	112	52.3
Three or more	40	18.7
Total	214	100.0

Missing=10

The majority of respondents (N=112, 52.3%) indicated that there are two adults in the home. Sixty-two (29.0%) students reported only one adult in the home, whereas 40 students (18.7%) responded that three or more adults live with them. Ten students did not respond to this item.

Each student was asked to indicate his/her mother's level of education. The summarized results are presented in Table 10.

Table 10
Frequency Distribution
Mother's Educational Level

Mother's Educational Level	Frequency	Percent
Did not finish 7th grade	1	0.5
Finished 8th & 9th grade	11	5.3
Some high school	31	14.9
Graduated from high school	61	29.3
Some college	41	19.7
Graduated from college	36	17.3
Completed graduate school	27	13.0
Total	208	100.0

Missing=16

Sixty-one students (29.3%) reported that their mothers had graduated from high

school. Forty-one (19.7%) indicated that their mothers had attended some college and 36 participants (17.3%) reported that their mothers graduated from college. Thirty-one students (14.9%) indicated that their mothers attended some high school and 27 (13.0%) reported that their mothers completed graduate school. Eleven (5.3%) of the students reported that their mothers completed the eighth and ninth grades and one student indicated that his/her mother did not complete seventh grade. Eight students indicated that they had no information about their mothers' educational level and an additional 8 student did not respond to this item.

Students were asked to indicate their father's highest level of education. Table 11 presents the summarized results of this item.

Table 11

Frequency Distribution
Father's Educational Level

Father's Educational Level	Frequency	Percent
Did not finish 7th grade	2	1.1
Finished 8th & 9th grade	9	5.0
Some high school	16	8.8
Graduated from high school	60	33.1
Some college	33	18.2
Graduated from college	27	14.9
Completed graduate school	34	18.8
Total	211	100.0

Missing=43

Sixty students (33.1%) reported that their fathers had graduated from high school. Thirty-three (18.2%) reported that their fathers attended some college and 27 (14.9%) indicated that their father had graduated from college. Thirty-four (18.8%) students report

that their fathers completed graduate school, whereas two (1.1%) students reported that their fathers did not complete seventh grade. Nine students (5.0%) reported that their father completed seventh and eighth grade and 16 (8.8%)reported that their father attended some high school. Thirty students indicated that they had no information about their father's educational level and 13 students did not complete this item.

Students were asked to indicate their family's main source of income. Results of the responses on this item are summarized in Table 12.

Table 12

Frequency Distribution
Family's Primary Source of Income

Primary source of income	Frequency	Percent
Mother	93	48.9
Father	75	39.5
Other guardian	10	5.3
Other (ADC, SSI, etc.)	12	6.3
Total	190	100.0

Missing=34

Ninety-three students (48.9%) reported that their mothers provide the main family income and 75 (39.5%) indicated that their fathers are the primary source of income. Ten students (5.3%) report that another adult provides the family income and 12 students (6.3%) indicate that the family is supported either through public assistance or some other source of support. Thirty-four students did not respond to this item.

Students were asked to provide information about the primary income earner's occupation. The summarized responses to this item are presented in Table 13.

Table 13

Frequency Distribution
Primary Income Holder's Occupation

Occupation	Frequency	Percent
Professional/Technical	1	1.3
Upper Management/Executive	12	15.8
Middle Management/Administrator	25	32.9
Sales/Marketing	5	6.6
Clerical/Service Worker	10	13.2
Tradesman/Machine Operator/Laborer	9	11.8
Farm Owner/Operator	5	6.6
Unskilled Worker	8	10.5
Welfare	1	1.3
Total	76	100.0

Missing=148

One hundred forty-eight students (66.1%) did not respond to this item. Of the seventy-six students responding to the item, 25 (32.9%) primary wage-earners' occupations were classified as Middle Management/Administrator. Twelve (15.8%) were reported as Upper Management/Executive and one (1.3%) as Professional/Technical. Ten (13.2%) of the respondents indicated that the primary wage-earner was employed in a Clerical/Service Worker position, 5 (6.6%) were classified as Farm Owner/Operators, 9 (11.8%) as Tradesman/Machine Operator/Laborers. Eight participants (10.5%) indicated that the primary wage-earner worked as an Unskilled Worker, and one student (1.3%) indicated that the family income is provided through the Welfare system.

A two-factor Hollingshead Socioeconomic Status analysis was used to categorize the socioeconomic status (SES) of families in the study based on the educational level and occupational type of the primary income holder. Results of this analysis are presented in Table 14.

Table 14

Frequency Distribution
Hollingshead Socioeconomic Distribution
Heads of Households of Students in the Study

Socioeconomic Class	Frequency	Percent
Class I (Upper)	1	1.8
Class II (Upper Middle)	24	42.1
Class III (Middle)	13	22.8
Class IV (Lower Middle)	14	24.6
Class V (Lower)	5	8.8
Total	57	100.0

Missing=167

The families of students for whom both factors involved in the calculation of SES were available (N=57, 25.4% of the total sample) were classified into five socioeconomic classes, with most families falling into the three middle classes. Of those families classified, one family (1.8%) was considered to be in the upper class, whereas 5 families (8.8%) were considered to fall into the lower class. The remaining 51 families (89.5%)were considered to fall into the middle-class categorization: upper-middle, middle, and lower middle.

Description of Responses to the Children's Report of Exposure to Violence (CREV)

Students completed the Children's Report of Exposure to Violence. Frequency distributions were generated to facilitate comparisons regarding type and frequency of violence exposure within the sample, as well as to allow comparisons between the present study and previous research. Summarized results of this survey instrument, by item, are presented in Table 15.

Table 15

Frequency Distribution
Responses to CREV by Item

Item Number and Description	No/Never	One Time	Few Times	Many Times	Every Day	Missing/No Response
	Frequencies in Percentages					
1. Watched someone beaten up on TV	1.3	3.6	14.3	51.8	23.7	5.4
2. Someone told you stranger beaten up	21.0	7.1	38.8	22.8	4.5	5.8
3. Have seen stranger beaten up	28.1	17.4	30.4	12.5	2.2	9.4
4. Watched someone chased/threatened on TV	4.0	6.3	20.5	45.5	17.4	6.3
5. Someone told you stranger chased/threatened	33.5	12.1	26.8	17.4	4.5	5.8
6. Have seen stranger chased/threatened	43.8	17.4	17.4	11.6	4.0	5.8
7. Watched someone robbed/mugged on TV	6.7	7.6	19.6	46.0	14.3	5.8
8. Someone told you stranger robbed/mugged	32.1	15.6	29.5	14.3	2.7	5.8
9. Have seen stranger robbed/mugged	59.8	16.5	11.6	4.5	1.3	6.3
10. Watched someone shot/stabbed on TV	7.1	7.6	20.1	47.3	13.8	4.0
11. Someone told you stranger shot/stabbed	28.1	16.5	33.5	15.2	1.8	4.9
12. Have seen stranger shot/stabbed	64.3	17.0	8.0	4.0	1.8	4.9
13. Watched someone killed on TV	6.7	4.0	19.2	52.2	13.4	4.5
14. Someone told you stranger killed	33.5	17.4	26.3	16.1	2.2	4.5
15. Have seen stranger being killed	72.8	7.1	4.0	3.1	1.3	11.6
16.Someone told you someone you know beaten up	13.8	13.4	37.1	25.9	2.7	7.1
17.Have seen someone you know being beaten up	22.8	16.5	37.1	14.3	2.7	6.7
18.Someone told you someone you know was chased/threatened	37.1	17.9	24.1	13.4	.9	6.7
19.Have seen someone you know chased/threatened	46.4	18.8	19.2	8.5	1.3	5.8
20.Been told someone you know robbed/mugged	36.2	18.8	26.3	8.9	1.8	8.0
21.Seen someone you know robbed/mugged	65.2	12.1	7.1	5.8	1.7	8.0
22.Been told someone you know shot/stabbed	36.2	26.3	19.6	8.5	1.8	7.6

Table 15, cont'd

Frequency Distribution
Responses to CREV by Item

Item Number and Description	No/Never	One Time	Few Times	Many Times	Every Day	Missing/No Response
	Frequencies in Percentages					
23.Seen someone you know shot/stabbed	67.9	12.5	6.3	5.4	1.3	6.7
24. Been told someone you know killed	39.7	21.0	20.5	10.7	.9	7.1
25. Seen someone you know being killed	75.9	8.0	4.9	2.2	2.2	6.7
26. You have been beaten up	38.4	22.8	21.9	7.6	3.6	5.8
27. You have been chased/threatened	53.1	19.2	13.8	7.6	.9	5.4
28. You have been robbed/mugged	77.2	9.8	4.5	1.3	1.3	5.8
29. You have been shot/stabbed	78.6	10.7	1.3	2.2	.9	6.3

Description of Continuous Variables

Eight instruments were completed by the participants in this study. Additionally, an instrument (the Teacher Report Form) was completed by each participant's teacher and each student's grade point average for the preceding semester was extracted from his/her academic record. These three components comprise the data set for each participant.

One instrument, the Conflict Tactics Scale (Straus, 1979), elicited inconsistent and invalid response patterns from the students. Only four of the 224 participants completed the instrument according to the written and verbal instructions provided during administration. The information obtained from these protocols was not deemed to

accurately represent students' experiences due to either non-compliance or lack of understanding. Hence, this instrument was eliminated from the analyses.

The summarized responses on each measure are presented in Table 16.

Table 16

Frequency Distribution
Descriptive Statistics by Instrument

Instrument		N		Mean	Median	Std. Deviation	Minimum	Maximum
		Valid	Missing					
Teacher Report Form (TRF)		147	77	46.35	46.00	10.42	33.00	75.00
Children's Report of Exposure to Violence (CREV)	Direct Exp.	224	0	24.36	22.00	15.01	.00	84.00
	Indir. Exp.	224	0	7.77	9.00	2.59	.00	12.00
Children's Attributional Style Questionnaire (CASQ)		224	0	3.99	4.00	4.27	-8.00	17.00
Trauma Symptom Checklist For Children- Version A (TSCC-A)		224	0	38.76	33.00	24.90	.00	117.00
Beck Hopelessness Scale (BHS)		224	0	4.66	3.00	4.00	.00	19.00
Coopersmith Self-Esteem Inventory (CSI)		224	0	23.79	26.00	7.57	.00	34.00
Future Orientation Index (FOI)		224	0	4.12	4.00	1.57	2.00	8.00
Grade Point Average (GPA)		137	87	2.52	2.58	.94	.00	4.00

Research Questions and Hypotheses

Five research questions with associated hypotheses were addressed in this study.

Statistical analysis, including multiple analysis of variance (MANOVA), partial correlations, linear discriminant function analysis, and stepwise multiple linear regression were used in the analyses to test these hypotheses. All decisions on the statistical significance of the findings were made using an alpha level of .05.

> *Research question 1*. Are there differences in self-esteem, attributional style, future orientation, distress symptoms, and academic functioning among middle school children who have been exposed to different levels of violence?

This research question was answered by testing the following hypothesis:

H_1: Middle school children who have been exposed to different levels of violence will differ in self-esteem, attributional style, hopelessness, future orientation, and distress symptoms.

To test this hypothesis, multiple analysis of variance (MANOVA) was employed, with scores on self-esteem, attributional style, hopelessness, future orientation, and distress symptoms (collectively referred to "psychological functioning variables") used as the dependent variables in this analysis. The independent variable was level of exposure to violence, high and low. Students whose scores were at or below 28 were below the 33rd percentile and comprised the "low exposure" group, Students whose scores were above 42 were above the 66th percentile and comprised the "high exposure"group. The frequency distribution of cases is presented in Table 17.

Table 17

Distribution of Students to Violence Exposure Groups

Level of Violence Exposure	Frequency	Percent
Low	75	33.5
Middle	70	31.3
High	79	35.3
Total	224	100.0

Seventy-five (33.5%) of the students had scores up to 28 and were included in the low exposure to violence group, with 70 (31.3%) students having scores between 29 and 42 classified in the middle group. The remaining 79 (35.3%) students had scores over 42 and comprised the high exposure to violence group.

The scores on the five dependent variables were compared between the high and low exposure to violence groups. The students in the middle group were excluded from this analysis. The results of this analysis are presented in Table 18.

Table 18

Multiple Analysis of Variance
Psychological Functioning by Level of Exposure to Violence

	Value	DF	F Ratio	Sig of F	Effect Size
Hotelling's Trace	.19	6/147	4.76	<.000	.16

The Hotelling's Trace of .19 produced on the MANOVA was statistically significant. This finding was supported by the F ratio of 4.76 which was statistically significant at an alpha level below .000 with 6 and 147 degrees of freedom. Based on this finding, there appears to be a difference between the high and low exposure to violence groups on psychological functioning measures. The effect size of .16 obtained

on this analysis provides evidence of a moderate effect supporting the statistical significance of the findings.

Five subhypotheses were developed to examine each of the dependent measures separately. These hypotheses are:

> H_{1a}: Children exposed to higher levels of violence in the community will demonstrate higher self-concept scores as measured by the Coopersmith Self-Esteem Inventory.
>
> H_{1b}: Children exposed to higher levels of violence will demonstrate a more externalizing attributional style as measured by the Attributional Style Questionnaire.
>
> H_{1c}: Children exposed to higher levels of violence will demonstrate a more hopeless future orientation as measured by the Beck Hopelessness Scale and future orientation index.
>
> H_{1d}: Children exposed to higher levels of violence will demonstrate a greater number of distress symptoms as measured by the Trauma Symptom Checklist for Children.
>
> H_{1e}: Children exposed to higher levels of violence will demonstrate less adaptive academic functioning as measured by their GPA and their teacher rated problem behaviors as measured by the Teacher Report Form of the CBCL.

Descriptive statistics were obtained on each of the dependent variables to provide the reader with information regarding the individual variables included in this analysis. Table 19 presents the results of this analysis.

Table 19

Descriptive Statistics
Psychological Functioning by Level of Exposure to Violence

Dependent Variable	Number	Mean	SD
Self-Esteem (Total Score)			
Low Exposure to Violence	75	25.25	7.01
High Exposure to Violence	79	23.22	7.50
Hopelessness			
Low Exposure to Violence	75	4.00	3.61
High Exposure to Violence	79	5.24	4.39
Future Orientation Scale			
Low Exposure to Violence	75	4.09	1.38
High Exposure to Violence	79	3.93	1.61
Trauma			
Low Exposure to Violence	75	30.37	20.38
High Exposure to Violence	79	47.43	24.49
Composite Positive Attributions			
Low Exposure to Violence	75	12.36	3.49
High Exposure to Violence	79	10.91	3.54
Composite Negative Attributions			
Low Exposure to Violence	75	7.23	3.06
High Exposure to Violence	79	8.20	3.49

As the findings of the MANOVA produced evidence of a statistically significant difference between high and low exposure to violence groups on the five measures of psychological functioning, the tests of between subjects effects were examined. The results of these analyses are presented in Table 20.

Table 20

Tests of Between Subjects Effects
Psychological Functioning by Level of Exposure to Violence

Dependent Variable	Sum of Squares	DF	Mean Square	F Ratio	Sig of F
Self-Esteem (Total Score)					
Between	159.82	1	159.82	3.03	.084
Within	8025.53	152	52.80		
Hopelessness					
Between	80.74	1	80.74	6.52	.012
Within	1881.66	152	12.38		
Future Orientation Scale					
Between	36.64	1	36.64	3.39	.067
Within	1641.91	152	10.80		
Trauma					
Between	11193.13	1	11193.13	21.95	.000
Within	77509.04	152	509.93		
Composite Positive Attributions					
Between	1.02	1	1.02	.45	.502
Within	344.19	152	2.26		
Composite Negative Attributions					
Between	59.21	1	59.21	3.64	.058
Within	2472.43	152	16.27		

*p≤.05

Two of the five dependent variables, hopelessness and trauma symptoms, differed between the high and low exposure to violence groups. The dependent variables, self-esteem, future orientation, positive attributional style, and negative attributional style did not differ between the students in the low and high exposure to violence group.

The F ratio of 6.52 obtained for hopelessness was statistically significant at an alpha level of. 05 with 1 and 152 degrees of freedom. This result showed that students who had high exposure to violence (m=10.91, sd=3.54) had significantly lower scores on hopelessness than students with low exposure to violence (m=12.36, sd=3.49).

When the scores for the high and low exposure to violence groups were compared on trauma symptoms, the obtained F ratio of 21.95 was statistically significant at an alpha

level of .05 with 1 and 152 degrees of freedom. An examination of the mean scores for the two groups showed that students in the high exposure to violence group (m=47.42, sd=24.49) had significantly higher scores than students in the low exposure to violence group (m=30.37, sd=20.38).

Based on these findings, there appears to be a difference in hopelessness and trauma between the students in the high and low exposure to violence group. The differences between the two groups on self-esteem, future orientation, positive attributions and negative attributions were minimal and not considered statistically significant.

Research question 2. Is there a relationship between frequency of exposure to violence and self-esteem, attributional style, future orientation, and distress symptoms?

Correlation analysis was used to test the following hypothesis:

H_2: Self-concept, attributional style, future orientation, and distress symptoms are related to the frequency of exposure to violent events as measured by the Children's Report of Exposure to Violence.

An intercorrelation matrix was generated to reflect the Pearson product moment correlations between self-concept, attributional style, future orientation, hopelessness, and distress symptoms and the frequency of exposure to violent events. The results of this analysis are presented in Table 21.

Table 21

Correlation Analyses
Psychological Functioning Measures by Exposure to Violence

Psychological Functioning Measures	r Value	Sig of r
Attributional Style		
Composite Positive	-.116	.083
Composite Negative	.134*	.045
Hopelessness	.196*	.003
Future Orientation	.026	.698
Self Esteem	-.235*	.000
Trauma	.318*	.000

*p<.05

Four variables: composite negative attributional style (r=.134, p=.045), hopelessness (r=.196, p=.003), self-esteem (r=.235, p≤.000), and trauma symptoms (r=.318, p≤.000), were found to be significantly correlated with children's reported level of exposure to violence. The other variables, composite positive attributional style and future orientation, were not significantly correlated with violence exposure levels. Based on these findings the null hypothesis of a relationship between psychological functioning and children's reported level of exposure to violence was retained.

> *Research question 3.* Is exposure to violence associated with the expression of a characteristic pattern of cognitions: a higher than average self-concept, an external attributional style, high level of hopelessness, and low future orientation?

Discriminant analysis was used to test the following hypothesis:

H_3: A participant's pattern of cognitions (as evidenced by his/her scores on the CSI, ASQ, and BHS) will predict membership in either the high violence exposure or low violence exposure group.

The participants' level of exposure to violence (high or low) was used as the criterion variable in a discriminant analysis. The predictor variables in this analysis were total self-esteem, overall attributional style, hopelessness, and future orientation. The

results of this analysis are presented in Table 22.

Table 22

Discriminant Analysis
Exposure to Violence (High and Low)

Standardized Canonical Discriminant Function Coefficients	Value
Total (General) Self-Esteem	.433
Social Self/Peers Subscale	-.827
Home/Parents Subscale	.265
School-Academic Subscale	.212
Overall Attributional Style	
Composite Negative	-.451
Composite Positive	.553
Hopelessness	-.046
Future Orientation Index	.027

The chi-square value of 28.35 (df=8, p=.000) obtained on the discriminant analysis was statistically significant indicating the four predictor variables could be used to predict classification of students as having either high or low exposure to violence.

The students were classified using the coefficients obtained from the discriminant analysis. Table 23 presents the results of these analyses.

Table 23

Classification Table
Exposure to Violence

Original Classification	Predicted Group Membership					
	Low Exposure		High Exposure		Total	
	Number	Percent	Number	Percent	Number	Percent
Low Exposure	51	68.0	24	32.0	75	100.0
High Exposure	29	36.7	50	63.3	79	100.0
Ungrouped Cases	39	55.7	31	44.3	70	100.0

The discriminant function was able to classify 65.6% of the cases correctly. Fifty-one (68.0%) of the 75 students who were in the low exposure to violence group were correctly classified using the discriminant function as low exposure. Fifty (63.3%) of the 79 students who were included in the high exposure to violence group were correctly classified. Among the ungrouped cases (students who were not previously classified as having either high or low exposure to violence), 39 (55.7%) were classified as having low exposure to violence and 31 (44.3%) were classified as having high exposure to violence. Based on the findings of this analysis, the null hypothesis was rejected.

Research question 4. Is the effect of exposure to violence on academic functioning mediated by distress symptoms and/or a specific cognitive style?

Stepwise multiple linear regression analysis was used to test the following hypothesis:

H_4: The effect of exposure to violence on academic functioning is mediated by a pattern of cognitions and/or distress symptoms.

Stepwise multiple linear regression analysis was used to determine if any of the predictor variables; children's report of exposure to violence, attributional style, hopelessness, future orientation scale, self-esteem, and distress symptoms; could be used to predict their academic functioning. Academic functioning involved two distinct

variables, grade point averages obtained from student records and total scores on Teacher Report Forms. Results of this analysis are presented in Table 24.

Table 24

Stepwise Multiple Linear Regression Analysis
Academic Functioning

Predictor Variable	Constant	b weight	Beta Weight	r^2	t Value	Sig of t
School Self-Esteem	2.05	.27	.30	.09	3.67	<.001

Multiple R	.30
R2	.09
F Ratio	13.45
Degrees of Freedom	1/135
Sig of F	<.000

One independent variable, school self-esteem, entered the stepwise multiple linear regression equation, accounting for 9% of the variance in academic functioning on the Grade Point Average component . The F ratio of 13.45 was statistically significant at an alpha level of less than .001 with 1 and 135 degrees of freedom. This result indicated the amount of variance in academic function (GPA) accounted for by school self-esteem was significant. The remaining independent variables did not enter the regression equation, providing evidence that these variables were not significant predictors of academic functioning.

None of the independent variables entered the stepwise multiple linear regression equation when Teacher Report Form scores (Total Score, Internalizing Total, and Externalizing Total) were used as the dependent variables. This result indicates that the amount of variance in academic functioning (behavior as reported by the TRF) accounted by for the independent variables was not statistically significant.

Research question 5. Is there a difference between participants' scores on measures of self-concept, attributional style, future orientation, distress symptoms, frequency of violence exposure associated with the participants' gender, ethnicity, maternal presence in the home, maternal education, and SES?

Multiple analysis of variance were used to test the hypotheses associated with this research question:

H_{5a}: Participants' self-concept, attributional style, hopelessness, future orientation, distress symptoms, and frequency of violence exposure will not differ relative to their gender.

The dependent variables that were used to test this hypotheses included self-esteem, hopelessness, future orientation, distress symptoms, positive attributional style, negative attributional style, total attributional style, and children's report of exposure to violence. The independent variable in this analysis was the gender of the student. The results of the MANOVA are presented in Table 25.

Table 25

Multiple Analysis of Variance
Psychological Functioning Measures by Gender

	Value	DF	F Ratio	Sig of F
Hotelling's Trace	.06	6/213	1.99	.068

The results of the Hotelling's trace of .06 was not statistically significant $F(6/213)=1.99$, $p=.068$. Based on this finding there does not appear to be a difference between male and female students on the psychological functioning variables. To further explain this lack of difference, descriptive statistics were obtained for each of the dependent variables by gender. The results of this analysis are presented in Table26.

Table 26

Descriptive Statistics
Psychological Functioning Variables by Gender

Dependent Variable	Number	Mean	SD
Self-Esteem			
Male	98	24.04	8.02
Female	122	23.97	6.64
Hopelessness			
Male	98	5.50	4.20
Female	122	4.12	3.72
Trauma			
Male	98	37.28	25.08
Female	122	39.53	24.22
Composite Positive Attributions			
Male	98	11.66	3.94
Female	122	11.80	3.10
Composite Negative Attributions			
Male	98	8.08	3.70
Female	122	7.44	2.77
Children's Report of Exposure to Violence			
Male	98	39.24	20.23
Female	122	36.06	17.56

Based on the findings of the MANOVA and an examination of the means and standard deviations for each of the dependent variables, the differences between groups were not tested for significance. The null hypothesis of no difference was retained.

H_{5b}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to their ethnicity.

The dependent variables that were used to test this hypotheses included self-esteem, hopelessness, future orientation, distress symptoms, positive attributional style, negative attributional style, total attributional style, and children's report of exposure to violence. The independent variable in this analysis was the ethnicity of the student recoded into three groups: African American, Caucasian, and other. The results of the MANOVA are presented in Table 27.

Table 27

Multiple Analysis of Variance
Psychological Functioning Measures by Ethnicity

	Value	DF	F Ratio	Sig of F
Hotelling's Trace	.04	12/420	.61	.834

The results of the Hotelling's trace of .04 was not statistically significant F(12/420)=0.61, p=.834. Based on this finding there does not appear to be a difference among students of different ethnic backgrounds on the psychological functioning variables. To further explain this lack of difference, descriptive statistics were obtained for each of the dependent variables by ethnicity. The results of this analysis are presented in Table 28.

Table 28

Descriptive Statistics
Psychological Functioning Variables by Ethnicity

Dependent Variable	Number	Mean	SD
Self-Esteem			
African American	89	23.91	7.46
Caucasian	94	23.62	6.99
Other	36	25.06	7.63
Hopelessness			
African American	89	4.80	3.89
Caucasian	94	4.71	3.94
Other	36	4.75	4.47
Trauma			
African American	89	36.49	23.66
Caucasian	94	38.81	25.21
Other	36	40.72	22.50
Composite Positive Attributions			
African American	89	11.61	3.41
Caucasian	94	12.01	3.46
Other	36	11.67	3.36
Composite Negative Attributions			
African American	89	7.90	3.43
Caucasian	94	7.81	3.00
Other	36	7.31	3.11
Children's Report of Exposure to Violence			
African American	89	37.18	17.00
Caucasian	94	36.39	17.91
Other	36	41.35	24.78

Based on the findings of the MANOVA and an examination of the means and standard deviations for each of the dependent variables, the differences between groups were not tested for significance. The null hypothesis of no difference was retained.

H_{5c}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to a maternal presence in the home.

The dependent variables that were used to test this hypothesis included self-esteem, hopelessness, future orientation, distress symptoms, positive attributional style, negative attributional style, total attributional style, and children's report of exposure to

violence. The independent variable in this analysis was the living situation of the student. Living situation was defined as either the student lived with his/her mother only or lived with in other family situations, including both mother and father present. The results of the MANOVA are presented in Table 29.

Table 29

Multiple Analysis of Variance
Psychological Functioning Measures by Living Situations

	Value	DF	F Ratio	Sig of F
Hotelling's Trace	.03	6/209	1.03	.409

The results of the Hotelling's trace of .03 was not statistically significant F(6/209)=1.03, p=.409). Based on this finding there does not appear to be a difference between students who live with their mothers or those in other living situations on the psychological functioning variables. To further explain this lack of difference, descriptive statistics were obtained for each of the dependent variables by living situation. The results of this analysis are presented in Table 30.

Table 30

Descriptive Statistics
Psychological Functioning Variables by Living Situation

Dependent Variable	Number	Mean	SD
Self-Esteem			
Mother Only	113	23.43	6.52
Other	103	24.50	8.09
Hopelessness			
Mother Only	113	4.77	3.89
Other	103	4.84	4.14
Trauma			
Mother Only	113	41.55	25.00
Other	103	34.89	22.91
Composite Positive Attributions			
Mother Only	113	11.71	3.49
Other	103	11.84	3.38
Composite Negative Attributions			
Mother Only	113	7.81	2.80
Other	103	7.76	3.57
Children's Report of Exposure to Violence			
Mother Only	113	37.51	18.25
Other	103	38.11	19.41

Based on the findings of the MANOVA and an examination of the means and standard deviations for each of the dependent variables, the differences between groups were not tested for significance. The null hypothesis of no difference was retained .

H_{5d}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to their mother's level of education.

The dependent variables that were used to test this hypothesis included self-esteem, hopelessness, future orientation, distress symptoms, positive attributional style, negative attributional style, total attributional style, and children's report of exposure to violence. The independent variable in this analysis was the educational level of the mother. The results of the MANOVA are presented in Table 31.

Table 31

Multiple Analysis of Variance
Psychological Functioning Measures by Mother's Educational Level

	Value	DF	F Ratio	Sig of F
Hotelling's Trace	.16	24/786	1.33	.137

The results of the Hotelling's trace of .16 was not statistically significant F(24/786)=1.33, p=.137). Based on this finding there does not appear to be a difference between students on the psychological functioning variables relative to their mothers' educational levels. To further explain this lack of difference, descriptive statistics were obtained for each of the dependent variables by mothers' educational levels. The results of this analysis are presented in Table 32.

Table 32

Descriptive Statistics
Psychological Functioning Variables by Mothers' Educational Level

Dependent Variable	Number	Mean	SD
Self-Esteem			
No Diploma	43	23.67	7.84
Diploma	61	23.34	5.91
Some College	41	24.10	7.25
College Degree	36	22.83	9.30
Graduate School	27	27.56	5.06
Hopelessness			
No Diploma	43	4.65	4.15
Diploma	61	5.39	4.04
Some College	41	3.83	3.96
College Degree	36	4.39	3.60
Graduate School	27	4.93	4.09
Trauma			
No Diploma	43	43.01	28.01
Diploma	61	38.35	22.81
Some College	41	40.92	28.87
College Degree	36	33.93	17.95
Graduate School	27	27.34	13.84
Composite Positive Attributions			
No Diploma	43	12.19	2.59
Diploma	61	11.26	3.55
Some College	41	11.98	4.33
College Degree	36	11.97	3.13
Graduate School	27	12.11	3.40
Composite Negative Attributions			
No Diploma	43	7.74	3.35
Diploma	61	7.85	3.13
Some College	41	7.41	3.04
College Degree	36	7.58	3.36
Graduate School	27	8.00	3.05
Children's Report of Exposure to Violence			
No Diploma	43	38.55	21.26
Diploma	61	33.93	14.78
Some College	41	38.28	16.38
College Degree	36	41.73	23.52
Graduate School	27	34.33	16.98

Based on the findings of the MANOVA and an examination of the means and standard deviations for each of the dependent variables, the differences between groups were not tested for significance. The null hypothesis of no difference was retained.

H_{5e}: Participants' self-concept, attributional style, hopelessness, future orientation, academic functioning, distress symptoms, and frequency of violence exposure will not differ relative to their grade level..

The dependent variables that were used to test this hypotheses included self-esteem, hopelessness, future orientation, distress symptoms, positive attributional style, negative attributional style, total attributional style, and children's report of exposure to violence. The independent variable in this analysis was the grade of the student. The results of the MANOVA are presented in Table 33.

Table 33

Multiple Analysis of Variance
Psychological Functioning Measures by Grade Level

	Value	DF	F Ratio	Sig of F
Hotelling's Trace	.02	6/213	.57	.754

The results of the Hotelling's trace of .02 was not statistically significant F(6/213)=0.57, p=.754). Based on this finding there does not appear to be a difference between male and female students on the psychological functioning variables. To further explain this lack of difference, descriptive statistics were obtained for each of the dependent variables by grade level. The results of this analysis are presented in Table 34.

Table 34

Descriptive Statistics
Psychological Functioning Variables by Grade

Dependent Variable	Number	Mean	SD
Self-Esteem			
Seventh Grade	112	24.02	7.48
Eighth Grade	108	23.98	7.08
Hopelessness			
Seventh Grade	112	4.41	3.83
Eighth Grade	108	5.07	4.15
Trauma			
Seventh Grade	112	39.48	22.43
Eighth Grade	108	37.53	37.53
Composite Positive Attributions			
Seventh Grade	112	11.80	3.53
Eighth Grade	108	11.67	3.47
Composite Negative Attributions			
Seventh Grade	112	7.53	3.14
Eighth Grade	108	7.94	3.32
Children's Report of Exposure to Violence			
Seventh Grade	112	36.77	18.45
Eighth Grade	108	38.21	19.26

Based on the findings of the MANOVA and an examination of the means and standard deviations for each of the dependent variables, the differences between groups were not tested for significance. The null hypothesis of no difference was retained.

Summary

Results of the current research indicate that of the 224 participants, 35.5% (N=79) of the sample were exposed to a "high" level of violence and 33.5% (N=75) comprised the "low" exposure group. The remaining 70 students experienced "moderate" exposure to violence as measured by the Children's Report of Exposure to Violence. A MANOVA indicates significant differences between high and low exposure groups on "psychological functioning" measures which include: self-esteem, attributional style,

hopelessness, trauma symptoms, and future orientation. Univariate F tests of between subjects effects reveal significant differences between groups on two dependent variables: hopelessness and trauma symptoms.

In correlational analyses, four variables: composite negative attributional style, hopelessness, self-esteem, and trauma symptoms, were found to be significantly correlated with children's reported level of exposure to violence. Additionally, a discriminant function analysis revealed that students could be reliably classified into either the 'high exposure" or "low exposure" groups using four predictor variables collectively: self-esteem, attributional style, hopelessness, and future orientation.

Stepwise multi-linear regression analysis was used to determine which variables could be reliably be used to predict academic functioning. Only one variable, school self-esteem, was found to be predictive of grade point average. None of the variables were predictive of school behavior, as reported by teachers on the Teacher Report Form.

Finally, multiple analyses of variance were used to test for effects of demographic characteristics (gender, ethnicity, maternal presence in the home, maternal education, SES, and grade level) on the participants' self-concept, attributional style, future orientation, distress symptoms, and frequency of violence exposure. No significant differences were found between groups on any of the demographic variables tested.

Chapter IV has presented the findings on the research hypotheses and provided answers to each of the research questions. The conclusions and recommendations following from these findings and the associated literature, reviewed in Chapter III, are included in Chapter V.

CHAPTER V

DISCUSSION AND RECOMMENDATIONS

Discussion

Based on the findings from the statistical analyses and a review of the current body of literature relating to violence exposure in youth, the following conclusions are presented. Results obtained from the present study are generally consistent with and support findings from previous research on violence exposure in children with regard to prevalence rates and sequelae of violence exposure. Exploratory analyses provide some direction for intervention with these youths and insights into the pervasive and enduring effects of chronic exposure to violence.

Prevalence rates regarding various types and levels of violence exposure obtained from the responses of the participants of this study are provided for comparison with rates obtained in previous research. The discussion focuses on the interpretation and exploration of the findings as they relate to the impact of exposure to violence on young adolescents' psychological functioning. Also discussed are the results of exploratory analyses related to the impact of violence exposure on academic functioning. Implications for interventions, clinical practice, and prevention, as well as recommendations for future research are presented.

Prevalence Rates

The reports of violence exposure from the youngsters in this sample indicate that these children are, indeed, frequent witnesses to many incidents of crime and violence in Flint, Michigan. Almost 31% of students in the sample report having seen a stranger shot or stabbed at least one time and slightly more than 15 % report having seen a stranger

being killed. Twenty-seven percent report having seen someone they know being robbed or mugged and approximately one fourth of these students (25.4%) reported having seen someone they know being shot or stabbed. Seventeen percent indicated that they had seen someone they know being killed.

In terms of direct victimization, 55.8% report that they have been beaten up at least once; 41.5% indicated having been chased/threatened at least once, 17% report having been robbed or mugged, and 15.2% reported having been shot or stabbed. These rates are fairly consistent with those reported in previous research with adolescent and pre-adolescent samples in inner-city environments (Bell & Jenkins, 1991; Dyson, 1990; Freeman et al, 1993; Shakoor & Chalmers, 1989; Schwab-Stone et al, 1995). The student participants in this study, similar to those in other "high violence" areas, report repeated exposure to a myriad of violent events. They live in a community which has a crime rate more than four times the national average for the offenses of murder, rape, and aggravated assault (Criminal Justice Information Services, 1995) and in order to provide for increased safety in the learning environment, students regularly enter the school building through metal detectors and security guards. The developmental experiences and environments of these youngsters necessitate adaptations in behavioral and psychological functioning to facilitate coping with the realities of their situation. These adaptations are reflected in group differences discussed below. However, Richters and Martinez (1993) point out that there is no one pattern that describes every individual's reaction to witnessing a violent act. Each individual's response is dependent upon a complex set of variables which can act as mediators or moderators of violence exposure. Individual or intrapsychic factors, familial/environmental factors, demographic factors, and circumstances surrounding the

traumatic incident are all potential variables which impact the experience of the traumatic event or events. Similarly, responses to traumatic experiences are not discretely contained in one domain. Cognitive, behavioral, and affective responses to events interact and are manifested in a multitude of ways.

Demographic Variables

The sample was fairly evenly distributed across the range of violence exposure. When groups were created using the 33rd and 66th percentile scores on the Children's Report of Exposure to Violence as cut-points, 75 students fell in the "low exposure" group (at or below the 33rd percentile). Seventy students were in the "moderate exposure" group (between the cut points), and 79 students comprised the "high exposure" group (at or above the 66th percentile).

None of the demographic variables examined (gender, grade level, ethnicity, mother's presence in the home and educational level, and grade level) were found to significantly impact students' reports of exposure. However, it should be noted that the data obtained for socioeconomic status of participants may not have accurately represented the entire sample, as data was only available for 25.4% of the sample. Therefore, the relationship between violence exposure and SES was not examined in the present study. As described previously in Chapter Two, results of studies which examine the influence of demographic variables on violence exposure levels and outcomes have yielded few consistent trends. The results of the present study conflict with results obtained by Fitzpatrick and Boldizar (1993), who report significant differences between genders in amount of violence exposure, but support other findings of these authors (Fitzpatrick & Boldizar, 1993) regarding age and maternal presence in the home. The

results of the current study also conflict with those of Schwab-Stone et al (1995) in terms of the effect of demographic variables. These authors report significantly greater exposure to violence reported by males than females (Schwab-Stone et al, 1995). Additionally, significant differences were found between groups when compared on SES and ethnicity, with students from lower socioeconomic groups reporting greater exposure and minority students (both Hispanic and African-American) reporting higher levels of exposure than Caucasian students (Schwab-Stone et al, 1995). Schwab-Stone et al (1995) utilized a sample of over 2,200 students, providing significantly greater statistical power for their analyses than either the present study (n=224) or others (Fitzpatrick and Boldizar, 1993; Martinez and Richters, 1993; Osofsky et al, 1993) (all ns ≤221), which may account for their detection of significant differences between demographic groups..

Sequelae of Violence Exposure

This study examined the impact of exposure to violence on young adolescents' psychological functioning with the goal of increasing insights into the impact of chronic violence exposure on the development of particular cognitive styles. Specifically, the relationships between violence exposure and self-esteem, attributional style, hopelessness, and future orientation were examined. The relationship between violence exposure and trauma symptoms was also explored. Trauma symptoms include those associated with re-experiencing the trauma, avoidance of trauma related material, and anxiety. Previous research has demonstrated that violence exposure is associated with such distress symptoms in children and adolescents (Martinez & Richters, 1993; Osofsky et al, 1993). Theorists and researchers emphasize the disruption of normal developmental processes effected when children are repeatedly exposed to violent events (Osofsky, 1995; Richters

& Martinez, 1993). Martinez and Richters (1993) point out that changes in cognitive processes which are initially adaptive in allowing children to cope with trauma may become "entrenched, resistant to change, and overgeneralized to situations in which they are maladaptive" (p.33).

Differences were found between high and low exposed groups on psychological functioning variables that included: hopelessness, future orientation, attributional style, self-esteem, and trauma symptoms using a multiple analysis of variance (MANOVA). Theoretical as well as statistical issues indicate the use of MANOVA versus univariate tests. As suggested in discussions of the previous research, individuals' responses to trauma are not confined to one domain. The symptoms associated with exposure to violent events are significant, but each individual's complex intrapsychic make-up, prior functioning and experience, and feelings about themselves and their future exert an influence on the way in which an event impacts their functioning. The variables chosen for analysis in this study represent various domains which are intertwined. An individuals' ability to cope with traumatic events is likely to exert a significant effect on their feelings about themselves, their future, and the causes of events.

According to Stephens (1992) and Tabachnick and Fidell (1989), there are four statistical reasons for using a MANOVA rather than individual univariate tests. The use of individual univariate tests can inflate the overall type 1 error rate that could result in increased probability of false rejections of the null hypotheses. Initial use of univariate tests could ignore important information (i.e., correlations among variables) which are incorporated into the test statistic obtained on the MANOVA. Additionally, the groups being compared may not differ on the individual dependent variables, although when taken

as a group, the differences between the groups may be sufficient to attain a significant result indicating that the groups due differ on the latent variable being measured by the analysis. Some statisticians argue that levels of the independent variable should be compared on the dependent variables taken as a group, if there is underlying support for including the variables in a single analysis, as is the case in this study.

Further statistical analyses of differences between the high and low exposed groups in the present study indicated that there were significant differences between groups in level of hopelessness reported and in the number of trauma symptoms reported, with the high exposure group reporting significantly higher levels of each variable. These results are consistent with findings by Singer et al. (1995) which demonstrated a relationship between violence exposure and trauma symptoms in a diverse sample of 9th through 12th graders in an urban area of Cleveland, Ohio. Horowitz, Wiene, and Jekel (1995) also found a positive correlation between number of violent events witnessed and severity of PTSD symptoms. Similarly, Schwab-Stone et al. (1995) report that adolescents exposed to high levels of violence were more likely to demonstrate lowered personal expectations for the future than were students with lower levels of exposure.

The significant difference found between groups in level of hopelessness conflicts with the findings of Hinton-Nelson and colleagues (Hinton-Nelson et al, 1996) which found that children exposed to violence demonstrated levels of hope consistent with other non-exposed group levels. These authors found that direct victimization helped to explain the variance in levels of hope. Adolescents who had witnessed violence but had not been directly victimized reported the highest levels of hope, whereas those with more direct exposure evidenced lower levels of hope. In the present study, rates of direct

victimization were high (at least 55.8%) which may account for the high level of hopelessness in the highly exposed group, as compared with the low exposure group. Additionally, the measures of "hope" employed in these studies differed significantly in terms of presentation of items, with the measure used by Hinton-Nelson et al (1996), the Hope Scale for Children (Snyder, 1994), assessing "hope" per se and the measure employed in the present study (BHS) tapping "hopelessness."

Hinton-Nelson et al. (1996) discussed the potential impact of the adolescents' sense of invulnerability on their measure of hopelessness, stating that "while young people acknowledge the violence surrounding them, they are able to sustain high hope as long as they do not perceive its personal impact" (p.351). This conceptualization can be applied to interpret the findings of the current study related to future orientation (the belief that one will live to the ages of 25 and 50 years, respectively). Despite their heightened awareness of the fatalities in the community, youngsters in the high exposure group demonstrated continued belief in their own invulnerability to premature death. No differences were found between high and low exposure groups in the present sample on a measure of future orientation. Similarly, no significant differences were found between groups on measures of self-esteem and attributional style.

Significant correlations were found between frequency of violence exposure and self-esteem, attributional style, hopelessness, and trauma symptoms. Students who reported fewer instances of exposure to violence also provided responses indicating higher self-esteem. Self-esteem was inversely related to trauma symptoms and hopelessness. These results are consistent with findings by Freeman et al (1993) which cite low self-esteem as a correlate of violence exposure in urban school children. Interestingly,

students who demonstrated lower self-esteem also evidenced a tendency to make significantly fewer positive attributions. This finding suggests that students exposed to high levels of violence may be relatively unsuccessful in employing the "cognitive filters" described by Taylor and Brown (1988). The youngsters in the "high exposure" group do not demonstrate unrealistically positive views of themselves, their ability to control events, or their likelihood of obtaining positive outcomes in the future. On the contrary, a high frequency of violence exposure was associated with a more negative attributional style. In other words, students more frequently exposed to violence tended to provide explanations for negative life events which were internal, stable, and global, a pattern characterized as a "pessimistic" or negative attributional style. Violence exposure was directly related to level of hopelessness and to number of trauma symptoms. Predictions regarding life expectancy (future orientation index) were significantly correlated only with anxiety.

These results are theoretically consistent with the "scar hypothesis" (Lewinsohn at al., 1981) and the interrelationships between negative life events, depression, and explanatory style proposed by Nolen-Hoeksema et al (1992). The students in the present study frequently exposed to traumatic events demonstrate patterns of explanatory style which are pessimistic, as well as other cognitions which are typically associated with depression (hopelessness and low self-esteem). Following the theory and findings of Nolen Hoeksema et al (1992), this cognitive style may be or may become, a significant predictor of depression later in life.

Exploratory Analysis

In examining the pattern of cognitions associated with violence exposure, analyses indicate that students' level of violence exposure can be predicted with significant

accuracy based on a characteristic pattern of cognitions. A participant's scores on measures of self-esteem, attributional style components, hopelessness, and future orientation, when used collectively allowed for that participant to be correctly classified as a member of the low exposed or high exposed group with significant accuracy (68.0% in the low exposed group, and 63.3% in the high exposed group). As noted previously, the high exposure group evidences lower scores on general self-esteem, higher levels of hopelessness, and makes lower predictions regarding life expectancy (future orientation). Additionally, the high exposure group tends to make fewer positive and more negative attributions for events than the low exposure group.

The implications of these results provide direction for interventions designed to impact youngsters exposed to significant levels of violence. Due to the methodology employed in the study, statements regarding causality cannot be made. Clearly, however, interventions which simply seek to limit future violence exposure or even those which address trauma symptoms in youth will fall short. Cognitive styles are developed throughout childhood and adolescence. These youngsters manifest a pattern of cognitions which may be maladaptive and may mitigate adaptive functioning. As Friedlander (1993) emphasizes, childrens' experiences with violence are often "*specific and distinctively potent developmental disorganizer(s) in the course of their psychological growth*"(p.68). Effective interventions will address these patterns/cognitions and attempt to facilitate the development of more adaptive cognitive sets.

The results of analyses conducted to assess factors impacting academic functioning indicate that only school self-esteem accounts for a significant amount of the variance in students' academic functioning as indicated by grade point average. Counter to the

hypotheses, exposure to violence, attributional style, hopelessness, future orientation, and distress symptoms were not significant predictors of academic functioning based on either measure of functioning (GPA or teacher reports). School self-esteem also did not account for a significant amount of variance in teacher reports of students' academic functioning.

These results are interesting in light of the previous research which documents negative effects on cognitive abilities related to violence exposure (Osofsky et al, 1993; Shakoor & Chalmers, 1991). These authors suggested that deficits in concentration, memory, and school performance may be the result of symptoms associated with PTSD, such as sleep disturbance, intrusive thoughts, images, and memories, etc. In the present analysis, number/frequency of trauma symptoms did not account for a significant amount of the variance in school performance, in terms of GPA and also did not predict variance in student behaviors as reported by classroom teachers on the Teacher Report Form. Trauma symptoms were found to be inversely related to self-esteem, which was the only significant predictor to emerge in this analysis, suggesting that perhaps students who are able to "protect" their self-image despite repeated negative experiences achieve more adaptive outcomes academically.

Limitations

There are several limitations inherent in the present research. The first limitation relates to the methodology. The use of a non-experimental design makes it impossible to infer causality with regard to the concepts examined in this research. Due to the nature of urban environments in this decade, it would likely prove quite difficult to design a study which would allow for comparison of "non-exposed" versus "low" , "moderately" or "high" exposed groups without also introducing a number of confounding variables.

Longitudinal research may provide an avenue which offers greater explanatory power in determining the effects of violence exposure on children and increased insight regarding the factors which mitigate the impact of such exposure by allowing an assessment of prior functioning, environmental factors, etc.

The overwhelming majority of participants in this study (N=220 of a total N=224) did not complete, or correctly complete, the Conflict Tactics Scale. The instrument was pilot tested in a classroom of 30 students in another Flint middle school. Most students in the pilot study were able to correctly complete the instrument. The majority of students in the present sample either did not attempt the instrument or ignored the instructions written on the page and given verbally by the researcher. It is possible that this response was due to the number of instruments used in the study and the large group setting used for data collection. Although assistance was available to students during data collection, this instrument was very time consuming and students may have felt awkward requesting repeated assistance. It was also possible that students tired of completing questionnaires and rejected the most lengthy.

The student assent form that was reviewed and signed by students prior to their participation in the study indicated that if responses on the CTS reflected possible abuse within their families, confidentiality would be broken and appropriate referrals would have to be made. The students may have been unwilling to risk exposure of family violence and chose not to complete the CTS as a result. Due to the participants' failure to properly complete the measure designated to assess intrafamily violence, the differential effects of within-family versus community violence exposure were not able to be examined. Previous research has indicated that family and social supports may mitigate the effects of

violence exposure (Osofsky et al, 1993), suggesting that youngsters with similar levels of exposure may present with different outcomes depending on the origin/participants of the violent events. However, use of both the CTS and the CREV may have potentially confounded results by overemphasizing the importance of intrafamily violence. Future research may seek to reliably differentiate the origins and perpetrators of violence, using an alternative instrument, in order to analyze variations in psychological functioning among victims.

Grade point average (GPA) was considered to be a measure of academic functioning of the students in this study. GPA reflects several elements of academic functioning, such as cognitive ability, attendance, attentiveness, compliance, participation, and subjective teacher assessments. This variable may not be sufficiently sensitive to reflect consequences of exposure to violence because of the complex interactions between psychological functioning and behavior.

Although the results of this study may be useful for individuals, such as educational personnel, parents, and community advocates, who work within the middle school or with the students who participated in this study, results of this research cannot be generalized to all adolescents. Student participants in this study reside in a very violent, urban setting and attend a large, ethnically diverse, public middle school. The generalizability of these results is limited to schools in similar settings with similar populations. In order to generalize these findings to other, more diverse settings, replication of this study in other settings may be beneficial.

Implications for Intervention

Given the prevalence and frequency of violence exposure in the present sample, the

need for a broad intervention strategy to reach large numbers of students is apparent. Procedures and methods to assess children and adolescents who have been exposed to violence are in the early phases of development. Many students exposed to violence, particularly co-victims, often do not seek assistance. Even when many students are reached by health or mental health professionals, screening/assessment procedures often do not adequately address violence exposure. The stigma associated with violent events, fear of overwhelming the listener, or denial/minimizationof the experience by the victim may prevent youngsters (or adults) from revealing such incidents (Pynoos & Eth, 1986).

Several questionnaires have been developed for use with children of various ages. Richters and Saltzman (1990) created the Survey of Exposure to Community Violence which asks directly about specific types of violence and activities associated with violence. This instrument has two versions, one for parents and one for children. Similarly, Richters and Martinez (1990) developed a violence exposure measure designed specifically for young children and Richters (1990) developed a cartoon figure interview used in assessing PTSD symptoms in inner-city children, which can be used with children as young as first grade. In addition to this cartoon-based assessment of trauma symptoms, diagnostic interviewing and self-report measures are frequently used to assess the psychological impact of violence exposure.

Pynoos and Eth (1986) have developed a semi-structured interview technique for use with children who have witnessed violence. This interview emphasizes projective techniques, such as play and drawings, to explore children's trauma reactions and offers an alternative to direct interview techniques. This type of interview is designed to have therapeutic benefits and involves normalizing the child's reaction to the violence and

encouraging exploration of feelings and thoughts related to the trauma. The Institute for Trauma and Loss in Children in Detroit, Michigan, has piloted a group therapy program entitled "I Feel Better Now" which implements the Pynoos and Eth (1986) technique in a structured, time-limited group setting. The efficacy of these interventions has not yet been empirically assessed, but such techniques seek to reduce the stigma and increase the supports and assistance available to victims of violence.

Unfortunately, such interventions are far from routine in our nation's schools and students frequently experience multiple traumatic incidents within a relatively short period of time. This is particularly disturbing given the recommendations by investigators that interventions are most efficacious if initiated within a brief time following the trauma, after which time the treatment impacts are decreased (Pynoos & Nader, 1990), and, as suggested by Pynoos and Nader (1988) "*the effects of each episode (of violence exposure) can be additive and seriously deplete the child's inner resources*"(p. 471).

The results of the current study demonstrate that youngsters exposed to high levels of violence demonstrate significant differences in psychological functioning and trauma symptoms when compared to low-exposed youths. Psychological functioning refers to cognitive variables such as self-esteem, attributional style, hopelessness, and future orientation, as well as trauma symptoms. The term "trauma symptoms" again refers to symptoms such are re-experiencing the trauma, trauma specific fears, hypervigilance, etc. Significant relationships are also found between students' attributional style, hopelssness, self-esteem, and trauma symptoms. Chronic violence exposure exerts a pervasive effect on youngsters' behaviors and psychological functioning. Constructs such as self-esteem, attributional style, and hopelessness are established during childhood and remain relatively

enduring and resistant to change. Such cognitive sets are established developmentally based on the individual's experiences with the environment, others, and events. Hence,cognitions about the self, others, and the environment, as well as explanatory processes are interrelated.

Although a negative or "pessimistic" cognitive style may be a result of repeated exposure to violent events, research suggests that interventions which simply limit future exposure or address depressive symptoms may be insufficient to facilitate adaptive outcomes for children who have already developed such styles (Nolen-Hoeksema et al., 1992). Effective interventions should seek not only to reduce exposure to violence and treat PTSD or depressive symptoms, but also address the associated patterns of cognitions, focusing on attribution retraining, developing a more positive self-image, and decreasing hopelessness.

Such an endeavor presents a significant challenge to clinicians, educators, and community advocates. The cognitive styles adopted by individuals serve an adaptive function and, in most cases, are based on the realities of the individual's previous experiences within their environment. Interventions must be designed which are respectful of these realities, yet seek to encourage youngsters to develop alternative cognitive sets which can be applied in other settings and to recognize when a particular coping strategy may be maladaptive in a given situation.

Recommendations for Research

Results of this study contribute to the growing body of literature regarding prevalence rates and sequelae of violence exposure in children. Additionally, the results of the discriminant function analysis indicate that middle school students exposed to high

levels of violence are characterized by a pattern of cognitions including lower levels of self-esteem, a more negative attributional style, higher levels of hopelessness, and report a lower life expectancy when compared with students exposed to lower levels of violence. Level of violence exposure was not found to be a significant predictor of academic functioning. Similarly, the number of trauma symptoms reported, attributional style,and hopelessness did not account for the variance in academic functioning in the sample. Only school self-esteem accounted for a significant amount of the variance, suggesting that the student's ability to manage traumatic experiences, psychologically, and the specific cognitive adaptations which occur as a result of violence exposure may be more predictive of achievement outcomes than exposure to violence per se.

Further research is needed to address the differential impact of violence exposure across settings. Specifically, an exploration of the effects of violence perpetrated within the home and the mediating/moderating effects of level of family violence on outcomes for children exposed to high levels of community violence may provide valuable information for designing intervention programs. The instrument intended to serve this function in the present study, the Conflict Tactics Scale (Straus, 1979) proved too cumbersome for the majority of the students to complete successfully. The development and utilization of an instrument which will assess the frequency and level of violence experienced within the home by children and adolescents would be useful in future research.

Additionally, a significant limitation of research focused on assessing violence exposure and sequelae is the lack of psychometrically sound instruments. Continued collaborative efforts of researchers and clinicians in large scale studies with at-risk and lower-risk populations can provide valuable validity and reliability information regarding

various measures of violence exposure. Research with lower incidence populations or children with chronic exposure and positive outcomes are also desirable as such studies may provide insights into intrapsychic, environmental, or familial factors contributing to resilience.

The exploration of the relationship between academic functioning and violence exposure undertaken in the present study yields little insight into the cognitive factors influencing academic success or failure. It is interesting to note, however, that the School subscale of the Coopersmith Self Esteem Inventory was the only factor to enter the regression equation in predicting academic success in terms of GPA. Exposure to violence is found to be significantly inversely related to self-esteem, yet the variable to impact school performance is not exposure to violence or self-esteem, but a domain of the self-esteem measure. Future research may delve more deeply into the complex cognitive processes through which self-esteem is developed and the ways in which domain specific self evaluations are created and maintained.

Finally, an examination of the efficacy of various intervention strategies would be beneficial in facilitating the development and implementation of appropriate treatment for children and adolescents in school-based and clinical settings. Research over the past decade consistently and persuasively documents the need for broad-reaching interventions designed to both prevent the victimization of children and to assist them in healing when they are faced with traumatic incidents.

"*We must not let ourselves forget childhood trauma just because the problem is so vast.*" (Terr, 1991, p. 10).

Appendix A

Student Packets

Student Assent Form

I am conducting a research study on the effects of exposure to violence on middle school students. This study is being completed as part of my doctoral program at Wayne State University. The school principal has approved this project for all students at McKinley Middle School.

Your school has agreed to allow the students to participate in a research study related to the ways in which witnessing or experiencing violence affects middle school students. You are being asked to participate by completing the questionnaires contained in this packet. You are under no obligation to participate. However, I hope that by learning more about how violence affects students in your age range, I can learn from you experiences and find better ways to help students deal with events they experience both in and outside of school. All information which you provide will be completely confidential, however, if you indicate that someone in your family is physically abusive to you, I am obligated by law to report it to the authorities. That is the only limit to confidentiality.

Answering these surveys is a one-time process. You will never be contacted by anyone regarding the information which you provide (with the exception noted above) and no one will have access to your response sheets but the researcher. If you agree to participate, your teacher will complete a survey asking about your behavior in the classroom and your GPA and attendance information will be pulled from your file. This information is also confidential and will not be released to anyone. Any results of this study will be reported as "group data."

Please complete the enclosed questionnaires, following the instructions given by your homeroom teacher or the researcher. If you do not want to participate, please put all the

surveys back into the packet and hand it in. Your teacher will give you something to do while the surveys are being completed. If you are willing to participate, please complete the surveys according to the directions on each. If you need help with the directions, raise your hand and someone will come to assist you.

Following completion of the instruments according to the directions given on the instruments and myself, your name will be entered into a drawing for a prize of $50.00. I will be checking the completed instruments to make sure all questions have been answered and the instructions have been followed. Only those students who have followed these directions will be entered into the drawing. You will be notified of the winner within one week.

If you would like to talk about some of the feelings or thoughts which you have regarding the questions or events talked about on the surveys, please contact you school counselor or call one of the numbers listed on the next page.

If you have any questions, please raise your hand. Thank you for your support and cooperation.

_____ _____

Carie McGauley, Investigator Date

_____ _____

Student Signature Date

PIN #:_____

Please answer the following questions by circling your answer on this answer sheet. It is important that you **answer all the questions.** If you need help, raise your hand. This information is confidential.

1. Are you a: boy or a girl?

2. Your age is: 11 12 13 14 15 16 17.

3. You are in: 6th 7th 8th grade.

4. Your race is: African-American White Asian Hispanic

Native American other:_____

5. You live with: your mother your father both parents

grandparent foster parent other relative

other:_____

6. How many adults live (over 21) in your home? 1 2 3 or more

7. How high did your mother go in school? (circle one)

did not finish seventh grade
finished eighth & ninth grade
some high school
graduated from high school
some college
graduated from college
completed graduate school

8. How high did your father go in school? (circle one)

did not finish seventh grade
finished eighth & ninth grade
some high school
graduated from high school
some college
graduated from college
completed graduate school

PIN #:_____

9. Your family's main source of income is: a.) Mother b.) Father c.) other Guardian d.) other (ADC, SSI, etc)

10. If you answered (a), (b)or (c) to number 9 above, please continue. If you circled (d), please do not complete the rest of this page and thank you for your participation.

What is your father's current job (if retired, please state what he used to do)? _____
_____
_____
_____Please describe what he does (did):_____
_____
_____
_____

What is your mother's current job (if retired, please state what she used to do)? _____
_____
_____
_____Please describe what she does (did):_____
_____
_____
_____

What is your guardian's current job (if retired, please state what he/she used to do)? _____
_____
_____
_____Please describe what he/she does (did):_____
_____
_____
_____

Thank you very much for your participation!!!

Appendix C

Parent Consent Letter

Carie McGauley, M.A.
1424 Gregory
Lincoln Park, Michigan 48146

Dear Parent(s):

I am conducting a research study on the effects of exposure to violence on middle school students. As we are aware from television reports and newspaper articles, we are living in a society which is becoming increasingly violent. This study will examine the effects of exposure to violence on the way in which middle school children think and feel. I am requesting your permission to allow your child to participate in this project. This study is being completed as part of my doctoral program at Wayne State University. The school principal has approved this project for all students at McKinley Middle School.

This study will involve approximately 75 minutes of your child's time and will be conducted during school hours, primarily during the homeroom period. Students will be asked to fill out several questionnaires covering such topics as exposure to specific violent events (for example, have they heard gunshots or heard about someone they know being mugged). Students will also be asked specifically about violence committed by people they know or family members, the ways in which they explain negative events, and they way in which they view themselves, and their future. In addition, I will need permission to obtain some information from school records (such as their grades). Also, teachers will complete a behavior checklist for each student who is participating in the study. This checklist will provide information about the frequency with which your child engages in specific behaviors at school as compared with other students his/her age. Each student who participates in the study and who completes all the surveys according to the directions will be entered into a drawing for a cash award of $50.00. The drawing will be completed at the school and prizes will be awarded within one week of the completion of the surveys.

If you would like to know more about the types of questions on the surveys or to actually review the surveys prior to allowing your child to participate, please contact me at (313)386-2603 and I will make the surveys available to you at the school office.

The study will be completed in one day and will be arranged for each homeroom at the discretion of the principal. Students who do not wish to participate can indicate this by simply not completing the surveys. Teachers will have other materials available for those students who do not wish to complete the surveys. The students who participate in this study will be given complete freedom to withdraw at any time, and will also have the right to decline to answer any of the questions on each survey. All information about your child will be strictly confidential, unless a student reports an incident of abuse which the researcher is required by law to report. Any articles which are to be published from this study will be presented only in terms of group data, and no one individual will be identified.

The only benefit associated with participation in this study is the chance to win the cash award in the drawing from among those participants who complete all the surveys . Certain risks are associated with participation in this project. If students indicate by their responses on the surveys that they themselves have been victims of abuse, it will be necessary for the researcher to identify these students and report incidents of abuse to the proper authorities. It is possible that in their responses to some of these questions, your child may indicate that he/she is distressed or depressed

about events he/she has witnessed. I have provided a list of community resources (see attachment) which may be helpful should your child indicate to you that he/she needs to talk with someone to help with managing his/her emotions. I will also provide your child with this list at the time of the surveys. In the unlikely event of any injury resulting from this study, there is no reimbursement, compensation, or free medical care offered by Wayne State University.

If you have any concerns or questions regarding this study, please feel free to contact me at your earliest convenience at (313) 386-2603. I will be happy to respond to your telephone calls within 24 hours. If you have questions or concerns regarding your child's participation in the research, you can contact Dr. Peter Lichtenberg of the Wayne State University Behavioral Investigation Committee at (313) 577-1628.

Your child **will participate** in this study **unless** we receive this form returned with your child to his/her homeroom class with your signature, stating that you do **not** wish your child to participate in the study. I very much appreciate your support in helping make this research study a success.

Sincerely,

Carie McGauley

Please return this form ***only*** if you do ***not*** want your child to participate in the study.

I DO NOT WANT my child _____to participate in the study

(please print)

described above (Effects of exposure to violence).

Signature:_____ Date:_____

Child's Grade Level: 6th 7th 8th

Referrals

- Genesee County Community Mental Health
  Child and Adolescent Services
  1102 Mackin Road
  810/257-3676

- Behavioral Health Services
  Mental Health
  1375 N. Main
  Lapeer, MI
  810/664-6143

- Hurley Mental Health Associates
  1-800-742-7504

- Genesee Psychological Resources, P.C.
  G-5054 W. Bristol Road
  810/732-6030

- Hillside Center for Behavioral Services
  G-2110 W. Hill Road
  810/239-7691

Appendix B

Academic Functioning Measures

FLINT
COMMUNITY
SCHOOLS

November 4, 1996

Graduate School
Wayne State University

To Whom It May Concern:

Permission has been granted for Carie McGauley to gather data and conduct research in the Flint Community Schools as necessary for the completion of her doctoral dissertation.

Ms. McGauley has explained the focus and purpose of her research on the effects of exposure to violence and has discussed the procedures necessary for conducting this study (i.e., data collection, etc.). Ms. McGauley received approval from this office to proceed.

Sincerely,

Stevan V. Nikoloff, Director
Research and Testing

jid

Catch Our Spirit —
Grow With Us

923 E. Kearsley Street
Flint, MI 48503-1900
(313) 760-1000

An Equal Opportunity/Affirmative Action Employer

MCKINLEY MIDDLE SCHOOL
4501 CAMDEN
FLINT, MICHIGAN 48507
January 29, 1997

TO: Carrie McGauley

FROM: Michael Tuohy

Please be advised you have permission to conduct your Research on VIOLENCE - HOW IT AFFECTS MIDDLE SCHOOL STUDENTS - at McKinley Middle School, Spring of 1997.

Looking forward to working with you.

Respectfully,

M. Tuohy, Principal
McKinley Middle School

JOHNS HOPKINS
UNIVERSITY

Department of Mental Hygiene
School of Hygiene and Public Health
624 N. Broadway / Baltimore MD 21205-1999
(410) 955-3910 / FAX (410) 955-9088

Carie McGauley
1424 Gregory
Lincoln Park, MI 48146

March 12, 1997

Dear Ms. McGauley:

Thank you very much for your interest in the Children's Report of Exposure to Violence (CREV). The initial psychometric properties of the instrument are published in The Journal of the American Academy of Child and Adolescent Psychiatry, Volume 34, pages 220-208. The results of a pilot study on the emotional impact of children's exposure to community violence which used the CREV are published in the same journal, Volume 34, pages 1362-1368.

Enclosed is a copy of the original CREV self-report instrument which assesses youth's lifetime exposure to community violence. You may duplicate it and use it for research purposes for one year. Additionally, I have enclosed administration and scoring instructions.

I have recently developed new versions of the CREV. The new Parent and Youth versions assess exposure to community violence in the past year as well as life time exposure. They are available on diskette to be administered as computer assisted programmed interviews (API). Once the psychometric properties have been established, the CAPI-CREV's will be available for sale.

Again, thank you for your interest in using the CREV for your research. Please complete and return the enclosed permission form so I am aware of projects in which the CREV is used.

Sincerely,

Michele Cooley-Quille, PhD
Michele Cooley-Quille
Assistant Professor
Licensed Psychologist

THE
PSYCHOLOGICAL
CORPORATION®

The Psychological Corporation
555 Academic Court
San Antonio, Texas 78204-2498
Tel 210-299-1061
Telex 5106015629 TPCSAT
Fax 210-270-0327

FAXED 1/9/97

January 9, 1997

Ms. Carie J. McGauley
1424 Gregory
Lincoln Park, MI 48146

VIA FACSIMILE TRANSMISSION TO
(313) 282-0722

Dear Ms. McGauley:

Thank you for your response to my letter regarding your use of the *Beck Hopelessness Scale* and the *Trauma Symptom Checklist for Children* in your dissertation research.

The *Trauma Symptom Checklist for Children* is distributed but not published by us; therefore, we are unable to address its use in your research. You may purchase the instrument through our Customer Service Department with your professor's approval; however, no discount will apply.

As a responsible test publisher, we believe it is our duty to protect the security and integrity of our test instruments. Therefore, we cannot allow copies of the *Beck Hopelessness Scale* to be included with or stapled in your dissertation. If available, sample items may be included, but actual test items cannot. Also, all testing must be conducted in your presence or that of another qualified individual so that all test materials remain secure.

We will gladly grant permission for the use of this test instrument if the above restrictions will be followed. Please indicate your agreement to these terms by signing and returning this letter for our files. When you sign and return this letter, we will release your order if it has been placed. If you have not placed an order, please contact Ms. Deborah Brown-Joseph at (800) 211-8378, ext. 5530, to order your materials. You are eligible for a 50% discount on the purchase of these materials; however, you must request the discount at the time you order and pay for the order yourself.

Also, please forward a copy of your final dissertation for our library upon completion.

Thank you for your interest in our test materials. If you have further questions or needs, please contact us. Good luck with your research.

Sincerely,

Christine Doebbler
Manager
Legal Affairs

AGREED:

_____

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ABSTRACT

IMPACT OF VIOLENCE EXPOSURE ON URBAN MIDDLE SCHOOL STUDENTS

by

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Exposure to violence has reached epidemic proportions among youth in the United States in recent years (Fingerhut & Kleinman, 1990; Finkelhor & Dzuiba-Leatherman, 1994). Recently, efforts to quantify violence exposure, both direct victimization and victimization through witnessing, have been initiated. Additionally, researchers have begun to explore the effect such exposure exerts on its victims. The present study was designed to examine the psychological sequelae of exposure to violent events on urban middle school students. Participants consisted of 224 seventh and eighth grade students of diverse ethnic backgrounds from McKinley Middle School, located in Flint, Michigan. Students were fairly evenly divided between genders (n(boys)=98, n(girls)=112, n(unreported)=. 12). The independent variable was exposure to violence, as assessed by the Children's Report of Exposure to Violence (Cooley et al, 1995). A co-variate, Family Conflict, was proposed but dropped from the analyses due to an excessive number of incomplete responses on the instrument used to assess this variable. Dependent variables examined included: attributional style, hopelessness, future orientation, self-esteem, academic

functioning, and trauma symptoms.

Results indicate that students in the high exposure group demonstrate significantly higher levels of distress symptoms and hopelessness than those in the low exposure group. Composite negative attributional style, hopelessness, and trauma symptoms were found to be positively correlated with violence exposure. Self-esteem was found to have an inverse relationship with violence exposure. An exploratory analysis (discriminant function analysis) indicated that students' classification as either "high-exposed" or "low-exposed" could be correctly predicted using four predictor variables collectively: total self-esteem score, overall attributional style, hopelessness, and future orientation. 65.6% of cases were correctly classified. One independent variable, school self-esteem, was found to account for a significant amount of the variance (9%) in students' GPA, whereas none of the predictor variables accounted for significant amount of variance in Teacher Report Form scores. None of the demographic variables examined accounted for significant differences between groups in level of violence exposure reported.

Autobiographical Statement

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