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Children's Exposure to Violence Across Contexts: Profiles of Family, School, and Community Witnessing and Victimization

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LOYOLA UNIVERSITY CHICAGO

CHILDREN'S EXPOSURE TO VIOLENCE ACROSS CONTEXTS:
PROFILES OF FAMILY, SCHOOL, AND COMMUNITY WITNESSING AND
VICTIMIZATION

A THESIS SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
MASTER OF ARTS

PROGRAM IN CLINICAL PSYCHOLOGY

BY

CATHERINE M. RICE

CHICAGO, IL

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ABSTRACT

Children residing in low-income, urban neighborhoods are at a disproportionately higher risk of exposure to violence (ETV) across multiple contexts compared to their peers, including witnessing violence and direct victimization. The many negative effects of ETV are compounded when youth experience ETV across multiple settings and when these experiences are chronic. Despite this, much of the research on ETV during childhood focuses on a single form of violence (e.g., family victimization or witnessing community violence). The current study examines patterns of frequency of ETV, including witnessing and victimization, across family, school, and community contexts, using person-centered methods to elucidate the patterns of ETV across multiple ecologies. In addition, the current study examines demographic variables and cohesion across family, school, and community settings in relation to profiles to better understand how patterns of violence can differentially affect low-income, urban youth.

Results of latent profile analysis showed three distinct profiles. The largest profile ($N = 130$, 54.4% of the sample) was comprised of individuals reporting almost no ETV, witnessing or victimization, across settings (Low Exposure group). The next largest group, $N = 87$; 36.4% of the sample) was comprised of individuals who experienced relatively low to moderate rates of all forms of ETV, with moderate to high rates of witnessing community violence (Moderate Exposure group). The third and smallest group ($N = 22$; 9.2% of the sample) was characterized by high levels of both community witnessing and victimization, as well as moderate levels of school witnessing and family victimization (High Exposure group). This group showed low rates

of school victimization and family witnessing, comparable to the other two groups. Examination of demographic and protective factors associated with each profile showed differences in indicators of socio-economic status (SES) and levels of family cohesion. Notably, profiles with higher ETV showed indications of lower SES, and, counter to expectations, the Moderate Exposure group showed the highest level of family cohesion. Profiles showed no differences in gender, parent education, or cohesion in school and neighborhood settings. Implications for clinical intervention and future research are discussed.

CHAPTER 1

INTRODUCTION

In the United States, children are more likely than adults to be exposed to violence, with millions of children exposed to violence across multiple ecologies each year (Finkelhor, 2008; Hashima & Finkelhor, 1999; Finkelhor, Turner, Ormrod, Hamby, & Kracke, 2009). Following exposure to violence (ETV), children suffer a variety of damaging effects, ranging from injury, to poor academic outcomes, to post-traumatic stress symptoms and related mental health issues (Fowler et al., 2009; Evans, Davies, & Dilillo, 2008; Finkelhor, Ormrod, & Turner, 2007).

African American youth, in particular, are at a high risk for ETV, with some estimates suggesting as many as 75% of African American youth have witnessed four or more violent events by adolescence (Miller, Wasserman, Neugebauer, Gorman-Smith, & Kamboukos, 1999). Research has shown that intervention and prevention efforts can improve children's resilience following exposure to violence; however, these efforts are dependent upon how well clinicians and researchers understand the nature of ETV during childhood. While much attention has been focused on the effects of violence, the majority of work has examined ETV according to different settings, developing a fragmentary picture of ETV during childhood. By taking into account individual differences across ETV, the current study seeks to ascertain a cohesive, comprehensive representation of ETV to better inform those working to strengthen children's capacity to avoid ETV and resilience following ETV.

In order to gain a clear conceptualization of children's exposure to violence, it is necessary to establish the actions or behaviors that constitute violence. Traditionally, a violent act has been conceptualized as one "carried out with the intention or perceived intention of physically hurting another person" (Gelles & Straus, 1979). According to this definition, violence can be expressed verbally, physically, or even emotionally, provided that the behavior is combined with the intent to harm another person. The broad scope of this definition allows for application across different fields, settings, and circumstances. In 1996, the World Health Organization (WHO) elaborated upon this definition, citing violence as the "intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation" (WHO Global Consultation on Violence and Health, 1996). This, too, includes a wide range of actions and outcomes, while emphasizing intent to harm as a critical component for an act to be considered violent. Notably, this excludes certain traumatic, and even sometimes gory, events, such as traffic accidents or natural disasters, as violent actions (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002). Thus, most studies examining children's exposure to violence only include events falling under these definitions, categorizing events that fall out of this realm as other traumas or life stressors instead of violence.

Understanding ETV through an Ecological Framework

Bronfenbrenner (1979) proposed an ecological model through which youth are shaped by multiple processes occurring at numerous levels. At the first level, the microlevel, youth are shaped by their immediate environment (e.g., family, schools, community). The second level, or the macrolevel, describes a wider system in which youth are shaped by broad factors such as societal & cultural contexts. At the core of this model lies the notion that these different

environments are “nested” within each other in a way that allows each environment to exert influence on the individual and interact with the other systems. Applying an ecological framework to the study of ETV during childhood can aid in understanding the individual and interactive effects of ETV that occur in different settings across the micro- and macro-systems (Copeland-Linder, Lambert, & Ialongo, 2010; Dubow et al., 2009).

Building on Bronfenbrenner’s ecological framework, Cicchetti and Lynch (1993) developed their ecological transactional model that further accounts for an individual’s multiple surroundings and organizes diverse risk factors. In essence, this model proposes that a child’s previous development, family influences, community environments, and cultural attitudes each contributes to a dynamic process that leads to a child’s developmental outcomes. At each ecological level, different risk and protective factors are present, and the combination of these factors contributes to either an enhanced or diminished likelihood that children will experience an array of outcomes, from academic success to mental health issues to ETV. Notably, this model allows for risk or protective factors at one level to affect factors and outcomes at any other level. In the context of ETV, this would suggest that risk and protective factors in one system are pertinent to the experience of violence in another system; a theory that has been supported across multiple studies (Romano, Bell, & Billette, 2011; Finkelhor, Ormrod, Turner, & Holt, 2009; Elsaesser & Voisin, 2015).

Similar to Bronfenbrenner (1979), the highest level of Cicchetti and Lynch’s (1993) ecological transactional model is the macrosystem, consisting of cultural beliefs and values. These cultural standards permeate families and communities, leveraging influence in these realms. For example, cultural norms such as the high prevalence of media violence and the acceptability of corporal punishment for children have been identified as factors in the

macrosystem that create an overall cultural environment tolerant, and even promotive, of violence, which may lead to higher childhood ETV across multiple systems (Liebler, Hatef, & Munno, 2016; Lansford, 2010).

Within the macrosystem lies the exosystem, consisting of a child's community and neighborhood. Formal and informal social structures serve to make up the exosystem, including social networks, support groups, employment opportunities, and socioeconomic climate (Cicchetti & Lynch, 1993). Disorganized and low-income neighborhoods are risk factors in the exosystem that contribute to the likelihood of violence exposure (Finkelhor, Ormrod, Turner, & Holt, 2009; Coulton, Korbin, & Su, 1999). These structures not only affect factors within the exosystem, but they exert a particular influence on the child's microsystem, or the family environment, the most immediate context of the child's development (Cicchetti & Lynch, 1993). For instance, unemployment and the accompanying poverty-related stressors impede functioning within family units, subsequently increasing children's vulnerability to ETV, inside and outside the family (Wadsworth et al., 2008; Finkelhor, Ormrod, Turner, & Holt, 2009). As it is the most proximal system to the child, it is generally regarded as the primary context for a child's development (Bronfenbrenner, 1986).

The final component included in an ecological transactional model is ontogenic development, which concerns the child's previous and ongoing development. This aspect separates this model from traditional ecological models, as it incorporates the belief that the individual exerts influence on his or her environment, thus contributing to his or her own development (Cicchetti & Lynch, 1993). This level encapsulates internal factors that impact the child's ability to adapt to circumstances and prosper, including emotion dysregulation and poor coping skills. These internal factors interact with the child's experience of violence to create

potentiating factors for adverse developmental outcomes (Harding, Morelen, Thomassin, Bradbury, & Shaffer, 2013; Mohammad, Shapiro, Wainwright, & Carter, 2015). By this same token, an individual's personal strengths, including spirituality and emotional intelligence, can act as protective factors, increasing resilient functioning following childhood ETV, even into adulthood (Howell & Miller-Graff, 2014).

Exposure to Violence

Past research examining exposure to violence has largely examined violence exposure and its effects within a particular setting. Family, school, and community violence constitute three of the most often studied types of violence exposure during childhood; yet, most often these exposures and their subsequent effects are studied separately, within their individual "silo," with the goal of ascertaining the unique etiology or consequences of each type of exposure (Hamby & Grych, 2013). Underlying this compartmentalization of different types of violence exposures is the assumption that these phenomena are "theoretically distinct" from each other, each stemming from unique risk factors and creating its own set of effects (Bidarra, Lessard, & Dumont, 2016). Certainly, these studies have enhanced the understanding of children's ETV, promoting intervention and prevention efforts to curtail the negative sequelae of each type of violence exposure. However, studying each type of exposure in isolation results in an incomplete understanding of how multiple exposures may co-occur to intensify the negative effects of ETV on children's outcomes. It is important to note that, while family, school, and community violence literatures constitute the bulk of the research on childhood ETV, other areas exist that are not necessarily encompassed by these three segments (e.g., media violence exposure, dating violence). Though beyond the scope of this paper, these other forms of ETV are salient in a

child's development and more research is necessary to further our understanding of these types of ETV.

Family violence. The American Academy of Family Physicians (2004) defined family violence as the “intentional intimidation or abuse of children, adults, or elders by a family member, intimate partner, or caretaker... including physical and sexual assault, emotional or psychological mistreatment, threats and intimidation, economic abuse and violation of individual rights.” In the same statement, the group recognized family violence as a public health issue of epidemic proportions. Family violence, which frequently occurs in private residences, can often occur undetected by outside persons, posing a particular threat to children who experience it (Emery, 1989). Historically, violence occurring within a family has not always been recognized as an illegal, punishable offense, although this has been shifting in recent years in an effort to protect families, especially children (Hines & Malley-Morrison, 2005).

Because of the complex nature of families, identifying and studying family violence can pose a considerable difficulty (Emery, 1989). For example, some studies may examine family violence as violence occurring within an intimate relationship, while others may consider a domestic relationship sufficient for family violence. To curb the ambiguities that can arise from these differences, researchers have been encouraged to provide clear operational definitions of the types of violence being measured (Emery, 1989).

Given these differences, prevalence rates of family violence can vary across studies. The second National Survey of Children's Exposure to Violence (NatSCEV II) examined violence exposure during childhood utilizing a nationally representative sample of 4,503 youth aged 1 month to 17 years, making a tremendous contribution to the field's understanding of the frequency of ETV and the ways in which it occurs during childhood. Looking at family violence,

data from this study showed that roughly 20% of all children experienced assault by juvenile sibling in the past year, with an almost 30% lifetime prevalence (Finkelhor, Turner, Shattuck, & Hamby, 2013). Child abuse, or abuse committed against a child by a parent and/or caretaker, reached a prevalence rate of 4.5% for males and 2.9% for female in the past year (11% and 8% in lifetime, respectively). Both males and females reported similar rates of witnessing a family assault, with 8.5% of males and 7.8% of females witnessing a family assault in the past year, and over 20% in lifetime for both males and females Finkelhor, Turner, Shattuck, & Hamby, 2013). Other studies have reported similar, and even slightly higher prevalence rates, especially when considering neglect and the co-occurrence of these different types of family violence (Hussey, Chang, & Kotch, 2006; Bidarra, Lessard, & Dumont, 2016).

For a child, experiencing family violence, either through direct maltreatment or witnessing family members' aggression, can be highly detrimental. A meta-analysis revealed that children who simply witness domestic violence are at a higher risk for adjustment problems, with about 63% of these children exhibiting worse adjustment than their peers (Kitzmann, Gaylord, Holt, Kenny, & Peterson, 2003). Additionally, Kitzmann and colleagues found that there were no significant differences in adjustment issues between children who witnessed domestic violence, those who were physically abused, and the children who experienced both, suggesting that the experiencing violence within the family was devastating to a child's development, no matter the form. Beyond adjustment issues, exposure to family violence is associated with higher levels of internalizing and externalizing problems, negative affect, negative cognitions, and aggression in response to conflict, particularly for girls (Kitzmann, Gaylord, Holt, Kenny, & Peterson, 2003; Elsaesser & Voisin, 2015).

Research on family violence has pointed to a number of factors that are associated with increased likelihood of exposure during childhood. Increased parental stress, economic stress, residential instability, living in non-traditional families (including single-parent families, step-families, and families with parents in a cohabitating relationship), parent alcohol and drug use, and parent psychopathology have all shown to be associated with higher rates of family violence (Rodriguez, 2010; Stith et al., 2009; Turner, Finkelhor, Hamby, & Shattuck, 2013; Turner, Finkelhor, & Ormrod, 2007; McLanahan & Beck, 2010; Weissman, Feder, & Pillowsky, 2004; Windham et al., 2004). It is important to note that, while these factors may increase the likelihood of family violence, not all families with these characteristics will, in fact, be violent. Context is important in determining how and why family violence will occur (Cummings, Davies, & Campbell, 2000).

School violence. Beyond experiencing violence within the microsystem, children can also be exposed to violence in the exosystem. According to the Center for Disease Control and Prevention (CDC), school violence is a subcategory of “youth violence that occurs on school property, on the way to or from school or school-sponsored events, or during a school sponsored event” (CDC, 2016). High-level violence in schools remains relatively uncommon; however, such events do occur (Meyer-Adams & Conner, 2008). NatSCEV II data indicate that a sizeable minority of youth experiences a school bomb or attack threat, with 7.9% of males and 11.5% of females recalling such an experience in their lifetime (2.3% and 5.2% within the past year, respectively) (Finkelhor, Turner, Shattuck, and Hamby, 2013). Additionally, less than 2.6% of youth homicides occurred at school, and this rate has remained relatively stable over the past decade (CDC, 2016).

While severe forms of violence are relatively infrequent, other forms of violence show higher prevalence rates within schools. In 2012, about 749,200 nonfatal violent victimizations occurred at school for kids age 12-18 (Robers, Kent, Rathbun, & Morgan, 2013). In 2013, 8.1% of high school students reported being in physical fight on school property in last year, 6.9% were threatened or injured with weapon on school property one or more times, and 19.6% were bullied on school property within the last year (CDC, 2013). Furthermore, within the last 30 days prior to the survey, 5.2% of students carried a weapon on school property in the last month and 7.1% missed school because they felt unsafe. While these statistics are startling, these numbers have mostly decreased over time (since 1993), with the exception of having missed school for safety reasons, which has seen an increase over the last decade (CDC, 2013).

By far, the most common form of violence in schools is bullying, which includes behaviors such as threats or intimidation, verbal cursing or teasing, stealing passively or by force, and physical attacks (Flannery, Wester, & Singer., 2004; Nansel et al., 2001). Estimates of bullying prevalence vary widely across studies, though most studies suggest between 15-30% of US student population experiences bullying (Nansel et al., 2001; Nansel et al., 2003; Kartal, 2008). A recent meta-analysis supported this, finding that roughly 35% of children report involvement in bullying, via perpetration, victimization, or (most often) both (Kljakovic & Hunt, 2016).

School violence, and bullying, in particular, is associated with a range of negative sequelae. School victimization can result in increased feelings of loneliness, fear, poor self-esteem, social anxiety, depression, substance use, aggression, and even self-harm and suicide attempts (Hawker & Boulton, 2000; Lee et al., 2016; Lereya, Copeland, Zammit, & Wolke, 2015; Arseneault, Bowes, & Shakoor, 2010; Crepeau-Hobson, & Leech, 2016; CDC, 2013).

Furthermore, victimization appears to be relatively stable over time, and these effects have been shown to last into adulthood (Kljakovic, & Hunt, 2016; Arseneault, Bowes & Shakoor 2010).

Witnessing bullying and other forms of school violence can have similarly harmful effects on children. By witnessing such events, children can be “victimized by chronic presence of violence” in schools (APA, 1993). This has been found to be especially damaging if school officials tacitly approved the violent acts (Shidler, 2001). Meyer-Adams and Conner (2008) found that when students are victimized or contribute to bullying behavior, they tend to perceive the school’s psychosocial environment more negatively, leading to a higher likelihood of acting aggressively (e.g., carrying weapons) or avoidantly (e.g., skipping school), which further negatively impacts the school environment and its ability to provide an effective education (Meyer-Adams & Conner, 2008).

In addition to violence perpetrated by peers, school violence encompasses teacher- and staff-perpetrated violence. This type of violence is relatively understudied, but is known to have a range of detrimental effects on children (Hyman & Perone, 1998; Khoury-Kassabri, Astor, & Benbenishty, 2008). Such events can result in a disruption of the trust between teachers, staff, and students, as well as provoke students’ re-experiencing of other traumas and feelings of frustration and alienation (Hyman & Perone, 1998; Hyman & Snook, 2000).

Community violence. Within the exosystem, children can also be exposed to violence in their broader community. Community violence can be defined as victimization within a neighborhood or community setting. Similar to other types of violence exposures, victimization can be either direct, through personal experience of the act, or indirect, through witnessing a violent act. Community victimization can take many different forms, including being chased, beaten up, robbed, shot, and stabbed (Buka, Stichick, Birdthistle, & Earls, 2001; Stein, Jaycox,

Kataoka, Rhodes, & Vestal, 2003). The World Health Organization (WHO) recognizes community violence as a type of interpersonal violence “between individuals who are unrelated, and who may or may not know each other, generally taking place outside the home” (WHO, 2002).

Community violence is one of the broadest forms of ETV, as it can occur in a wide number of settings, and it can encapsulate multiple subcategories of violence, such as youth violence, random acts of violence, violence by authority figures (e.g., police), sexual assault by strangers, or violence in institutional settings (WHO, 2002; Futterman, Hunt, & Kalven, 2016). In their analysis of the community violence literature, Trickett, Durán, and Horn (2003) found that, while some researchers gave explicit instruction on what to consider community violence, most studies did not instruct participants one way or another in regards to these issues. As a result, participants were left to decide what their “community” was. Furthermore, there was little consensus in the events surveyed across studies, such that particular violent events were including in some assessments of community violence and excluded from others. This has led community violence researchers to advocate for more precise measurement tools, as well as considering community violence within the broader context, examining school and family factors that contribute to children’s vulnerability and resilience, so as not to paint a limited picture of children’s experiences (Aisenberg & Herrenkohl, 2008).

Using a nationally representative sample, the NatSCEV II study found that 30% of males and 24.9% of females reported witnessing a community assault in their lifetime, with 18.5% and 15.2% witnessing one in the past year, respectively (Finkelhor, Turner, Shattuck, and Hamby, 2013). It is well established that prevalence rates vary widely across communities; low-income, urban communities are most likely to experience community violence, with estimates of

exposure to community violence as high as 50-96% in urban areas (Stein, Jaycox, Kataoka, Rhodes, & Vestal, 2003; Gladstein et al., 1992; Campbell & Schwartz, 1996).

In addition to living in urban areas, there are many other factors that increase or decrease the likelihood of ETV in the community. Boys of all ethnicities are exposed to higher rates of community violence than girls (Boyd, Cooley, Lambert, & Ialongo, 2003; Chen, 2009; Weist, Acosta, & Youngstrom, 2001; Voisin, Neilands, & Hunnicutt, 2011), and one in four African American boys report being victimized (e.g., beaten or shot at), compared with 12% of African American females (Chen, 2009), often more than once during adolescence (Gaylord-Harden, Cunningham, & Zelencik, 2011). However, one study examining daily exposure to violence in urban African American youth using the experience sampling method found that girls reported higher rates of daily victimization than boys, suggesting that various formats of reporting ETV might glean differing results (Richards et al., 2015). Goldner, Peters, Richards, and Pearce (2011) found that spending more time with family or at school was associated with less community violence exposure for boys; conversely, spending more time in public or with peers was associated with more community violence exposure for boys. After-school hours (between 3-8pm) were shown to be a particularly risky time for community ETV, and, somewhat counter-intuitively, community witnessing and victimization occurred more often on weekdays than weekends (Richards et al., 2015).

Community violence exposure is associated with a range of negative effects for youth. It has been associated with increased internalizing symptoms (Wilson & Rosenthal, 2003; Cooley-Quille, Boyd, Frantz, & Walsh, 2001; Fowler et al., 2009); however, there are mixed findings, as some studies have found that higher levels of community violence exposure result in fewer internalizing symptoms that could be due to desensitization (Gaylord-Harden, Dickson, & Pierre,

2016; Farrell & Bruce, 1997). Community violence can also have an impact on externalizing problems, such as delinquent and aggressive behavior (Chen, Voisin, & Jacobson, 2016; Gorman-Smith, Henry, & Tolan, 2004; Fowler et al., 2009). Notably, some studies have found that girls tend to develop more internalizing problems, while boys tend to develop more externalizing problems in response to ETV in the community (e.g., Reese, Vera, Thompson, & Reyes, 2001). Beyond these detrimental effects, community violence can result in problems concentrating, development of post-traumatic stress disorder (PTSD), and social maladjustment for some children (Cooley-Quille, Boyd, Frantz, & Walsh, 2001; Fowler et al., 2009; Löfving-Gupta, Lindblad, Stickley, Schwab-Stone, & Ruchkin, 2015; Carey & Richards, 2014).

Proximity to a violent event in the community can have an effect on the presence and severity of symptoms that youth experience. Nader and colleagues (1990) found that symptoms experienced following exposure increased the closer a person was to a violent event (i.e., direct victimization, witnessing, or hearing about it). A recent meta-analysis supported this finding, indicating that ETV in the community predicts to more symptoms, particularly externalizing symptoms, the closer one is to an event. As this association was especially strong for externalizing symptoms, the authors suggested that exposure to community violence may portray violence as an effective problem solving strategy, encouraging youth to adopt that behavior (Fowler et al., 2009).

Environmental and Demographic Considerations

Family, school, and community cohesion. In the context of urban, high violence communities, social support can play a pivotal role in fostering healthy development for adolescents (Li, Nussbaum, & Richards, 2007). Cohesion, defined as the bonds within supportive contexts in a person's life, is especially salient within the primary contexts for adolescent

development. Experiencing chronic ETV is indicative of extraordinarily maladaptive relationships between adolescents and their environments; examining cohesion across multiple contexts (e.g., family, school, and neighborhood) can provide insight into potentially healthy relationships between adolescents and their environments, providing avenues for positive development despite chronic ETV (Lerner et al., 2013; DiClemente et al., 2016).

Family cohesion, or the “degree of commitment, help, and support family members provide for one another” (Moos & Moos, 1994), is a “latent and multidimensional construct” reflective of family functioning (DiClemente et al., 2016; Soloski & Berryhill, 2016). Family cohesion encompasses parent-child relationships, as well as sibling relationships. In addition to providing a supportive context for development, families with high levels of cohesion can reduce risk of experiencing ETV through increased parental monitoring (Bacchini, Miranda, & Affuso, 2010). Family cohesion can also ameliorate the effects of ETV, including reduced internalizing and externalizing symptomatology (Goldner et al., 2016, Gorman-Smith & Tolan, 1998, Eisman, Stoddard, Heinze, Caldwell, & Zimmerman, 2015), as well as promote positive affect despite ETV, particularly for boys (DiClemente et al., 2016).

Similarly, school cohesion can be defined as a student’s belief that the adults in his school care about his learning and about him as individual (Blum & Libbey, 2004). Higher levels of student victimization have been related to poorer school climate (Khoury-Kassabri, Benbenishty, Avi Astor, & Zeira, 2004). However, children’s feeling of connectedness to their school can function as a protective factor in high-violence settings, predicting to positive adjustment for youth in these contexts (Blum & Libbey, 2004; Brookmeyer, Fanti, & Henrich, 2006; Ozer & Weinstein, 2004). Likewise, community cohesion, “defined by trust and feelings of kinship among community members” (Riina, Martin, Gardner, & Brooks-Gunn, 2013), has

been shown to be helpful for children, with more positive feelings of community cohesion associated with fewer internalizing problems and reduced levels of antisocial behavior (Romero, Richards, Harrison, Garbarino, & Mozley, 2015; Goldner et al., 2016). In addition to preventing negative outcomes, neighborhood cohesion has been shown to be predictive of resilient outcomes in youth (e.g., self-esteem) for males exposed to high levels of violence (DiClemente et al., 2016).

Ethnicity. African Americans are disproportionately affected by community violence. Estimates suggest that 45-96% of African American youth have witnessed violence in their community, from assault to murder (Gaylord-Harden, Cunningham, & Zelencik, 2011; Margolin & Gordis, 2000), and 16-37% of African American youth report violent victimization (Farrell & Bruce, 1997; Spano & Bolland, 2013). Exposure is often not limited to a single event; one study found that 75% of high risk minority youth report witnessing four or more violent events by adolescence (Miller, Wasserman, Neugebauer, Gorman-Smith, & Kamboukos, 1999). Many African American youth reside in dangerous, economically poorer, under-resourced urban communities, all of which increase the risk for exposure to community violence (Zimmerman & Messner, 2013; Buka, Stichick, Birdthistle, & Earls, 2001; Campbell & Schwarz, 1996; Fitzpatrick & Boldizar, 1993). Even after controlling for demographic variables, African American youth were exposed to community violence more often than their peers (Weist, Acost, & Youngstrom, 2001). When compared to Caucasian peers living in cities, urban African American youth are two times more likely to witness violence (Schwab-Stone et al., 1995). Essentially, for African American youth, expected ETV in the community increased by 78%, compared to Whites or Hispanics. Another study examining daily exposure to violence found that urban African American youth in high-risk neighborhoods experienced, on average, one

violent incident per week in their community (Richards et al., 2015). Given the disproportionate levels of exposure to violence, particularly within the community, for African American youth, further research to better understand their experiences of ETV is imperative, as nationally representative samples will not adequately capture the extent to which these youth are affected by violence.

Gender. Not only is ethnicity an important factor in studying ETV, gender also is crucial to consider, as boys and girls may differ in the amount of witnessing or victimization they experience, as well as the subsequent effects. In reviewing gender differences for family violence exposure, the NatSCEV II study found that boys are more likely to experience physical abuse from caregiver than girls in the past year (4.5% vs. 2.9%). Similarly, over the course of a lifetime, boys are significantly more likely to experience an assault from a juvenile sibling than girls (30.7% vs. 26.6%), although prevalence rates in the past year did not differ across genders (around 20% for both). While no significant gender differences have been found for emotional abuse experienced in the last year, girls are more likely to experience emotional abuse from caregiver than boys over the course of their lifetime (17.5% vs. 12.5% in lifetime). However, there is no evidence of differences in witnessing family assaults between genders, with around 8% of children reporting witnessing this in the past year (Finkelhor, Turner, Shattuck, & Hamby, 2013).

Gender differences also appear mixed in the literature on school violence. Interestingly, girls are significantly more likely to report victimization via a school bomb or attack threat than boys, with 5.2% and 2.3% reporting experiencing this in the past year (Finkelhor, Turner, Shattuck, & Hamby, 2013). Carbone-Lopez, Esbensen, and Brick (2010) found that boys were more likely to be victims of bullying at schools, particularly when it takes a physical form, while

girls were more likely to be victimized through indirect bullying (i.e., relational aggression). In a meta-analysis, however, Card, Stucky, Sawalani, & Little (2008), found no evidence to support gender differences in bullying.

Finally, studies on community violence show that boys tend to report more exposure than girls (Elsaesser & Voisin, 2015; Schwab-Stone et al., 1995; Stein, Jaycox, Kataoka, Rhodes, & Vestal, 2003). Within the past year, boys are more likely to witness community assault than girls (18.5% versus 15.2% in the past year), and are more likely to be assaulted than girls, including assaults without a weapon (33.0% vs. 26.4%) with a weapon (7.4% vs. 5.1%), and assaults resulting in an injury (13% vs. 7.1%) (Finkelhor, Turner, Shattuck, & Hamby, 2013). These likely represent community assaults, but the way in which they were measured prohibits exact categorization. Researchers have suggested that this may be, in part, due to differences in parental monitoring, as girls tend to be monitored more heavily (Svensson, 2003; Webb, Bray, Getz, & Adams, 2002). A better understanding of the ways in which boys and girls differ with respect to co-occurrence will help further the field's understanding of how each gender is exposed to violence (Hamby & Grych, 2013).

Age. Different forms of ETV have been shown to either increase or decrease across the lifespan. Younger children witness domestic violence at disproportionately higher rates than older children, with the average age of first exposure occurring around seven years of age, although girls report slightly younger ages of first exposure than boys. (Graham-Bermann, & Perkins, 2010; Cater, Miller, Howell, & Graham-Bermann, 2015). Researchers hypothesize that as children gain more independence, they spend more time outside the home, thus reducing their exposure to family violence and increasing exposure to community violence. Adolescence has been shown to be a particularly risky time for increased exposure to community violence,

especially for boys (Margolin & Gordis, 2000; Elsaesser & Voisin, 2015). School violence, as well, typically begins in late childhood, peaking in early to mid-adolescence, with exposures tending to decrease during the high school years (Nansel et al., 2001; CDC, 2013; Cook, Williams, Guerra, Kim, & Sadek, 2010). However, a recent meta-analysis focusing on longitudinal studies of bullying during adolescence did not find any associations with age, suggesting the importance of other factors in predicting peer victimization (Kljakovic, & Hunt, 2016).

Age has also been associated with the effects of ETV, particularly early adolescence. During early adolescence, children undergo many changes, including changing relationships with parents and peers, increased independence, and continued neurodevelopment. Violence exposure has been shown to disrupt a child's healthy developmental pathway, leading to emotion dysregulation, increased aggression, and higher rates of drug use (Carey, 2012; Sullivan, Farrell, Kliewer, Vulin-Reynolds, & Valois, 2007). These negative sequelae are exacerbated the earlier that children are exposed to violence (Buckner, Beardslee, & Bassuk, 2004; Weist, Acosta, & Youngstrom, 2001; Miller-Graff, Scrafford, & Rice, 2015). Violence exposure during early adolescence raises the likelihood of a child engaging in risky behaviors and developing a host of internalizing symptoms with long-term implications (Tolan, Gorman-Smith, & Henry, 2003). As adolescence is a crucial period for development, the increased risk of violence exposure within certain contexts make it an especially important time for intervention and prevention efforts to reduce the risk of ETV and its negative effects (Holmbeck, 1994; Hamby & Grych, 2013).

Polyvictimization across Contexts

It is clear that the problem of violence exposure during childhood is complex and multifaceted, spanning across multiple ecologies that impact a child's development. While

studies that examine one type of violence exposure, exclusively, can elucidate the incidence and effects of such experiences, they are limited in key ways (Hamby & Grych, 2013). First, these studies may inflate the contribution of one type of victimization to poor mental health and related issues. Second, these studies exclude the ways in which other types of ETV may add to or interact with other forms of victimization to produce negative outcomes. Finally, many of these studies lack the ability to identify groups of children who are victimized in multiple realms (Finkelhor, Ormrod, & Turner, 2007). With such profound limitations, studies that focus on simply one type of violence exposure fail to capture the reality of many children who are multiply victimized and who are at the greatest risk (Hamby & Grych, 2013).

To capture these intricacies, research has begun to focus on *polyvictimization* during childhood, or the co-occurrence of multiple types of victimization (Finkelhor, Turner, & Ormrod, 2007; Hamby & Grych, 2013). In addition to examining ETV in each setting, the NatSCEV II study also investigated the prevalence of polyvictimization among youth, finding that 57.7% of children had experienced at least one of five aggregate types of direct or indirect victimization (physical assault, sexual victimization, maltreatment, property victimization, or witnessing family/ community violence). Out of fifty possible types of victimization, 48% of the entire sample of children experienced more than one type of victimization, 15.1% experienced more than six types, and 4.9% experienced 10 or more different forms of victimization. In other words, one in twenty children experienced *ten or more* forms of victimization before their eighteenth birthday (Finkelhor, Turner, Shattuck, & Hamby, 2013). This is consistent with a previous study using a nationally representative sample, which found that of the 71% of participants who experienced one victimization, 69% experienced at least one additional, separate type of victimization within the past year (Finkelhor, Ormrod, & Turner, 2007), as well as the Adverse

Childhood Experiences study, which found that victimizations tend to co-occur (Felitti et al., 1998).

Effects of polyvictimization on mental health. As one might expect, experiencing multiple victimizations has been shown to be predictive of poorer outcomes than a single victimization experience, suggesting that multiple stressors combine or accumulate in various ways (Finkelhor, Ormrod, & Turner, 2007). In fact, studies have found both cumulative and interactive effects of co-occurring victimizations. For example, witnessing domestic violence, coupled with the experience of victimization through domestic violence predicts to worse outcomes than simple experiencing one or the other (Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). One study found that individuals who were polyvictims in the past year comprised 80% of 10-17 year olds with clinical levels of anxiety symptoms and 86% with clinical levels of depressive symptoms in the sample (Finkelhor, Ormrod, & Turner, 2007). Children who were exposed to multiple victimizations were significantly more likely than their peers to meet criteria for depression, anxiety, and delinquency, illustrating the toxic effect of ETV on children's developmental trajectory (Finkelhor, Ormrod, & Turner, 2007). In most cases, polyvictimization predicted symptom levels more than lifetime adversity did. Similarly, the number of victimizations proved to be more predictive of trauma symptoms than any one type of victimization, regardless of severity, with the predictive power of any single victimization dropping significantly once polyvictimization was entered as a predictor. Multiple victimizations had a cumulative effect on trauma symptoms, with more victimizations predicting to higher levels of trauma symptoms (Finkelhor, Ormrod, & Turner, 2007). A study of Palestinian children also found that multiple victimizations had a significant additive effect on aggression and post-traumatic stress symptoms (Dubow et al., 2009). This lends strong evidence to the idea that the

presumed influence of individual types of ETV might actually be attributable to underlying effects of polyvictimization (Finkelhor, Ormrod, & Turner, 2007).

Further complicating the picture, children's adjustment can vary according to type of victimization sustained, such that the effects of experiencing two forms of violence depend on the forms of violence that were experienced (Holt & Espelage, 2003). However, Finkelhor, Ormrod, and Turner (2007) caution that while the prevalence of mental health and related issues is substantially higher, not all polyvictims exhibit elevated symptomology, drawing attention to the relevance of other factors in predicting adjustment and resilience following multiple victimization. For example, in a sample of polyvictims, earlier ages of first exposure to violence exacerbated the effects of polyvictimization and resulted in higher levels of PTSD symptoms, suggesting that these experiences impact the developing regulatory system (Miller-Graff, Scrafford, & Rice, 2015). Findings such as this underscore the reality that a multiplicity of factors, including the timing of and the forms in which violence is experienced, are critically important to understand the consequences of children's experience of violence (Margolin, Vickerman, Oliver, & Gordis, 2010).

Predictors of polyvictimization. One of the strongest predictors of polyvictimization is prior exposure to violence; of youth exposed to one form of violence in the last year, the majority were exposed to another type of victimization, as well (Finkelhor, Ormrod, Turner, & Hamby, 2005). Among 2,724 youth (age 0-17 years) being physically assaulted in the past year resulted in 3.4 greater likelihood of maltreatment by a caregiver, 4.9 times greater likelihood of being sexually victimized, and 2.5 times greater likelihood of witnessing any type of violence. Similarly, a lifetime history of witnessing violence correlated with 6.6 times greater likelihood of

sexual victimization, 3.9 times greater likelihood to be maltreated by a caregiver, and 1.8 times greater likelihood of physical assault (Finkelhor, Turner, Shattuck, & Hamby, 2015).

These data emphasize that certain types of violence exposures tend to cluster together. In addition, there is also evidence that certain types of ETV predict general polyvictimization status more than others. For example, exposure to war, rape, witnessing murder, and witnessing parental assault on a sibling strongly predicted polyvictimization status. However, other victimization experiences, including bullying and peer/sibling assault, only weakly predicted polyvictimization status compared to the more severe forms of violence exposure (Finkelhor, Ormrod, & Turner, 2007).

Age is another factor that can influence experience of polyvictimization. In a sample of children age 0-17 years, the mean age of those with who reported low levels of polyvictimization (3-6 victimizations in the past year) was 11.7 years; for high polyvictims (seven or more victimizations in the past year), the mean age was 13.0 years (Finkelhor, Ormrod, & Turner, 2007). Additionally, polyvictimization was most likely to occur during the ages of 6 and 14, implicating the transitions into elementary and high school as particularly risky times (Finkelhor, Ormrod, Turner, & Holt, 2009). Polyvictims were more likely to live in cities, to be African American, to be of low SES, and have single parent, cohabitating, or stepfamily household structure (Finkelhor, Ormrod, & Turner, 2007; Turner, Finkelhor, Hamby, & Shattuck, 2013).

Living in a dangerous community, growing up in a dangerous family, having a disorganized, unpredictable home environment, and having significant emotional problems predicted polyvictimization in children (Finkelhor, Ormrod, Turner, & Holt, 2009). For younger children, the individual, emotional characteristics strongly predicted to polyvictimization; for older children, all four factors increased likelihood of polyvictimization. Somewhat counter-

intuitively, higher GPA and participation in afterschool activities was associated with higher levels of polyvictimization for low-income African American youth, perhaps due to bullying or increased time spent with peers (Elsaesser & Voisin, 2015). Furthermore, paternal rejection, lower friendship quality, and participation in out-of-school activities were associated with higher levels of polyvictimization in a cross-sectional study of Canadian adolescents, suggesting that risk factors across settings increase vulnerability for polyvictimization (Romano, Bell, & Billette, 2011).

Gender and polyvictimization. Boys tend to be polyvictims more often than girls, both in nationally-representative and African American samples (Finkelhor, Ormrod, & Turner, 2007; Elsaesser & Voisin, 2015). Elsaesser and Voisin (2015) found that African American males tended to experience significantly more community violence exposure than females, while experiencing similar levels of family violence; yet, this difference in community violence significantly raised the prevalence of polyvictimization for boys. There also appeared to be a gender difference in the correlates of polyvictimization. For girls, low SES, high levels of aggression, and risky peer norms were associated with higher polyvictimization, while high student-teacher connectedness was associated with lower polyvictimization. For boys, anxiety and aggression were associated with more polyvictimization, while withdrawal was associated with less polyvictimization (Elsaesser & Voisin, 2015). These findings illustrate the ways in which boys and girls might differentially be affected by polyvictimization, and more research is needed to thoroughly evaluate the role of gender in exposure across contexts.

Accounting for Diverse Victimization Experiences

With prevalence rates of polyvictimization staggeringly high, as well as the multitude of factors related to these exposures, it is clear that studying particular types of ETV in isolation

misrepresents children's experiences. It is nearly impossible to find a group that is only exposed to one type of violence, as risk factors for ETV are overlapping across ecologies, and almost all types of ETV, even those seemingly very different, are related to each other in one way or another (e.g., child maltreatment and robbery) (Hamby & Grych, 2013). This has prompted many researchers to reject the "silo" approach to ETV, calling for a more integrated approach that more closely conforms to the reality of children (e.g., Hamby & Grych, 2013).

Effective analysis of the co-occurrence of different types of ETV must account for two sources of variability. First, variability across contexts should be examined. Using an ecological framework attempts to account for this variability by delineating between various settings, while nesting them within each other. Second, examination of co-occurrence should take into account variation across people, such that individual differences are not overlooked. This can be accomplished a number of ways, one of which is by utilizing person-centered methods (Hamby & Grych, 2013).

Person-centered methods. Person-centered analyses have been identified as a method that can help elucidate whether subgroups exist for exposure to or effects of violence (Fowler et al., 2009). As opposed to variable-centered approaches, which can fail to "capture striking patterns in the lives of real people, losing a sense of the whole and overlooking distinctive regularities across dimensions that can indicate who is at greatest risk or needs a particular intervention," person-centered methods conform to individual experiences rather than glossing over differences (Masten, 2001). Person-centered analyses may provide a more realistic portrayal of individual experiences, and, as such, may be more appropriate for understanding the way in which risk factors, such as a diverse set of violence exposures, exist simultaneously and interact to impact mental health (Copeland-Linder, Lambert, & Ialongo, 2010).

Past research using person-centered methods. Much of the violence research that exists today utilizes traditional, variable-centered approaches to investigate the ways in which violence manifests itself in the lives of youth. However, a few studies have capitalized on the ability of person-centered methods to understand how violence can affect youth on an individual level (Weir & Kaukinen, 2015; Copeland-Linder, Lambert, & Ialongo, 2010; Ronzio, Mitchell, & Wang, 2011; Gaylord-Harden, Dickson, & Pierre, 2016; Russell, Nurius, Herting, Walsh, & Thompson, 2010).

The majority of these studies have focused solely on the experience of community violence. In each one, different predictors have been included to develop profiles of violence exposure, making it difficult to compare across studies. Lambert, Nylund-Gibson, Copeland-Linder, & Ialongo, (2010) examined classes, or profiles, of community violence exposure, including witnessing and victimization, in a sample of low income, African American youth (mean age = 11.76 years). They found that 25% of the sample comprised a low exposure group, while 75% comprised a high exposure group. Furthermore, the majority of participants remained stable in their group membership across time (62%); however, subsets of students transitioned into either the higher or lower group in during the middle school years. Depression and impulsive behavior were significantly higher for students in the high exposure group than the low exposure group in sixth grade; yet, these effects did not persist across time. Contrary to previous research, the authors found no gender differences in chronically high or low exposure to community violence. A later study examining witnessing community violence in a sample of African American mothers supported the high and low exposure groups, also finding depression and anxiety to be higher for the high exposure group (Ronzio, Mitchell, & Wang, 2011).

Building on this work, Gaylord-Harden, Dickson, and Pierre (2016) examined both witnessing and victimization or indirect victimization in a sample of low-income, urban African American adolescents (ages 11-15), and found three distinct classes of community victimization: 1) a high exposure class, exhibiting high witnessing and high victimization, but low rates of witnessing; 2) a low exposure class, exhibiting low witnessing and low victimization; and 3) a high exposure class, exhibiting high witnessing, and both indirect and direct victimization. The victimization class constituted the majority of the sample, (39%) and older students were more likely to be members of high exposure class (*mean age* = 13.04), with no differences in relative risk between classes as a function of gender. Furthermore, while no anxiety differences emerged, depression was significantly higher for low exposure and victimization classes compared to the high exposure class, but not between low exposure class and victimization, suggesting that desensitization may occur for those adolescents exposed to the highest levels of violence (Gaylord-Harden, Dickson, & Pierre, 2016). In a similar vein, Nylund Bellmore, Nishina, & Graham (2007) examined witnessing and victimization of peer-to-peer violence, finding three distinct groups: high, low, and medium probability of peer victimization. In accordance with previous research, they found that depressive symptoms differed across these groups, with higher exposure groups reporting higher levels of depression. These results suggest that profiles of violence exposure might be more nuanced than originally anticipated, even within just one category of ETV.

Other researchers have utilized person-centered methods to ascertain how risk and protective factors interact with violence exposure variables. Copeland-Linder, Lambert, and Jalongo (2010) included community witnessing and victimization, along with protective factors, to study profiles according to level of risk for ETV and subsequent mental health issues. They found that three distinct classes emerged: a vulnerable group (5%), a moderate risk/high

protection group (77%), and a moderate risk/medium protection group (18%). These classes differentially predicted depression but not aggressive behavior. One of the few studies to include multiple forms of ETV also included delinquency in the profiles of violence exposure to determine whether there are differences in the trajectories of delinquency among youth exposed to violence (Weir & Kaukinen, 2015). They found that histories of violence exposure tended to affect males and females differentially in regard to delinquency; specifically, females tend to terminate delinquent activity by their late 20s, while males tend to steadily offend into their late 20s.

Issues with current person-centered research. While each of these studies provides insight into how violence exposure differs across individuals, they each exhibit limitations. First, the vast majority of these studies used dichotomized violence exposure variables, such that a person was either violence-exposed or not (e.g., Weir & Kaukinen, 2015; Copeland-Linder, Lambert, & Ialongo, 2010; Ronzio, Mitchell, & Wang, 2011; Gaylord-Harden, Dickson, & Pierre, 2016; Russell, Nurius, Herting, Walsh, & Thompson, 2010; Ronzio, Mitchell, & Wang, 2011). In doing so, these studies disregard the frequency of ETV, which implicitly suggests that a one-time victimization can be equated with *re-victimization*, or the re-occurrence of a particular type of violence over time (Hamby & Grych, 2013). However, it is known that chronic ETV is worse than acute ETV (Finkelhor, Ormrod, & Turner, 2007). Second, not all of these studies examined both witnessing and victimization (e.g., Ronzio, Mitchell, & Wang, 2011); yet, both forms of ETV can impact youth, and they can do so in different ways. Third, almost none of these studies examined ETV across multiple relevant contexts (e.g., school, family, community). Given that victimization across contexts is associated with worse outcomes, studies seeking to

provide more realistic representations of children's ETV should strive to incorporate a variety of relevant contexts.

Current Study

The goal of the current study is twofold. First, the current study will examine patterns of violence exposure during childhood through adolescence in a sample of low-income, urban African American youth, to determine distinct profiles of family, school, and community violence, including frequency of witnessing and victimization for each domain. Second, group membership will be examined in relation to demographic variables (i.e., gender, SES, family structure, parent education) and cohesion across contexts, assessing how these factors differ across profiles of ETV.

By accomplishing these aims, the current study improves the literature by (1) accounting for frequency of ETV during childhood, (2) accounting for differences in witnessing vs. victimization, (3) accounting for different contexts of ETV, (4) accomplishing aforementioned goals in a person-oriented way, consistent with the ontogenic development focus of ecological-transactional theory, and (5) pushing the field towards a more integrated understanding of childhood ETV.

Aims and Hypotheses

Aim 1. Obtain descriptive information about each type of violence exposure by gender.

Hypothesis 1. Boys would show higher levels of community violence exposure than girls; however, boys and girls would show similar levels of family and school violence exposure.

Aim 2. Using variables that capture the frequency of ETV across contexts, the current study seeks to examine the patterns of violence exposure that emerge using person-centered analyses.

Hypothesis 2. It was hypothesized that four groups will emerge:

Group 1: High across all 6 domains

Group 2: Low across all 6 domains

Group 3: High community witnessing/victimization, low across other four domains

Group 4: High community witnessing, low across other five domains

Aim 3. Examine the cross-sectional correlates of group membership, including demographic variables (i.e., gender, family structure, parent education, income) and cohesion variables (i.e., family, school, and community cohesion).

Hypothesis 3. Groups 1 and 3 would include more males, more single parent households, lower parent education, and lower income relative to Groups 2 and 4.

Hypothesis 4. Group 1 would show poorer cohesion across family, school, and community domains compared to other groups. Groups 3 and 4 would show poorer community cohesion compared to Group 2, but similar levels of family and school cohesion.

CHAPTER 2

METHOD

Participants, Design, and Procedures

A sample of 268 low-income, urban African American sixth-grade students was recruited for a three-year longitudinal study examining exposure to community violence and its effects in early adolescence. Participants attended one of six urban public schools that were selected based on their location in low-income neighborhoods, and were identified as being in high-crime areas, as indicated by the preceding year's Chicago Police Department's published crime statistics. Of the students approached to be part of the study, 58% agreed to participate, which is consistent with previous studies utilizing a similar sample (e.g., Cooley-Quille & Lorion, 1999). Data collection occurred in three waves, with one each school year from 1999-2001. During the first wave, the sample contained slightly more females than males (59% female), and the average age of students was 11.65 years; 254 students continued into the second year of the study ($M = 12.57$ years), and 222 students continued into the final year ($M = 13.58$ years). The current study examines only data from year two of the larger study, with 239 students from this time point completing the exposure to violence measure in its entirety (59% female, $M = 12.55$ years, $SD = .68$). There were no significant group differences in parental education, parents' marital status, and annual household income between those students who continued with the study and those who were lost to attrition over the three-year period (Goldner et al., 2016). It is important to note that the sample size for some statistical analyses in the current study will

reflect a smaller size due to incomplete parent-report data during the second wave of data collection.

A previous study reported on household characteristics for the sample (Goldner, Peters, Richards, & Pearce, 2011). The median annual family income was between \$10,000 and \$20,000, indicating that the majority of participants lived in low-income households, consistent with the neighborhood demographics. Most parents reported having at least a high school degree (83%), with 10% reporting having either a college or post-graduate/professional degree. Additionally, 48% of participants came from one-parent homes, and the median household size for the sample was five people.

Once signatures on both the child-assent and parent-consent forms were obtained, students were allowed to participate in data collection. Data collection occurred in three waves, once every year, beginning in the 1999-2000 school year (sixth grade) and ending in the 2000-2001 school year (eighth grade). During each wave, students responded to questionnaires administered by trained research assistants over the course of five consecutive days. In exchange for their participation, students received games, sports equipment, and gift certificates, and parents received gift certificates. Although the study spanned sixth through eighth grades, the constructs of interest were only administered at seventh and eighth grade, with the sample size for seventh grade significantly higher than eighth grade; thus, the current study will only include the second wave of data collection.

Measures

Demographics. Student gender was assessed via self-report surveys. Other demographic variables, including family structure, parent income, and parent education, were obtained through parent-report surveys. Due to high amounts of missing data for parent-report surveys,

relevant child-report variables were utilized to supplement parent-report information for family structure and parent income. Child report variables included the number of people who lived at the child's home, number of commodities (e.g., TV, radio) owned by the family, and whether the child shared a bedroom.

Exposure to violence. To assess adolescents' ETV, a revised version of the *My Exposure to Violence Scale* was used (Buka, Selner-O'Hagan, Kindlon, & Earls, 1997). The revised version was a 25-item self-report measure, and participants rated the frequency of their lifetime exposure to a series of violent events on a scale from 0 (*never*) to 4 (*four or more*). The measure contained both witnessing and victimization subscales. The witnessing subscale consisted of 13 items such as, "Have you seen someone else being hit, kicked, or beat up?" and "Have you seen someone being forced to have sex?" Similarly, the victimization scale consisted of 12 items, and included questions such as, "Have you been chased by someone who wanted to hurt you?" and "Have you been threatened with a knife or a gun?" Internal consistency for the witnessing subscale during seventh grade was high ($\alpha = .746$ in seventh grade); however, the victimization subscale demonstrated relatively lower internal consistency ($\alpha = .491$). This is unsurprising, as scales assessing incidence of violence exposure are not expected to show high internal consistency (Finkelhor, Ormrod, Turner, & Hamby, 2005).

After the initial question asking the whether a particular violent event occurred and how frequently, the measure asked a series of follow-up questions, including "Who did it?" and "Where?" Responses to these questions were used to code the type of violent act into (1) family violence, (2) school violence, or (3) community violence. Violence was determined to be family violence if it occurred inside the youth's home/yard or in a relative's home *and* by someone the youth knew (either immediate family or other person with whom the youth had a relationship).

The variable was not limited strictly to biological family, as families can be comprised of individuals outside of immediate, biological relations. School violence was determined to be violent acts committed on school grounds *and* perpetrated by someone the youth knew. Community violence was comprised of acts that were committed outside of home and school. Additionally, acts that occurred inside the home/yard, a relative's home, or school grounds *and* were perpetrated by someone the youth did not know were also considered to be community violence. This was done in recognition that community violence often permeates even private residences and educational settings. The witnessing and victimization subscales were preserved within each category of violence, producing six distinct variables: family witnessing, family victimization, school witnessing, school victimization, community witnessing, and community victimization.

Family cohesion. The *Family Environment Scale (FES)*; Moos & Moos, 1986) was adapted to include only the "Cohesion" subscale of the Relationship dimension, resulting in a revised version of the measure containing 8 items. This self-report questionnaire assesses youths' perceptions of support and helpfulness within their families (e.g., "Family members really help and support one another" and "There is a feeling of togetherness in our family"). Response options ranged from 1 (*not true for my family*) to 4 (*very true for my family*). Internal consistency was adequate at seventh grade ($\alpha = .63$).

School cohesion. A revised version of the *School Sense of Community Measure* (Battistich & Hom, 1997). Due to the topic of interest in the original study, only the "Sense of School as a Community" subscale was used, and four items of this subscale were eliminated due to redundancy with other measures in the study. The revised measure contains 10 items asking youth to report on how much they agree with statements regarding their school (e.g., "Students at

this school really care about each other” and “My school is like a family”) on a scale from 1 (*disagree a lot*) to 5 (*agree a lot*). Internal consistency for the revised measure was high at seventh grade ($\alpha = .88$).

Community cohesion. A revised version of the *Neighborhood Youth Inventory (NYI*; Chipuer et al., 1999) was used to measure neighborhood cohesion. Due to overlap with other measures in the original study, 12 items from the original *NYI* were removed prior to data collection, resulting in a reduced, 10-item measure. The revised scale contains 10 items asking youth to report their perceptions of helpfulness, friendship, and activity in their communities on a scale from 1 (*not true at all*) to 5 (*completely true*). Example items include “There is a place for kids my age to hang out in my neighborhood” and “I feel okay asking for help from my neighbors.” Internal consistency was high at seventh grade ($\alpha = .81$).

Analytic Procedure

First, variables assessing the frequency of witnessing ETV and direct victimization across (1) family, (2) school, and (3) community settings in seventh grade will be created, for a total of six continuous variables. In accordance with the first aim of the study, gender differences across each type of ETV will be examined using a t-test.

For the second aim of the study, profiles of ETV across settings during childhood will be obtained using Mplus statistical software (Version 7.4, Muthén & Muthén, 2015). Like latent class analysis, latent profile analysis (LPA) is a procedure that uses underlying latent classes to explain the relationship among observed dependent variables (latent indicators). Whereas LCA uses dichotomous variables as predictors, LPA uses continuous variables to produce a set of multivariate linear regression equations to describe the relation between a set of observed dependent variables and a set of underlying categorical variables (Muthén & Muthén, 2015). The

current study will utilize the six violence variables as predictors to identify similar response patterns among individuals, beginning with a one-profile solution and adding on until the best fitting solution is reached. As no single statistic is provided to evaluate model fit, a series of statistics will be examined to choose the most appropriate number of profiles, including Akaike Information Criterion (AIC), Bayesian Information Criteria (BIC), sample-size adjusted BIC, entropy, and bootstrap parametric likelihood ratio test (BLRT) (Nylund, Asparouhov, & Muthén, 2007; Asparouhov & Muthén, 2012; Ram & Grimm, 2009). Using the results of the latent profile analysis, each participant will be assigned to a class according the profiles that emerge.

Consistent with previous research (e.g., Kircanski et al., 2016; Müllerová, Hansen, Contractor, Elhai, & Armour, 2016), the correct number of classes will also be based on the smallest derived class size. Any solution with a class consisting of less than 5% of the sample will be rejected, as it may be “over-fitting” the data and therefore less likely to replicated in future data sets.

To achieve the third aim of the study, the demographic correlates of group membership will be examined using the recommended multinomial logistic regression procedures in Mplus (Asparouhov & Muthén, 2014). For categorical distal variables (e.g., gender, parent marital status, parent education), the method described by Lanza, Tan, & Bray (2013) (DCAT) will be used, which treats categorical distal outcomes as covariates in the model to estimate the distribution across classes. To assess continuous distal variables (e.g., parent income, number of people in home), the recommended three-step estimation procedure (DU3STEP) will be used, which provides estimates the means of continuous variables across classes, while taking into account uncertainty in group membership by correcting for classification-error (Vermunt, 2010; Asparouhov & Muthén, 2014). This same procedure will be used to understand differences in family, school, and community cohesion across profiles.

CHAPTER 3

RESULTS

Preliminary Analyses

To create the six ETV subscales, each item response was coded by setting and perpetrator to determine its categorization of family, school, or community violence. Then, preserving the witnessing and victimization subscales of the *EV-R*, the total frequency of exposure within each setting was summed, creating six distinct variables reflecting total ETV across settings. Of the 244 students who completed the exposure to violence measure, 16.6% did not complete the follow-up items on 1 or 2 items, which did not allow for coding of the violence into setting categories. These items were excluded from the total ETV scores for these participants. In addition, 2% of the sample ($n = 5$) did not complete follow-up items to 3 or more items, precluding coding of these items according to setting. As a result, the ETV scores across settings for these participants were determined to misrepresent the total amount of violence exposure they endorsed. These participants were excluded from analyses entirely due to an inaccurate representation of ETV across settings. The final sample consisted of 239 participants.

Reliability, normality, and descriptive statistics for all variables were examined (Table 1). However, it should be noted that internal reliability for ETV measures is potentially misleading because ETV is not a unitary construct, and it is not necessarily expected that these events are closely related, despite belonging to the same conceptual category. As a result, low internal

consistency should not discourage the use of these subscales (Netland, 2001; Finkelhor, Hamby, Ormrod, & Turner, 2005). In addition, the ETV variables were positively skewed and showed high kurtosis, with the majority of participants reporting very low levels of ETV, consistent with previous studies (Finkelhor, Turner, Shattuck, & Hamby, 2015). Finally, correlations among the ETV and cohesion variables can be found in Table 1. Consistent with previous studies, certain forms of ETV were correlated with each other, while others appeared to be uncorrelated. School witnessing and victimization were correlated with each other, as were community witnessing and victimization. Witnessing and victimization within a family setting were uncorrelated. School witnessing was also correlated with community witnessing and victimization, along with family victimization. Family victimization was also positively correlated with community witnessing. Interestingly, all three forms of cohesion were positively correlated with each other, and community cohesion was positively correlated with witnessing violence in the community.

Table 1. Reliability, normality, and range statistics for ETV subscales and cohesion measures

| Variable | Reliability | Min-Max | Skewness | Kurtosis |
|--------------------|-------------|---------|----------|----------|
| Family Wit | .104 | 0-4 | 4.511 | 20.205 |
| School Wit | .356 | 0-10 | 3.719 | 16.378 |
| Community Wit | .631 | 0-27 | 3.681 | 22.826 |
| Family Vic | .308 | 0-8 | 6.816 | 52.348 |
| School Vic | .245 | 0-5 | 6.037 | 41.860 |
| Community Vic | .413 | 0-14 | 4.462 | 29.757 |
| Family Cohesion | .630 | 0-23 | -1.112 | 2.013 |
| School Cohesion | .881 | 0-32 | 0.206 | -0.692 |
| Community Cohesion | .811 | 2-40 | 0.123 | -0.924 |

Table 2. Mean, standard deviations, and correlations for exposure to violence and cohesion variables

| Variables | <i>N</i> | <i>M</i> | <i>SD</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------------|----------|----------|-----------|-------|--------|--------|--------|-------|-------|--------|--------|
| 1. Family Wit | 239 | 0.17 | 0.70 | - | | | | | | | |
| 2. School Wit | 239 | 0.50 | 1.36 | -.013 | - | | | | | | |
| 3. Community Wit | 239 | 1.63 | 2.98 | .077 | .375** | - | | | | | |
| 4. Family Vic | 239 | 0.15 | 0.81 | .097 | .145* | .203** | - | | | | |
| 5. School Vic | 239 | 0.12 | 0.55 | -.030 | .256** | .071 | -.031 | - | | | |
| 6. Community Vic | 239 | 0.59 | 1.48 | .013 | .382** | .649** | .271** | -.040 | - | | |
| 7. Family Coh. | 229 | 15.33 | 4.03 | -.039 | .073 | .066 | -.073 | .027 | .003 | - | |
| 8. School Coh. | 223 | 13.71 | 8.10 | -.074 | -.085 | .021 | -.117 | -.079 | -.009 | .221** | - |
| 9. Comm. Coh. | 227 | 21.68 | 9.19 | .017 | -.023 | .139* | -.099 | .005 | .082 | .319** | .511** |

Note: * significant at .05 level, ** significant at .01 level

Hypothesis 1: Gender Differences in ETV

Gender differences across each type of ETV were examined using an independent samples t-test ($N = 237$). Results showed that males and females reported very similar rates of ETV, both witnessing and victimization, across all three settings (family, school, and community) in seventh grade ($p > .05$). The mean exposure in each category, along with standard deviations, for the overall sample is given in Table 2.

Hypothesis 2: Latent Profile Analysis

In the current study, six variables reflecting ETV across family, school, and community settings were used as continuous indicator variables in the model. As previously mentioned, these variables represent non-normal data. Although one assumption of LPA is the marginally normally distributed data, the logic of LPA suggests that non-normal data should not be transformed, as this is what the latent profiles are created to explain (McLachlan & Peel, 2000). In addition, given the measurement of the ETV items, the total scores do not represent either pure count or continuous scales. However, because the total scores could only take on non-negative integer values, it was determined that the total scores were best represented as count data using a Poisson distribution. The analyses were run, first, treating the variables as such. Post hoc analyses treating the variables as continuous variables or as counts using a zero-inflated Poisson distribution showed little change in the overall profiles that were obtained. Though there was little difference, the original model showed the strongest fit and had the most acceptable class sizes; thus, it was retained as the best representation of the data, and these are the results that are presented.

It was hypothesized that a 4-class solution would be the best fit to the data. Latent profile analysis using the maximum likelihood estimation with robust standard errors and chi-square

showed that the three-class solution showed lower AIC, BIC, and adjusted BIC, as well as a significant BLRT compared to the two-class solution, suggesting that the three-class solution is a better fit than the two-class solution. Entropy showed a minor decrease for the three-class solution, though it was still very high. Compared to the three-class solution, the four-class solution showed slightly lower AIC, BIC, and adjusted BIC, as well as slightly higher entropy. However, the four-class solution included a group that was comprised of 9 individuals (3.8%) of the data. As that was below the previously determined 5% threshold for the smallest acceptable group, the four-class solution was rejected as a meaningful solution. As a result, the three-class solution, which showed acceptable model fit, was adopted as the best fitting model. Model fit statistics can be found in Table 3. Figure 2 illustrates the change in AIC, BIC, and adjusted BIC across models.

The three-class solution reflected three distinct profiles of children's exposure to violence, illustrated in Figure 3. The largest profile ($N = 130$, 54.4% of the sample) was comprised of individuals reporting very low rates of ETV, witnessing and victimization, across settings (Low Exposure group). The next largest group, ($N = 87$; 36.4% of the sample) was comprised of individuals who experienced relatively low to moderate rates of all forms of ETV, with moderate to high rates of witnessing community violence (Moderate Exposure group). The third and smallest group ($N = 22$; 9.2% of the sample) was characterized by high levels of both community witnessing and victimization, as well as moderate levels of school witnessing and family victimization (High Exposure group). This group showed low rates of school victimization and family witnessing, comparable to the other two groups. The average counts of violence in each setting for each class are shown in Table 4.

Table 3. Fit information for latent profile analysis models with 1-4 classes

| #Classes | Free Parameters | Chi Square | <i>df</i> | AIC | BIC | Adjusted BIC | Entropy | BLRT (<i>p</i>) | Smallest Class Size Proportion |
|----------|-----------------|------------|-----------|----------|----------|--------------|---------|-------------------|--------------------------------|
| 1 | 6 | 921.987 | 38840 | 3157.124 | 3177.983 | 3158.964 | -- | -- | 100% |
| 2 | 13 | 1049.307 | 38840 | 2503.636 | 2548.830 | 2507.624 | 0.908 | <.001 | 40.17% |
| 3 | 20 | 1066.963 | 38836 | 2345.239 | 2414.769 | 2351.374 | 0.896 | <.001 | 8.97% |
| 4 | 27 | 861.520 | 38834 | 2228.533 | 2322.398 | 2236.815 | 0.907 | <.001 | 3.77% |

Note. AIC=Akaike Information Criterion, smaller is better; BIC=Bayesian Information Criteria, smaller is better; adjusted BIC=Sample-adjusted BIC, smaller is better; Entropy closer to 1 is better, BLRT=bootstrapped parametric likelihood ratio test (*p* values reported here).

Figure 1. AIC/BIC/Adjusted BIC showing model fit for models with 1-4 classes

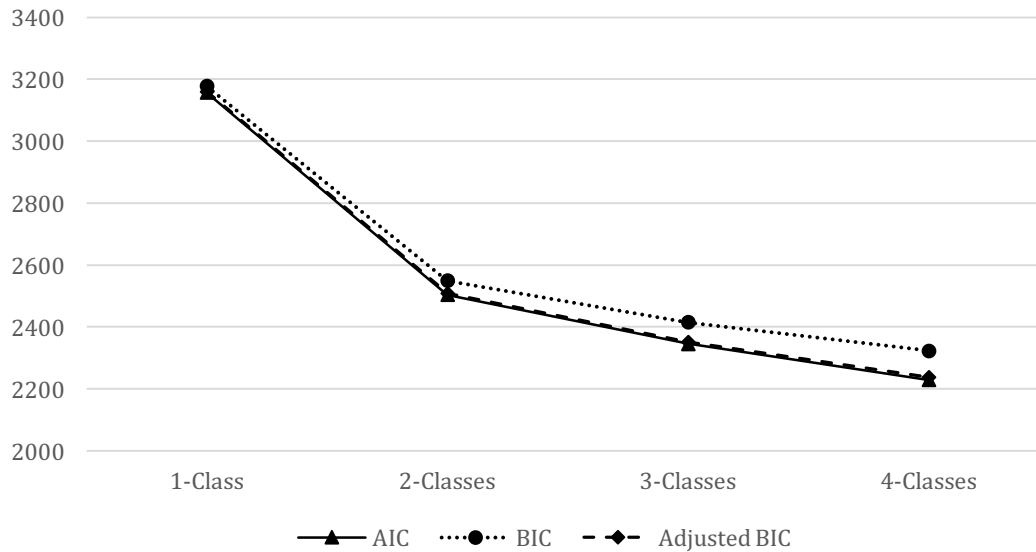


Figure 2. Latent profiles of ETV based on the 3-class solution

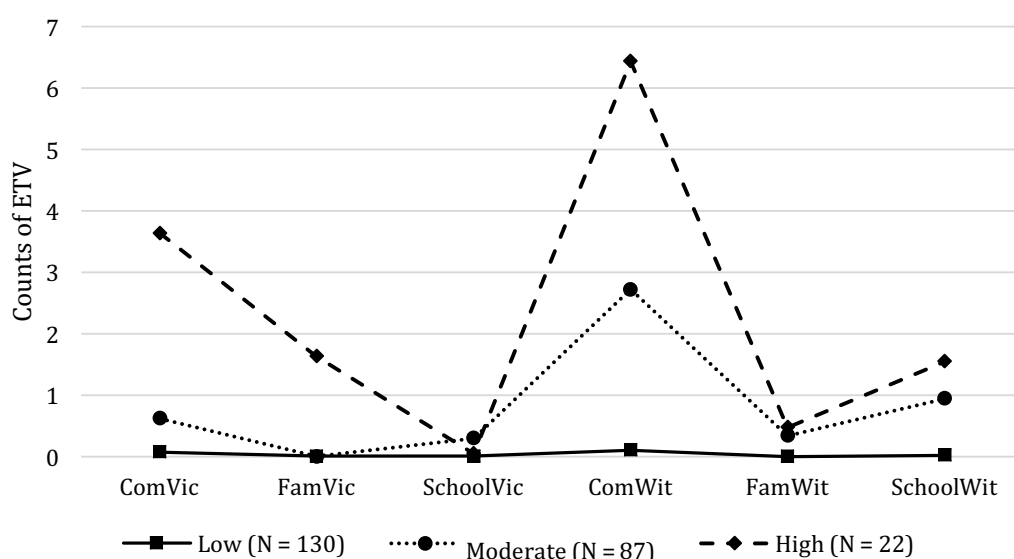


Table 4. Average counts of ETV in each setting for overall sample and by class

| | Overall (<i>N</i> = 239) | Low (<i>N</i> = 130) | Moderate (<i>N</i> = 87) | High (<i>N</i> = 22) |
|----------------|------------------------------|--------------------------|------------------------------|--------------------------|
| Family Wit. | 0.167 | 0.000 [†] | 0.342* | 0.475 |
| School Wit. | 0.498 | 0.026* | 0.945 | 1.550 |
| Community Wit. | 1.628 | 0.106* | 2.721* | 6.437* |
| Family Vic. | 0.151 | 0.008* | 0.000 [†] | 1.632 |
| School Vic. | 0.117 | 0.008* | 0.298* | 0.047* |
| Community Vic. | 0.594 | 0.075* | 0.622 | 3.640* |

Note: * indicates that an estimate is a significant indicator of the class ($p > .05$). [†]Moderate Exposure family victimization and Low Exposure family witnessing showed zero variability, with no participants endorsing either type of exposure within the class. Model estimates could not be obtained for those parameters.

It is worth noting which of the six forms of ETV acted as significant indicators of each group. For the Low Exposure group, all types of ETV were significant indicators of group membership, except for family witnessing, as no one in this group endorsed witnessing violence in the family, resulting in zero variability for that indicator. For the Moderate Exposure group, only school victimization, community witnessing, and family witnessing were significant

indicators of group membership. For the High Exposure group, community victimization and witnessing, along with school victimization were significant indicators.

Hypothesis 3: Demographic Correlates of Profiles

To address the third hypothesis (i.e., gender, family structure, parent education, income will vary across groups), demographic descriptions of the profiles were examined in Mplus using the class membership produced through the latent profile analysis. This hypothesis was tested by examining observed characteristics (Z) as predictors of latent class membership (C). Given that C is not observable, to treat C as known would ignore any uncertainty that is present in the classification through latent profile analysis (Lanza, Tan, & Bray, 2013). Following the guidelines proposed by Asparouhov & Muthén (2014), the preferred method of multinomial logistic regression for continuous distal outcomes (DU3STEP) was used for continuous variables, which estimates the varying means of Z across classes C , correcting for classification-error (Vermunt; 2010; Asparouhov & Muthén, 2014).

The preferred method of multinomial logistic regression for categorical variables (DCAT), including both nominal and ordinal variables, was used, which treats categorical distal outcomes as covariates to empirically derive the class-specific distribution of Z using observed proportions and information provided by the latent profile model (Lanza, Tan, & Bray, 2013; Asparouhov & Muthén, 2014). The difference in the log-likelihood between the latent class models with and without covariate Z is used to test the significance of the association between C and Z .

Both procedures apply listwise deletion. Notably, many of the analyses for Hypothesis 3 utilize parent-report data, available for 69.0% of participants ($N = 165$). As the majority of missing parent-report data was due to parents missing the entire wave of data collection, data

imputation was deemed inappropriate. When available, child-reported proxy variables were used to supplement parent-report data to provide a more complete understanding of demographics in relation to profiles. Results are summarized in Table 5.

Gender. No gender differences across profiles emerged ($N = 237$; $X^2 = 3.488$, $df = 2$, $p = .175$). The distribution of males and females appeared to be similar across the Low Exposure (conditional probability for males = .445), Moderate Exposure (conditional probability for males = .326), and High Exposure (conditional probability for males = .501) groups.

Family structure. Parent-reported marital status (single parent vs. two parent homes) was reported by 165 parents in the sample. Results showed no significant differences across profiles ($X^2 = 2.123$, $df = 2$, $p = .346$). The number of parent figures in the home was also examined, which could include individuals such as grandparents, aunts, or uncles ($N = 155$). Results showed no statistical difference across groups ($X^2 = 1.466$, $df = 2$, $p = .480$). Similarly, the number of individuals in the home, as reported by the child, was examined ($N = 222$), which showed significant difference across groups ($X^2 = 7.570$, $df = 2$, $p = .023$). Post-hoc tests showed a significant difference between the Low Exposure and Moderate Exposure groups ($X^2 = 7.330$, $df = 1$, $p = .007$), with the Low Exposure group having significantly more people in the home ($M = 5.945$) compared to the Moderate Exposure group ($M = 4.837$).

Income. Parent-reported total annual household income was examined across groups ($N = 165$). Results showed significant differences across groups ($X^2 = 0.861$, $df = 2$, $p = .650$). In addition, household annual income was divided by the number of people in the home to account for how many people the income was supporting. However, this showed no significant differences across groups ($X^2 = 2.281$, $df = 2$, $p = .320$).

Given the missing parent-report data, certain child-report variables were examined as proxy variables for family income. First, children reported on whether they shared a bedroom, indicating yes or no. Examination across groups revealed significant differences ($X^2 = 14.042$, $df = 2$, $p = .001$), with post-hoc examination showing that participants in the High Exposure group were most likely to share a room (conditional probability = .866), followed by participants from the Moderate Exposure group (conditional probability = .581), and then the Low Exposure group (conditional probability = .446). Post-hoc examination showed a significant difference between the Low Exposure and High Exposure groups ($X^2 = 13.226$, $df = 1$, $p < .001$), as well as a significant difference between the Moderate Exposure and High Exposure groups ($X^2 = 4.671$, $df = 1$, $p = .031$). The difference between the Low Exposure and Moderate Exposure groups was trending towards significance ($X^2 = 3.359$, $df = 1$, $p = .067$).

In addition, children reported on the number of commodities owned by their family (e.g., phone, television, computer). This was divided by the number of people in each house to account for differences in household size. Results showed a significant difference across groups ($X^2 = 12.206$, $df = 2$, $p = .002$). Post-hoc tests showed that the Low Exposure group reported owning significantly more commodities per person than the Moderate Exposure group ($X^2 = 7.276$, $df = 1$, $p = .007$) and the High Exposure group ($X^2 = 11.644$, $df = 1$, $p = .001$). No significant differences existed between the Moderate and High Exposure groups in the number of commodities owned.

Parent education. Highest degree attained by a parent was examined ($N = 157$). Education was categorized into 5 groups: No high school degree, high school degree/GED, some

college/technical school, college/professional degree. Results showed that the distribution of education did not significantly differ across classes ($X^2 = 7.882$, $df = 6$, $p = .247$).

Hypothesis 4: Differences in Cohesion Variables across Profiles

The three-step estimation procedure for continuous variables (DU3STEP) was used to estimate the level of cohesion across profiles in Mplus, correcting for classification-error, as recommended by Asparouhov & Muthén (2014). As this procedure utilizes listwise deletion, 10 cases were excluded from the family cohesion analysis ($N = 229$), 16 cases from the school cohesion analysis ($N = 223$), and 12 cases from the neighborhood cohesion analysis ($N = 227$). Results are summarized in Table 6.

Family cohesion. Results showed a significant difference of family cohesion across groups ($X^2 = 6.146$, $df = 2$, $p = .046$). Contrasts between classes showed a significant difference between the Low and Moderate groups ($X^2 = 5.363$, $df = 2$, $p = .021$), with the Low Exposure group ($M = 14.774$) showing significantly lower levels of family cohesion compared to the Moderate Exposure group ($M = 16.288$). The difference in family cohesion between the Moderate and High Exposure groups was trending towards significance ($X^2 = 3.253$, $df = 2$, $p = .071$), with the Moderate Exposure group exhibiting relatively higher levels of family cohesion ($M = 16.288$) compared to the High Exposure group ($M = 14.829$). No significant difference emerged between the Low and High Exposure groups.

School cohesion. Results showed no significant differences in school cohesion across groups, suggesting that subjective ratings of school cohesion were similar across Low, Moderate, and High Exposure groups.

Neighborhood cohesion. Results showed no significant differences in neighborhood cohesion across groups, suggesting that subjective ratings of neighborhood cohesion were similar across Low, Moderate, and High Exposure groups.

Table 5. Demographic correlates of latent profiles

| | Low (N = 130) | Moderate (N = 87) | High (N = 22) |
|------------------------------------|------------------|----------------------|------------------|
| Gender | | | |
| Male | .445 | .326 | .501 |
| Female | .555 | .674 | .499 |
| Parent marital status | | | |
| Single | .721 | .655 | .516 |
| Married | .279 | .345 | .484 |
| Number of parent figures at home | 1.707 | 1.565 | 1.530 |
| Number of people at home | 5.945* | 4.837* | 5.671 |
| Total annual income | \$19,753 | \$21,841 | \$17,249 |
| Annual income per person | \$4,917 | \$4,507 | \$3,339 |
| Shared bedroom | | | |
| Yes | .446* | .581* | .816* |
| No | .554* | .419* | .184* |
| Number of commodities (per person) | 1.024* | 0.695* | 0.583* |
| Parent education | | | |
| No HS degree | .196 | .140 | .101 |
| HS degree/GED | .294 | .157 | .187 |
| Some college/technical degree | .389 | .518 | .353 |
| College/professional degree | .122 | .185 | .360 |

Note: * indicates significant differences with at least one other group (see text for description of differences). Estimates for gender, parent marital status, shared bedroom, and parent education reflect conditional probability of observed variable *Z* for each given class.

Table 6. Mean scores on measures of family, school, and community cohesion for overall sample and across groups

| | Overall | Low (<i>N</i> = 130) | Moderate (<i>N</i> = 87) | High (<i>N</i> = 22) |
|--------------------|---------|--------------------------|------------------------------|--------------------------|
| Family Cohesion | 15.33 | 14.774* | 16.288* | 14.29 |
| School Cohesion | 13.71 | 13.938 | 13.629 | 12.580 |
| Community Cohesion | 21.68 | 21.034 | 22.625 | 21.749 |

Note: * indicates significant differences with at least one other group (see text for description of differences).

CHAPTER 4

DISCUSSION

The rates of ETV reported in the current study are comparable to other studies (e.g., Finkelhor, Turner, Shattuck, & Hamby, 2013), though some studies have found significantly higher rates of ETV, depending on the sample and measurement of ETV (e.g., Miller, Wasserman, Neugebauer, Gorman-Smith, & Kamboukos, 1999). Community violence was the most commonly reported form of ETV, which was expected, as participants were recruited for their high rates of violence within their neighborhoods. The rates of the six forms of ETV showed no gender differences for the overall sample. Reports of the lifetime frequency of family and school ETV were consistent across genders, similar to previous studies (e.g., Finkelhor, Turner, Shattuck, & Hamby, 2013, Card, Stucky, Sawalani, & Little, 2008). Somewhat surprisingly, no gender differences emerged in rates of community exposure, contrary to what was hypothesized. While many studies have previously found evidence suggesting that boys report higher rates of community violence than their female counterparts (e.g., Voisin, Neilands, & Hunnicutt, 2011), other studies have found similar rates across genders (e.g., Richards et al., 2015). As Richards and colleagues (2015) note, this may be a reflection of the measurement used, as some measures may be more sensitive to gender differences than others.

Hypotheses predicted four distinct patterns of ETV to emerge: (1) Low across settings, (2) High across settings, (3) High community exposure, low across family and school, and (4) High community witnessing, low across everything else. Results showed three distinct profiles of

ETV, which resembled the four hypothesized groups, though not perfectly. First, a Low Exposure group emerged, showing very low ETV across all settings (54.4% of the sample). Consistent with this, previous studies have found that roughly 50% of kids report very low rates of exposure to violence (e.g., Finkelhor, Turner, Shattuck, & Hamby, 2013). Second, a Moderate Exposure group was found (36.4%), showing moderate to high rates of witnessing community violence, along with slightly higher rates of family witnessing and school victimization compared to the Low Exposure group. Third, a High Exposure group was found (9.2%), exhibiting high levels of community witnessing and victimization and moderate levels of school witnessing.

Examination of the fit statistics showed that a four-class solution had slightly better fit to the data compared to the three-class solution; however, it was rejected based on small class size (less than 5% of the sample). The four-class solution was very close to the three-class solution, showing similar Low and High Exposure classes. The Moderate class was separated into two distinct classes, one with higher community exposure and one with higher school exposure. It is likely that the sample size of the current study did not have power to distinguish between these two classes given the low separation between the two. Although the addition of a fourth class may enhance our understanding of distinct patterns of children's ETV across contexts, the three-class solution provides greater clinical utility.

Other person-oriented studies have found the presence of a low ETV groups (Nylund, Bellmore, Nishina, & Graham, 2007; Lambert, Nylund-Gibson, Copeland-Linder, & Ialongo, 2010), suggesting that even in samples recruited from high risk areas, a proportion of youth experience relatively lower rates of ETV compared to their peers. In addition, moderate ETV

groups have emerged in person-oriented research examining school violence (Nylund, Bellmore, Nishina, & Graham, 2007), as have high ETV groups in research examining community violence (Gaylord-Harden, Dickson, and Pierre, 2016; Lambert, Nylund-Gibson, Copeland-Linder, & Ialongo, 2010). However, it is difficult to directly compare profiles across studies, as each study included a unique set of predictors (e.g., only community violence, risk and protective factors), and few have examined ETV across multiple relevant contexts. Given that multiple forms of ETV tend to co-occur, resulting in poorer outcomes, the current study expanded upon previous research by incorporating three separate settings to provide a more comprehensive picture of how ETV is present in the lives of African American youth residing in high violence, low-income neighborhoods. Thus, the profiles obtained reflect the interplay between multiple ecosystems for each individual, in line with the ecological-transactional approach, which underscores the relatedness between systems and the individual.

It is important to note that the Low Exposure group is comprised of over half of the sample. This can be interpreted as a rather positive finding, particularly for organizations with limited resources struggling to attend to the needs of youth in high risk, urban communities. However, despite low levels of direct victimization or witnessing experiences, researchers and clinicians must recognize that these children are likely still affected by violence. Many of these children experience the effects of chronic violence in their communities implicitly, by fearing for their safety while walking to school or learning about victimizations of friends or family. In this way, even distal exposures can create a culture of fear and destabilize youth's perceptions of safety and control, leading to the development of post-traumatic stress symptoms and other detrimental outcomes (Fowler et al., 2009). As such, they may not demonstrate need for the most

intensive interventions; yet, practitioners should consider other resources that may be beneficial for these children.

The Moderate Exposure group consisted of youth who reported similar levels of school victimization (low), family witnessing/victimization (low), and community witnessing (moderate). These children appear to show low risk in two very important settings within the micro- and exosystems (family and school), exhibiting levels comparable with the Low Exposure Group. Yet, they show higher risk in the community setting within the exosystem compared to the Low Exposure group. Importantly, this profile did not show characteristic levels of school witnessing or community victimization, suggesting that these two forms of ETV were less salient for membership in this group.

The High Exposure group displayed the highest level of ETV within the exosystem, with rates of community ETV drastically higher than either of the other two groups. However, the levels of ETV for school and family settings appear to fluctuate within the High Exposure group, as not all forms of violence in these settings emerged as significant predictors of group membership. Perhaps most notably, family victimization did not appear to be a significant indicator of the High Exposure group, despite the higher mean score for this group compared to the other two. These results suggest that while some forms of ETV may cluster together to show distinct profiles of ETV for subgroups of children, there may still be significant variability for risk in certain domains within each group.

Although no differences in parent-reported income were found, examination of child-report proxy variables for income revealed differences in the number of people in the home, with the Low Exposure group reporting more in-home residents than the Moderate Exposure group.

Children in the High Exposure group were also significantly more likely to share a bedroom compared to the Low and Moderate Exposure groups, and children in the Low Exposure group owned significantly more commodities per person (e.g., television, stereos) than children in the Moderate or High Exposure groups. Together, these suggest meaningful differences in economic risk across profiles. Specifically, the Moderate and High Exposure groups appear to experience similar levels of economic hardship, with the High Exposure group only slightly higher. The Low Exposure group appeared to have less economic hardship compared to the Moderate and High Exposure groups. This follows a logical pattern, especially given the link between poverty and exposure to violence (Zimmerman & Messner, 2013), providing external validity for the profiles obtained.

Contrary to expectations, cohesion across community and school settings appeared to be quite similar for all three profiles. Interestingly, though family cohesion appeared to be similar for the Low and High Exposure groups, the Moderate Exposure group showed significantly higher levels of family cohesion compared to the Low Exposure group. These results support the conceptualization of cohesion as a moderator of the effects of ETV, rather than an outcome of ETV. In other words, cohesion may exist independently of exposure to violence, such that it is possible for an individual within a high violence environment to have a sense of solidarity and trust with those within that environment. This, then, allows cohesion to function as a protective factor, reducing risk for future violence exposure and enhancing positive mental health, despite the presence of ETV (Bacchini, Miranda, & Affuso, 2010; DiClemente et al., 2016; Goldner et al., 2016; Ozer & Weinstein, 2004).

Previous literature has related higher levels of family cohesion with lower levels of witnessing of community violence, controlling for race, gender, and previous delinquency and victimization experiences (Barr et al., 2012). Results of the current study lend partial support to this link. On the one hand, the Low Exposure group showed much lower levels of witnessing community violence compared to the Moderate Exposure group; however, it also showed significantly lower levels of family cohesion. Thus, it does not appear that family cohesion acts as a protective factor for the Low Exposure group. On the other hand, the Moderate Exposure group showed much lower levels of witnessing violence in the community compared to the High Exposure group, while also showing marginally higher levels of family cohesion, a difference that was nearing significance. This implies family cohesion may act as a protective mechanism for the Moderate Exposure group, reducing their risk of further ETV that would promote membership in the High Exposure group. It may be that the effect of family cohesion on ETV as a protective mechanism depends on the level of risk in other areas. Youth who do not experience amplified risk in certain areas (e.g., SES) compared to their peers may show a less pronounced response to the level of family cohesion. Thus, while family cohesion appears to be remarkably similar for the Low and High Exposure groups, family economic situation may partially account for the difference in ETV between the two groups (Selner-O'Hagan, Kindlon, Buka, Raudenbush, & Earls, 1998).

While it may be that the Moderate Exposure group inherently contains higher levels of family cohesion compared to the other two groups, allowing it to function as a protective mechanism, the patterns of violence across the groups may also serve to explain the observed differences in family cohesion. Following exposure to moderate levels of violence within their

community, the Moderate Exposure group may view their communities as less safe, leading them to spend more time with their families. A qualitative study with parents and children living in high violence, urban neighborhoods found that parents use a variety of “hypervigilant behaviors” to protect children when they perceive the community to be dangerous. These included “screening” children’s companions, intensive monitoring of where children spend time, keeping children in visual range as much as possible, and acting as confidants to have knowledge of children’s lives outside the family (Horowitz, McKay, & Marshall, 2005). The Low and High Exposure groups might not experience this same retreat into family life, although for different reasons. Children in Low Exposure group may still view their communities as safe, such that they retain the freedom to spend time in contexts outside of the home. The High Exposure group, however, exhibits higher levels of family violence compared to the other two groups, suggesting that family life may be more chaotic for the High Exposure group, leaving these children without a haven to escape the danger present in the community.

With this understanding, the differences in family cohesion between the groups may carry implications for individuals’ risk for future ETV, as well as resilience following ETV. Family cohesion may reflect effective parental monitoring (Bacchini, Miranda, & Affuso, 2010), which can provide children and adolescents with a perception that someone cares for and will look out for them. Children from families with higher levels of cohesion also show better anger regulation and fewer behavioral problems compared to children from less cohesive families (Houlberg, Henry, & Morris, 2012; Plybon & Kliwer, 2001), both of which are known risk factors for ETV. By nurturing healthy family environments, cohesive families may have higher capacity to provide for children’s needs, communicate effectively, and lend emotional support to

cope with life's challenges, especially exposure to community violence (Kliewer, Parrish, Taylor, Jackson, Walker, & Shivy, 2006). With these resources available within the family, children are more likely to exhibit resiliency in the face of chronic risk, including enhanced self-esteem and positive affect (DiClemente et al., 2016).

The lack of findings for parent-report variables (i.e., income, parent marital status, parent education) may be attributable to missing data for parents. The lack of gender differences across profiles was again surprising. This current finding mimics the findings of Gaylord-Harden, Dickson, and Pierre (2016), who found no gender differences in community witnessing or victimization when using person-centered methods. Compared to traditional variable-centered methods, it may be that person-centered methods more accurately reflect naturally occurring patterns of ETV within children's environment (Gaylord-Harden, Dickson, & Pierre, 2016). By encompassing violence across multiple ecosystems, the current study may have occluded gender differences that exist for community ETV, especially given that males and females tend to demonstrate similar levels of ETV in family and school settings.

Strengths and Limitations

The current study demonstrated a number of notable strengths. First, the current study sought to accurately represent children's experiences by incorporating the frequency of ETV across three different settings (i.e., family, school, community) and two modes of exposure (i.e., witnessing and victimization) through a person-oriented framework. By conforming to children's individual experiences, the current study highlighted the varied way in which violence exposure can occur during childhood, without obscuring individual differences. In addition, utilizing frequency of ETV instead of presence of ETV (a binary variable), the current study was sensitive

to the difference between single and chronic exposures and provided a nuanced understanding of how different forms of ETV occur relative to each other. In doing so, the current study addressed the challenges facing African American youth living in low-income neighborhoods, a particularly high-risk group for ETV traditionally underrepresented in research.

In addition to the strengths, the current study was subject to a few limitations. The ETV measure utilized retrospective report of lifetime ETV; as such, children may have excluded some instances of ETV. The measure also allowed children to report only one perpetrator and place, even in instances where the event may have occurred with more than one perpetrator and/or in more than one place. This may have led to children reporting only the most salient or recent experience, resulting in under-reporting of their total ETV. In addition, violence occurring at home may have been under-reported due to stigma or fear of possible repercussions (Emery, 1989). Certain forms of ETV (e.g., media violence exposure, dating violence) were not measured, as they were beyond the scope of the current study. These are relevant experiences for many youth, and future studies should incorporate these.

The ETV measure also showed low reliability. While past researchers have noted that high internal consistency is not necessarily expected from ETV measures, this is nonetheless a troubling limitation, as it obscures our ability to detect effects that may be present. In the end, our conclusions are only as strong as the measures on which they rely. In the field of violence, where research is used to inform prevention efforts, intervention programs, and policy, these conclusions can carry significant impact on the lives of many children. Researchers in this field must continue to improve measures of ETV, such that they are (1) an accurate and

comprehensive reflection of children's experiences, (2) sensitive to relevant factors (e.g., type, frequency, setting, timing), and (3) constructed in such a way that allows for adequate reliability.

Missing data was a challenge for the current study, as well. First, missing data affected measurement of ETV, as the ETV instrument required children to answer follow-up questions about their experiences, including who did it and where it occurred. Approximately 15% of students neglected to respond to these follow-up questions for one or two items; as such, those particular items were not able to be categorized into family, school, or community settings and were excluded from the child's ETV scores. This, along with the limitations of the ETV measure itself, suggest that the total ETV reported in the current study is an underestimation of what children may be experiencing in low-income, urban neighborhoods. In addition, approximately 30% of parents in the sample did not complete any of the parent survey. Non-significant findings from analyses using parent-report data should be interpreted with caution given this limitation.

Other limitations include limited generalizability, as the current study examined the experiences of low-income, urban, African-American youth, and the cross-sectional nature of the study, preventing conclusions regarding causation. Additional studies are needed to evaluate whether the profiles obtained reflect the experiences of youth in other demographic groups and whether these profiles are stable across time. The sample size, too, may not have provided sufficient power to detect small classes with low separation (Tein, Coxe, & Cham, 2013). Future studies utilizing larger sample sizes might have adequate power to distinguish between a higher number of profiles.

Clinical Implications

The current study illustrates systematic variations in ETV for youth from high violence, low-income neighborhoods. Importantly, the three profiles show striking differences in community violence, along with differences in family and school exposure, drawing attention to the heterogeneity of exposure even within a high-risk sample. Furthermore, even within profiles, certain forms of ETV appeared to less salient predictors, such that there was no “characteristic” level of exposure for the profile in those domains. Oftentimes, interventions target high-risk community samples, however, it is likely that individuals within this sample require varying degrees of resources and intervention. With this understanding, interventions should be tailored to meet youths’ individual needs, so as to maximize impact and provide appropriate resources to children based on their experiences.

The level of ETV reported by individuals in the High Exposure group suggests they would benefit most from mental health resources; however, the group also shows significantly lower indicators of SES, suggesting they may have the least access to resources in their community. Interventions should continue to develop creative ways to provide resources to the most vulnerable populations.

Furthermore, interventions should demonstrate flexibility in addressing all victimization experiences, as the profiles obtained in the current study support past findings that ETV across settings tends to co-occur. In addition, witnessing and victimization in the same setting showed different rates even within profiles, with rates of witnessing oftentimes higher than victimization. For example, frequency of community witnessing appears to be disproportionately higher than frequency of community victimization, particularly in the High Exposure group. This

underscores the necessity of assessing for the frequency of both witnessing and victimization, even within the same setting, as these can both affect children and can do so in different ways. Similarly, because profiles appeared to differ on levels of family cohesion, assessment of protective factors may help to determine child's level of risk. Interventions targeted at children and families may promote family cohesion, which may be most helpful for those children showing higher levels of risk. The lack of significance for family victimization as a predictor for the High Exposure group reminds us that we cannot automatically assume that children in the highest risk groups will show the highest levels of violence exposure in a particular setting. As such, practitioners should seek to understand which environments may serve as strengths for youth and capitalize on them in designing treatments for youth.

Conclusion and Future Directions

By integrating six different forms of violence exposure, the obtained profiles more accurately reflect children's overall ETV than studies assessing a single form. Future studies should continue to explore the interrelations of ETV across settings and perpetrators, incorporating relevant factors such as proximity to, frequency of, and variability in ETV. To continue pushing forward the field of violence research, especially person-oriented violence research, researchers should develop theory-driven practices for conceptualizing and assessing ETV during childhood. This entails the continual improvement of current measures and the development of new, more sensitive and reliable measures of ETV that provide an accurate gauge of children's ETV, not simply a select few experiences. As others have noted, clinical interview may be preferable to self-report measures given the sensitivity of the questions (Weist, Youngstrom, Myers, Warner, Varghese, & Dorsey, 2002). Related to this, researchers should

consider whether examining lifetime ETV or past year ETV shows more clinical utility in developing profiles of ETV. It may be that past year ETV shows more predictive validity for short-term risk, but lifetime ETV is a stronger predictor for long-term risk and symptoms, though there is not sufficient information to draw these conclusions.

Building on the current study, future studies should examine profiles of violence exposure in relation to symptom profiles. Furthermore, new research is needed to better understand how children displaying these different patterns of ETV can be identified in clinical settings. It is important to keep in mind that there is likely heterogeneity within each profile in regards to symptom levels, demographic factors, and risk or protective factors. These external variables are influenced by many elements, and researcher should continue to consider individual differences in evaluating profiles of ETV.

The current study provided support for the theory that ETV across settings may occur in unique patterns for African American youth in high violence, low-income neighborhoods. Whereas traditional variable-centered methods provide aggregate estimates of the prevalence of ETV for all youth within a population, person-centered methods provide estimates for distinct subgroups within a population, with the assumption that exposure occurs in a finite number of observable and predictable patterns. In this way, the current study, and person-centered methods in general, advocate for the perspective that individual differences within a population are not negligible; rather, understanding this heterogeneity can guide theory and inform clinical approaches to best serve children affected by violence.

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VITA

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