

The Association Between Violence Exposure and Aggression and Anxiety:
The Role of Peer Relationships in Adaptation for Middle School Students

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ABSTRACT

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The extent and consequences of exposure to violence on child and adolescent adjustment are well documented. Empirical studies have focused on identifying the risk and protective factors that may increase or decrease the likelihood of poor outcomes. In terms of resilience and adaptation, some adolescents appear to be capable of coping with the stress of exposure to violence, while others are not. Coping with violence exposure requires both internal and external resources that ultimately determine how adaptive or maladaptive the outcome will be. Given that adolescence is a time during which peer relationships become increasingly important, they may serve as external coping resources. The present study hypothesizes that various facets of peer relationships (i.e., friends' behavior, friendship reciprocity, peer acceptance, and peer intimacy/closeness) will have an effect on the relationship between community and family violence exposure and psychological and behavioral outcomes, specifically, aggression and anxiety, as both have been consistently and empirically linked to violence exposure.

Data were collected from 667 middle school students, followed from 6th grade to 8th grade, living in a high crime school district in New York City. Data were also collected from their parents and classmates. Prosocial friends and their influence on the cognitive processing of social information, leading to fewer hostile attributions, were expected to help adolescents cope by minimizing the negative impact of exposure to violence on aggression. Further, reciprocated

friendships, peer acceptance, and close, intimate friends were expected to lessen the negative impact of exposure to violence on anxiety.

Controlling for gender, six models were tested positing separate moderating and mediating effects of the aforementioned variables on the associations between violence exposure and aggression and also anxiety. Friends' Antisocial behavior was found to mediate the relationship between violence exposure and later aggressive behavior. Hostile attribution alone did not explain the relationship between violence exposure and later aggression, but when Friends' Antisocial behavior and hostile attribution were examined in the same model, together they mediated the association between violence exposure and later aggressive behavior. Of note, Friends' Antisocial behavior was a stronger predictor than hostile attribution. Greater social acceptance moderated the relationship between violence exposure and later reported anxiety when violence exposure was low. Peer intimacy/closeness, while demonstrating a direct effect on anxiety, failed to moderate the association between violence exposure and anxiety. Finally, Friends' Prosocial Behavior could not be tested for whether it buffered the effect of violence exposure on later aggression because the data did not meet criteria for performing tests of moderation. However, Friends' Prosocial behavior was related to other study variables in the expected direction; it was significantly negatively associated with violence exposure, hostile attribution bias, and Friends' Antisocial behavior. Therefore the emphasis on friends' prosocial behavior in current prevention efforts to reduce aggressive outcomes is warranted.

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Chapter I

INTRODUCTION

A disturbingly large number of children and adolescents living in the United States are witness to, or direct victims of violence. Poor, urban environments are plagued with high levels of potentially harmful and life-threatening situations. Chronic violence exposure has been found to be associated with increased risk of emotional and behavioral difficulties in children and adolescents. Because of the complexity of hypothesized processes linking violence exposure and outcome, there is still a need for more attention to systematic explorations of how children in high-risk areas adapt, including the underlying mechanisms that contribute to coping in the face of chronic and pervasive stress. According to Lazarus and Folkman (1991), stress is defined as a “particular relationship between the person and the environment that is appraised by a person as taxing or exceeding his or her resources and endangering his or her well-being...” (p. 19). As such, community and family violence should be considered significant stressors.

In the face of community and family violence exposure, understanding the mechanisms or processes by which adolescents cope is important, as they ultimately have an effect on adaptation. Lazarus and Folkman (1984) describe coping as the “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (p.141). Lazarus and colleagues (1974) posited that both internal resources (e.g., problem-solving abilities and ways of thinking) and external resources (e.g., financial resources, social support) are necessary as they contribute to an individual’s coping capacity. Although these conceptualizations of stress and coping have been based on adult functioning, they have been generalized to children and adolescents (e.g., Compas, Connor-Smith, Saltzman, Harding Thomsen, & Wadsworth, 2001; Grant,

Compas, Stuhlmacher, Thurm, McMahon, & Halpert, 2003).

Successful adaptation to stress involves a variety of coping strategies such as managing emotions, thinking constructively, monitoring behavior, and acting upon the environment in such a way as to change or diminish sources of stress (Compas et al, 2001). The acquisition of these skills is important to human development. It is when an adolescent's coping efforts are ineffectual that they can lead to maladaptive outcomes (Seiffge-Krenke, 1995).

In terms of external coping resources, peers play a significant role in youths' adaptation to stressful situations. It is widely accepted that peer relationships contribute to the psychological development and welfare of children and adolescents (Sullivan, 1953). As such, theory suggests that peers have a strong influence over adolescents in terms of both their thoughts and behavior. Social learning theory (Bandura, 1986) has been used to help explain how social behaviors are learned through imitation and modeling. Crick and Dodge's (1994) social information-processing model has taken the issue one step further by attempting to describe the underlying cognitive processes that explain social learning.

While parents are still necessary and important resources during adolescence, youth tend to rely more on peers as social influences for important decisions (Cook, Buehler, & Henson, 2009). Further, peers appear to have a significant impact on a broad array of developmental choices that have both long-term (e.g., success in school, sexual involvement, and substance use) and short-term (e.g., lifestyle preferences for clothing, music, etc) consequences (Wang, Peterson, & Morphey, 2007). Given peers' influence, under stressful circumstances, an adolescent's way of thinking, problem-solving abilities, and response may be influenced by his or her friends. As a result, peer influence may contribute to adolescent coping efforts.

According to Sullivan's (1953) theory of interpersonal development, friends serve an

important protective function for at-risk youth. Through friendships individuals can derive the emotional and cognitive resources for support and coping (Hartup, 1992a). Cohen and Wills' (1985) stress buffering theory has often been used to explain how social support buffers or protects an individual. When an individual's perceived social support is responsive to his/her needs during a stressful situation, it is said to be protective (Cohen & Wills, 1985). "A protective function is implied if, for example, individuals with high levels of a trait are unaffected by conditions of increasing stress, whereas those low on the trait show declines in competence with increasing stress levels" (Luthar, 1991, p. 602). Protective factors interact with stress and ultimately predict adjustment (Garmezy, Masten, & Tellegen, 1984). Social support can also buffer the impact of risk factors by enhancing opportunities and resources necessary for physical and psychological well-being (Bowen & Chapman, 1996). The opportunities and resources that social support can afford should, in turn, enhance and expand an adolescent's repertoire of coping strategies.

Much of the literature on peer relationships has focused upon the dyadic experience of friendship; however, that is but one piece of the larger social picture. An examination of social relationships as potential coping resources should include an analysis of dyadic and group experiences (Bukowski, Velasquez, & Brendgen, 2008), peer intimacy and closeness (Berndt, 1996), the behavior of the adolescent (Coie, Dodge, & Kupersmidt, 1990; Dodge, 1983), and the adolescent's friends' behavior and social influence (Barry & Wentzel, 2006; Keenan, Loeber, Zhang, Stouthamer-Loeber, & van Kammen, 1995; Patterson, DeBaryshe, & Ramsey, 1989; Cook et al, 2009). This type of investigation would afford a comprehensive view of the processes through which social relationships affect youth development, adaptation, and resilience. Additionally, a longitudinal approach to the study of peer relationships is necessary in

order to capture the transactional nature of social influences/effects over time. Of note, while important conceptual and empirical distinctions have been made with respect to the various types and attributes of relationships that are encompassed by the broad concept “peer relations,” certain aspects of social relationships may have an additive effect and their influence may be examined as a constellation rather than through individual factors. Thus, some facets of social relationships may stand alone (i.e., friends’ behavior) whereas others (i.e., reciprocated friendships, peer acceptance, peer intimacy/closeness, and peer rejection) may be best understood collectively.

The Significance of Peer Relationships

The importance of children’s and adolescents’ social relationships has long been the focus of developmental theorists and researchers (Sullivan, 1953; Piaget, 1965; Kohlberg, 1969; Asher & Parker, 1989; Furman & Buhrmester, 1992). Of particular interest has been the dynamic, developmental nature of social relationships. As children grow into adolescents, they rely less on parents or caregivers for their primary social experiences, and begin turning their attention towards forming more sustaining relationships with peers (Berndt, 1982; Furman & Buhrmester, 1992). As a result, peer relationships take on a new significance in adolescence and have far-reaching implications for future development. Good developmental outcomes depend upon having friends and maintaining these relationships, because friends provide important socialization experiences, impact social-emotional functioning and self-understanding, and influence the formation and functioning of subsequent adult relationships (Hartup, 1993).

Friendships

Sullivan’s (1953) interpersonal theory of development has been widely referenced as the theoretical basis for examining youths’ social relationships, specifically friendships. According

to Sullivan, friendships are crucial to the psychological development and welfare of children and adolescents. He outlined specific interpersonal needs that emerge across various stages of development, infancy through adulthood. According to Sullivan, it is through these stages of development and one's interactions with care providers and peers that youth acquire the necessary tools to navigate the social world.

The first stage of development, infancy (birth to two years), is the period in which the need for tenderness surfaces and is generally fulfilled through one's interactions with a parent or mother figure. Childhood (ages 2 to 6 years old) is marked by the expansion of the interpersonal world, including interactions with other adults and children, and the use of language as a tool for interpersonal communication. The juvenile stage (ages 6 to 9 years old) marks the social transition during which children seek acceptance by their peer group. One's classmates become a growing influence over the individual, and concepts such as cooperation, compromise, and competition become operationalized. The preadolescent stage (ages 9 to 12 years old) signals an increased desire for interpersonal intimacy and the need for validation by a same-sex best friend or "chum" of comparable age and status. This developmental advance signifies an important milestone and is characterized by equality and the reciprocal nature of the relationship.

According to Sullivan, friendship represents "a perfectly novel relationship with the person concerned; he becomes of practically equal importance in all fields of value (p. 245)." The early adolescent stage (ages 12 to 16 years old) is marked by a coexistence of intimacy with a single friend of the same gender and sexual interest in persons of the opposite gender. Late adolescence and adulthood are the final two stages in which the aspects of one's personality are further honed, and hopefully, lead to the establishment of relationships of love.

For the purposes of the current study, Sullivan's (1953) preadolescent stage is most

relevant because of the emphasis on establishing friendships and the importance of these relationships on cognitive and social development. However, due to the study's longitudinal design, the participants' ages extend beyond the age range defined as preadolescent and into the early adolescent stage. It should be noted that Sullivan used these stages as a guide to interpersonal development, but acknowledged that individuals can change at any time. Further, while the shift towards 'chumships' becomes apparent in the preadolescent stage, the importance of establishing and maintaining those friendships continues throughout adolescent development and beyond.

In terms of adaptation, Sullivan's idea of a relationship in which there is a sense of mutual understanding, reciprocity, and a sharing of perspectives supports the notion that friends influence one another cognitively via their interdependence. Further, Sullivan advocated for the protective benefits of having friends. Sullivan believed that friendships allowed one to feel accepted, connected, and secure. He argued that friendships could ameliorate traumatic events that may have resulted from prior family experiences. Likewise, the collaborative relationship that a friend affords meant that he or she would make "sure each other's satisfactions and security were met... (p. 115; as cited in Evans, 1996)." In essence, he viewed friendships as security systems that could protect an individual from risk within and outside of the family.

Peer acceptance

Like friendship, peer acceptance is considered an important determinant of social development and adjustment (Furman, 1996; Hartup, 1992b). Popularity represents a high level of peer acceptance within the larger social group. While popularity and friendship are interrelated social phenomena, they are also distinct concepts (George & Hartman, 1996). Furman and Robbins (1985) adopted the notion of "provisions" to explain the differences

between the developmental significance of popularity and that of friendship. Furman and Robbins reasoned that popularity and friendship offer children and adolescents similar and different experiences. Specifically, they argued that popularity offers experiences for a sense of inclusion, whereas friendship provides opportunities for loyalty, affection, and intimacy. Likewise, Gest and colleagues (2001) asserted that friendships help teach children social skills that ultimately affect their acceptance by the peer group, but also that acceptance by the peer group affords opportunities to make friendships. In terms of adaptation, one would expect that being well accepted within a larger social network would afford greater and more secure access to social and emotional support, particularly in times of stress.

Peer Rejection

Just as popularity represents the extent of one's peer acceptance, teasing represents a form of peer rejection (Leary, Kowalski, Smith, & Phillips, 2003). Teasing can impact peer group affiliation and define social relationships, particularly during early adolescence when teasing increases (Land, 2003; Warm, 1997). "Concern with acceptance and social changes within friendships and peer groups have made teasing within peer interactions especially salient and likely to occur" (Eder et al., 1995; Kowalski, 2000, as cited in Jones, Newman, & Bautista, 2005). For example, social experiences at both the dyadic and group levels inform and influence one another such that when viewed at the group level, certain individual characteristics may be viewed favorably or unfavorably, thus making a particular child or adolescent more or less popular with his or her peers (Boivin, Dodge, & Coie, 1995; Chang, 2004 as cited in Bukowski, Velasquez, & Brendgen, 2008). Those characteristics deemed unfavorable by the larger social group may then serve as prompts for teasing since teasing often occurs when a child or adolescent has violated some prescribed social norm (Keltner, Capps, Kring, Young, & Heerey,

2001). Malicious teasing is most concerning because of the potential for negative emotional reactions and its harmful consequences for psychosocial well-being. Victims of such teasing receive the message that the perpetrator does not like, value, or accept them (Leary et al, 2003). Intuitively, one would expect that being teased or picked on more than his or her peers would limit the extent and the availability of social and emotional support, thus resulting in poorer outcomes.

Intimacy/Closeness

Sullivan (1953) considered high quality relationships those that demonstrated greater intimacy and collaboration and less competition; intimacy and collaboration imply the sharing of one's thoughts and feelings within a secure partnership. Adolescents often share personal or private information with their "best friend" and studies have found that adolescents identify self-disclosure and openness as critical components of friendship (Berndt, 1989; Bigelow, 1977; Furman and Bierman, 1983; Hunter & Youniss, 1982 as cited in Shulman, 1993). Intimacy may be the strongest evidence for the assumption that friendships become more supportive during adolescence (Berndt, 1989). As such, the degree to which two friends share and help each other is an indication of the closeness of their relationship (Berndt, 1989). According to Laursen and Mooney (2008), "close friendships are a cornerstone of adaptation and a reliable marker of individual adjustment..." (p. 47). Therefore, adolescents who do not have close, intimate relationships may be deprived of important sources of social support and coping assistance (Buhrmester, 1990), which in the context of stress, could have maladaptive outcomes.

Peer Behavior and Influence

Individuals generally seek out and socialize with those who are akin to themselves. Similarity explains, in part, why individuals become friends (Hallinan & Williams, 1990).

However, peers also serve as important behavioral and cognitive change agents (Rubin, LeMare, & Lollis, 1990). Thus, depending upon one's friends' behavior (e.g., prosocial or antisocial), peer influence may be adaptive or maladaptive (Allen & Antonishak, 2008).

An examination of friends' behavior and attitudes helps to explain how and when friends have an impact on psychological and behavioral adjustment and subsequent adaptation.

Bandura's (1986) social learning theory has often been used to explain the extent to which children and adolescents influence each other. According to Bandura, behavior, cognitions and other personal factors, and environmental influences all operate as interrelated determinants that affect each other reciprocally. Adolescents' perceptions that others expect them to behave in certain ways should partly motivate them to do so; the effects of social learning tend to be particularly strong when the potential influence is considered powerful, similar to oneself, or a source of affiliation (Bandura, 1986). Thus, in terms of coping and adaptation, it is expected that in the face of violence exposure, having prosocial friends will decrease the likelihood of engaging in aggressive behaviors, particularly in times of stress. On the other hand, having aggressive or antisocial friends will increase the likelihood of an aggressive response.

The social information-processing (SIP) model (Crick & Dodge, 1994) has also been used to explain how children and adolescents influence one another cognitively and behaviorally. More specifically, the model is one of the most frequently cited and influential theories used to explain aggressive behavior in humans. The SIP model posits that social behavior is the result of sequential processing of social information through a series of cognitive steps (Nelson & Crick, 1999), which involve encoding and interpreting internal and external social cues (Crick & Dodge, 1994). According to Crick and Dodge (1994), because social information is processed through a series of cognitive steps, should any deficiencies occur during the sequence, the

behavioral outcome is likely to be maladaptive.

Part of the process of interpreting cues in a social situation is determining the meaning attributed to the cues or what Crick and Dodge (1994) call the “intent attributions.” As children and adolescents interact with those around them, they must interpret the social signals they are given so that they are able to respond appropriately. The term “hostile attributional bias,” coined by Nasby, Hayden, and dePaulo (1979), describes the tendency of aggressive youth to attribute hostile intent to others. Therefore aggressive children are apt to misinterpret social signals and the intent of those around them, which can lead to inappropriate responses and/or behavior.

Just as aggressive children and adolescents may have a hostile attribution bias associated with their behaviors, Nelson and Crick (1999) posited that prosocial children and adolescents may display a particular attributional bias related to their distinct behavior. The authors suggest that a “benign attributional bias” predisposes adolescents to display “more consistent prosocial behavior, which in turn facilitates more positive peer relationships and greater fulfillment of their social needs” (p.19). Positive or prosocial behavior is necessary when forming relationships with peers (Coie, Dodge, Terry & Wright, 1991; Zimmer-Gembeck, Geiger, & Crick, 2005). Positive peer interactions tend to promote the development of perspective-taking and empathy, which, in turn, serve as a basis for cooperative, prosocial, and nonaggressive types of behavior (e.g., Youniss & Smollar, 1989). According to Sullivan (1953), the prosocial behaviors learned between friends, would, over time, extend to other individuals outside of this relationship. Thus, children who observe friends interacting in prosocial ways are more likely to behave similarly (Bryan & Walbek, 1970; Elliot & Vasta, 1970).

Since peers are considered important socializing agents during adolescence (Berndt &

Ladd, 1989), the manner in which an adolescent encodes and subsequently interprets social information should be influenced, in part, by his or her friends. In terms of coping and adaptation, it is expected that in the face of violence exposure, the influence of prosocial friends will reduce attributions of hostile intent whereas the influence of aggressive or antisocial friends will strengthen attributions of hostile intent.

In sum, peers and peer relationships are important for children's and adolescents' cognitive and social maturity. Further, peers become increasingly important during adolescence for support and companionship. Given the social influence that friends possess and the support that they can afford, peers play a significant role in youths' adaptation to stressful situations. A comprehensive examination of social relationships and the role they play in the association between violence exposure and outcomes should include an analysis of both dyadic and group experiences, the quality of these relationships, the behavior of the adolescent, and the adolescent's friends' behavior and social influence. Theoretically, these aspects of social relationships can have independent effects on outcomes; however, certain features may exert their influence collectively, representing a larger construct. With that said, it is expected that adolescents with close, reciprocated friendships, good social status, and prosocial friends will be better equipped to cope with stressful situations and should ultimately display more successful adaptation in the face of chronic violence exposure.

Review of Literature

Prevalence of Violence Exposure

According to the U.S. Department of Justice (2009) and the National Survey of Children's Exposure to Violence (Finkelhor, Turner, Ormrod, & Hamby, 2009), a substantial proportion of our society's children are exposed to violence on a daily basis. "Each year,

millions of children and adolescents are victims of and/or witnesses to violence in their homes, schools, and communities (Finkelhor et al., 2009, p.2).” In fact, children and adolescents in the United States are more likely to be exposed to violence and crime than adults (Finkelhor, 2008). While violence exposure is not restricted to any particular ethnicity, race, or socioeconomic group, research suggests that its impact is most readily apparent among poor, urban, minority youth (Edlynn, Gaylord-Harden, Richards, & Miller, 2008; Gladstein, Rusonis, & Heald, 1992; Christoffel, 1990). Early surveys and studies (Fitzpatrick & Boldizar, 1993; Richters & Martinez, 1993; Osofsky, Wewers, Hann, & Fick, 1993) suggested that as many as 97% of urban youth reported being witness to community violence, while as many as 70% had been victimized. Although the reported rates for witnessing violence are generally higher than those for victimization, both indirect and direct exposure have been shown to have a deleterious impact on adolescent functioning (Margolin & Gordis, 2000).

Lambert, Ialongo, Boyd, and Cooley (2005) found that of 582 predominately African-American, lower income, middle school students, approximately half reported being witness to community violence by eighth grade (12.9% witnessed someone robbed or mugged; 46.6% witnessed someone beaten up; 12.0% witnessed someone shot or stabbed; and 5.7% witnessed someone killed). In a large, nationally representative sample of 5,935 public school eighth grade students, Taylor, Esbensen, Peterson, and Freng (2007) found that 48% of these students had experienced one or more violent victimization(s) during the year prior to the study, and, on average, these victims experienced 4.4 incidents. While the overwhelming majority of victimizations were simple assaults, more than 15% of the sample reported being victims of serious violence (i.e., aggravated assault and/or robbery).

Some studies have shown that experiencing one form of victimization can put an

individual at risk for experiencing another (Finkelhor, Ormrod, Turner, & Hamby 2005; Hanson, Self-Brown, Fricker-Elhai, Kilpatrick, Saunders, & Resnick, 2006; Schwab-Stone, Chuansheng, Greenberger, Silver, Lichtman & Voyce, 1999). For example, in a sample of predominately African-American youth, Howard and colleagues (2002) found that of the 349 adolescent participants, approximately 69% reported being both a victim of and a witness to violence. Further, Finkelhor, Ormrod, and Turner (2007) reported findings from the Developmental Victimization Survey (DVS), a national longitudinal study of multiple victimizations among children and adolescents, which indicated that nearly a quarter of adolescents (ages 10-17) had been exposed to at least four types of victimization within the year prior to data collection.

Not only is violence in the community a threat to children's and adolescents' well being, but also exposure to violence in the home poses a considerable risk. Like community violence, family violence involves both direct (i.e., child maltreatment) and indirect (i.e., witnessing domestic violence) victimization. Despite declining rates of reported child maltreatment since the early to mid 1990's (Jones & Finkelhor, 2009), it remains a serious concern for American society as well as a public health issue (Graham-Bermann, & Levendosky, 1998; O'Donnell, Schwab-Stone, & Ruchkin, 2006). According to Child Maltreatment 2007, a government report comprised of data from State child protective services (CPS) agencies for the Federal fiscal year 2007 and compiled from records of substantiated maltreatment cases across the United States, the overall rate of child and adolescent maltreatment is 10.6% in the general population (U.S. Department of Health and Human Services, Administration on Children, Youth and Families, 2009). National estimates of exposure to domestic violence are lacking, however, and less is known about prevalence of domestic violence exposure among children and adolescents living in homes where partner violence occurs (Fantuzzo & Fusco, 2007; McDonald, Jouriles, Ramisetty-

Mikler, Caetano, & Green, 2006; Osofsky, 2003).

In an earlier study that examined both parent-child and spousal abuse exposures, O'Keefe (1996) found that of the 935 inner-city, urban high school students, ages 14 to 20 years of age, 63% of the sample were victims of severe parent-child violence at least once in their lifetime. Additionally, the adolescents reported witnessing severe interparental violence, with 33% reporting that one parent had hit the other with an object and 16% reported witnessing one parent beat up the other. In a more recent study with a nationally representative sample of 4,549 children and adolescents, Finkelhor, Turner, Ormrod, and Hamby (2009) found that 9.8% of the sample had witnessed some form of domestic violence, and of that percent, 6.2% reported witnessing interparental violence. In terms of dual exposures, research has established high rates of concurrent interparental violence and child physical abuse (Herrenkohl, Sousa, Tajima, Herrenkohl, & Moylan, 2008; Appel & Holden, 1998, Jouriles & LeCompte, 1991) as well as concurrent exposure to community violence and domestic violence (Bell & Jenkins, 1993; Garbarino, Dubrow, Kostelny, & Pardo, 1992; Lynch & Cicchetti, 1998; Kennedy, 2008; Rosario, Salzinger, Feldman, & Ng-Mak, 2008).

Association of Violence Exposure and Aggressive Behavior

Association of Community Violence Exposure and Aggressive Behavior

For children and adolescents, the impact of violence exposure on the development of aggressive behavior has been well documented, with inner city youth representing a substantial number of those affected. Moreover, adolescents may be at greater risk for poorer outcomes than young children given their higher rates of exposure to community violence, and adolescents, given that they are older, have experienced longer term exposure compared to younger children (Elze, Stiffman, & Dore, 1999; Jones, Ajitutu, & Johnson, 1996).

Earlier investigations have shown that adolescents' exposure to community violence predicts aggression and antisocial behavior (Attar, Guerra, & Tolan, 1994; Jenkins & Bell, 1994; Gorman-Smith & Tolan, 1998; Miller, Wasserman, Neugebauer, Gorman-Smith, & Kamboukos, 1999). Further, associations between community violence exposure and externalizing behaviors such as drug and alcohol use, weapon carrying, fighting, and having trouble in school have been demonstrated (Jenkins & Bell, 1994; DuRant, Getts, Cadenhead, & Woods, 1995). For example, DuRant and colleagues (1995) conducted a study of 225 urban, African-American youth, ages 11 to 19 years old, examining the relationship between community violence exposure and current violent behavior. Although males reported engaging in significantly more violent behavior, including using weapons and fighting, community violence exposure was the strongest predictor of violent behavior for both sexes. For their longitudinal study of 6th, 8th, and 10th grade students, Schwab-Stone and colleagues (1999) reported significant correlations between violence exposure and externalizing behaviors (i.e., aggressive behavior and readiness to engage in aggressive behavior) for the whole sample ($r=.74$; $N=2,748$), and for their follow up sample ($r=.75$; $N=2,600$). Finally, Guerra, Huesman, and Spindler (2003) surveyed 4,458 ethnically diverse school children regarding the type and amount of community violence they had witnessed in their urban neighborhoods over a period of one year. The results indicated that regardless of age, greater exposure to community violence increased the likelihood that the children exhibited aggressive behaviors within two months following the study. Further, these children held beliefs that aggression was acceptable and they reported more aggressive fantasies.

Association of Family Violence Exposure and Aggressive Behavior

Witnessing domestic violence and being a victim of child abuse have been found to be related to aggressive behavior in children and adolescents (Fantuzzo & Mohr, 1999). For

example, Salzinger, Feldman, Ng-Mak, Mojica, Stockhammer, & Rosario (2002) conducted a study examining the effects of co-occurring partner violence and child abuse on child behavioral outcomes. Parent, teacher, and peer report were collected. In their sample of 100 confirmed cases of physical abuse in school children ages 9 to 12 years old and 100 case-matched classmate controls, Salzinger and colleagues (2002) found that child abuse within the context of domestic partner violence increased the risk that a child would be rated as antisocial (i.e., fights and is mean) by his/her peers by 5.5 times. In a study of 532 Italian preadolescents, Baldry (2007) found that externalizing problems were significantly related to abuse by parents, suggesting that children who are abused are more likely to become aggressive.

In terms of witnessing domestic violence, English, et al. (2009) found that among children who were not maltreated (i.e., physically abused), witnessing domestic violence greatly increased the likelihood of externalizing problems. Similarly, in a meta-analysis conducted by Kitzmann, Gaylord, Holt, & Kenny (2003), compared to other children, those exposed to interparental violence were more likely to show aggression in response to conflict. Both exposure to interparental conflict and child abuse can independently affect children's health and well-being, as well as their externalizing behavior; behavioral outcomes worsen, however, when there is co-occurrence of direct and indirect victimization at home (English, Marshall, & Stewart, 2003). While it is important to analyze the independent impact of these types of exposures, they are often highly correlated (Edleson, 1999).

Association of Violence Exposure and Anxiety

Association of Community Violence Exposure and Anxiety

Studies have found significant associations between experiencing and/or witnessing community violence and a variety of psychological problems, most notably anxiety (Cooley-

Quille, Boyd, Frantz, & Walsh, 2001; Hill & Madhere, 1996; Margolin & Gordis, 2000; Singer, Anglin, Song, & Lunghofer, 1995). Ruchkin, Henrich, Jones, Vermeiren, and Schwab-Stone (2007) found that even when controlling for prior psychopathology, community violence victimization was positively associated with higher levels of posttraumatic stress, depression, and anxiety. In a meta-analysis conducted by Wilson and Rosenthal (2003) focusing on reoccurring community violence exposure and distress, they estimated the size of the relationship between exposure (i.e., combination of witnessing and victimization) and internalizing psychological symptoms (i.e., depression, anger, posttraumatic stress disorder, and anxiety) in adolescents. Using 27 different studies composed of 37 independent samples and a total of 17,322 participants, Wilson and Rosenthal found a low-medium effect size ($r = .25$) for the relationship between chronic community violence exposure and psychological distress.

Often violence exposure in the community is in the form of peer victimization (i.e., bullying) (Salzinger, Feldman, Stockhammer, & Hood, 2002; Schwartz & Proctor, 2000). In a nationally representative sample of 11,033 adolescents in grades 6 through 10, Spriggs, Iannotti, Nansel, and Haynie (2007) conducted a survey of self-reported bullying involvement. The results showed that 21% of youth experienced bullying at least once a week, with 9% reporting being a victim, 9% a bully, and 3% a bully and a victim. In terms of the relationship between anxiety and peer victimization, Holt, Finkelhor, and Kantor (2007) assessed 689 5th grade students from an urban, ethnically diverse school district and found that the children who had been bullied ($N = 83$) demonstrated significantly greater internalizing problems (i.e., anxiety and depression) than children who had not experienced any peer victimization.

Association of Family Violence Exposure and Anxiety

Empirical studies have highlighted and supported the link between children's exposure to family violence and child and adolescent social and emotional adjustment. Chan and Yeung (2009) conducted a meta-analytical review of 37 published studies to identify the overall effect size of family violence (i.e., combined witnessing, hearing about, and victimization) on children's and adolescents' adjustment outcomes (i.e., internalizing problems, externalizing problems, perceptions/cognitions, posttraumatic stress disorders, and interpersonal relationships/competence). Twenty-nine of the studies showed a significant relationship between family violence exposure and internalizing symptoms, with an overall effect size of .22.

Bourassa (2007) conducted a study analyzing the impact of co-occurring child abuse and interparental violence on adolescent outcomes. The participants were 490 French Canadian adolescents, ages 16 to 18 years old. Bourassa found that participants who were both abused and exposed to interparental violence exhibited more clinically significant levels of internalizing symptoms than adolescents who had only been exposed to interparental violence. Bourassa emphasized, however, that exposure to only interparental violence definitely had an impact; for example, adolescents who had only been exposed to interparental violence exhibited internalizing behaviors more frequently than teens who had not experienced or been exposed to either. Similarly, Moylan and colleagues (2010) conducted a prospective study of 457 youth examining the effects of dual exposure (i.e., child abuse and domestic violence exposure) on adolescent internalizing and externalizing behaviors. Of the 457 adolescents, 101 had experienced both abuse and witnessed domestic violence. With respect to internalizing behaviors, dual exposure significantly predicted anxious/depressed symptoms.

Peer Relationships and Attributions as Intervening Variables between Violence Exposure and Psychological and Behavioral Outcomes

Despite the empirical evidence that exposure to violence predicts poor psychological and behavioral outcomes, there is still a need for more attention to systematic explorations of how youth in high-risk areas adapt. It is important to understand the underlying processes that contribute to coping in the face of community and family violence exposure. What is known about adolescent coping under stressful conditions predominantly focuses on social support (e.g., Rosario et al., 2008); however a comprehensive examination of adolescents' social relationships with peers as coping resources should include an analysis of friendships, peer group acceptance, peer rejection, the quality of relationships, the behavior of the adolescent, and the adolescent's friends' behavior and social influence, as these factors may contribute to successful adjustment and subsequent adaptation.

The present study proposes that in the context of violence exposure, various facets of peer relationships (i.e., reciprocity, peer acceptance, closeness/attachment, and friends' behavior) have an effect on the cognitive processing of social information and the relationship between community and family violence exposure and psychological and behavioral outcomes, specifically, aggression and anxiety. Theory and research suggest that peers serve as important social influences and sources of support (e.g., Sullivan, 1953; Cook, Buehler, & Henson, 2009). As such, youth exposed to violence may be better equipped to cope with the stresses of exposure when they have prosocial friends in addition to a combination of peer acceptance, reciprocal friendships, and close and supportive relationships.

Friendships

As aforementioned, friendships influence youth development on many levels. Positive peer relationships have been correlated with decreases in feelings of loneliness, increases in self-esteem and social self-competence, and greater school involvement (Goldbaum, Craig, Pepler, and Connolly, 2003; Storch, Brassard, & Masia-Warner, 2003; Storch & Masia-Warner, 2004; Berndt & Keefe, 1995; Keefe & Berndt, 1996). Further, having close, positive peer relationships are vitally important during adolescence, as they can fulfill the need for companionship and provide support and security (Sullivan, 1953).

Empirical studies have shown the extent to which positive peer relationships impact adaptation. In terms of victimization, Storch et al. (2003) and Storch and Masia-Warner (2004) posit that positive experiences with peers help victims cope by facilitating the development of self-esteem, social skills, and interpersonal competence, all of which serve to mitigate the experience of being victimized. With respect to social-emotional functioning, in a community violence study by Rosario et al. (2008), peer support from close friends was found to relate to fewer internalizing symptoms (i.e., anxiety). Salzinger, Feldman, Rosario, and Ng-Mak (2011) found that under conditions of high violence exposure, attachment to friends was more effective in mitigating exposure's effects than attachment to parents. In terms of externalizing behaviors, specifically aggression, Scarpa and Haden (2006) found that in their sample of 515, 18-22 year old college students, the association between community violence victimization and aggression was strongest when the individual perceived low levels of peer support. Given these findings, having friends should be protective in that they can serve as coping resources in the context of exposure to violence.

Peer Acceptance/Peer Rejection

Much of the literature on social acceptance has focused on the negative effects of experiencing low levels of acceptance within the peer group. Peer rejection has been linked to a variety of concurrent, short-term, and long-term problems, ranging from behavior problems in elementary school to an increased risk for psychological disorders in adolescence and adulthood (Coie, Dodge, & Kupersmidt, 1990; Parker & Asher, 1987). George and Hartman (1996) found that poorly accepted children had significantly fewer reciprocated friendships than their more popular peers. Additionally, the friendships of more popular children were more stable than those of less popular children (George & Hartman, 1996). Further, studies specifically examining teasing have found associations with negative emotions, low self-esteem, depression, suicidal ideation, and suicide (Boulton & Hawker, 1997; Eisenberg, Neumark-Sztainer, & Story, 2003; Shapiro, Baumeister, & Kessler, 1991).

Given the fact that often exposure to community violence involves peer victimization (Salzinger, Feldman, Stockhammer, & Hood, 2002; Schwartz & Proctor, 2000), the majority of studies on victimization and social acceptance focus on bullying. For example, Salmivalli, Huttunen, and Lagerspetz (1997) conducted a study of 459 sixth grade students, examining how social networks relate to bullying. It was found that children without a discernable social network (i.e., outsiders) were more likely to be bullied. Thus, it appears that children and adolescents without a group of friends are at considerably greater risk of victimization than youth with an adequate social network.

Intimacy/Closeness

During adolescence, friends spend progressively more time together and their relationships become increasingly more intimate (Berndt & Perry, 1990). Further, adolescent

friendships can provide support and fulfill the needs for companionship and assistance (Buhrmester, 1996). When friendships are supportive and meet the needs of those involved, they are considered high quality relationships (Berndt, 1996). Studies have shown that adolescents with high quality friendships demonstrate better social adjustment (Berndt, Hawkins, & Jiao, 1999), better school adjustment (Tomada, Schneider, de Domini, Greenman, & Fonzi, 2005), greater ability to cope with stress (Hartup & Stevens, 1997), and higher self-esteem (Bishop & Inderbitzen, 1995). Higher quality relationships have also been related to lower levels of anxiety and depression (Windle, 1994).

In terms of violence exposure, having high quality friendships has been shown to be protective against the effects of victimization. For example, Goldbaum and colleagues (2003) assessed 1,241 children, 5th through 7th grade, to measure victimization over time and the effect of victimization on social functioning. Participants who did not experience any victimization had the highest ratings of social self-competence and trust and affection in their relationships. Individuals who had experienced consistent levels of victimization over time reported the lowest ratings of social self-competence, and their friendships were reportedly low in trust and affection. Individuals reporting lower quality friendships (i.e., less trust and affection) also were at heightened risk for increasing victimization.

Peer Behavior and Influence

An adolescent's behavior generally influences the types of friends (i.e., antisocial or prosocial) with which he or she associates (Barry & Wentzel, 2006). Empirical evidence suggests that associating with antisocial peers increases the likelihood of engaging in deviant behavior, while withdrawal from antisocial peers is followed by decreases in deviant behavior (Thornberry, Krohn, Lizotte, & Chard-Wierschem, 1993). Thus social behavior is in part learned

via peer interactions. Childhood aggression is related to deficiencies at key steps in the processing of social information (Nelson & Crick, 1999). Aggressive children, in turn, tend to display a hostile attribution bias in response to ambiguous provocations (Steinberg & Dodge, 1983; Dodge, 1980). According to Dodge (2006), one social experience that promotes a hostile attributional style includes peers' modeling of hostile attributions. For example, Espelage and colleagues (2003) conducted an experiment with preadolescents to assess the impact of peer group aggression on a target child's behavior. Results indicated that the group's level of aggression predicted the target child's level of aggression over time.

While much of the literature on peer influence has focused on the negative aspects of peers (i.e., peer pressure and deviant friends), less has been written about the role of peers as positive social influences (Collins & Roisman, 2006). In one of the few studies specifically examining prosocial behavior, Nelson and Crick (1999) assessed 675 fourth through sixth grade children and adolescents and found that prosocial youth were less likely to attribute hostile intent or get upset/mad in a hypothetical provocation situation. Additionally, prosocial youth rated overt aggressive responses to provocation relatively more negatively and prosocial responses to provocation relatively more positively than their comparison group.

The Potential Impact of Other Factors Associated with Violence Exposure, Peer Relationships, and Psychological and Behavioral Outcomes

While it is expected that peer relationship variables will significantly affect the level of reported aggression and anxiety within the context of violence exposure, the impact of other factors should be considered. Thus, the following provides a brief, empirical review of gender, race/ethnicity, and welfare status as factors known to impact violence exposure, peer relationships, and aggression and anxiety.

Gender

Gender differences in exposure to direct and indirect forms of violence in the community have been empirically investigated (Wilson, Rosenthal, & Battle, 2007; Cooley-Quille, Boyd, Frantz, & Walsh, 2001; Cooley, Turner, & Beidel, 1995; Fitzpatrick & Boldizar, 1993). Many community studies have concluded that males are more likely to be physically victimized compared to females (Buka, Stichik, Birdthistle, & Earls, 2001; Bell & Jenkins, 1993; DuRant et al, 1995). For example, Jenkins and Bell (1994) found that in a sample of inner-city high school students, males were more likely than females to report having been beaten up, stabbed, or shot. In a large study of approximately 6,000 students, grades 3 through 12, Flannery, Wester, and Singer (2004) found that males were victimized at a rate of 10 to 15% higher than females. Gender differences have also been found for witnessing community violence. Schwab-Stone and colleagues (1995, 1999) demonstrated in their longitudinal study that more boys than girls reported witnessing violence. Similarly, in a sample of 280 urban high school students, Kennedy (2008) found that, overall, female students witnessed less violence than male students.

In the context of community violence exposure, some studies have shown that female children and adolescents may be more likely than their male counterparts to experience internalizing symptoms (i.e., anxiety). Foster, Kuperminc, and Price (2004) conducted a study of 149 adolescents, ages 11 to 16 years old, examining gender differences and types of exposure and levels of posttraumatic stress. The authors found that within the context of community violence exposure, girls are more likely than boys to meet clinical cutoffs for anxiety ($p < 0.10$). Buckner, Beardslee, and Bassuk (2004) found that even after controlling for mother's psychological distress and housing status, community violence exposure was significantly associated with internalizing symptoms (i.e., anxiety and depression) for all participants, but

more so for girls than for boys.

According to the Fourth National Incidence and Prevalence Study of Child Abuse and Neglect (NIS-4) (Sedlak et al., 2010), a government mandated assessment of the prevalence of child abuse and neglect in the United States, girls experience significantly higher rates of abuse than boys (8.5 per 1,000 for girls and 6.5 per 1,000 for boys). The differing rates are primarily due to girls' significantly higher risk of sexual abuse. In terms of outcomes, support for gender differences is inconsistent. Kitzmann, Gaylord, Holt, and Kenny (2003), conducted a meta-analysis using 118 studies of domestic violence exposure and found no gender-by-outcome interactions. Wolfe, Crooks, Lee, McIntyr-Smith, and Jaffe (2003) also conducted a meta-analysis using 41 studies examining the effects of domestic violence exposure and found comparable results. In contrast, Evans, Davies, and DiLillo (2008) reported significantly higher effect sizes for externalizing behaviors for boys exposed to domestic violence than for their female counterparts. Adolescent boys have also been shown to be at higher risk for externalizing problems after being abused in childhood (Graham-Bermann and Hughes, 2003; Widom, 1998).

In terms of peer relationships, studies suggest that gender differences exist with respect to peer intimacy/closeness and peer support. Girls have been found to rate the quality of their relationships more favorably than boys (Linden-Andersen, Markiewicz, & Doyle, 2008; Buhrmester, 1990). Several studies have also shown that girls report their friendships as demonstrating higher levels of peer support (Furman & Buhrmester, 1992; Colarossi & Eccles, 2000; Jenkins, Goodness, & Buhrmester, 2002) when compared to their male counterparts.

Race/Ethnicity

Studies often show that minority subjects, particularly African American youth, are exposed at a higher rate to community violence than White youth (Salzinger et al., 2002).

Further, African American youth have been found to experience higher rates of violent victimization (e.g., homicide) rates than White youth (Voisin, 2007). According to the National Criminal Victimization Survey data (Bureau of Justice Statistics, 2007), the rate of violent victimization for the year 2007 was approximately 19.9 per 1,000 for White youth ages 12 and older compared to 24.3 per 1,000 for African American youth of the same age range. In terms of domestic violence exposure, in a study that examined 1,560 police-substantiated domestic violence events, Fantuzzo and Fusco (2007) found 63% of the reported domestic violence victims, including the child and adolescent witnesses, were minorities. With respect to the current proposed study, the number of non-minority children and adolescents is too small such that comparisons cannot be made across ethnicities.

Welfare Status

Economic disadvantage has been frequently cited as one of the factors that increase risk for youth's exposure to violence (Salzinger et al., 2002; Salzinger, Ng-Mak, Feldman, Kam, & Rosario, 2006). For example, studies have found that disadvantaged children are more often a victim of, or a witness to, community violence (Esbensen & Huizinga, 1991; Schwab-Stone et al., 1995). Further, poverty is generally concentrated in inner-city neighborhoods. Finally, when compared to other kinds of communities, research and victimization surveys have shown that public housing residents are victimized and/or are the perpetrators of violence at higher rates (DeKeseredy, Schwartz, Alvi, & Tomaszewski, 2003; Holzman, Hyatt, and Dempster, 2001). The current study's population is predominately welfare dependent; therefore differences due to welfare status are not anticipated.

In sum, the literature on violence exposure and aggression has consistently predicted poor outcomes for children and adolescents exposed in their communities, schools, and homes.

Likewise, violence exposure has been shown to have a deleterious impact on psychological functioning, specifically, anxiety, as both community violence and family violence studies have demonstrated. Intervening variables such as peer social influence, friendships, peer acceptance, peer intimacy/closeness, and peer rejection are expected to have an impact on the relationship between violence exposure and outcomes, given the theoretical and empirical evidence that these variables have demonstrable effects in other contexts. According to Bukowski and Adams (2005), peer relationships may function in many ways to mediate and moderate the processes leading away from (and toward) psychopathology.

With respect to the current proposed study, the number of non-minority children and adolescents is too small such that comparisons cannot be made across ethnicities. Further, the current study's population is predominately welfare dependent; therefore differences due to welfare status are not anticipated. Thus, race/ethnicity and welfare status will not be used as control variables. While gender is a factor that has been examined empirically and known to impact violence exposure, peer relationships, aggression, and anxiety, there is no theoretical evidence to support differences between males and females on these variables. Thus gender will be treated as a confounding variable and controlled for in the current investigation.

Problem Statement and Goal

While the body of research regarding the effects of violence exposure on children and adolescents is substantial, questions still remain unanswered, specifically concerning adaptation and the underlying processes that contribute to coping (Seiffge-Krenke, 1995). Adolescence is a period of great developmental change, particularly in terms of social relationships and the shift from caregivers to peers as socializing agents. Peer relationships have the potential to affect the etiology, prevention, and treatment of psychopathology and a variety of behavior problems given

their significance in development (Masten, 2005). That said, the current study is concerned with the answering the question, what aspects of adolescent social relationships function as coping resources in the face of violence exposure?

Design and Models

The present study is designed to test two sets of models related to exposure and outcomes over time. The first set of models examines the role of friends' behavior (i.e., prosocial and antisocial) and social cognition (i.e., hostile attributional bias) on the relationship between violence exposure and later aggressive behavior. Theoretically, there are two pathways by which friends' behavior could influence the aforementioned relationship. Friends' behavior could answer the question, does the type of friend (e.g., prosocial or antisocial) an adolescent associates with moderate the relationship? If considered a moderator, prosocial friends are hypothesized to lessen the impact of violence exposure on the expression of later aggressive behavior (see Model 1a: Prosocial) whereas antisocial friends are hypothesized to exacerbate the association between violence exposure and future aggression (see Model 1a: Antisocial). Friends' behavior could also act as a mediator by explaining the association between violence exposure and aggression. Thus, exposure to violence over time is hypothesized to encourage associations with antisocial friends, and in turn, increase the likelihood of later aggressive behavior (see Model 1b). Finally, the role of hostile attribution is seen as a mediator such that violence exposure is hypothesized to predispose an adolescent to attribute hostile intent in ambiguous social situations, which should then lead to increased aggressive behavior (see Model 1c).

The second set of models examines the role of some important dimensions of social relationships on the relationship between exposure to violence and later anxiety. Reciprocated

friendships, peer acceptance, and peer rejection theoretically and intuitively should combine to create a single factor of social acceptance, which is hypothesized to moderate the relationship between exposure to violence and anxiety¹. Lastly, peer intimacy/closeness is hypothesized to moderate the relationship between exposure to violence and anxiety. See Table 1 for the hypotheses related to the two sets of models.

¹ For Model 2, the variables Reciprocated Friendships, Peer Acceptance, and Peer Rejection were analyzed as one composite variable representing Social Acceptance (Advanced Seminar Hearing, December 9, 2010).

Table 1
Hypotheses

Model	Variables of Interest	Hypotheses
1a: Prosocial	<ul style="list-style-type: none"> • Violence Exposure • Friends' Behavior • Aggressive Behavior 	<ul style="list-style-type: none"> • MODERATION: Adolescents whose friends are more prosocial will be less likely to engage in aggressive behavior as exposure to violence increases than adolescents whose friends are less prosocial.
1a: Antisocial		<ul style="list-style-type: none"> • MODERATION: Adolescents whose friends are more antisocial will be more likely to demonstrate aggressive behavior as exposure to violence increases than adolescents whose friends are less antisocial.
1b		<ul style="list-style-type: none"> • MEDIATION: Friends' behavior will mediate the association between violence exposure and aggressive behavior. As exposure to violence increases, adolescents will be more likely to associate with antisocial friends than prosocial friends, which will in turn increase their likelihood to demonstrate aggressive behavior.
1c	<ul style="list-style-type: none"> • Violence Exposure • Hostile Attribution • Aggressive Behavior 	<ul style="list-style-type: none"> • MEDIATION: Hostile attribution will mediate the association between violence exposure and aggressive behavior. As violence exposure increases, adolescents will show an increased likelihood of attributing hostile intent in ambiguous social situations that will, in turn, lead to an increased likelihood of aggressive behavior.
1d: Prosocial	<ul style="list-style-type: none"> • Violence Exposure • Friends' Behavior • Hostile Attribution • Aggressive Behavior 	<ul style="list-style-type: none"> • MODERATION: For adolescents whose friends' are more prosocial, violence exposure will lead to fewer hostile attributions. Fewer hostile attributions will lead to less aggressive behavior.
1d: Antisocial		<ul style="list-style-type: none"> • MODERATION: For adolescents whose friends are more antisocial, violence exposure will lead to

Chapter II

METHODOLOGY

Sample

The sample consisted of 667 children living in an inner city, high-crime school district in New York City (NYC). The sample ranged in age from 11-14 and was comprised of 335 boys and 332 girls. Sixty-five percent were Hispanic, 32% Black, and 4% “other.” Approximately half of the children’s guardians had received a high school education. Fifty-three percent of the guardians received public assistance in the year prior to the 6th grade data collection. The composition of households was as follows: 26% with two biological parents, 12% with one biological parent and a partner, 45% with a single biological parent, 6% with a biological parent and grandparent(s), 6% with grandparents, and 5% with other alternate living arrangements (e.g., child living with an older sister). The current study is based on data collected as part of a larger NIMH-funded study, NIMH Grant # R01 MH056198 (principal investigator: Suzanne Salzinger, Ph.D.), that was designed to study the effects of community violence exposure on middle school children living in urban, high-crime neighborhoods.

Employing a longitudinal design, data were collected annually over three rounds/years while the participants were in middle school. Investigators collected data from the children and their parents when the children were in the 6th grade and then once during each of the two subsequent rounds/years. Teacher behavior ratings and academic records were collected in each of the three rounds. Classroom sociometric data were collected in the first two rounds. The proposal review committee of the NYC Board of Education and the institutional review board of Columbia University’s Department of Psychiatry approved all procedures and communications with families. Additionally, the investigators obtained a Federal Certificate of Confidentiality.

Subjects were recruited from a New York City school district meeting three criteria: first, it was a high risk area for community violence as determined by its location and high rates of reported community violence (NYC Police Department, 1999); second, the middle schools included grades six through eight, making possible three annual assessments of the children within the same schools; and lastly, the district provided a potentially large subject pool of 3,000 sixth graders in nine schools.

Six of the nine schools within the selected district agreed to participate. No differences in Board of Education academic statistics were found between the schools that participated and those that did not. For the six participating schools, letters were sent home with all sixth graders informing their parents that the principal investigators were studying the effects of community violence on sixth graders in the school district and that there would be an initial classroom-based exercise to study the children's social behavior. Parents not wanting their children to be given the classroom exercise were asked to so indicate on an attached form and return it to the investigators in an enclosed stamped envelope. In addition, the letter stated that families would be contacted by mail and telephone to request their participation in the subsequent individual interview phase of the study.

Other than those few families that declined participation in the classroom exercise, all families were mailed follow-up letters indicating interest in interviewing the parent or guardian about the child, family, home and neighborhood and in interviewing the child about his/her experiences at school and in the community.

Investigators initially intended to recruit 600 families with an additional 10% in anticipation of attrition during the course of the study. Of those contacted ($n = 1518$), 54% ($n = 814$) of the guardians agreed to participate, 36% ($n = 546$) remained undecided during the 5-

month recruitment period in the spring semester, and 10% ($n = 158$) declined to participate. Based on sociometric data obtained in the classroom exercise, children whose parents agreed to participate were rated as more aggressive on a scale of 1-5, with 3 equal to “same as other children,” than children whose parents remained undecided or refused. The target children were perceived by their classmates to be meaner ($t = 2.89$, $df = 1516$, $p < .005$) and to fight more than other kids ($t = 2.67$, $df = 1516$, $p < .01$).

Those parents who agreed to participate provided formal informed consent for themselves, and their children provided assent. Parents and children were then interviewed by the end of the allotted recruitment periods. The majority of guardians were interviewed at home; children were interviewed in school if their schedules permitted, or else, privately at home. Parents were given the choice of being interviewed in English or Spanish. The youth were also given the option, but all chose to be interviewed in English. For their participation, guardians received \$50 and children \$10 compensation for each round of the study.

A first cohort of the sample was recruited from January to May 1998 and a second during the same months of the following year. Data collection occurred in three, annual rounds over three years. The N s for Cohort 1 plus Cohort 2 are: $472 + 195 = 667$ (Round 1); $434 + 177 = 611$ (Round 2); $405 + 174 = 579$ (Round 3). The loss of participants due to attrition was approximately 13% across the three rounds. The main cause of attrition was an inability to locate families who had moved. In each of the three years, adolescent exposure to community and family violence was measured by child and parent report.

As shown in Table 2, the sample at Round1 consisted of approximately equivalent numbers of males and females (50.2% males and 49.8% females). These proportions remained somewhat stable across Round 2 (50.1% male; 49.9% female) and Round 3 (49.9% male; 50.1%

female). With respect to the initial sample, approximately 65.4% of the participants self-identified as Latino/Hispanic, 31.8% as Black/African-American, 1.3% as Asian, 1.2% as White, and 0.3% as Other. These proportions also remained stable across Rounds 2 and 3. Public assistance (e.g., welfare or food stamps) was received in the past year by either the informant or spouse/partner in approximately half (49.8%) of the families in the sample at Round 1, while 47.5% reported no public assistance history for either person in the past year. For Rounds 2 and 3 the proportion of households with one individual receiving public assistance in the past year decreased to 47.3% and 39.1%, respectively. This decline in assistance suggests that the number of participating households that were receiving public assistance decreased during the study, or those participants that were lost to attrition were welfare dependent families.

Table 2
Demographics of the Sample

		Round 1	Round 2	Round 3
# of participants		667	611	579
Age (mean/ <i>SD</i>)		12.29 (0.65)	12.66 (.694)	13.57 (.647)
<hr/>				
Gender (%)	Male	50.2	50.1	49.9
	Female	49.8	49.9	50.1
<hr/>				
Ethnicity (%)	Latino/Hispanic	65.4	66.4	67.7
	Black/African American	31.8	31.1	29.9
	Asian	1.3	1.0	1.0
	White	1.2	1.1	1.0
	Other	0.3	0.3	0.3
<hr/>				
Welfare Status (%)	No public assistance history for either informant or spouse/partner in past year	47.5	50.0	58.3
	Public assistance for either informant or spouse/partner in past year	49.8	47.3	39.1

Measures

Exposure to Community Violence

Exposure to community violence, as either victim or witness, was assessed with the *Survey of Exposure to Community Violence (SECV; Richters & Saltzman, 1990)*, a self-report questionnaire for youth that measures the frequency of exposure to, or being a victim of, various types of violence in one's school or neighborhood (see *Appendix A*). Youth were asked whether they had been exposed to each of nineteen types of violent events during the past year as either victim or witness (e.g., *Have you been attacked or stabbed with a knife?...Have you seen it happen to someone?...Have you heard about it happening to someone you know?*). The reported

number of different types of exposure was tallied to obtain two total scores of exposure (i.e., victimization and witnessing). For example, for Round 1, children reported witnessing a mean of 6.25 types of community violence events ($SD = 4.42$) and being victimized by a mean of less than one (0.90) type of event ($SD = 1.38$) (see *Appendix J*). A repeated measures ANOVA revealed significant decreases for Total Community Violence Exposure from Round 1 to Round 3 ($F = 33.23, n = 583, df = 2, p < .05, \eta_p^2 = .103$). For partial eta squared (η_p^2), effects were considered as either small (.01 to .06), medium (.06 to .14), or large (0.14 and higher). As such, the decreases in community violence exposure over time represent a medium effect size.

The Community Violence Exposure variable represents the adolescent's self report of violence experienced in either school or neighborhood. Tables 3(a), 3(b), and 3(c) document the percentages of students reporting any exposure and mean number of types of violence experienced in neighborhood, school or community (a combination of exposure in the neighborhood and school). Across all three rounds and exposure environments (i.e., school and neighborhood), a significant proportion of adolescents reported experiencing some type of violence in the previous year. Moreover, during each of the three years, approximately three-fourths of the sample reported having been a victim of or witness to community violence at least once, with the average adolescent reporting as few as four to as many as seven different types of exposure.

Table 3(a)
Percentage of Exposure Reported by Number of Types of Violence Experienced and Location by Students in Round 1

	School	Neighborhood	Community
No report of exposure (%)	28.2	10.8	6.3
One or more types reported (%)	71.8	89.2	93.7
Mean number of types of violence reported	1.93	4.89	6.81

Table 3(b)

Percentage of Exposure Reported by Number of Types of Violence Experienced and Location by Students in Round 2

	School	Neighborhood	Community
No report of exposure (%)	37.2	13.2	9.0
One or more types reported (%)	55.3	79.3	83.5
Mean number of types of violence reported	1.50	4.20	5.60

Note. Data were unavailable for 50 participants (7.5%).

Table 3(c)

Percentage of Exposure Reported by Number of Types of Violence Experienced and Location by Students in Round 3

	School	Neighborhood	Community
No report of exposure (%)	37.2	20.7	14.1
One or more types reported (%)	51.3	67.8	74.4
Mean number of types of violence reported	1.40	3.47	4.86

Note. Data were unavailable for 77 participants (11.5%).

Exposure to Family Violence

Family violence was assessed using selected items from the Conflict Tactics Scale (CTS; Straus, 1979) that were administered to each child's parent or guardian (see *Appendix B*). There were a total of ten items used to assess violence in the home. The parent or guardian was first asked questions regarding the use of physical violence against the target child in the past year. Next, the same questions were asked, but in reference to violent victimization of the child by another adult in the home. A count of affirmative responses to the 20 items was computed as the index of youth victimization in the home. The same ten CTS items and response format were used to assess the guardian's report of witnessing family violence by the target youth during the past year. The ten items were repeated twice, with respect to the youth witnessing violence among adults and between adults and other children in the home. A count of the affirmative responses to the 20 items was computed as the index of witnessing violence among family members. For Round 1, parents reported their children as being victimized by a mean of 0.88

family violence events ($SD = 1.43$) and as witnessing a mean of a mean of 0.74 events ($SD = 1.52$). A repeated measures ANOVA revealed that Total Family Violence Exposure significantly decreased from Round 1 to Round 3 ($F = 6.629, n = 580, df = 2, p < .05, \eta_p^2 = .022$), which represents a small effect size (see *Appendix J*).

Total Violence Exposure

In order to test the hypothesized models, a composite score for Total Violence Exposure was created using the scores of the *Survey of Exposure to Community Violence* and the *CTS*. First, the witnessing and victimization indices for each measure were summed to obtain an index of Total Community Violence Exposure and index of Total Family Violence Exposure. For example, Round 1 Total Community Violence Exposure had a mean of 6.81 ($SD = 5.04$) and the mean index of Total Family Violence Exposure was 1.62 ($SD = 2.53$). These indices were then standardized. Finally, the standardized scores representing exposure to community violence and exposure to family violence were summed to create the Total Violence Exposure variable, which was used in all the analyses. Total Violence Exposure in Round 1 and Round 2 will be used for the analyses (see Table 4).

Peer Relationship Variables

For the peer relationship variables, either Round 1 or Round 2 data will be used dependent upon the type of analysis (see Table 4). For tests of moderation, Round 1 data will be used and for tests of mediation Round 2 data will be used.

Reciprocated Friendships and Peer Acceptance were based on sociometric assessments conducted in each classroom (collected during Round 1 and 2 only) using a peer nomination assessment (Salzinger, Feldman, Hammer & Rosario, 1993) (see *Appendix C*). For reciprocated friendships, the target adolescent was asked to name the “two kids you most like to be with” from

a list of same-sex students in his/her class. His/her classmates were also asked the same question and an index of reciprocated friendship was determined, ranging from 0 to 2 based on whether the target adolescent received a nomination from neither, one, or both of the identified friends. The sample mean number of reciprocated friendships across the first two rounds was 0.94 ($SD = 0.79$) in Round 1 and 1.0 ($SD = 0.77$) in Round 2. Thus adolescents had, on average, at least one reciprocated friendship during Round 1 and Round 2.

Peer acceptance was assessed via the target adolescent's classmates' (both male and female students) nominations. Each adolescent was given a list of "kids" in their class and asked to circle the names of the "kids you *usually* hang out with." The social status of the target adolescent was measured as the frequency of peer nominations received from both his/her male and female classmates. The sociometry procedure was similar or identical to those in the child development literature. The validity of sociometric assessment is supported by studies showing that sociometric status groups, based on peer nominations, are reliably associated with different behavioral characteristics (Salzinger et al., 1993; Dodge, Coie, & Kupersmidt, 1990; Asher, 1983; Dodge & Murphy, 1984). The sample mean frequency of peer nominations was 6.19 ($SD = 3.42$) in Round 1 and 6.98 ($SD = 3.80$) in Round 2. On average, the target adolescent was nominated by six to seven other classmates as someone whom they wanted to "hang out with."

Quality or intimacy/closeness of peer relationships was assessed using a modified version of the *Inventory of Parent and Peer Attachment (IPPA)* (Armsden & Greenberg, 1987) (see *Appendix D*). The instrument is a self-report questionnaire for use with adolescents. For the current study, only the peer-related questions were analyzed. The peer-related portion of the instrument consists of 25 items (e.g., "I feel my friends are good friends"; "When I'm angry about something, my friends try to be understanding"; and "My friends listen to what I have to

say.”), which are rated on a five point Likert-type response scale, from 1 (almost never or never true) to 5 (almost always or always true). Total scores range from 25 to 125. Negatively worded items were reversed scored before summing the response values (Armsden & Greenberg, 1987). Higher scores indicated greater intimacy/closeness with respect to the youths’ relationships. According to Armsden and Greenberg (1987), the *IPPA* “has shown substantial reliability and good potential validity as a measure of perceived quality of close relationships in late adolescence (p. 447).” Three-week test-retest reliability was .86 for the Peer Attachment scale, and validity was demonstrated by correlating the *IPPA* with the Social and Family Self Scores of the *Tennessee Self-Concept Scale* (Armsden & Greenberg, 1987). Cronbach’s alpha was .81 for the current sample. Degree of intimacy/closeness was represented by the mean of the entire friend scale. The mean for Round 1 was 3.979 ($SD = .642$). On average, the adolescents responded “Often true” to the peer questions regarding their relationships, indicating a high level of intimacy and closeness.

The adolescent’s and his/her friends’ social behavior was rated using two different measures. The first measure was a modified version of Salzinger, Feldman, Hammer, and Rosario’s (1993) peer assessment procedure (see *Appendix E*), in which all same-sex classmates rated each other and themselves on four items: *Does s/he get teased and picked on by other kids? Does s/he start fights with other kids? Does s/he share things and cooperate with other kids? Does s/he insult other kids and say mean things to them?* The 5-point Likert response scale was as follows: 1 = “Not at all”; 2 = “Not as much as other boys/girls”; 3 = “About the same as other boys/girls”; 4 = “More than other boys/girls”; and 5 = “A whole lot more than other girls/boys.” Of the items asked, one classmate-rated behavior score was derived for the target adolescent, a “peer rejection” score, which represents the mean of the teased and picked on

by other kids ratings from classmates (Round 1: $M = 1.96$, $SD = 0.68$). On average, the target adolescent was picked on “Not as much as other boys/girls.” The distribution of ratings for “peer rejection” was then dichotomized such that a mean value above 3 (i.e., having the attribute more than other boys or girls) resulted in assigning that peer-rated behavioral characteristic to a child. Of the items asked, one classmate-rated behavior score was derived for the target adolescent’s best friend(s), a “prosocial” score, which represents the mean of the sharing/cooperation ratings from classmates (Round 1: $M = 3.08$, $SD = 0.47$). The peer assessment items used in the present study are identical or similar to those found in the child development literature. The assessment’s validity is supported by studies showing that such ratings correspond well to observed behavior (Salzinger, Rosario, Feldman, Ng-Mak, 2008; Feldman, Salzinger, Rosario, Alvarado, Caraballo, & Hammer, 1995; Salzinger et al., 1993; Dodge, 1983).

The second measure of social behavior used was a modified version of the Elliot and Ageton (1980) self-report of delinquency instrument (see *Appendix F*). Thirty-six items appropriate for New York City youth were used while inappropriate items (e.g., hitchhiking) were deleted. The instructions were rephrased to make them appropriate for self report of friends’ behavior: “Now I want to know whether any of the kids you usually hang out with have done any of these things in the past year.” The answer format was “yes” or “no.” The number of “yes” responses was used as a measure of antisocial behavior among the target youth’s friends including both sexes (Round 1: $M = 4.69$, $SD = 5.12$; Round 2: $M = 5.05$, $SD = 5.63$). Cronbach’s alpha was 0.89 for the current sample. On average, the target adolescent reported few antisocial behaviors among his/her friends..

Social Acceptance

In order to test the hypothesized models for the outcome Anxiety, a factor analysis was

conducted on the variables Reciprocated Friendships, Peer Acceptance, Peer Intimacy/Closeness, and Peer Rejection in order to determine whether they were indeed individual factors or better accounted for as a composite variable. One of the assumptions of exploratory factor analysis is that the variables of interest should demonstrate moderate to moderate-high intercorrelations without multicollinearity. For Round 1, the variables Reciprocated Friendships, Peer Rejection, and Peer Acceptance were moderately and significantly correlated with each other; however, Peer Intimacy/Closeness was only weakly correlated with Peer Rejection (see Table 5). Thus Peer Intimacy/Closeness will be tested separately.

Exploratory factor analysis extracted one factor. The first factor had an eigenvalue of 1.53 and accounted for 51.10% of the total variance. The factor loadings were .74, .75, and .65 for Reciprocated Friends, Peer Acceptance, and Peer Rejection, respectively. All of the loadings exceeded the widely accepted cutoff of .40 (Stevens, 2002), demonstrating that they all load onto a common factor. Z-scores were created for each variable, then added together resulting in one composite variable (i.e., a general factor of Social Acceptance) and will be used in the regression analysis. For Round 1, Social Acceptance had a mean of .15 ($SD = 1.99$) (see Table 4).

Social Cognition/Hostile Attribution

A modified, expanded version of Dodge and Frame's (1982) hypothetical stories (see *Appendix G*) was used to measure the extent to which individuals attribute hostility to others in a variety of ambiguous social situations. Children were asked to respond to a series of 14 vignettes and rate their responses on a 4-point scale. Examples of vignettes are, "*Imagine that you are putting your things into your locker, and the kid next to you pushes the door of your locker and it slams on your finger. How do you think it happened?*" Possible responses include: "(1) *I would think that probably it was an accident;* (2) *I would think that maybe it was an*

accident; (3) *I would think that maybe it was on purpose*; and (4) *I would think that probably it was on purpose.*” The child’s score is the mean rating over the 14 items; a higher mean score indicates greater hostile attribution. Concurrent validity was demonstrated by correlating the hostile attribution assessment with the aggression subscale scores from the *Child Behavior Checklist* and the *Moral Disengagement Scale* (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). Cronbach’s alpha for the hostile attribution measure was .71 for the current sample; the sample mean rating was 2.432 ($SD = .457$; $n = 579$). Round 2 data for Hostile Attribution will be used for analysis purposes (see Table 4).

Aggressive Behavior

Aggressive behavior was assessed in the third round of the study via the adolescents themselves using the *Child Behavior Checklist -Youth Self Report* (YSR; Achenbach, 1991), (see *Appendix H*). The *Child Behavior Checklist* (CBCL) includes 118 items focusing on emotional and behavioral difficulties for which parents rate the level of current or past (within the past 6 months) problem behavior using the following scale: 0 = not true; 1 = somewhat or sometimes true; 2 = very true or often true. The YSR uses the same response format as the CBCL and largely parallels it in item content. In terms of the psychometric properties of the YSR, test-retest reliabilities ranged from 0.47 to 0.79 and internal consistencies ranged from 0.71 to 0.95 (Achenbach, 1991). The YSR was used in Round 3 only. The sample mean T-scores for youth self-ratings of Aggressive Behavior in Round 3 was 53.42 ($SD = 6.18$). Youth report in Round 3 was used to assess the outcome Aggression (see Table 4). It should be noted that the average T-score for the current sample does not approach clinical significance for aggressive behavior.

Anxiety

The target adolescent’s anxiety levels were measured using the *Revised Children’s*

Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1997) (see *Appendix I*). The *RCMAS* is a self-report instrument designed to measure the level and nature of children's and adolescents' anxiety. It is designed for children and youth between the ages of 6 and 19 years old and is comprised of 28 "yes/no" statements, four subscale scores (Physiological Anxiety, Worry/Oversensitivity, Social Concern/Concentration; and a Lie subscale), and a Total Anxiety score. For the current study, the Total Anxiety score was derived by adding the number of "yes" responses for each subscale. A raw score for Total Anxiety can range from 0 to 28. The *RCMAS* Total Anxiety score yields a reliability coefficient across age levels from .78 to .84 (Ryngala, Shields, & Caruso, 2005). Cronbach's alpha was .81 for the current sample. The sample mean Total scores for youth-rated Anxiety across the three years were 9.94 ($SD = 5.82$) in Round 1; 8.66 ($SD = 5.70$) in Round 2; and 7.66 ($SD = 5.74$) in Round 3. For the current study, Anxiety data from Round 3 was analyzed (see Table 4). On average, the current sample was similar to the normative sample ($M = 10.08$; $SD = 5.76$) for youth approximately the same age (Reynolds & Richmond, 2002).

A repeated measures ANOVA was used to determine whether youth-rated anxiety varied over time. Results showed that youth-rated anxiety decreased significantly from Round 1 to Round 3 ($F = 51.25$, $n = 666$, $df = 2$, $p < .05$, $\eta_p^2 = .134$). The changes in reported anxiety symptoms, while significant, produced only a medium effect size.

Table 4
Descriptives of the Variables of Interest by Round²

Variables of Interest							
	N	Min	Max	Mean	SD	Skew	Kurtosis
Round 1– Total Violence Exposure	667	-1.99	6.72	0.0	1.50	1.142	1.550
Round 2– Total Violence Exposure	611	-1.70	11.11	0.00	1.48	2.014	8.441
Round 1– Friends’ Prosocial Behavior	642	1.65	4.39	3.08	0.47	-.151	-.290
Round 2– Friends’ Antisocial Behavior	611	0.0	34.0	5.05	5.63	1.633	2.967
Round 2– Hostile Attribution	611	1.14	4.0	2.46	0.47	.054	.069
Round 1– Social Acceptance	633	-5.74	4.52	.15	1.99	-.293	-.287
Round 1– Peer Intimacy/Closeness	667	1.48	5.0	3.98	0.64	-.670	.259
Round 3– Aggression	578	50.0	83.0	53.42	6.18	1.885	2.826
Round 3– Anxiety	579	0.0	26.0	7.66	5.74	.741	-.154

Note. Violence Exposure represents a the standardized sum of domestic and community violence; Friends’ Prosocial Behavior represents the classmates’ mean ratings of the target youth’s two best friends’ prosocial behavior; Friends’ Antisocial Behavior represents the target youth’s ratings of his/her friends’ antisocial behavior; Hostile Attribution is represented by youth’s total score; Social Acceptance represents the standardized sum of reciprocated friendships, peer acceptance, and peer rejection; Peer Intimacy/Closeness represents the target youth’s responses to the IPPA peer questions; Aggression represents T-scores from the Achenbach Youth Self Report; and Anxiety represents youth’s total score on the RCMAS.

Table 5
Bivariate Correlations Between Round 1 Peer Variables

	1	2	3	4
1. Reciprocated Friendships	–			
2. Peer Acceptance	.33**	–		
3. Intimacy/Closeness	.08	.03	–	
4. Peer Rejection	-.22**	-.25**	-.08*	–

Note. Reciprocated Friendships represent same sex, reciprocated friend nominations; Peer acceptance represents the number of ‘hang out’ nominations received by the target youth from both sexes in the classroom; Peer Intimacy/Closeness represents the target youth’s responses to the IPPA peer questions; Peer Rejection represents the same sex behavior ratings for the target youth from his/her peers of whether he/she is teased more than others. * $p \leq .05$ ** $p \leq .01$

² For descriptives of all the variables of interest from each round of data collection, please see *Appendix J*

Correlations Among Gender and the Variables of Interest

In order to determine the relevance of possible confounding variables, gender was correlated with the variables of theoretical interest (see Table 6). Gender was significantly correlated with a number of the variables of interest although the correlations were generally weak. Girls were more likely than boys to report higher levels of social acceptance and peer intimacy/closeness. Boys, on the other hand, were more likely to be exposed to higher levels of violence and to attribute hostile intent in ambiguous situations. Lastly boys reported fewer aggressive behaviors and anxiety symptoms than girls.

Table 6
Bivariate Correlations between Variables of Interest by Round and Gender³

Variables of Interest	Gender
Round 3 – Anxiety	.11**
Round 3 – Aggression	.15**
Round 1 – Total Exposure to Violence	-.17**
Round 2 – Total Exposure to Violence	-.15**
Round 2 – Hostile Attribution	-.11**
Round 1 – Friends’ Prosocial Behavior	.21**
Round 2 – Friends’ Antisocial Behavior	-.07
Round 1 – Social Acceptance	.16**
Round 1 – Peer Intimacy/Closeness	.15**

Note. Gender: Male=1, Female=2; Anxiety represents the target youth’s total responses on RCMAAS; Aggression represents T-scores from Achenbach Youth Self Report; Violence Exposure represents a composite score of community and family violence; Hostile Attribution is represented by youth’s total score; Friends’ Prosocial Behavior represents the classmates’ mean ratings of the target youth’s two best friends’ prosocial behavior; Friends’ Antisocial Behavior represents the target youth’s ratings of his/her friends’ antisocial behavior; Reciprocated Friendships represent same sex, reciprocated friend nominations; Peer acceptance represents the number of ‘hang out’ nominations received by the target youth from both sexes in the classroom; Peer Intimacy/Closeness represents the target youth’s responses to the IPPA peer questions; Peer Rejection represents the same sex ratings for the target youth from peers of whether he/she is teased more than others. ** $p \leq .01$

³ For bivariate correlations between gender and of all the variables of interest from each round of data collection, please see *Appendix K*

Missing Data Analysis

After creating the necessary composite variables, the data were analyzed to assess the possible effects of missing data in Round 2 and Round 3. The youths' report of total community violence (witnessing and victimization) in Rounds 2 and 3 was used as the basis for the analysis because the presence or absence of this data should indicate whether the remaining data for that Round was present or absent. Using the youths' report of total community violence, the percentages of adolescents with non-missing data are 92.5% and 88.5% for Round 2 and Round 3, respectively. Two dichotomous variables, where 0=data present and 1=data missing, were created to represent: Present vs. Missing data in Round 2 and Present vs. Missing data in Round 3. These two variables were then correlated with all of the variables of interest from each Round. Results are found in Table 7(a), 7(b), 7(c), 7(d), 7(e), and 7(f).

Table 7(a)
Results of Missing Data Analysis for Gender

	Gender
Round 2 Missing vs. Present Data	.01
Round 3 Missing vs. Present Data	-.01

Table 7(b)
Results of Missing Data Analysis for the Outcomes Anxiety and Aggression

	Round 1 Anxiety	Round 2 Anxiety	Round 3 Anxiety	Round 3 Aggression
Round 2 Missing vs. Present Data	.13	A	-.01	.03
Round 3 Missing vs. Present Data	.07	.01	-.01	-.07

Table 7(c)
Results of Missing Data Analysis for Violence Exposure

	Round 1 Total Violence Exposure	Round 2 Total Violence Exposure	Round 3 Total Violence Exposure
Round 2 Missing vs. Present Data	-.02	A	-.02
Round 3 Missing vs. Present Data	.05	.09*	a

Table 7(d)
Results of Missing Data Analysis for Hostile Attribution

	Round 1 Hostile Attribution	Round 2 Hostile Attribution	Round 3 Hostile Attribution
Round 2 Missing vs. Present Data	-.03	A	-.01
Round 3 Missing vs. Present Data	-.08*	-.01	-.01

Table 7(e)
Results of Missing Data Analysis for Friends' Behavior

	Round 1 Friends' Antisocial Behavior	Round 1 Friends' Prosocial Behavior	Round 2 Friends' Antisocial Behavior	Round 2 Friends' Prosocial Behavior
Round 2 Missing vs. Present Data	.04	.04	.06	-.04
Round 3 Missing vs. Present Data	.06	.02	.00	-.04

Table 7(f)
Results of Missing Data Analysis for Social Acceptance and Peer Intimacy

	Social Acceptance Round 1	Peer Intimacy Round 1
Round 2 Missing vs. Present Data	-.05	-.05
Round 3 Missing vs. Present Data	-.02	-.01

NOTE: Gender: Male=1, Female=2; Anxiety represents youth's total score on RCMAS; Aggression represents T-scores from the Achenbach Youth Self Report; Violence Exposure represents a composite score of community violence and family violence; Hostile Attribution is represented by youth's total score; Friends' Antisocial Behavior represents the target youth's ratings of his/her friends' antisocial behavior; Friends' Prosocial Behavior represents the classmates' mean ratings of the target youth's two best friends' prosocial behavior; Social Acceptance represents the standardized sum of reciprocated friendships, peer acceptance, and peer rejection; Peer Intimacy/Closeness represents the target youth's responses to the IPPA peer questions. * $p \leq .05$ a. Cannot be computed because at least one of the variables is constant.

As shown in Tables 7(a), 7(b), 7(c), 7(d), 7(e), and 7(f) only two weak but significant results were obtained. Missing data on youths' total report of community violence was not significantly correlated with gender (see Table 7(a)) or with any of the outcome variables of interest (see Table 7(b)). Missing data from the youths' report of total community violence in Round 3 was positively correlated ($r = .09$; $p < .05$) with Round 2 Total Violence Exposure and

negatively correlated ($r = -.08$; $p < .05$) with Round 1 Hostile Attribution. Aside from these two significant findings, those cases that are missing data from Rounds 2 and 3 were not found to be significantly different from those cases with data and thus the missing data occur randomly and not for systematic reasons. In total, only two out of forty-eight (4%) correlations were found to be significant, which is approximately what would be expected by chance alone.

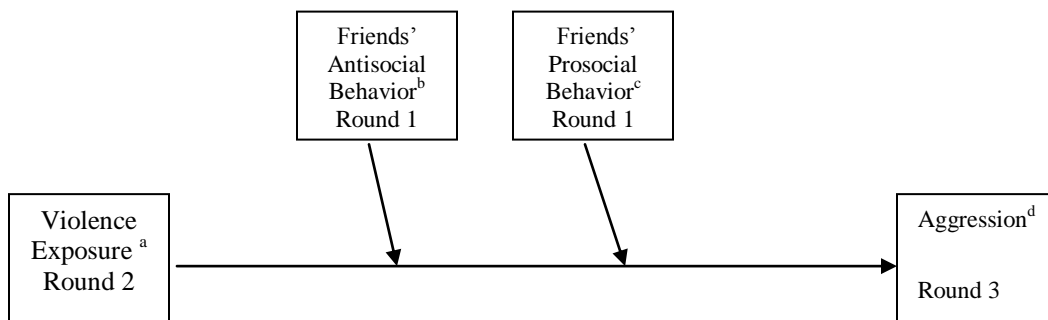
Plan of Analyses

Multiple analyses will be conducted to test various hypotheses involving friends' behavior and social cognition in explaining the association between violence exposure and aggression. As illustrated in Figure 1, Friends' behavior should moderate the relationship between Violence Exposure and Aggressive Behavior. Specifically, having antisocial friends should exacerbate the relationship between violence exposure and aggressive behavior while having prosocial friends should decrease the likelihood of Aggressive Behavior in the face of Violence Exposure. Following the MacArthur approach (Kraemer, Kiernan, Essex, and Kupfer, 2008) which proposes revisions to traditional moderation testing as outlined by Baron and Kenny (1986), three eligibility criteria will be used for establishing moderation: the moderator temporally precedes the predictor, the moderator and the predictor are independent of each other, and an interaction between the moderator and predictor is demonstrated. Therefore, friends' behavior will be examined in Round 1, Violence Exposure in Round 2, and the outcome Aggressive Behavior in Round 3. Further, correlations between the moderators, Friends' Prosocial and Antisocial behavior, and the independent variable, Violence Exposure, will be examined to ensure independence. Regression analyses will be used in order to test the direct effects of the independent variable and the proposed moderators on the outcome, Aggressive Behavior, as well as the interactions between the proposed moderators and the independent

variable, Violence Exposure. According to Cohen and Cohen (1983), to eliminate multicollinearity, all variables involved in the moderating relationship will be centered about their means.

Figure 1

Model 1a Moderation by Friends' Antisocial Behavior and Friends' Prosocial Behavior on the Relationship Between Violence Exposure and Aggressive Behavior



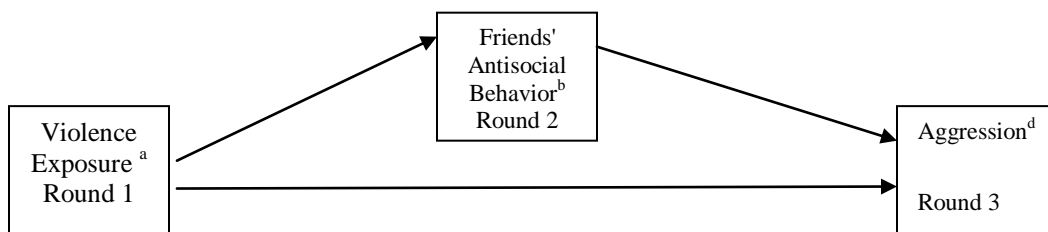
Note. a: Violence Exposure represents a composite score of community violence and family violence; b: Friends' Antisocial Behavior represents the target youth's ratings of his/her friends' antisocial behavior; c: Friends' Prosocial Behavior represents the classmates' mean ratings of the target youth's two best friends' prosocial behavior; and d: Aggression represents T-scores from the Achenbach Youth Self Report.

As illustrated in Figure 2, Violence Exposure should influence an adolescent's association with a particular type of friend (e.g., Antisocial friends), which should in turn increase the likelihood of later aggressive behavior. According to the MacArthur approach, three eligibility criteria will be used for establishing mediation: the predictor precedes the mediator, the predictor and mediator are associated, and either a main effect of the mediator or an interaction between the predictor and the mediator is demonstrated (Kraemer et al., 2008). Therefore, Violence Exposure will be examined in Round 1, Friends' Antisocial behavior in Round 2, and the outcome Aggressive Behavior in Round 3. Further, the correlation between the mediator, Friends' Antisocial behavior, and the independent variable, Violence Exposure, will be examined to ensure a significant association. Regression analyses will be used in order to test the direct effects of the mediator (Friends' Antisocial behavior) on the outcome (Aggressive

Behavior), and the independent variable (Violence Exposure) on the outcome (Aggressive Behavior), as well as the interaction between the proposed mediator and the independent variable, Violence Exposure. It is hypothesized that the effect of Violence Exposure on the outcome Aggressive Behavior will be explained, or partially explained by Friends' Antisocial behavior on the outcome Aggressive Behavior. If the association between Violence Exposure and Aggressive Behavior is substantially reduced upon the introduction of Friends' Antisocial behavior, mediation is indicated.

Figure 2

Model 1b Mediation by Friends' Antisocial Behavior on the Relationship Between Violence Exposure and Aggressive Behavior



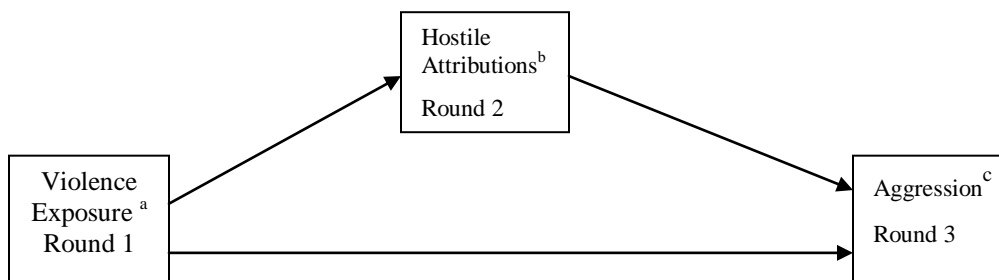
Note. a: Violence Exposure represents a composite score of community violence and family violence; b: Friends' Antisocial Behavior represents the target youth's ratings of his/her friends' antisocial behavior; c: Aggression represents T-scores from the Achenbach Youth Self Report.

As illustrated in Figure 3, the hypothesized mediation effect of social cognitions on the relationship between violence exposure and aggressive behavior will be tested. In the context of violence exposure, it is expected that adolescents will form hostile attributions, which will in turn result in aggressive behavior. Again the McArthur Group's approach to mediation will be utilized such that the predictor precedes the mediator, the predictor and mediator are associated, and either a main effect of the mediator or an interaction between the predictor and the mediator is demonstrated (Kraemer et al., 2008). Therefore, Violence Exposure will be examined in Round 1, Hostile Attribution in Round 2, and the outcome Aggressive Behavior in Round 3.

Further, correlation between the mediator, Hostile Attribution, and the independent variable, Violence Exposure, will be examined to ensure a significant association. Regression analyses will be used to test the direct effects of the mediator (Hostile Attribution) on the outcome (Aggression), and the independent variable (Violence Exposure) on the outcome (Aggression), as well as the interaction between the proposed mediator and the independent variable, Violence Exposure. It is hypothesized that the effect of Violence Exposure on the outcome Aggression will be explained, or partially explained by Hostile Attributions on the outcome Aggression. If the association between Violence Exposure and Aggression is substantially reduced upon the introduction of Hostile Attributions, mediation is indicated.

Figure 3

Model 1c Mediation by Hostile Attribution of the Relationship Between Violence Exposure and Aggressive Behavior



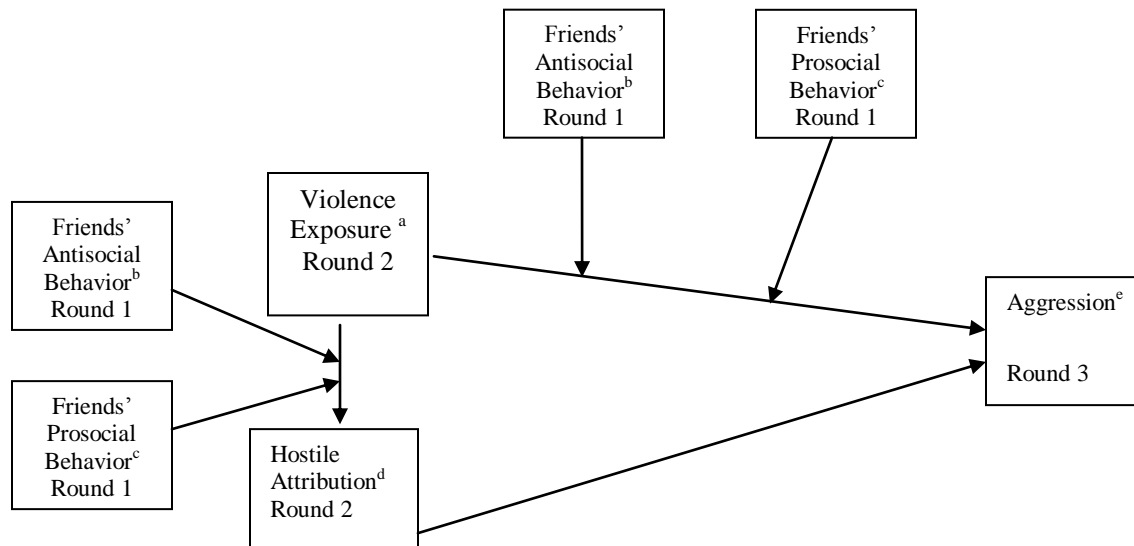
Note. a: Violence Exposure represents a composite score of community violence and family violence; b: Hostile Attributions represents youth self report; and c: Aggression represents T-scores for Total Aggression from the Achenbach Youth Self Report.

According to the literature, friends serve as cognitive change agents, and thus it makes theoretical sense that in the face of violence exposure, one's friends' behavior would either strengthen or reduce the mediating effect of Hostile Attributions on the relationship between Violence Exposure and Aggressive Behavior. When the process mediating a treatment effect (i.e., social cognitions mediating the effect of violence exposure) is suspected to be dependent upon the moderator(s) (i.e., friends' prosocial or friends' antisocial behavior), then moderated

mediation should be considered (Muller, Judd, & Yzerbyt, 2005). Thus, as illustrated in Figure 4, Hostile Attributions are hypothesized to mediate the effect of Violence Exposure on Aggression, contingent upon one's friends' behavior, either Prosocial or Antisocial. In order to test for moderated mediation, first, mediation must be established (Muller et al., 2005). The analysis for Model 1c serves as this preliminary step. Following the recommendations set forth by Muller et al. (2005), a series of regression analyses will be conducted. First, the moderating effect of friends' behavior on the association between Violence Exposure and Aggressive Behavior will be assessed (see Figure 1). Next, the moderating effect of friends' behavior (i.e., Friends' Prosocial or Antisocial Behavior) on the association between Violence Exposure and Hostile Attributions will be assessed. A direct effect of Violence Exposure on Hostile Attribution is a necessary precondition for moderated mediation. Additionally, significant interactions between Violence Exposure and Prosocial and Antisocial Friends are necessary to indicate moderated mediation; this would mean that the magnitude of the indirect effect of Violence Exposure via Hostile Attributions varies as a function of friends' behavior. Finally, Aggressive Behavior will be regressed on Violence Exposure, Hostile Attribution, friends' behavior (i.e., Prosocial or Antisocial), the interaction between friends' behavior and Violence Exposure, and the interaction between friends' behavior and Hostile Attribution, while controlling for Hostile Attribution. This allows for Hostile Attribution's effect on Aggressive Behavior and the residual effect of the Violence Exposure on Aggressive Behavior, controlling for Hostile Attribution, to both be moderated by friends' behavior. Should any of the above analyses not support the hypothesized associations then the model of moderated mediation will not apply and a model of mediation will be tested (see Figure 5).

Figure 4

Model 1d Moderation by Friends' Antisocial and Friends' Prosocial Behavior of the Mediation Effect of Hostile Attributions on the Relationship Between Violence Exposure and Aggressive Behavior



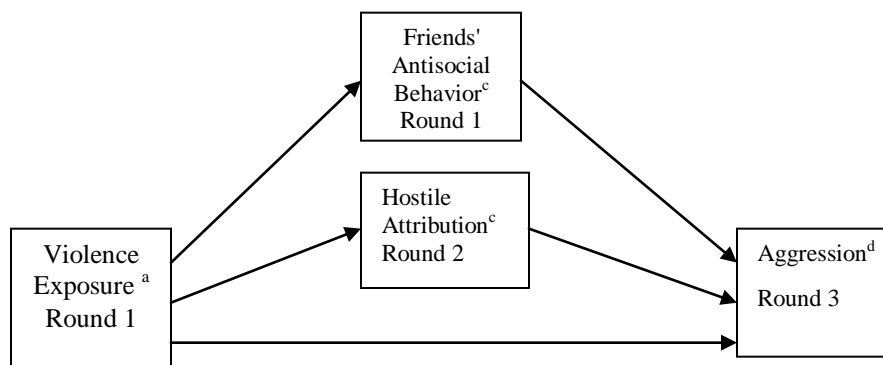
Note. a: Violence Exposure represents a composite score of community violence and family violence; b: Friends' Antisocial Behavior represents the target youth's rating of his/her friends' antisocial behavior; c: Friends' Prosocial Behavior represents the classmates' mean ratings of the target youth's two best friends' prosocial behavior; and d: Hostile Attributions represents youth self report; and e: Aggression represents T-scores for Total Aggression from the Achenbach Youth Self Report.

Finally, as illustrated in Figure 5, the hypothesized mediation effects of Friends' Antisocial behavior and Hostile Attributions on the relationship between violence exposure and aggressive behavior will be examined. In the face of violence exposure, it is expected that adolescents will act more aggressively and also associate with more antisocial friends and attribute more hostile intent to others actions. Using the McArthur Group's approach to mediation, the predictor will precede the mediators, the predictor and mediators will be associated, and either main effects of the mediators or interactions between the predictor and the mediators will be demonstrated (Kraemer et al., 2008). Therefore, Violence Exposure will be examined in Round 1, Friends' Antisocial behavior and Hostile Attribution in Round 2, and the outcome Aggressive Behavior in Round 3. Further, correlations between the mediators, Friends' Antisocial behavior and Hostile Attribution, and the independent variable, Violence Exposure,

will be examined to ensure significant associations. Regression analyses will be used to test the direct effects of the mediators (Friends' Antisocial behavior and Hostile Attribution) on the outcome (Aggression), and the independent variable (Violence Exposure) on the outcome (Aggression), as well as the interactions between the proposed mediators and the independent variable, Violence Exposure. It is hypothesized that the effect of Violence Exposure on the outcome Aggression will be explained by Friends' Antisocial behavior and Hostile Attributions on the outcome Aggression. If the association between Violence Exposure and Aggression is substantially reduced upon the introduction of Friends' Antisocial behavior and Hostile Attributions, mediation is indicated.

Figure 5

Model 1e Mediation by Friends' Antisocial Behavior and Hostile Attribution on the Relationship Between Violence Exposure and Aggressive Behavior



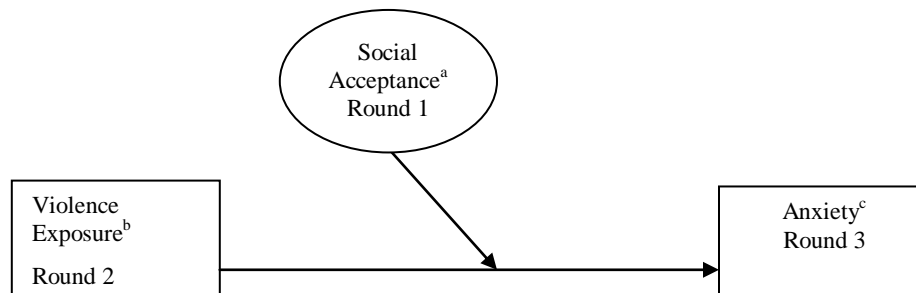
Note. a: Violence Exposure represents a composite score of community violence and family violence; b: Friends' Antisocial Behavior represents the target youth's rating of his/her friends' antisocial behavior; c: Hostile Attributions represents youth self report; and d: Aggression represents T-scores for Total Aggression from the Achenbach Youth Self Report.

Two separate analyses will be conducted to test hypotheses involving social acceptance and peer intimacy/closeness in explaining the association between violence exposure and later anxiety. As illustrated in Figure 6, Social Acceptance should moderate the relationship between Violence Exposure and Anxiety. Adolescents who have greater social acceptance will report less anxiety as exposure to violence increases, whereas adolescents with less social acceptance will

report greater anxiety in the context of violence exposure. Moderation will be established using the following criteria: the moderator temporally precedes the predictor, the moderator and the predictor are independent of each other, and an interaction between the moderator and predictor is demonstrated (Kraemer et al., 2008). Therefore, the peer variables will be examined in Round 1, Violence Exposure in Round 2, and the outcome Anxiety in Round 3. Correlations between the predictor(s) and the independent variable will be assessed to ensure independence. Finally, to eliminate multicollinearity, all predictors will be centered about their means and then the interaction terms will be calculated between each predictor/moderator and the independent variable Violence Exposure.

Figure 6

Model 2a Moderation by Social Acceptance on the Relationship Between Violence Exposure and Anxiety



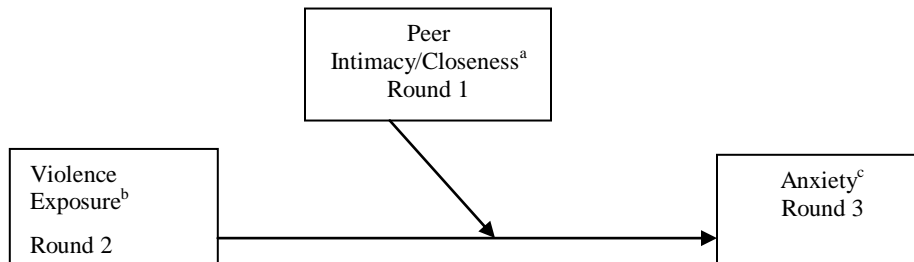
Note. a: Social Acceptance represents the standardized sum of reciprocated friendships, peer acceptance, and peer rejection; b: Violence Exposure represents a composite score of community violence and family violence; and c: Anxiety represents the target youth's total responses on RCMAS.

As illustrated in Figure 7, Peer Intimacy/Closeness should moderate the relationship between Violence Exposure and Anxiety. Adolescents who have close, intimate relationships will report less anxiety as exposure to violence increases, whereas adolescents with less close, intimate relationships will report greater anxiety in the face of violence exposure. Moderation will be established as in previous analyses. Peer intimacy/closeness will be examined in Round 1, Violence Exposure in Round 2, and the outcome Anxiety in Round 3. Correlations between

the predictor(s) and the independent variable will be assessed to ensure independence. Finally, to eliminate multicollinearity, all predictors will be centered about their means and then the interaction terms will be calculated between each predictor/moderator and the independent variable Violence Exposure.

Figure 7

Model 2b Moderation by Peer Intimacy/Closeness on the Relationship Between Violence Exposure and Anxiety



Note. a: Peer Intimacy/Closeness represents the target youth's responses to the IPPA peer questions; b: Violence Exposure represents a composite score of community violence and family violence; and c: Anxiety represents the target youth's total responses on RCMAS.

Chapter III

RESULTS

Correlations Among the Variables of Interest

Bivariate correlations were obtained among all of the variables of interest. Separate tables were created for the Aggressive Behavior and Anxiety outcome variables (see Table 8 and Table 9). As shown in Table 8, Exposure to Violence was significantly and positively correlated with youths' report of Aggressive Behavior in Round 3. Youth experiencing higher levels of violence exposure reported more aggressive behavior. Exposure to Violence was also significantly and positively correlated to youths' report of Hostile Attribution. Hence, those youth who experienced more types of violence often attributed hostile intent in ambiguous social situations.

Correlations of Hostile Attribution with the predictor and outcome variables were highly significant and largely consistent. Friends' behavior also presented an expected pattern of associations. Friends' Antisocial behavior was significantly and positively correlated with Violence Exposure. Youth who associated with more antisocial friends tended to experience more types of violence. Friends' Antisocial behavior was also significantly and positively correlated with Hostile Attribution, such that those youth having more antisocial friends attributed more hostile intent in ambiguous social situations. Likewise, Friends' Antisocial behavior was significantly and positively correlated with Aggressive Behavior. Thus, youth who associated with more antisocial friends reported greater aggressive behavior. Friends' Prosocial behavior was also weakly but significantly and negatively related to Violence Exposure and Hostile Attribution. Further, Friends' Prosocial behavior and Friends' Antisocial behavior were significantly and negatively associated as expected. Friends' Prosocial behavior, however, was

not correlated with Aggressive Behavior two years later as might have been expected.

Table 9 displays the bivariate correlations for the variables of interest for the theoretical model involving Anxiety as the outcome. Exposure to Violence in Round 2 was significantly and positively correlated with Anxiety one year later. Exposure to Violence in Round 2 was also significantly and negatively correlated with Round 1 Peer Intimacy/Closeness. Adolescents who lack close, intimate relationships tend to experience more types of violence. Social Acceptance in Round 1 was weakly but significantly correlated with Anxiety two years later. Youth who experience greater social acceptance report less anxiety.

Table 8
Bivariate Correlations Among the Variables of Interest in the Theoretical Model By Round With Aggression as Outcome

	1	2	3	4	5	6	7
1. Aggression, R3	–						
2. Violence Exposure, R1	.10*	–					
3. Violence Exposure, R2	.25**	.52**	–				
4. Hostile Attribution, R 2	.12**	.17**	-.21**	–			
5. Friends' Prosocial Behavior, R1	.03	-.12**	-.23**	-.11**	–		
6. Friends' Antisocial Behavior, R1	.21**	.21**	.38**	.13**	-.13**	–	
7. Friends' Antisocial Behavior, R2	.33**	.30**	.48**	.18**	-.17**	.56**	–

Note. Aggression represents T-scores for Total Aggression from the Achenbach Youth Self Report; Violence Exposure represents a composite score of community violence and family violence; Hostile Attributions represents youth's self report; Friends' Prosocial Behavior represents the classmates' mean ratings of the target youth's two best friends' prosocial behavior; and Friends' Antisocial Behavior represents the target youth's rating of his/her friends' antisocial behavior. * $p \leq .05$ ** $p \leq .01$

Table 9
Bivariate Correlations Among the Variables of Interest in the Theoretical Model by Round With Anxiety as Outcome

	1	2	3	4
1. Anxiety, R2	–			
2. Violence Exposure, R2	.24**	–		
3. Social Acceptance, R1	-.09*	-.06	–	
4. Intimacy/Closeness, R1	-.15**	-.08**	.08	–

Note. Anxiety represents the target youth's total responses on RCMAS; Violence Exposure represents a composite score of community violence and family violence; Social Acceptance represents the composite variable including Reciprocated Friendships, Popularity, and Peer Rejection; Peer Intimacy/Closeness represents the target youth's responses to the IPPA peer questions. * $p \leq .05$ ** $p \leq .01$

Model 1a: Moderation by Friends' Antisocial Behavior and Friends' Prosocial Behavior on the Relationship Between Violence Exposure and Aggressive Behavior

Model 1a examines the hypothesized moderating effect of Friends' Prosocial behavior and Friends' Antisocial behavior on the association between Violence Exposure one year later and Aggressive Behavior two years later. As aforementioned, there are preliminary steps necessary to establish moderation. In addition to temporally preceding the predictor, the moderator and the predictor should be independent (Kraemer et al, 2008). As such, the moderator, Friends' Antisocial behavior in Round 1, and the predictor, Violence Exposure in Round 2, were found to be strongly and significantly associated ($r = .38, p \leq .01$; see Table 8), thus Friends' Antisocial behavior failed to meet criteria for tests of moderation and was not included in the analysis. Furthermore, Round 1 Friends' Prosocial behavior was also correlated with Violence Exposure in Round 2 ($r = -.23, p \leq .01$); therefore it was not examined as a possible moderator.

Model 1b: The Mediating effect of Friends' Antisocial Behavior on the Relationship Between Violence Exposure and Aggressive Behavior

Next, Model 1b, which represents the possible mediating influence of Friends' Antisocial behavior on the association between Violence Exposure and Aggressive Behavior, was examined (see Figure 2 and Table 10). Friends' Antisocial behavior in Round 2 and Violence Exposure in Round 1 were significantly correlated ($r = .30^{**}$, $p \leq .01$; see Table 8). Before testing for mediation effects, the possible confounding effect of gender was considered because of its significant correlations with some of the study's variables of interest. Table 10 presents the hierarchical linear regression model that examines the hypothesized mediating effect of Friends' Antisocial behavior in the association between Violence Exposure and later Aggressive Behavior. Violence Exposure in Round 1 was significantly related to Aggressive Behavior in Round 3 ($\beta = .14$, $p \leq .01$) after controlling for gender (step 1). Next, the mediating effect of Friends' Antisocial behavior in Round 2 was added to the model (step 2). According to the MacArthur approach (Kraemer et al., 2008), mediation is established by demonstrating either a main effect of the mediator or an interaction between the mediator and the independent variable. Violence Exposure was no longer a significant predictor ($\beta = .05$, ns), demonstrating the mediating effect of Friends' Antisocial behavior on the effect of Violence Exposure on later Aggressive Behavior. Of note, the same model was tested separately by gender and confirmed that the above process was the same for both girls and boys.

Table 10
Hierarchical Linear Regression Model Testing for the Potential Mediating Effects of Friends' Antisocial Behavior on the Relationship Between Violence Exposure and Aggressive Behavior

Variable	<i>b</i>	SE <i>b</i>	β	ΔR^2
Step 1- Gender ^a	2.15	.52	.17***	
Violence Exposure R1	.56	.17	.14**	.04
Step 2- Violence Exposure R1	.20	.17	.05	
Antisocial Friends R2	.37	.05	.32***	.10
Step 3- Violence Exp R1 x Antisocial Friends R2	-.01	.03	-.02	.00

^a Boys = 1; Girls = 2; ** $p \leq .01$. *** $p \leq .001$; $R^2 = .14$; Note: All continuous variables are centered before they are entered into the regression equation; R1 = Round 1; R2 = Round 2.

Model 1c: The Mediating effect of Hostile Attribution on the Relationship Between Violence Exposure and Aggressive Behavior

In Model 1c, the possible mediating influence of Hostile Attribution on the association between Violence Exposure and Aggressive Behavior was examined (see Figure 3 and Table 11). Hostile Attribution in Round 2 and Violence Exposure in Round 1 were significantly correlated ($r = .17^{**}$, $p \leq .01$; see Table 8). Again, before testing for mediation effects, gender was considered because of its significant correlations with some of the study's variables of interest. Table 11 presents the hierarchical linear regression model that examines the hypothesized mediating effect of Hostile Attribution in the association between Violence Exposure and later Aggressive Behavior. Violence Exposure in Round 1 was significantly related to Aggressive Behavior in Round 3 ($\beta = .14$, $p \leq .01$) after controlling for gender (step 1). Next, the hypothesized mediating effect of Hostile Attribution was added to the model (step 2). Violence Exposure continued to be a significant predictor ($\beta = .12$, $p \leq .01$), thus Hostile Attribution did not have a mediating effect on the relationship between Violence Exposure and

later Aggressive Behavior.

The same model was tested separately to confirm that the above process was the same for both girls and boys. It was found that Hostile Attribution mediated the relationship between violence exposure and aggression for girls ($\beta = .19, p \leq .01$), but not for boys ($\beta = .05, p > .05$).

Table 11

Hierarchical Linear Regression Model Testing for the Potential Mediating Effect of Hostile Attribution on the Relationship Between Violence Exposure and Aggressive Behavior

Variable	<i>b</i>	SE <i>b</i>	β	ΔR^2
Step 1- Gender ^a	2.15	.52	.17***	
Violence Exposure R1	.56	.17	.14**	.04
Step 2- Violence Exposure R1	.48	.17	.12**	
Hostile Attribution R2	1.64	.55	.12**	.02
Step 3- Hostile Attribution R2 x Violence Exp R1	-.13	.37	-.01	.00

^a Boys = 1; Girls = 2; ** $p \leq .01$. *** $p \leq .001$; $R^2 = .06$; Note: All continuous variables are centered before they are entered into the regression equation.; R1 = Round 1; R2 = Round 2.

Model 1e: The Mediating effects of Friends' Antisocial Behavior and Hostile Attribution on the Relationship Between Violence Exposure and Aggressive Behavior

Finally, in Model 1e, the possible mediating influences of both Friends' Antisocial behavior and Hostile Attribution on the association between Violence Exposure and Aggressive Behavior were examined (see Figure 5 and Table 12). Friends' Antisocial behavior in Round 2, Hostile Attribution in Round 2, and Violence Exposure in Round 1 were all significantly correlated with each other ($r = .30^{**}$ and $r = .17^{**}$, $p \leq .01$, respectively; see Table 8). Gender was correlated with the present variables; therefore, it was controlled for in the analysis. Table 12 presents the hierarchical linear regression model that examines the hypothesized mediating effect of Friends' Antisocial behavior and Hostile Attribution in the association between

Violence Exposure and Aggressive Behavior. Violence Exposure in Round 1 was significantly related to Aggressive Behavior in Round 3 ($\beta = .14, p \leq .01$) after controlling for gender (step 1). Next, the hypothesized mediating effect of Friends' Antisocial behavior and Hostile Attribution in Round 2 was added to the model (step 2). Violence Exposure was no longer a significant predictor ($\beta = .04, p > .05$), demonstrating the mediating effect of Friends' Antisocial behavior and Hostile Attribution on the effect of Violence Exposure on later Aggressive Behavior. Antisocial Friends was significantly related to Aggressive Behavior ($\beta = .31, p \leq .01$) while Hostile Attribution approached significance ($\beta = .08, p = .06$), after controlling for gender.

The same model was tested separately to confirm that the above processes were the same for both girls and boys. It was found that Friends' Antisocial behavior mediated the relationship between violence exposure and aggression for both girls and boys, however, hostile attribution only mediated the relationship for girls ($\beta = .13, p \leq .05$), not for boys ($\beta = .01, p > .05$).

Table 12
Hierarchical Linear Regression Model Testing for the Potential Mediating Effect of Friends' Antisocial Behavior and Hostile Attribution on the Relationship Between Violence Exposure and Aggressive Behavior

Variable	<i>b</i>	SE <i>b</i>	β	ΔR^2
Step 1- Gender ^a	2.15	.52	.17***	
Violence Exposure R1	.56	.17	.14**	.04
Step 2- Violence Exposure R1	.16	.17	.04	
Friends' Antisocial R2	.36	.05	.31***	
Hostile Attribution R2	1.02	.53	.08*	.10
Step 3- Friends' Antisocial R2 x Violence Exp R1	-.01	.03	-.01	
Hostile Attribution R2 x Violence Exp R1	.06	.35	.01	.00

^a Boys = 1; Girls = 2; * $p \leq .06$. ** $p \leq .01$. *** $p \leq .001$; $R^2 = .14$; Note: All continuous variables are centered before they are entered into the regression equation; R1 = Round 1; R2 = Round 2.

Model 2a: Moderating Effect of Social Acceptance on the Relationship Between Violence Exposure and Anxiety

For Model 2a, the possible moderating influence of the common factor, Social Acceptance, on the association between Violence Exposure and Anxiety was examined (see Figure 6 and Table 13). Following the criteria for moderation, Social Acceptance preceded Violence Exposure, and Social Acceptance in Round 1 and Violence Exposure in Round 2 were not correlated with each other. Due to correlations with some of the variables of interest, gender was controlled for in the analysis. Table 13 presents the hierarchical linear regression model. Social Acceptance in Round 1 was significantly related to Anxiety in Round 3 ($\beta = -.09, p \leq .05$) after controlling for gender (step 1). Further, the interaction between Social Acceptance in Round 1 and Violence Exposure in Round 2 was significant ($\beta = .10, p \leq .05$). However Social Acceptance was found to have a limited moderating effect. As shown in Figure 8, at low levels

of violence exposure, Social Acceptance is protective against future anxiety. However, at high levels of exposure, Social Acceptance is less protective.

The same model was tested separately to confirm that the above process was the same for both girls and boys. It was found that Social Acceptance moderated the relationship between violence exposure and anxiety for girls ($\beta = .18, p \leq .01$), but not for boys ($\beta = .04, p > .05$).

Table 13

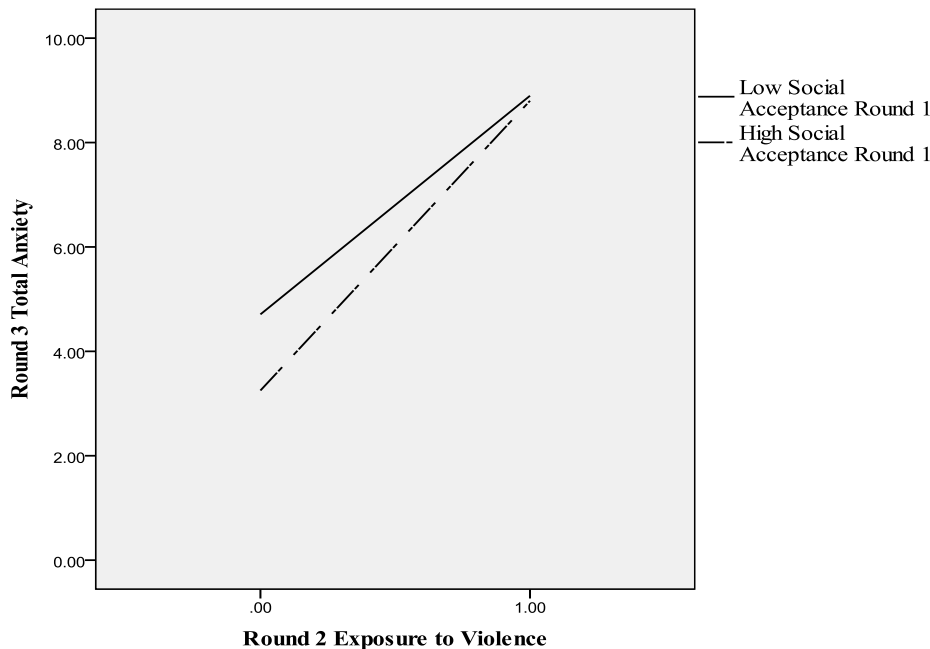
Hierarchical Linear Regression Model Testing for the Potential Moderating Effect of Social Acceptance on the Relationship Between Violence Exposure and Anxiety

Variable	<i>b</i>	SE <i>b</i>	β	ΔR^2
Step 1-Gender ^a	1.52	.49	.14**	
Social Acceptance R1	-.29	.12	-.10*	.02
Step 2- Violence Exposure R2	1.14	.17	.27***	
Social Acceptance R1	-.25	.12	-.09*	.07
Step 3- Social Accept R1 x Violence Exposure R2	.45	.19	.10*	.01

^a Boys = 1; Girls = 2; * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$; $R^2 = .11$; Note: All continuous variables are centered before they are entered into the regression equation; R1 = Round 1; R2 = Round 2.

Figure 8

Two-way Interaction of Moderating Effect of Social Acceptance on the Relationship Between Exposure to Violence and Anxiety



Model 2b: Moderating effect of Peer Intimacy/Closeness on the Relationship Between Violence Exposure and Anxiety

Lastly, Model 2b depicting the possible moderating influence of Peer Intimacy/Closeness was examined (see Figure 7 and Table 14). Peer Intimacy/Closeness preceded Violence Exposure and the two variables were weakly correlated ($r = -.08, p \leq .01$; see Table 9). Gender was controlled for due to its correlation with the variables of interest. Table 14 presents the hierarchical linear regression model. Peer Intimacy/Closeness was significantly related to Anxiety ($\beta = -.16, p \leq .001$) after controlling for gender (step 1). However, the interaction between Peer Intimacy/Closeness and Violence Exposure was not significant ($\beta = .03, p = ns$), thus moderation was not established.

The same model was tested separately to confirm that the above process was the same for both girls and boys. It was found that Peer Intimacy/Closeness did not moderate the relationship

between violence exposure and anxiety for girls or boys.

Table 14

Hierarchical Linear Regression Model Testing for the Potential Moderating Effect of Peer Intimacy/Closeness on the Relationship Between Violence Exposure and Anxiety

Variable	<i>b</i>	SE <i>b</i>	β	ΔR^2
Step 1- Gender ^a	1.74	.48	.15***	
Peer Intimacy/Closeness R1	-1.57	.37	-.18***	.05
Step 2- Violence Exposure R2	1.03	.16	.25***	
Peer Intimacy/Closeness R1	-1.37	.36	-.16***	.06
Step 3- Intimacy/Close R1 x Violence Exposure R2	.16	.25	.03	.00

^a Boys = 1; Girls = 2; *** $p \leq .001$; $R^2 = .11$; Note: All continuous variables are centered before they are entered into the regression equation. R1 = Round 1; R2 = Round 2.

Chapter IV

DISCUSSION

Overview of Findings

The goal of the current study was to examine various dimensions of social relationships to determine if/how they contribute to middle school students' ability to cope with exposure to community and family violence. It was hypothesized that friends' behavior, social acceptance, and peer intimacy/closeness would have an effect on the association between exposure to violence and psychological and behavioral outcomes, specifically, aggression and anxiety.

Not surprisingly, exposure to violence increased the risk for later aggressive behavior. Further, Friends' Antisocial behavior was found to mediate the effect of violence exposure on aggressive behavior two years later. The cognitive processing of social information, here represented by the attribution of hostility in ambiguous social situations, alone was not found to mediate the relationship between violence exposure and later aggression. However when examined together, Friends' Antisocial behavior and hostile attribution mediated the relationship between violence exposure and later aggressive behavior. Of note, Friends' Antisocial behavior was a stronger predictor of later aggressive behavior.

As expected, exposure predicted anxiety. Social acceptance was found to moderate the relationship between violence exposure and anxiety, however, as exposure to violence increased, the protective quality of social acceptance decreased. Peer intimacy/closeness evidenced a direct effect on anxiety, specifically adolescents with close, intimate friendships reported less anxiety; however, peer intimacy/closeness failed to demonstrate a moderating effect on the association between violence exposure and anxiety.

Aggression

As expected, there was an association between exposure to violence and aggression such that the more violence an adolescent experienced (accounting for both witnessing and victimization), the greater aggression they demonstrated two years later. This finding is in accordance with previous empirical studies of violence exposure (both community and domestic violence) predicting to aggressive behavior (Attar, Guerra, & Tolan, 1994; Jenkins & Bell, 1994; Gorman-Smith & Tolan, 1998; Miller, Wasserman, Neugebauer, Gorman-Smith, & Kamboukos, 1999; Fantuzzo & Mohr, 1999; Salzinger et al., 2002; Baldry, 2007). The current study examined a community sample of adolescents who, on average, did not report clinically significant aggressive behavior.

In the present study, it was hypothesized that having prosocial friends would serve a protective function by lessening the likelihood of aggressive behavior in the face of higher levels of violence exposure. It has been suggested that when children and adolescents demonstrate more consistent prosocial behavior, it ultimately facilitates more positive peer relationships and also greater fulfillment of their social needs (Nelson & Crick, 1999). From a social learning perspective, children who observe their friends demonstrating more prosocial behaviors should then imitate those behaviors themselves. Further, investigations have shown that positive peer relationships can serve as protective factors for at-risk youth (Bolger, Patterson, Kupersmidt, 1998; Gauze, Bukowski, Aquan-Assee, & Sippola, 1996; Schwartz, Dodge, Pettit, Bates, & The Conduct Problems Prevention Research Group, 2000). For the current investigation, Prosocial Friends' behavior could not be utilized to test the proposed hypothesis, however, the impact of this facet of peer relationships should not be dismissed. Prosocial Friends' behavior was significantly and negatively associated to violence exposure which suggests that youth who

associated with more prosocial friends experienced lower levels of violence exposure themselves. Prosocial Friends' behavior was also significantly and negatively associated to Antisocial Friends' behavior and Hostile Attributions which suggests that youth who associated with more prosocial friends typically had fewer friends that demonstrated antisocial behavior, and the target youth themselves attributed fewer hostile attributions. It should be noted that adolescents tend to evaluate peers' attributes and conduct relative to the group norms and goals (Scholte, van Aken, & van Lieshout, 1997). With that said, the measure used in the current study to determine prosocial behavior demonstrated little variability such that the majority of classmates rated the target youth's best friends as sharing and cooperating "*about the same as other boys/girls.*"

Another aim of the current study was to examine whether adolescents exposed to higher levels of violence exposure were more aggressive and also associated with more antisocial friends. As hypothesized, Friends' Antisocial behavior, the year after exposure to violence, was found to mediate the association between exposure and later aggressive behavior. This suggests that exposure to higher levels of violence over time encourages associations with antisocial friends and increases the risk of later aggressive behavior. This finding is in keeping with a coercive behavior model involving reciprocal, dyadic aggressive exchanges, typically associated with family interactions. Coercive behavior in the home between, for example, mother and child, typically includes an escalation in the intensity and aggressive nature of interpersonal interactions via negative reinforcement (Patterson, 1982). It is within reason to anticipate that the same coercive cycles can and do occur in peer social networks (Cairns, Cairns, Neckerman, Gest, & Gariépy, 1988). Empirical studies have also suggested that antisocial friends provide models and positive reinforcement for aggressive behavior (Brezina, Agnew, Cullen, & Wright,

2004; Criss, Pettit, Bates, Dodge, & Lapp, 2002; Biglan, Brennan, Foster, & Holder, 2004; Mize & Pettit, 1997; Thornberry et al., 1993). Therefore associations with antisocial friends may be both reinforced in the interaction and learned via modeling.

Investigations have shown that both community and family violence exposure influences youths' social cognitions and promotes aggressive behavior (McMahon, Felix, Halpert, & Petropoulos, 2009; Bradshaw, Rodgers, Ghandour, & Garbarino, 2009; Bradshaw & Garbarino, 2004). It was hypothesized that adolescents exposed to higher levels of violence were more aggressive and attributed greater hostile intent in ambiguous situations. For the current study, hostile attribution alone was not found to mediate the relationship between violence exposure and later aggression. One possible explanation for the lack of mediation may be that there was a decrease over time in reported hostile attributions. A repeated measures ANOVA revealed significant decreases for Hostile Attributions from Round 1 to Round 3 ($F = 4.11, df = 2, p < .05$). This finding is in contrast to previous studies which have demonstrated that exposure to violence over time increased children's aggressive behavior and social cognitions supporting aggression; that is as children grew older, they acted more aggressively and developed cognitions to support that behavior (Guerra, Huesmann, & Spindler, 2003; Huesmann & Guerra, 1997). When examined together, Friends' Antisocial behavior and hostile attribution mediated the association between violence exposure and later aggressive behavior. However Friends' Antisocial behavior provided a more powerful explanation of later aggressive behavior than the attribution of hostile intent, highlighting the extreme importance of friends.

Anxiety

As expected, there was a relationship between exposure to violence and anxiety such that the more violence an adolescent was exposed to, the greater anxiety he/she reported two years

later. This finding is consistent with previous investigations of the association of community and/or domestic violence exposure and anxiety in children and adolescents (Kennedy, Bybee, Sullivan, & Greeson, 2009; Cooley-Quille et al., 2001; Margolin & Gordis, 2000; Singer et al., 1995; Bourassa, 2007). It should be noted that the current community sample of adolescents had mean total scores on the *RCMAS* that were similar to the normative sample.

It was hypothesized that adolescents who have a greater degree of social acceptance will report less anxiety as exposure to violence increases. In this context, social acceptance represented a composite/composition of reciprocated friendships, peer acceptance, and peer rejection. There have been few investigations that have explored the aforementioned aspects of peer relationships as moderating the impact of violence exposure on anxiety. Of those that have, the studies have predominately focused on peer victimization (Holt & Espelage, 2007; Graham, Bellmore, & Juvonen, 2003; Hodges, Boivin, Vitaro, & Bukowski, 1999). The results of the present study found that while social acceptance moderated the association between violence exposure (both community and domestic) and later anxiety, as exposure to violence increased, the protective quality of social acceptance decreased. According to Luthar et al. (2000), this type of moderation is considered “protective-reactive,” and occurs when factors are protective at low levels of risk, but ineffective at high levels of risk.

Lastly, it was hypothesized that close/intimate friendships would moderate the association between violence exposure and anxiety. One important benefit for individuals engaged in close and intimate friendships is social support. According to Cohen and Wills (1985), when an individual’s perceived social support is responsive to his/her needs during a stressful situation, it is said to be protective. A few studies have examined community violence and its impact on social and emotional outcomes with peer social support identified as a

protective factor (Rosario et al, 2008; Hill & Madhere, 1996). For the current study, while close/intimate relationships demonstrated a direct inverse effect on anxiety, it failed to moderate the association between exposure and anxiety. Again, this finding suggests that the utility of certain protective factors (e.g., close/intimate peer relationships) may be context specific (Luthar & Cicchetti, 2000). For example, Hammack, Richards, Luo, Edlynn, and Roy (2004) found that some social support factors normally thought to contribute to resilience may fail to protect youth in conditions of extreme stress. Thus peer intimacy/closeness may promote resilience under some circumstances but not others (e.g., higher level of violence exposure beyond a certain level).

Gender

Although examining gender differences was not a focus of the current study, gender was related to many of the theoretical variables of interest. Thus, additional analyses were conducted to determine whether the processes examined by the various models were the same for boys and girls. It was determined that for most of the analyses, the processes were indeed that same for boys and girls. For example, for the models including Friends' Antisocial behavior and Peer Intimacy/Closeness, the processes did not differ by gender. In contrast, Hostile Attribution mediated the relationship between violence exposure and aggression but only for girls not boys. These findings were not anticipated given that girls are generally thought to have developmentally more mature social cognitive skills (Mears, Ploeger, and Warr, 1998). However, recent studies suggest that girls express their anger through relational aggression, which involves "harming others through purposeful manipulation [of] or damage to their peer relationships (Crick, 1996, p. 2317)." Relational aggression has been related to social processing deficits (Crick, 1995, 1996). Further, Talbott and colleagues (2002) assert that relationally

aggressive behaviors are frequent among young urban females. Lastly, Social Acceptance was found to buffer the relationship between violence exposure and anxiety for girls but again not for boys. This may be due in part to the fact that girls reported more anxiety symptoms than boys in the current sample. Similarly, studies have shown a stronger association between anxiety and violence exposure for girls than for boys (Foster, Kuperminc, & Price, 2004).

Strengths of the Current Study

This investigation makes multiple contributions to our understanding of adaptation and resiliency in the face of violence exposure. First, the study's sample is drawn from a poor, urban environment, wherein the threat of violence is pervasive, and prior research has demonstrated that minority youth are more likely to be exposed to community and domestic violence than Caucasian or suburban youth (Bureau of Justice Statistics, 2007; Fantuzzo & Fusco, 2007; Voisin, 2007; Salzinger et al., 2002; Gladstein et al., 1992; Schwab-Stone et al., 1995). The study also utilizes a large sample, enhancing the reliability of the findings. Likewise, the current study's longitudinal design avoids the pitfalls of cross-sectional designs and helps capture the transactional nature of influences/effects over time. Lastly the data are based on parent-, peer-, and self-report, and are thus less susceptible to self-presentation effects (i.e., socially desirable responses).

As research on violence exposure becomes increasingly more concerned with resiliency and identifying protective factors, the current study highlights the potential effects of adolescent social relationships. As previously mentioned, peer relationships have the potential to influence the etiology, prevention, and treatment of psychopathology and a variety of behavior problems given their significance in development (Masten, 2005). Extending the study of social relationships beyond the dyadic experience of friendship by including peer acceptance, peer

intimacy and closeness, the behavior of the adolescent, and the adolescent's friends' behavior and social influence, allows for a more comprehensive investigation and accounts for the different processes through which social relationships affect youth development, adaptation, and resilience.

Limitations of the Current Study

There are limitations inherent to the present study that should be acknowledged. Given the non-experimental nature of the data, causal interpretations cannot be made. Further, the sample was predominately Hispanic and African-American, recruited from a high-risk, urban area, and may not be representative of other ethnic/racial groups or suburban or rural populations. Thus, the generalizability of the findings may be problematic. Finally, attempts to explain how peer relationship variables function relative to specific types of violence (e.g., sexual abuse, physical abuse) were beyond the scope of this investigation, while the pathways of exposure (e.g., victimization, witnessing) were not the focus of this particular analysis.

Future Research and Implications for Intervention

It is well documented that community and domestic violence pose a threat to our youths' well-being and social and emotional functioning. The results of the current study suggest that peers can serve as coping resources; however, their ability to protect against the deleterious effect of violence exposure was less than anticipated. Greater social acceptance, including reciprocated friendships, popularity, and less peer rejection, lessened the effect of violence exposure on anxiety two years later. Unfortunately, peers' positive social behavior could not be assessed as a moderating variable in the relationship between violence exposure and later aggressive behavior; however significant and expected associations were found between friends' positive social behavior, violence exposure, peers' antisocial behavior, and hostile attributions.

These associations suggest that relationships with peers who display prosocial behavior can affect some change in violence exposure reported, type of friend one associates with (i.e., prosocial rather than antisocial), and social cognitions (i.e., fewer hostile attributions). It is evident, however, that additional research is needed that examines multiple dimensions of peer relationships as protective against the effects of violence exposure, in a variety of contexts, and especially among urban, low-income adolescents as they are at very high risk.

Since early adolescence represents a critical developmental period characterized by rapid physical, cognitive, and social changes, it is imperative to seize the opportunity to alter risk factors (Coie & Jacobs, 1993; Reid & Eddy, 1997). For the current study, exposure predicted poor outcomes, and social acceptance served as only a limited protective factor. Thus intervention efforts should focus first on reducing exposure and then reducing aggressive behavior and promoting positive peer relationships. Studies have shown empirically-validated, school-based interventions and peer mediation programs effective in decreasing violence and negative behaviors in schools (Cigainero, 2010; Miller-Johnson & Constanzo, 2004). Such programs emphasize conflict resolution and foster prosocial, collaborative behavior among peers. For the current study, although we were unable to demonstrate that Friends' Prosocial behavior served as the protective factor/coping resource anticipated, there was a significant correlation between greater positive peer social influence and less reported violence exposure. However school intervention efforts that focus solely on promoting positive social behavior are not sufficient. They must be used in conjunction with community and family involvement in order to provide a systems change approach to children and adolescents living in high-risk neighborhoods. "Interventions that coordinate services at multiple contextual levels increase opportunities to address the systemic causes of community violence (Fowler & Braciszewski,

2009; p. in the 258).” Programs that promote cohesion between youth, parents, schools, and the community can be instrumental campaign for violence reduction (Peacock, McClure, & Agars, 2003). For example, The Safe Schools/Healthy Students Initiative, a federally funded school-community program, includes community-wide strategies, school-wide prevention and intervention efforts, classroom interventions, and individual student interventions, and has been proven effective with low-income, minority populations (Telleen, Kim, & Pesce, 2009). Such a program would address the needs of at-risk youth at the primary, secondary, and tertiary levels.

REFERENCES

- Achenbach, T. M. (1991). *Manual for the Youth Self-Report and 1991 profile*. Burlington: University of Vermont, Department of Psychiatry.
- Allen, J.P. & Antonishak, J. (2008). Adolescent peer influences: Beyond the dark side. In M.J. Prinstein & K.A. Dodge (Eds.), *Understanding peer influence in children and adolescents* (pp. 141-160). New York, NY: Guilford Press.
- Appel, A.E., & Holden, G.W. (1998). The co-occurrence of spouse and physical child abuse: A review and appraisal. *Journal of Family Psychology, 12*, 578-599.
- Armsden, G. C., and Greenberg, M. T. (1987). The Inventory of Parent and Peer Attachment: Relationships to well-being in adolescence. *Journal of Youth and Adolescence, 16* (5), 427-454.
- Asher, S.R. (1983). Social competence and peer status: Recent advances and future directions. *Child Development, 54*, 1427-1434.
- Asher, S.R., & Parker, J.G. (1989). *The significance of peer relationship problems in childhood*. In B.G. Schneider, G. Attili, J. Nadel, & R.P. Weissberg (Eds.), *Social competence in developmental perspective* (pp.5-23). Amsterdam: Kluwer Academic Publishing.
- Attar, B.K., Guerra, N.G., & Tolan, P.H. (1994). Neighborhood disadvantage, stressful life events, and adjustment in urban elementary-school children. *Journal of Clinical Child Psychiatry, 23*, 391-400.
- Baldry, A.C. (2007). "It does affect me": Disruptive behaviors in preadolescents directly and indirectly abused at home. *European Psychologist, 12*, 29-35.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A., Barbaranelli, C., Caprara, G.V., & Pastorelli, C. (1996). Mechanisms of moral disengagement in the exercise of moral agency. *Journal of Personality and Social Psychology, 71*, 364-374.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51* (6), 1173-1182.
- Barry, C.M., & Wentzel, K.R. (2006). Friend influence on prosocial behavior: The role of motivational factors and friendship characteristics. *Developmental Psychology, 42* (1), 153-163.
- Bell, C. C., & Jenkins, E. J. (1993). Community violence and children on Chicago's

- southside. *Psychiatry*, 56, 46-54.
- Berndt, T.J. (1982). The features and effects of friendship in early adolescence. *Child Development*, 53 (6), 1447-1460.
- Berndt, T.J. (1989). Obtaining support from friends during childhood and adolescence. In D. Belle (Ed.), *Children's social networks and social supports* (pp. 308-331). Oxford, England: John Wiley & Sons.
- Berndt, T. J. (1996). Exploring the effects of friendship quality on social development. In W. M. Bukowski, A. F. Newcomb, & W. W. Hartup (Eds.), *The company they keep: Friendship in childhood and adolescence* (pp. 346-365). Cambridge, UK: Cambridge University Press.
- Berndt, T.J., Hawkins, J.A., & Jiao, Z. (1999). Influences of friends and friendships of adjustment to junior high school. *Merrill-Palmer Quarterly*, 45, 13-41.
- Berndt, T.J., & Keefe, K. (1995). Friends' influence on adolescents' adjustment to school. *Child Development*, 66 (5), 1312-1329.
- Berndt, T.J., & Ladd, G.W. (Eds.). (1989). *Peer relationships in child development*. Oxford, England: John Wiley & Sons.
- Berndt, T.J., & Perry, T.B. (1990). Distinctive features and effects of early adolescent friendships. In R. Montemayor, G.R. Adams, & T.P. Gullotta (Eds.), *From childhood to adolescence: A transitional period?* (pp. 269-287). Thousand Oaks, CA, US: Sage Publications, Inc.
- Biglan, A., Brennan, P. A., Foster, S. L., & Holder, H. D. (2004). *Helping adolescents at risk: Prevention of problem behaviors*. New York: Guilford.
- Bishop, J.A., & Inderbitzen, H.M. (1995). Peer acceptance and friendship: An investigation of their relation to self-esteem. *The Journal of Early Adolescence*, 15 (4), 476-489.
- Bolger, K.E., Patterson, C.J., & Kupersmidt, J.B. (1998). Peer relationships and self-esteem among children who have been maltreated. *Child Development*, 69, 1171-1197.
- Boulton, M. & Hawker, D. (1997). Verbal bullying—the myth of 'sticks and stones'. In D. Tattum & G. Herbert (Eds.), *Bullying: Home, School and Community* (pp. 53-63). London: David Fulton Publishers.
- Bourassa, C. (2007). Co-occurrence of interparental violence and child physical abuse and its' effect on the adolescents' behavior. *Journal of Family Violence*, 22, 691-701.

- Bowen, G.L., & Chapman, M.V. (1996). Poverty, neighborhood danger, social support, and the individual adaptation among at-risk youth in urban areas. *Journal of Family Issues, 17*, 641-666.
- Bradshaw, C.P., & Garbarino, J. (2004). Social cognition as a mediator of the influence of family and community violence on adolescent development: Implications for intervention. In J. Devine, J. Gilligan, K. Miczek, R. Shaikh, & D. Pfaff (Eds.), *Youth violence: Scientific approaches to prevention*. (pp. 85-105). New York, NY, US: New York Academy of Sciences.
- Bradshaw, C.P., Rodgers, C.R., Ghandour, L.A., & Garbarino, J. (2009). Social-cognitive mediators of the association between community violence exposure and aggressive behavior. *School Psychology Quarterly, 24* (3), 199-210.
- Brezina, T., Agnew, R., Cullen, F.T., & Wright, J.P. (2004). The code of the street: A quantitative assessment of Elijah Anderson's subculture of violence thesis and its contribution to youth violence research. *Youth Violence and Juvenile Justice, 2*, 303-328.
- Bryan, J.H., & Walbek, N.H. (1970). Preaching and practicing generosity: Children's actions and reactions. *Child Development, 41* (2), 329-353.
- Buckner, J.C., Beardslee, W.R., & Bassuk, E.L. (2004). Exposure to violence and low-income children's mental health: Direct, moderated, and mediated relations. *American Journal of Orthopsychiatry, 74* (4), 413-423.
- Buhrmester, D. (1990). Intimacy of friendship, interpersonal competence, and adjustment during preadolescence and adolescence. *Child Development, 61* (4), 1101-1111.
- Buhrmester, D. (1996). Need fulfillment, interpersonal competence, and the developmental contexts of early adolescent friendship. In W. M. Bukowski, A. F. Newcomb, & W. W. Hartup, (Eds.), *The company they keep: Friendship in childhood and adolescence* (pp. 158-185). Cambridge, UK: Cambridge University Press.
- Buka, S.L., Stichick, T.L., Birdthistle, I., & Earls, F.J. (2001). Youth exposure to violence: Prevalence, risks, and consequences. *American Journal of Orthopsychiatry, 71*, 298-310.
- Bukowski, W. M., & Adams, R. (2005). Peer relationships and psychopathology: Markers, moderators, mediators, mechanisms, and meanings. *Journal of Clinical Child and Adolescent Psychology, 34*, 3-10.
- Bukowski, W.M., Velasquez, A.M., & Brendgen, M. (2008). Variation in patterns of peer influence: Considerations of self and other. In M.J. Prinstein & K.A. Dodge (Eds.), *Understanding peer influence in children and adolescents* (pp. 125-140). New York, NY: Guilford Press.

- Bureau of Justice Statistics. (2007). *Criminal victimization in the United States*. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics. Retrieved April 7, 2010, from <http://www.ojp.usdoj.gov/bjs/pub/pdf/cvus0701.pdf>
- Cairns, R.B., Cairns, B.D., Neckerman, H.J., Gest, S.D., & Gariépy, J.L. (1988). Social networks and aggressive behavior: Peer support or peer rejection? *Developmental Psychology*, 24 (6), 815-823.
- Chan, Y.-C., & Yeung, J.W.-K. (2009). Children living with violence within the family and its sequel: A meta-analysis from 1995-2006. *Aggression and Violent Behavior*, 14, 313-322.
- Christoffel, K. K. (1990). Violent death and injury in US children and adolescents. *American Journal of Diseases of Children*, 144, 697-706.
- Cigainero, L. (2009). *The effectiveness of peer mediation on reducing middle school violence and negative behaviors* (Doctoral Dissertation). Available from ProQuest Dissertations & Theses database. (UMI No. AAI3393480)
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Cohen, S., & Wills, T. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98 (2), 310-357.
- Coie, J. Dodge, K. & Kupersmidt, J. (1990). Peer group behavior and social status. In S.R. Asher & J.D. Coie (Eds.), *Peer rejection in childhood* (pp. 17-57). Cambridge: Cambridge University Press.
- Coie, J., Dodge, K., Terry, R., & Wright, V. (1991). The role of aggression in peer relations: An analysis of aggression episodes in boys play groups. *Child Development*, 62, 812-826.
- Coie, J., & Jacobs, M.R. (1993). The role of social context in the prevention of conduct disorder. *Development and Psychopathology*, 5 (1-2), 263-275.
- Colarossi, J.G., & Eccles, J.S. (2000). A prospective study of adolescents' peer support: gender differences and the influence of parental relationships. *Journal of Youth and Adolescence*, 29, 661-678.
- Collins, W. A., & Roisman, G. I. (2006). The influence of family and peer relationships in the development of competence during adolescence. In A. Clarke-Stewart & J. Dunn (Eds.), *Families count: Effects on child and adolescent development* (pp. 79-103). New York: Cambridge University Press.

- Compas, B.E., Connor-Smith, J.K., Saltzman, H., Harding Thomsen, A., & Wadsworth, M.E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin*, *127* (1), 87-127.
- Cook, E.C., Buehler, C., & Henson, R. (2009). Parents and peers as social influences to deter antisocial behavior. *Journal of Youth and Adolescence*, *38*, 1240-1252.
- Cooley, M.R., Turner, S.M., & Beidel, D.C. (1995). Assessing Community Violence: The children's report of community violence. *Journal of the American Academy of Child and Adolescent Psychiatry*, *34* (2), 201-208.
- Cooley-Quille, M., Boyd, R. C., Frantz, E., & Walsh, J. (2001). Emotional and behavioral impact of exposure to community violence in adolescents. *Journal of Clinical Child Psychology*, Special Issue, *30*, 199–206.
- Crick, N.R. (1995). Relational aggression: The role of intent attributions, feelings of distress, and provocation type. *Development and Psychopathology*, *7* (2), 313-322.
- Crick, N.R. (1996). The role of overt aggression, relational aggression, and prosocial behavior in the prediction of children's future social adjustment. *Child Development*, *67* (5), 2317-2327.
- Crick, N.R., & Dodge, K.A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin*, *115*, 74-101.
- Criss, M.M., Pettit, G.S., Bates, J.E., Dodge, K.A., & Lapp, A.L. (2002). Family adversity, positive peer relationships, and children's externalizing behavior: A longitudinal perspective on risk and resilience. *Child Development*, *73*, 1120-1237.
- DeKeseredy, W.S., Schwartz, M.D., Alvi, S., & Tomaszewski, A. (2003). Perceived collective efficacy and women's victimization in public housing. *Criminal Justice*, *3*, 5-27.
- Dodge, K.A. (1980). Social cognition and children's aggressive behavior. *Child Development*, *51*, 162-170.
- Dodge, K.A. (1983). Behavioral antecedents of peer social status. *Child Development*, *54*, 1386-1399.
- Dodge, K.A. (2006). Translational science in action: Hostile attributional style and the development of aggressive behavioral problems. *Development and Psychopathology*, *18*, 791-814.
- Dodge, K.A., & Frame, C.L. (1982). Cognitive social biases and deficits in aggressive boys. *Child Development*, *53*, 620-635.

- Dodge, K.A., & Murphy, R.R. (1984). The assessment of social competence in adolescents. *Child Behavior Analysis and Therapy*, 3, 61-96.
- DuRant, R. H., Getts, A.G., Cadenhead, C., & Woods, E.R. (1995). The association between weapon-carrying and the use of violence among adolescents living in or around public housing. *Journal of Adolescence*, 18(5), 579-592.
- Edleson, J.L. (1999). Children's witnessing of adult domestic violence. *Journal of Interpersonal Violence*, 14, 839-870.
- Edlynn, E.S., Gaylord-Harden, N.K., Richards, M.H., & Miller, S.A. (2008). African American inner-city youth exposed to violence: Coping skills as a moderator for anxiety. *American Journal of Orthopsychiatry*, 78(2), 249-258.
- Eisenberg, M. E., Neumark-Sztainer, D. & Story, M. (2003). Associations of weight-based teasing and emotional well-being among adolescents. *Archives of Pediatrics & Adolescent Medicine*, 57, 733-745.
- Elliot, D.S., & Ageton, S.S. (1980). Reconciling race and class differences in self-reported and official estimates of delinquency. *American Sociological Review*, 45, 95-110.
- Elliot, R., & Vasta, R. (1970). The modeling of sharing: Effects associated with vicarious reinforcement, symbolization, age, and generalization. *Journal of Experimental Child Psychology*, 10 (1), 8-15.
- Elze, D.E., Stiffman, A.R., & Dore, P. (1999). The association between types of violence exposure and youths' mental health problems. *International Journal of Adolescent Medicine and Health*, 11, 221-255.
- English, D.J., Graham, J.C., Newton, R.R., Lewis, T.L., Thompson, R., Kotch, J.B., & Weisbart, C. (2009). At risk and maltreated children exposed to intimate partner aggression/violence: What the conflict looks like and its relationships to child outcomes. *Child Maltreatment*, 14(2), 157-171.
- English, D.J., Marshall, D.B., & Stewart, A.J. (2003). Effect of family violence on child behavior and health during early childhood. *Journal of Family Violence*, 18, 43-57.
- Esbensen, F., & Huizinga, D. (1991). Juvenile victimization and delinquency. *Youth and Society*, 23, 202-228.
- Espelage, D.L., Holt, M.K., & Henkel, R.R. (2003). Examination of peer-group contextual effects on aggression during early adolescence. *Child Development*, 74 (1), 205-220.
- Evans, F.B. (1996). *Harry Stack Sullivan: Interpersonal theory and psychotherapy*. Florence, KY: Taylor & Frances/Routledge.

- Evans, S.E., Davies, C., & DiLillo, D. (2008). Exposure to domestic violence: A meta-analysis of child and adolescent outcomes. *Aggression and Violent Behavior, 13*, 131-140.
- Fantuzzo, J., & Fusco, R.A. (2007). Children's direct exposure to types of domestic violence crime: A population-based investigation. *Journal of Family Violence, 22*, 543-552.
- Fantuzzo, J., & Mohr, W.K. (1999). Prevalence and effects of child exposure to domestic violence. *The Future of Children, 9* (3), 21-32.
- Feldman, R., Salzinger, S., Rosario, M., Alvarado, L., Caraballo, L., & Hammer, M. (1995). Parent, teacher, and peer ratings of physically abused and nonmaltreated children's behavior. *Journal of Abnormal Child Psychology, 23* (3), 317-334.
- Flannery, D., Wester, K., & Singer, M. (2004). Impact of violence exposure at school on child mental health and violent behavior. *Journal of Community Psychology, 32*, 559-574.
- Finkelhor, D. (2008). *Childhood Victimization: Violence, Crime, and Abuse in the Lives of Young People*. New York: Oxford University Press.
- Finkelhor, D., Ormrod, R., & Turner, H. (2007). Polyvictimization and trauma in a national longitudinal cohort. *Development and Psychopathology, 19*, 149-166.
- Finkelhor, D., Ormrod, R., Turner, H., & Hamby, S. (2005). The victimization of children and youth: A comprehensive, national survey. *Child Maltreatment, 10*, 5-25.
- Finkelhor, D., Turner, H., Ormrod, R., & Hamby, S. (2009). Violence, abuse, and crime exposure in a national sample of children and youth. *Pediatrics, 124* (5), 1-13.
- Fitzpatrick, K., & Boldizar, J. (1993). The prevalence and consequences of exposure to violence among African-American youth. *Journal of the American Academy of Child and Adolescent Psychiatry, 32*, 424-430.
- Fowler, P. J. & Braciszewski, J. M. (2009). Community violence prevention and intervention strategies for children and Adolescents: The need for multilevel approaches. *Journal of Prevention & Intervention in the Community, 37*(4), 255-259
- Foster, J.D., Kuperminc, G.P., Price, A.W. (2004). Gender difference in posttraumatic stress and related symptoms among inner-city minority youth exposed to community violence. *Journal of Youth and Adolescence, 33* (1), 59-69.
- Furman, W. (1996). Measuring friendships. In W.M. Bukowski, A.F. Newcomb, & W.W. Hartup (Eds.), *The company they keep: Friendship in childhood and adolescence* (pp. 41-65). Cambridge, UK: Cambridge University Press.
- Furman, W., & Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development, 63*, 103-115.

- Furman, W., & Robbins, P. (1985). What's the point? Issues in the selection of treatment objectives. In B. Schneider, K. Rubin, & J. Leddingham (Eds.), *Children's relations: Issues in assessment and intervention* (pp. 41-54). New York: Springer-Verlag.
- Garbarino, J., Dubrow, N., Kostelny, K. & Pardo, C. (1992). *Children In Danger: Coping with The Consequences of Community Violence*. San Francisco: Jossey-Bass Publishers.
- Garmezy, N., Masten, A.S., & Tellegen, A. (1984). The study of stress and competence in children: A building block for developmental psychopathology. *Child Development*, 55, 97-111.
- Gauze, C., Bukowski, W.M., Aquan-Assee, J., & Sippola, L.K. (1996). Interactions between family environment and friendship and associations with self-perceived well-being during early adolescence. *Child Development*, 67, 2201-2216.
- George, T.P., & Hartmann, D.P. (1996). Friendship networks of unpopular, average, and popular children. *Child Development*, 67, 2301-2316.
- Gershoff, E.T., & Aber, J.L. (2006). Neighborhoods and schools: Contexts and consequences for mental health and risk behaviors of children and youth. In L. Balter & C.S. Tamis-LeMonda (Eds.), *Child Psychology: A handbook of contemporary issues*, (pp.611-645). New York, NY: Psychology Press.
- Gest, S. D., Graham-Bermann, S., & Hartup, W.W. (2001). Peer experience: Common and unique features of number of friendships, social network centrality and sociometric status. *Social Development*, 10, 23-40.
- Gladstein, J., Rusonis, E. J., & Heald, F. P. (1992). A comparison of inner-city and upper-middle class youths' exposure to violence. *Journal of Adolescent Health*, 13, 275-280.
- Goldbaum, S., Craig, W.M., Pepler, D., & Connolly, J. (2003). Developmental trajectories of victimization: Identifying risk and protective factors. *Journal of Applied School Psychology*, 19 (2), 139-156.
- Gorman-Smith, D., & Tolan, P. H. (1998). The role of exposure to violence and developmental problems among inner-city youth. *Development and Psychopathology*, 10, 101- 116.
- Graham, S., Bellmore, A., Juvonen, J. (2003). Peer victimization in Middle School: When Self- and Peer Views Diverge. *Journal of Applied School Psychology*, 19 (2), 117-137.
- Graham-Bermann, S.A., & Hughes, H.M. (2003). Intervention for children exposed to interparental violence (IPV): Assessment of needs and research priorities. *Clinical Child and Family Psychology Review*, 6, 189-204.
- Graham-Bermann, S.A., & Levendosky, A.A. (1998). Traumatic stress symptoms in children of battered women. *Journal of Interpersonal Violence*, 13, 111-128.

- Grant, K.E., Compas, B.E., Stulmacher, A.F., Thurm, A.E., McMahon, S.D., & Halpert, J.A. (2003). Stressors and child and adolescent psychopathology: Moving from markers to mechanisms of risk. *Psychological Bulletin*, *129* (3), 47-466.
- Guerra, N.G., Huesmann, L.R., & Spindler, A. (2003). Community violence exposure, social cognition, and aggression among urban elementary school children. *Child Development*, *74* (5), 1561-1576.
- Hallinan, M.T., & Williams, R.A. (1990). Students' characteristics and the peer-influence process. *Sociology of Education*, *63* (2), 122-132.
- Hammack, P.L., Richards, M.H., Luo, Z., Edlynn, E.S., & Roy, K. (2004). Social support factors as moderators of community violence exposure among inner-city African American young adolescents. *Journal of Clinical Child and Adolescent Psychology*, *33* (3), 450-462.
- Hanson, R.F., Self-Brown, S., Fricker-Elhai, A., Kilpatrick, D., Saunders, B., & Resnick, H. (2006). The relations between family environment and violence exposure among youth: Findings from the National Survey of Adolescents. *Child Maltreatment*, *13*, 3-15.
- Hartup, W.W. (1992a). Friendships and their developmental significance. In H. McGurk (Ed.), *Childhood social development: Contemporary perspectives* (pp. 175-205). New Jersey: Erlbaum Associates Inc.
- Hartup, W.W. (1992b). Peer relations in early and middle childhood. In V.B. Van Hasselt & M. Hersen (Eds.), *Handbook of social development: A lifespan perspective* (pp. 257-281). New York, NY: Plenum Press.
- Hartup, W.W. (1993). Adolescents and their friends. In B. Laursen (Ed.), *Close friendships in Adolescence* (3-22). San Francisco, CA: Jossey-Bass.
- Hartup, W.W., & Stevens, N. (1997). Friendships and adaptation in the life course. *Psychological Bulletin*, *121* (3), 355-370.
- Herrenkohl, T.I., Sousa, C., Tajima, E.A., Herrenkohl, R.C., & Moylan, C.A. (2008). Intersection of child abuse and children's exposure to domestic violence. *Trauma, Violence & Abuse*, *9*, 84-99.
- Hill, H.M., & Madhere, S. (1996). Exposure to community violence and African American children: A multidimensional model of risks and resources. *Journal of Community Psychology*, *24*, 26-43.
- Hodges, E.V.E., Boivin, M., Vitaro, F., & Bukowski, W.M. (1999). The power of friendship: Protection against an escalating cycle of peer victimization. *Developmental Psychology*, *35* (1), 94-101.
- Holt, M.K., & Espelage, D.L. (2007). Perceived social support among bullies, victims, and bully-

- victims. *Journal of Youth and Adolescence*, 36 (8), 984-994.
- Holt, M.K., Finkelhor, D., & Kantor, G.K. (2007). Hidden forms of victimization in elementary students involved in bullying. *School Psychology Review*, 36 (3), 345-361.
- Holzman, H.R., Hyatt, R.A., Dempster, J.M. (2001). Patterns of aggravated assault in public housing: Mapping the nexus of offense, place, gender, and race. *Violence Against Women*, 7, 662-684.
- Howard, D.E., Feigelman, S., Li, X., Cross, S., & Rachuba, L. (2002). The relationship among violence victimization, witnessing violence and youth distress. *Journal of Adolescent Health*, 31, 455-462.
- Huesmann, L.R., & Guerra, N.G. (1997). Children's normative beliefs about aggression and aggressive behavior. *Journal of Personality and Social Psychology*, 72 (2), 408-419.
- Jenkins, E.J., & Bell, C.C. (1994). Violence among inner city high school students and post-traumatic stress disorder. In S. Friedman (Ed.), *Anxiety disorders in African Americans* (pp. 76-88). New York: Springer.
- Jenkins, S.R., Goodness, K., & Buhrmester, D. (2002). Gender differences in early adolescents' relationship qualities, self-efficacy, and depression symptoms. *Journal of Early Adolescence*, 22, 277-309.
- Jones, L., & Finkelhor, D. (2009). *Updated Trends in Child Maltreatment, 2007*. Retrieved December 9, 2009, from University of New Hampshire, Crimes Against Children Research Center Website: <http://www.unh.edu/ccrc/Trends/index.html>
- Jones, D.C., Newman, J.B., & Bautista, S. (2005). A three-factor model of teasing: The influence of friendship, gender, and topic on expected emotional reactions to teasing during early adolescence. *Social Development*, 14 (3), 421-439.
- Jones, F.C., Ajrotutu, C., & Johnson, J. (1996). African American children and adolescents exposure to community violence: A pilot study. *Journal of Cultural Diversity*, 3, 48-53.
- Jouriles, E.N., & LeCompte, S.H. (1991). Husbands' aggression toward wives and mothers' and fathers' aggression toward children: Moderating effects of child gender. *Journal of Consulting and Clinical Psychology*, 59 (1), 190-192.
- Keefe, K., & Berndt, T.J. (1996). Relations of friendship quality to self-esteem in early adolescence. *The Journal of Early Adolescence*, 16 (1), 110-129.
- Keenan, K., Loeber, R., Zhang, Q., Stouthamer-Loeber, M., & van Kammen, W.B. (1995). The influence of deviant peers on the development of boys' disruptive and delinquent behavior: A temporal analysis. *Development and Psychopathology*, 7(4), 715-726.

- Keltner, D., Capps, L., Kring, A.M., Young, R.C., & Heerey, E.A. (2001). Just teasing: A conceptual analysis and empirical review. *Psychological Bulletin*, *127* (2), 229-248.
- Kennedy, A. (2008). An ecological approach to examining cumulative violence exposure among urban, African American adolescents. *Child and Adolescent Social Work Journal*, *25*, 25-41.
- Kennedy, A.C., Bybee, D., Sullivan, C.M., & Greeson, M. (2009). The effects of community and family violence exposure on anxiety trajectories during middle childhood: The role of family social support as a moderator. *Journal of Clinical Child and Adolescent Psychology*, *38* (3), 365-379.
- Kitzmann, K. M., Gaylord, N. K., Holt, A. R., & Kenny, E. D. (2003). Child witnesses to domestic violence: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, *71*, 339-352.
- Kohlberg, L. (1969). *Stage and sequence: The cognitive-developmental approach to socialization*. In D.A. Goslin (Ed.). *Handbook of socialization theory and research*, pp. 347-480. Chicago: Rand McNally.
- Kraemer, H.C., Kiernan, M., Essex, M., & Kupfer, D. (2008). How and why criteria defining moderators and mediators differ between the Baron & Kenny and MacArthur approaches. *Health Psychology*, *27* (2), S101-S108.
- Lambert, S.F., Ialongo, N.S., Boyd, R.C., & Cooley, M.R. (2005). Risk factors for community violence exposure in adolescence. *American Journal of Community Psychology*, *36* (1/2), 29-48.
- Land, D. (2003). Teasing apart secondary students' conceptualizations of peer teasing, bullying, and sexual harassment. *School Psychology International*, *24* (2) 147-165.
- Lauren, B., & Mooney, K.S. (2008). Relationship network quality: Adolescent adjustment and perceptions of relationships with parents and friends. *American Journal of Orthopsychiatry*, *78* (1), 47-53.
- Lazarus, R.S., Averill, J., & Opton, E. (1974). The psychology of coping: Issues of research and assessment. In G.V. Coelho, D.A. Hamburg, & J.E. Adams (Eds.), *Coping and adaptation* (pp. 249-315). New York: Basic Books.
- Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Lazarus, R.S., & Folkman, S. (1991). *Stress, appraisal, and coping*. New York: Springer.
- Leary, M.R., Kowalski, R.M., Smith, L., & Phillips, S. (2003). Teasing, rejection, and violence: Case studies of the school shootings. *Aggressive Behavior*, *29*, 202-214.

- Linden-Andersen, S., Markiewicz, D., & Doyle, A-B. (2008). Perceived Similarity among adolescent friends: The role of reciprocity, friendship quality, and gender. *The Journal of Early Adolescence, 29*, 617-637.
- Luthar, S.S. (1991). Vulnerability and resilience: A study of high-risk adolescents. *Child Development, 62* (3), 600-616.
- Luthar, S.S., Cicchetti, D., & Bronwyn, B. (2000). Research on resilience: Response to commentaries. *Child Development, 71*(3), 573-575.
- Luthar, S.S., & Cicchetti, D. (2000). The construct of resilience: Implications for interventions and social policies. *Development and Psychopathology, 12*, 857-885.
- Lynch, M., & Cicchetti, D. (1998). An ecological-transactional analysis of children and contexts: The longitudinal interplay among child maltreatment, community violence, and children's symptomatology. *Development and Psychopathology, 10*, 235-257.
- Lynch, M. & Cicchetti, D. (2002). Links between community violence and the family system: evidence from children's feelings of relatedness and perceptions of parent behavior. *Family Process, 41* (3), 519-532.
- Margolin, G., & Gordis, E. G. (2000). The effects of family and community violence on children. *Annual Review of Psychology, 51*, 445-479.
- Masten, A. (2005). Peer relationships and psychopathology in developmental perspective: Reflections on progress and promise. *Journal of Clinical Child and Adolescent Psychology, 34* (1), 87-92.
- Mears, D. P., Ploeger, M., & Warr, M. (1998). Explaining the gender gap in delinquency: Peer influence and moral evaluations of behavior. *Journal of Research in Crime and Delinquency, 35*, 251-266.
- McDonald, R., Jouriles, E.N., Ramisetty-Mikler, S., Caetano, R., & Green, C.E. (2006). Estimating the number of American children living in partner-violent families. *Journal of Family Psychology, 20*, 137-142.
- McMahon, S., Felix, E., Halpert, J., & Petropoulos, L. (2009). Community violence exposure and aggression among urban adolescents: Testing a cognitive mediator model. *Journal of Community Psychology, 37* (7), 895-910.
- Miller, L., Wasserman, G., Neugebauer, R., Gorman-Smith, D., & Kamboukos, D. (1999). Witnessed community violence and antisocial behavior in high-risk, urban boys. *Journal of Clinical Child Psychology, 28*, 2-11.
- Miller-Johnson, S., & Constanzo, P.R. (2004). If you can't beat 'em...induce them to join you: Peer-based interventions during adolescence. In J.B. Kupersmidt and K.A. Dodge (Eds.),

- Children's peer relations: From development to intervention* (pp. 209-222). Washington, DC: American Psychological Association.
- Mize, J., & Pettit, G.S. (1997). Mothers' social coaching, mother-child relationship style and children's peer competence: Is the medium the message? *Child Development, 68*, 312-332.
- Moylan, C.A., Herrenkohl, T.I., Sousa, C., Tajima, E.A., Herrenkohl, R.C., & Russo, M.J. (2010). The effects of child abuse and exposure to domestic violence on adolescent internalizing and externalizing behavior problems. *Journal of Family Violence, 25*, 53-63.
- Muller, D., Judd, C.M., & Yzerbyt, V.Y. (2005). When moderation is mediated and mediation is moderated. *Journal of Personality and Social Psychology, 89* (2), 852-863.
- Nasby, W., Hayden, B., & DePaulo, B.M. (1979). Attributional bias among aggressive boys to interpret unambiguous social stimuli as displays of hostility. *Journal of Abnormal Psychology, 89*, 459-468.
- Nelson, D.A., & Crick, N.R. (1999). Rose-colored glasses: Examining the social information-processing of prosocial young adolescents. *Journal of Early Adolescence, 19* (1), 17-38.
- New York City Police Department (1999). Unpublished crime statistics.
- O'Donnell, D.A., Schwab-Stone, M.E., & Ruchkin, V. (2006). The mediating role of alienation in the development of maladjustment in youth exposed to community violence. *Development and Psychopathology, 18*, 215-232.
- O'Keefe, M. (1996). The differential effects of family violence on adolescent adjustment. *Child and Adolescent Social Work Journal, 13*, 51-68.
- Osofsky, J.D. (2003). Prevalence of children's exposure to domestic violence and child maltreatment: Implications for prevention and intervention. *Clinical Child and Family Psychology Review, 6*, 161-170.
- Osofsky, J.D., Wewers, S., Hann, D.M., & Fick, A.C. (1993). Chronic community violence: What is happening to our children? *Psychiatry, 56*, 36-45.
- Parker, J.G., & Asher, S.R. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? *Psychological Bulletin, 102* (3), 357-389.
- Patterson, G.R. (1982). *A Social Learning Approach: Vol. 3. Coercive Family Process* (pp. 1-101). Eugene, OR: Castalia Publishing Company.
- Patterson, G.R., DeBaryshe, B.D., & Ramsey, E. (1989). A developmental perspective on antisocial behavior. *American Psychologist, 44* (2), 329-335.

- Peacock, M.J., McClure, F., & Agars, M.D. (2003). Predictors of delinquent behaviors among latino youth. *The Urban Review*, 35 (1), 59-72.
- Piaget, J. (1965). *The moral judgment of the child*. New York, NY, US: Free Press.
- Reid, J.B., & Eddy, J.M. (1997). The prevention of antisocial behavior: Some considerations in the search for effective interventions. In D.M. Stoff, J. Breiling, & J.D. Maser (Eds.), *Handbook of antisocial behavior*, (pp.343-356). Hoboken, NJ: John Wiley & Sons Inc.
- Reynolds, C. R., & Richmond, B.O. (1997). What I think and feel: A revised measure of children's manifest anxiety. *Journal of Abnormal Child Psychology*, 25, 15–20.
- Reynolds, C. R., & Richmond, B.O. (2002). *Revised children's manifest anxiety scale manual*. Los Angeles, CA: Western Psychological Services.
- Richters, J. E., & Martinez, P. (1993). The NIMH community violence project: I. Children as victims of and witnesses to violence. *Psychiatry*, 56, 7–21.
- Richters, J. E., & Saltzman, W. (1990). *Survey of exposure to community violence: Self-report version*. Rockville, MD: National Institute of Mental Health.
- Rosario, M, Salzinger, S., Feldman, R. S., & Ng-Mak, D. S. (2008) Intervening processes between youths' exposure to community violence and internalizing symptoms over time: The roles of social support and coping. *American Journal of Community Psychology*, 41, 43–62.
- Rubin, K., LeMare, L., & Lollis, S. (1990). Social withdrawal in childhood. In S.R. Asher & J.D. Coie (Eds.), *Peer rejection in childhood*, (pp. 17-57). Cambridge: Cambridge University Press.
- Ruchkin, V., Henrich, C.C., Jones, S.M., Vermeiren, R., & Schwab-Stone, M. (2007). Violence exposure and psychopathology in urban youth: The mediating role of posttraumatic stress. *Journal of Abnormal Child Psychology*, 35, 578-593.
- Ryngala, D.J., Shields, A.L., & Caruso, J.C. (2005). Reliability Generalization of the Revised Children's Manifest Anxiety Scale. *Educational and Psychological Measurement*, 65 (2), 259-271.
- Salmivalli, C., Huttunen, A., & Lagerspetz, M. J. (1997). Peer networks and bullying in schools. *Scandinavian Journal of Psychology*, 38, 305-312.
- Salzinger, S., Feldman, R., Hammer, M., & Rosario, M. (1993). The effects of physical abuse on children's social relationships. *Child Development*, 64 (1), 169-187.

- Salzinger, S., Feldman, R.S., Ng-Mak, D.S., Mojica, E., Stockhammer, T.F., & Rosario, M. (2002). Effects of partner violence and physical child abuse on child behavior: A study of abused and comparison children. *Journal of Family Violence* 17, 23–52.
- Salzinger, S., Feldman, R., Stockhammer, T., & Hood, J. (2002). An ecological framework for understanding risk for exposure to community violence and the effects of exposure on children and adolescents. *Aggression and Violent Behavior*, 7, 423-451.
- Salzinger, S., Ng-Mak, D.S., Feldman, R.S., Kam, C-M., & Rosario, M. (2006). Exposure to community violence: Processes that increase the risk for inner-city middle school children. *Journal of Early Adolescence*, 26 (2), 232-266.
- Salzinger, S., Feldman, R.S., Rosario, M., & Ng-Mak, D.S. (2011). Role of parent and peer relationships and individual characteristics in middle school children's behavioral outcomes in the face of community violence. *Journal of Research on Adolescence*, 21(2), 395-407.
- Scarpa, A., & Haden, S.C. (2006). Community violence victimization and aggressive behavior: The moderating effects of coping and social support. *Aggressive Behavior*, 32, 502-515.
- Scholte, R.H.J., van Aken, M.A.G., & van Lieshout, C.F.M. (1997). Adolescent personality factors in self-ratings and peer nominations and their prediction of peer acceptance and rejection. *Journal of Personality Assessment*, 69, 534-554.
- Schwab-Stone, M., Ayers, T., Kaspro, W., Voyce, C., Barone, C., Shriver, T., et al. (1995). No safe haven: a study of violence exposure in an urban community. *Journal of the American Academy of Child and Adolescent Psychiatry*, 34, 1343-1352.
- Schwab-Stone, M., Chuansheng, C., Greenberger, E., Silver, D., Lichtman, J., & Voyce, C. (1999). No safe haven II: The effects of violence exposure on urban youth. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38 (4), 359-367.
- Schwartz, D., Dodge, K.A., Pettit, G.S., Bates, J.E., & The Conduct Problems Prevention Research Group. (2000). Dyadic friendship as a moderating factor in the pathway between early harsh home environment and later victimization in the peer group. *Developmental Psychology*, 36, 646-622.
- Schwartz, D., & Proctor, L. (2000). Community violence exposure and children's social adjustment in the school peer group: The mediating roles of emotion regulation and social cognition. *Journal of Consulting and Clinical Psychology*, 68 (4) 670-683.
- Sedlak, A.J., Mettenburg, J., Basena, M., Petta, I., McPherson, K., Greene, A., & Li, S. (2010). *Fourth National Incidence Study of Child Abuse and Neglect (NIS-4): Report to Congress*. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families.

- Seiffge-Krenke, I. (1995). *Stress, coping, and relationships in adolescence*. New Jersey: Lawrence Erlbaum Associates, Publishers.
- Shapiro, J. P., Baumeister, R. F. & Kessler, J. W. (1991). A three-component model of children's teasing: Aggression, humor, and ambiguity. *Journal of Social and Clinical Psychology, 10*, 459–472.
- Shulman, S. (1993). Close relationships and coping behavior in adolescence. *Journal of Adolescence, 16* (3), 267-283.
- Singer, M. I., Anglin, T.M., Song, L., & Lunghofer, L. (1995). Adolescents' exposure to violence and associated symptoms of psychological trauma. *JAMA, 273* (6), 477-482.
- Spriggs, A. L., Iannotti, R.J., Nansel, T.R., & Haynie, D.L. (2007). Adolescent bullying involvement and perceived family, peer and school relations: Commonalities and differences across race/ethnicity. *Journal of Adolescent Health, 41*(3), 283-293.
- Steinberg, M.S., & Dodge, K.A. (1983). Attributional bias in aggressive adolescent boys and girls. *Journal of Social and Clinical Psychology, 1*, 312-321.
- Stevens, J.P. (2002). *Applied multivariate statistics for the social sciences* (4th ed.). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Straus, M. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics Scales. *Journal of Marriage and the Family, 41*, 75-88.
- Storch, E.A., Brassard, M.R., & Masia-Warner, C.L. (2003). The relationship of peer victimization to social anxiety and loneliness in adolescence. *Child Study Journal, 33* (1), 1-18.
- Storch, E.A., & Masia-Warner, C.L. (2004). The relationship of peer victimization to social anxiety and loneliness in adolescent females. *Journal of Adolescence, 27*(3), 351-362.
- Sullivan, H.S. (1953). *The interpersonal theory of psychiatry*. New York, NY: WW Norton & Company.
- Talbott, E., Celinksa, D., Simpson, J., & Coe, M. (2002). “Somebody else making somebody else fight”: Aggression and the social context among urban adolescent girls. *Exceptionality, 10*, 203–220.
- Taylor, T.J., Esbensen, F., Peterson, D., and Freng, A. (2007). Putting youth violent victimization into context: Sex, race/ethnicity, and community differences among a multisite sample of youths. *Violence and Victims, 22* (6), 702-720.

- Telleen, S., Kim, Y.O., & Pesce, R. (2009). An ecological developmental community initiative to reduce youth violence: Safe Schools/Healthy Students. *Journal of Prevention & Intervention in the Community, 37*, 326-338.
- Thornberry, T.P., Krohn, M.D., Lizotte, A.J., & Chard-Wierschem, D. (1993). The role of juvenile gangs in facilitating delinquent behavior. *Journal of Research in Crime and Delinquency, 30* (1), 55-87.
- Tomada, G., Schneider, B., de Domini, P., Greenman, P., & Fonzi, A. (2005). Friendship as a predictor of adjustment following a transition to formal academic instruction and evaluation. *International Journal of Behavioral Development, 29* (4), 314-322.
- U.S. Department of Health and Human Services, Administration on Children, Youth and Families. (2009). *Child Maltreatment 2007*. Washington, DC: U.S. Government Printing Office.
- Voisin, D.R. (2007). The effects of family and community violence exposure among youth: Recommendations for practice and policy. *Journal of Social Work Education, 43* (1), 51-66.
- Wang, A., Peterson, G.W., & Morpheus, L.K. (2007). Who is more important for early adolescents' developmental choices? Peers or parents? *Marriage & Family Review, 42*(2), 95-122.
- Warm, T.R. (1997). The role of teasing in development and vice versa. *Journal of Developmental & Behavioral Pediatrics, 18* (2), 97-101.
- Widom, C.S. (1998). Childhood victimization: Early adversity and subsequent psychopathology. In B.P. Dohrenwend (Ed.), *Adversity, stress, and psychopathology* (pp. 81-95). London: Oxford University Press.
- Wilson, W. C. & Rosenthal, B. S. (2003). The relationship between exposure to community violence and psychological distress among adolescents: A meta-analysis. *Violence and Victims, 18*, 335-352.
- Wilson, W.C., Rosenthal, B.S., & Battle, W.S. (2007). Effects of gender, ethnicity and educational status on exposure to community violence and psychological distress in adolescence. *Journal of Aggression, Maltreatment & Trauma, 15* (1), 93-111.
- Windle, M. (1994). A study of friendship characteristics and problem behaviors among middle adolescents. *Child Development, 65* (6), 1764-1777.
- Wolfe, D. A., Crooks, C. V., Lee, McIntyre-Smith, A., & Jaffe, P. G. (2003). The effects of children's exposure to domestic violence: A meta-analysis and critique. *Clinical Child and Family Psychology Review, 6*, 171-187.

- Wright, K., & Stegelin, D. (2003). *Building School and Community Partnerships Through Parent Involvement*. Upper Saddle River, NJ: Pearson Education.
- Youniss, J., & Smollar, J. (1989). Adolescents' interpersonal relationships in social context. In T.J. Berndt & G.W. Ladd (Eds.), *Peer relationships in child development* (pp. 300-316). Oxford, England: John Wiley & Sons.
- Zimmer-Gembeck, M.J., Geiger, T.C., & Crick, N.R. (2005). Relational and physical aggression, prosocial behavior, and peer relations: Gender moderation and bidirectional associations. *The Journal of Early Adolescence*, 25(4), 421-452.

APPENDIX A

Measures of Exposure to Community Violence

Community Violence Victim (adapted from the *Richters and Saltzman's Survey of Exposure to Community Violence*)

In the past year:

1. Been chased or seen someone chased?
 Self: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

2. Been chased, threatened, or hurt by a gang?
 Self: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

3. Used or sold illegal drugs?
 Self: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

4. Been in or seen a serious accident?
 Self: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

5. Been roughed-up or mistreated by police?
 Self: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

6. Been threatened with serious physical harm?
 Self: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

7. Been beaten up or mugged?
 Self: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

8. Been slapped, punched, or hit?
 Self: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

9. Been attacked or stabbed with a knife?
 Self: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

10. Been shot or seen someone shot?

Self: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

11. Sexual attack?

Self: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

Community Violence Witness (adapted from the *Richters and Saltzman's Survey of Exposure to Community Violence*)

In the past year:

1. Been chased or seen someone chased?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

2. Been chased, threatened, or hurt by a gang?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

3. Used or sold illegal drugs?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

4. Been in or seen a serious accident?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

5. Been home when some- one broke in?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

6. Been roughed-up or mistreated by police?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

7. Been threatened with serious physical harm?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

8. Been beaten up or mugged?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

9. Been slapped, punched, or hit?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

10. Seen someone carrying or holding a gun or knife?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

11. Heard the sound of gun fire?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

12. Seen a gun being fired?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

13. Seen a seriously wounded person?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

14. Seen a dead person?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

15. Seen or heard someone commit suicide, or heard about someone you know committing suicide?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

Heard About: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

16. Been attacked or stabbed with a knife?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

Heard About: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

17. Been shot or seen someone shot?

Seen/Heard: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

Heard About: Where?
 School? Yes=1; No=0; NA=8
 Neighborhood? Yes=1; No=0; NA=8

18. Seen or heard about someone being killed?

Seen/Heard: Where?

School? Yes=1; No=0; NA=8

Neighborhood? Yes=1; No=0; NA=8

Heard About: Where?

School? Yes=1; No=0; NA=8

Neighborhood? Yes=1; No=0; NA=8

19. Sexual attack?

Seen/Heard: Where?

School? Yes=1; No=0; NA=8

Neighborhood? Yes=1; No=0; NA=8

Heard About: Where?

School? Yes=1; No=0; NA=8

Neighborhood? Yes=1; No=0; NA=8

APPENDIX B

Measures of Exposure to Family Violence

Family Violence Victimization (adapted from the *Conflict Tactics Scale*)

Family members use many different ways of trying to settle disagreements among themselves. I'm going to read you a list of some things people have reported doing with other members of their family when they had a disagreement. First, I want you to tell me whether any of these things happened in the past year between the adults in your household when any of you had a disagreement.

First, remind me if any other adults lived in your or _____'s household in the past year?

1. Threatened to hit or throw something at the other
Happened? Yes=1; No=0; NA=8
2. Threw or smashed or hit or kicked something
Happened? Yes=1; No=0; NA=8
3. Threw something at the other
Happened? Yes=1; No=0; NA=8
4. Pushed, grabbed or shoved the other
Happened? Yes=1; No=0; NA=8
5. Slapped the other
Happened? Yes=1; No=0; NA=8
6. Kicked, bit or hit the other with a fist
Happened? Yes=1; No=0; NA=8
7. Hit or tried to hit the other with something
Happened? Yes=1; No=0; NA=8
8. Beat up the other
Happened? Yes=1; No=0; NA=8
9. Threatened the other with a knife or gun
Happened? Yes=1; No=0; NA=8
10. Used a knife or gun
Happened? Yes=1; No=0; NA=8

Family Violence Witness

Now, I want you to tell me whether any of these things happened in the past year between any other adult household and any other children in the household, when they had a disagreement.

First, remind me if any other children lived in your or _____'s household in the past year?

1. Threatened to hit or throw something at _____
Happened? Yes=1; No=0; NA=8
2. Threw or smashed or hit or kicked something
Happened? Yes=1; No=0; NA=8
3. Threw something at _____
Happened? Yes=1; No=0; NA=8
4. Pushed, grabbed or shoved _____
Happened? Yes=1; No=0; NA=8
5. Slapped _____
Happened? Yes=1; No=0; NA=8
6. Kicked, bit or hit _____ with a fist
Happened? Yes=1; No=0; NA=8
7. Hit or tried to hit _____ with something
Happened? Yes=1; No=0; NA=8
8. Beat up _____
Happened? Yes=1; No=0; NA=8
9. Threatened _____ with a knife or gun
Happened? Yes=1; No=0; NA=8
10. Used a knife or gun
Happened? Yes=1; No=0; NA=8

APPENDIX C

Peer Nomination Assessment

Reciprocated Friendship and Peer Acceptance (adapted from the Salzinger et al. (1993) Peer Nomination Assessment—sociometric nominations by classmates)

1) This is a list of all the kids in your class. Please circle the names of the kids you usually hang out with.

LIST OF KIDS IN THE CLASS

STOP! DO NOT TURN THE PAGE UNTIL YOU ARE TOLD TO!

2) Are there other kids, who are not in your class that you also usually hang out with? Please list their names and school information below.

First name	Last name	Boy/Girl	School	Grade	Class
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

STOP! DO NOT TURN THE PAGE UNTIL YOU ARE TOLD TO!

3) Please circle the names of the TWO kids you MOST like to be with?

LIST OF BOYS (or GIRLS) IN THE CLASS

THANK YOU!

APPENDIX D

Measure of Peer Intimacy/Closeness

Adapted from the *Inventory of Parent and Peer Attachment* only **PART #2** questions are relevant to the current study)

PART # 1

This part of the interview asks about your feelings about your mother or father or the person who acted as your mother or father for most of your life.

For you, who is this person? (Mother, father, or other)
(write in relationship:) _____

[Interviewer: Hand subject Response Card F]

Please answer all the following questions about this person using the answers on this card. Please take your time and consider each one carefully. Make sure you consider all of the choices.

Response Scale:

- 1 = Almost never or never true
- 2 = Rarely true
- 3 = Sometimes true
- 4 = Often true
- 5 = Almost always or always true

1. My parent respects my feelings _____
2. I feel my parent does a good job as my parent _____
3. I wish I had a different parent _____
4. My parent accepts me as I am _____
5. I like to get my parent's opinion on things I'm concerned about _____
6. I feel it's no use letting my feelings show around my parent _____
7. My parent can tell when I'm upset about something _____
8. Talking over my problems with my parent makes me feel ashamed or foolish _____
9. My parent expects too much from me _____
10. I get upset easily around my parent _____

11. I get upset a lot more than my parent knows about _____
12. When we discuss things, my parent cares about what I think _____
13. My parent trusts my judgment _____
14. My parent has his/her own problems so I don't bother him/her with mine _____
15. My parent helps me to understand myself better _____
- Response Scale:
- 1 = Almost never or never true
- 2 = Rarely true
- 3 = Sometimes true
- 4 = Often true
- 5 = Almost always or always true
16. I tell my parent about my problems and troubles _____
17. I feel angry with my parent _____
18. I don't get much attention from my parent _____
19. My parent helps me to talk about my difficulties _____
20. My parent understands me _____
21. When I am angry about something, my parent tries to be understanding _____
22. I trust my parent _____
23. My parent doesn't understand what I'm going through these days _____
24. I can count on my parent when I really need to talk about something _____
25. If my parent knows something is bothering me, he/she asks me about it _____

PART # 2

This part of the interview asks about your feelings about your relationships with your close friends. Please listen to each statement and choose an answer from the response card.

1. I like to get my friends' opinion on things I'm concerned about _____
2. My friends can tell when I'm upset about something _____
3. When we discuss things, my friends care about what I think _____
4. Talking over my problems with my friends makes me feel ashamed or foolish _____

5. I wish I had different friends _____
6. My friends understand me _____
7. My friends encourage me to talk about my difficulties _____
8. My friends accept me as I am _____
- Response Scale:
- 1 = Almost never or never true
 - 2 = Rarely true
 - 3 = Sometimes true
 - 4 = Often true
 - 5 = Almost always or always true
9. I feel the need to be in touch with my friends more often _____
10. My friends don't understand what I'm going through these days _____
11. I feel alone or apart when I am with my friends _____
12. My friends listen to what I have to say _____
13. I feel my friends are good friends _____
14. My friends are fairly easy to talk to _____
15. When I am angry about something, my friends try to be understanding _____
16. My friends help me to understand myself better _____
17. My friends care about how I am _____
18. I feel angry with my friends _____
19. I can count on my friends when I really need to talk about something _____
20. I trust my friends _____
21. My friends respect my feelings _____
22. I get upset a lot more than my friends know about _____
23. It seems as if my friends are irritated with me for no reason _____
24. I can tell my friends about my problems and troubles _____
25. If my friends know something is bothering me, they ask me about it _____

APPENDIX E

Measures of Peer Rejection and Friends' Prosocial Behavior

Adolescent's Behavior (Peer Rejection) and Friends' Behavior (Prosocial)--adapted from a modified version of Salzinger, Feldman, Hammer, and Rosario's (1993) peer assessment procedure.

*Girls are administered the same questions but the words "he" and "boys" are changed to "she" and "girls."

Does he get teased and picked on by other kids?

A whole lot more than other boys	More than other boys	About the same as other boys	Not as much as other boys	Not at all
[5]	[4]	[3]	[2]	[1]

Does he start fights with other kids?

A whole lot more than other boys	More than other boys	About the same as other boys	Not as much as other boys	Not at all
[5]	[4]	[3]	[2]	[1]

Does he share things and cooperate with other kids?

A whole lot more than other boys	More than other boys	About the same as other boys	Not as much as other boys	Not at all
[5]	[4]	[3]	[2]	[1]

Does he insult other kids and say mean things to them?

A whole lot more than other boys	More than other boys	About the same as other boys	Not as much as other boys	Not at all
[5]	[4]	[3]	[2]	[1]

STOP!!

APPENDIX F

Measure of Friends' Antisocial Behavior

Adolescent's friends' behavior (Antisocial)—a modified version of the Elliot and Ageton (1980) self-report of delinquency instrument.

Instructions to be read aloud to interviewee:

"Now I want to know whether any of the kids you usually hang out with have done any of these things in the past year. Remember that I'm asking about the kids you usually hang out with, not just kids you know. Include kids in your family if they are kids you usually hang out with. You don't have to tell me their names. Please tell me whether any of them have done any of these things in the past year."

Interviewer: Code each response as YES=1; NO=0

Have any of them....:

1. Purposely damaged or destroyed property belonging to their parents or other family members? _____
2. Purposely damaged or destroyed property that did not belong to them, not counting family property? _____
3. Knowingly bought, sold or held stolen goods, or tried to do any of these things? _____
4. Thrown objects, such as rocks or bottles, at cars or people? _____
5. Run away from home? _____
6. Lied about their age to get into someplace or to buy something; for example, lying about their age to buy liquor or get into a movie? _____
7. Carried a hidden weapon other than a plain pocket knife, like a switchblade, a box cutter, or a gun? _____
8. Stolen (or tried to steal) things worth \$10 or less? _____
9. Stolen (or tried to steal) things worth more than \$10? _____
10. Taken something from a store without paying for it? Include things you already told me about. _____
11. Snatched someone's purse or wallet, or picked someone's pocket? _____
12. Used a slug or fake money to pay for something? _____
13. Tried to cheat someone by selling them something that was _____

worthless or was not what they said it was?

14. Broken into a building or vehicle (or tried to break in) to steal something or just to look around? _____
15. Avoided paying for such things as movies, bus or subway rides, or food? _____
16. Used a weapon, force, or strong-arm method to get money or things from other people? _____
17. Hit someone with the idea of hurting them? _____
18. Purposely set fire to a house, building, car or other property, or tried to do so? _____
19. Been involved in gang fights? _____
20. Attacked someone with a weapon with the idea of seriously hurting or killing him or her? _____
21. Been loud or created a disturbance in a public place - - what is called disorderly conduct? _____
22. Drank wine other than on family occasions or for religious purposes? _____
23. Drank beer or hard liquor? _____
24. Used marijuana ("pot") more than just trying it once? _____
25. Used drugs, such as crack, coke or heroin, more than a few times? _____
26. Sold or delivered marijuana or hash - - sometimes called "pot" or "grass"? _____
27. Sold or delivered hard drugs, such as heroin or cocaine? _____
28. Bought wine, beer, or liquor? _____
29. Begged for money or things from strangers? _____
30. Cheated on school tests? _____
31. Skipped classes or cut school without an excuse? _____
32. Been suspended from school? _____
33. Made obscene telephone calls, such as calling someone and saying dirty things? _____
34. Physically hurt or threatened to hurt someone to get them to have sex? _____

35. Tried to do something sexual with someone that they did not want to do, other than the things you already mentioned? _____

36. Been paid for having sex with someone? _____

37. Belonged to a gang? _____

APPENDIX G

Measure of Hostile Attribution

Adapted from a modified, expanded version of Dodge and Frame's (1982) hypothetical stories.

*Girls are administered the same questions but the pronouns "he" or "his" are changed to "she" or "her."

I'm going to describe some things that might happen to you or other kids in your school. Then I'm going to ask you what you think about each situation.

1. **Imagine you are sitting in the lunchroom at a table eating your lunch. Another kid comes over to the table carrying his lunch on a tray. When he walks behind you, his milk carton spills right down your back. I want you to give me your opinion about how it happened. Other kids might not agree with you, but I really want to know what you think.**

[Show subject responses and circle subject's response below]

1. I would think that probably it was an accident.
2. I would think that maybe it was an accident.
3. I would think that maybe it was on purpose.
4. I would think that probably it was on purpose.

2. **Imagine you are working at your desk. You get up to get a drink of water. When you come back, you see that your pencil is missing. A little while later, you see another kid using your pencil. I want you to give me your opinion about how come the kid is using your pencil. Remember, I really want to know what you think.**

[Show subject responses and circle subject's response below]

1. I would think that probably he borrowed it.
2. I would think that maybe he borrowed it.
3. I would think that maybe he stole it.
4. I would think that probably he stole it.

3. **Imagine that you leave your lunch bag on the table in the lunchroom while you go to get something to drink. When you come back, you see another kid**

holding your lunch bag and looking into it. I want you to give me your opinion about how come the kid has your lunch bag.

[Show subject responses and circle subject's response below]

1. I would think that probably he wanted to see what I had.
2. I would think that maybe he wanted to see what I had.
3. I would think that maybe he was going to take my lunch.
4. I would think that probably he was going to take my lunch.

- 4. Imagine that you and another boy are playing catch in the schoolyard. One time when the other boy gets the ball, he throws it and it hits you in the back so hard that it really hurts. I want you to give me your opinion about how come he threw the ball so hard.**

[Show subject responses and circle subject's response below]

1. I would think that probably it was an accident.
2. I would think that maybe it was an accident.
3. I would think that maybe it was on purpose.
4. I would think that probably it was on purpose.

- 5. Imagine that you are walking along the sidewalk, and a kid is coming toward you on a bicycle. As he passes you, the handlebars of the bicycle hit you and you almost fall over. How do you think it happened?**

[Show subject responses and circle subject's response below]

1. I would think that probably it was an accident.
2. I would think that maybe it was an accident.
3. I would think that maybe it was on purpose.
4. I would think that probably it was on purpose.

- 6. Imagine that you are putting your things into your locker, and the kid next to you pushes the door of your locker and it slams on your finger. How do you think it happened?**

[Show subject responses and circle subject's response below]

1. I would think that probably it was an accident.
2. I would think that maybe it was an accident.
3. I would think that maybe it was on purpose.
4. I would think that probably it was on purpose.

7. Imagine that a kid bumps into you on the stairs in school, and you trip and almost fall down the stairs. How do you think it happened?

[Show subject responses and circle subject's response below]

1. I would think that probably it was an accident.
2. I would think that maybe it was an accident.
3. I would think that maybe it was on purpose.
4. I would think that probably it was on purpose.

8. Imagine that you are walking along the sidewalk and a flowerpot comes crashing down and just misses you. You look up and see a kid looking out the window. How do you think it happened?

[Show subject responses and circle subject's response below]

1. I would think that probably the kid knocked it off the windowsill by accident.
2. I would think that maybe the kid knocked it off the windowsill by accident.
3. I would think that maybe the kid knocked it off the windowsill on purpose.
4. I would think that probably the kid knocked it off the windowsill on purpose.

9. Imagine that another kid's backpack hits you while you are trying to get past him on the bus. How do you think it happened?

[Show subject responses and circle subject's response below]

1. I would think that probably it was an accident.

2. I would think that maybe it was an accident.
3. I would think that maybe it was on purpose.
4. I would think that probably it was on purpose.

10. Imagine that a kid lets his dog off the leash just as you are walking by and the dog chases you. How do you think it happened?

[Show subject responses and circle subject's response below]

1. I would think that probably it was an accident.
2. I would think that maybe it was an accident.
3. I would think that maybe it was on purpose.
4. I would think that probably it was on purpose.

11. Imagine that you can't get off the bus at your stop because some kids are blocking the door. How do you think it happened?

[Show subject responses and circle subject's response below]

1. I would think that probably they didn't notice that I wanted to get off.
2. I would think that maybe they didn't notice that I wanted to get off.
3. I would think that maybe they were doing it on purpose.
4. I would think that probably they were doing it on purpose.

12. Imagine that a group of kids are fooling around in the hallway and you can't get to your class on time. How do you think it happened?

[Show subject responses and circle subject's response below]

1. I would think that probably they didn't realize I would be late.
2. I would think that maybe they didn't realize I would be late.
3. I would think that maybe they were doing it on purpose.

4. I would think that probably they were doing it on purpose.

13. Imagine that another kid was supposed to tell you that everybody was going out for pizza after school, but he never told you. How do you think it happened?

[Show subject responses and circle subject's response below]

1. I would think that probably he forgot.

2. I would think that maybe he forgot.

3. I would think that maybe he didn't tell me on purpose.

4. I would think that probably he didn't tell me on purpose.

14. Imagine that you put your walkman down for a minute in the schoolyard while you put on your jacket, and when you turn around, you see that another kid is holding it. How do you think it happened?

[Show subject responses and circle subject's response below]

1. I would think that probably he borrowed it.

2. I would think that maybe he borrowed it.

3. I would think that maybe he stole it.

4. I would think that probably he stole it.

APPENDIX H

Measure of Aggressive Behavior

Adolescents were given the *Child Behavior Checklist -Youth Self Report* (YSR; Achenbach, 1991).

APPENDIX I

Measure of Anxiety

Adolescents were given the *Revised Children's Manifest Anxiety Scale (RCMAS;* Reynolds & Richmond, 1997)

Here are some sentences that tell how people think and feel about themselves. Read each sentence carefully. Circle the word "Yes" if you think it is true about you. Circle the word "No" if you think it is *not* true about you. Answer every question even if some are hard to decide.

There are no right or wrong answers. Only you can tell us how you think and feel about yourself. Remember, after you read each sentence, ask yourself "Is it true about me?" If it is, circle "Yes." If it is not, circle "No."

- | | | |
|--|-----|----|
| 1. I have trouble making up my mind..... | Yes | No |
| 2. I get nervous when things do not go the right way for me | Yes | No |
| 3. Other people seem to do things easier than I can..... | Yes | No |
| 4. I like everyone I know | Yes | No |
| 5. Often I have trouble getting my breath | Yes | No |
| 6. I worry a lot of the time..... | Yes | No |
| 7. I am afraid of a lot of things..... | Yes | No |
| 8. I am always kind..... | Yes | No |
| 9. I get mad easily | Yes | No |
| 10. I worry about what my parents will say to me | Yes | No |
| 11. I feel that other people do not like the way I do things | Yes | No |
| 12. I always have good manners | Yes | No |
| 13. It is hard for me to get to sleep at night..... | Yes | No |
| 14. I worry about what other people think about me | Yes | No |
| 15. I feel alone even when there are people with me | Yes | No |

- | | | |
|--|-----|----|
| 16. I am always good | Yes | No |
| 17. Often I feel sick to my stomach..... | Yes | No |
| 18. My feelings get hurt easily..... | Yes | No |
| 19. My hands feel sweaty..... | Yes | No |
| 20. I am always nice to everyone..... | Yes | No |
| 21. I am tired a lot | Yes | No |
| 22. I worry about what is going to happen..... | Yes | No |
| 23. Other people are happier than I am | Yes | No |
| 24. I tell the truth every single time | Yes | No |
| 25. I have bad dreams | Yes | No |
| 26. My feelings get hurt easily when I am criticized | Yes | No |
| 27. I feel that someone will tell me I do things the wrong way | Yes | No |
| 28. I never get angry..... | Yes | No |
| 29. I wake up scared some of the time | Yes | No |
| 30. I worry when I go to bed at night | Yes | No |
| 31. It is hard for me to keep my mind on my schoolwork..... | Yes | No |
| 32. I never say things I shouldn't say | Yes | No |
| 33. I wiggle in my seat a lot | Yes | No |
| 34. I am nervous | Yes | No |
| 35. A lot of people are against me..... | Yes | No |
| 36. I never lie..... | Yes | No |
| 37. I often worry about something bad happening to me..... | Yes | No |

APPENDIX J

Descriptives of Variables of Interest from Round 1, 2, and 3

Round 1 Variables of Interest							
	N	Min	Max	Mean	SD	Skew	Kurtosis
Witness to Domestic Violence (parent report)	667	0.0	10.0	0.74	1.52	3.096	11.335
Victim of Domestic Violence (parent report)	667	0.0	9.0	0.88	1.43	2.265	6.191
<i>Total Domestic Violence Exposure (standard sum of witnessing and victimization)</i>	667	0.0	15.0	1.62	2.53	2.239	5.375
Witness to Community Violence (youth self-report)	667	0.0	23.0	6.25	4.42	.825	.462
Victim of Community Violence (youth self-report)	667	0.0	8.0	0.90	1.38	2.285	6.113
<i>Total Community Violence Exposure (standard sum of witnessing and victimization)</i>	667	0.0	27.0	6.81	5.04	.995	.945
<i>Total Violence Exposure (standardized sum of domestic and community violence)</i>	667	-1.99	6.72	0.0	1.50	1.142	1.550
Reciprocated Friendships (same-sex classmate reciprocated nomination)	647	0.0	2.0	0.94	0.79	.106	-1.372
Peer Acceptance (nominations received from classmates)	667	0.0	21.0	6.19	3.42	.330	.258
Peer Intimacy/Closeness (youth self-report of same-sex friend(s))	667	1.48	5.0	3.98	0.64	-.670	.259
Peer Rejection (classmates' behavior rating of adolescent)	664	1.0	4.61	1.96	0.68	.947	.612
Friends' Prosocial Behavior (classmates's behavior rating of target's same-sex friend(s))	642	1.0	5.0	3.83	0.85	-.484	-.145
Friends' Antisocial Behavior (adolescent's report of friend(s))	667	0.0	31.0	4.69	5.12	1.637	3.189
Hostile Attribution (youth self-report)	667	1.07	3.86	2.48	0.45	-.051	.317
Aggression (youth self-report)	N/A						
Anxiety (youth self-report)	195	0.0	27.0	9.94	5.82	.453	-.262

Note. Violence Exposure represents a composite score of community violence and family violence; Reciprocated Friendships represent same sex, reciprocated friend nominations; Peer acceptance represents the number of 'hang out' nominations received by the target youth from both sexes in the classroom; Peer Intimacy/Closeness represents the target youth's responses to the IPPA peer questions; and Peer Rejection represents the same sex behavior ratings for the target youth from his/her peers of whether he/she is teased more than others; Prosocial Friend(s) represents the classmates' mean ratings of the target youth's two best friends' prosocial behavior; Antisocial Friend(s) represents the target youth's ratings of his/her friends' antisocial behavior; Hostile Attribution is represented by youth's total score; Aggression represents T-scores from the Achenbach Youth Self Report; and Anxiety represents youth's total score on RCMAS.

Round 2 Variables of Interest							
	N	Min	Max	Mean	Standard Deviation	Skewness	Kurtosis
Witness to Domestic Violence (parent report)	611	0.0	13.0	0.63	1.52	4.045	21.040
Victim of Domestic Violence (parent report)	611	0.0	14.0	0.72	1.36	3.513	20.784
<i>Total Domestic Violence Exposure (standard sum of witness and victimization)</i>	611	0.0	24.0	1.35	2.60	3.670	20.108
Witness to Community Violence (youth self-report)	617	0.0	24.0	5.09	4.18	1.038	.877
Victim of Community Violence (youth self-report)	617	0.0	7.0	0.51	0.99	2.677	8.796
<i>Total Community Violence Exposure (standard sum of witness and victimization)</i>	617	0.0	25.0	5.60	4.75	1.131	1.050
<i>Total Violence Exposure (standardized sum of domestic and community violence)</i>	611	-1.70	11.11	0.00	1.48	2.014	8.441
Reciprocated Friendships (same-sex classmate reciprocated nomination)	581	0.0	2.0	1.0	0.77	-.021	-1.316
Peer Acceptance (nominations received from classmates)	614	0.0	21.0	6.98	3.80	.428	.374
Peer Intimacy/Closeness (youth self-report of same-sex friend(s))	611	1.64	5.0	4.03	0.59	-.508	-.222
Peer Rejection (classmates' behavior rating of adolescent)	581	1.0	5.0	2.01	0.74	1.276	1.793
Friends' Prosocial Behavior (classmates' behavior rating of target's same-sex friend(s))	576	1.0	5.0	3.84	0.82	-.570	.210
Friends' Antisocial Behavior (adolescent's report of friend(s))	611	0.0	34.0	5.05	5.63	1.633	2.967
Hostile Attribution (youth self-report)	611	1.14	4.0	2.46	0.47	.054	.069
Aggression (youth self-report)	N/A						
Anxiety (youth self-report)	611	0.0	24.0	8.66	5.70	.538	-.300

Note. Violence Exposure represents a composite score of community violence and family violence; Reciprocated Friendships represent same sex, reciprocated friend nominations; Peer acceptance represents the number of 'hang out' nominations received by the target youth from both sexes in the classroom; Peer Intimacy/Closeness represents the target youth's responses to the IPPA peer questions; and Peer Rejection represents the same sex behavior ratings for the target youth from his/her peers of whether he/she is teased more than others; Prosocial Friend(s) represents the classmates' mean ratings of the target youth's two best friends' prosocial behavior; Antisocial Friend(s) represents the target youth's ratings of his/her friends' antisocial behavior; Hostile Attribution is represented by youth's total score; Aggression represents T-scores from the Achenbach Youth Self Report; and Anxiety represents youth's total score on the RCMAS.

Round 3 Variables of Interest							
	N	Min	Max	Mean	Standard Deviation	Skewness	Kurtosis
Witness to Domestic Violence (parent report)	588	0.0	11.0	0.47	1.16	4.132	24.257
Victim of Domestic Violence (parent report)	588	0.0	9.0	0.77	1.43	2.629	7.920
<i>Total Domestic Violence Exposure (standard sum of witness and victimization)</i>	588	0.0	19.0	1.24	2.34	3.134	13.083
Witness to Community Violence (youth self-report)	590	0.0	26.0	4.41	4.01	1.283	2.429
Victim of Community Violence (youth self-report)	590	0.0	8.0	0.45	0.93	3.116	14.168
<i>Total Community Violence Exposure (standard sum of witness and victimization)</i>	590	0.0	32.0	4.86	4.51	1.436	3.406
<i>Total Violence Exposure (standardized sum of domestic and community violence)</i>	587	-1.61	13.59	0.00	1.49	2.297	12.703
Reciprocated Friendships (same-sex classmate reciprocated nomination)	N/A						
Peer Acceptance (nominations received from classmates)	N/A						
Peer Intimacy/Closeness (youth self-report of same-sex friend(s))	579	1.88	5.0	4.08	0.61	-.570	-.242
Peer Rejection (classmates' behavior rating of adolescent)	N/A						
Friends' Prosocial Behavior (classmates' behavior rating of same-sex friend(s))	N/A						
Friends' Antisocial Behavior (adolescent's report of friend(s))	579	0.0	32.0	5.75	6.09	1.400	1.842
Hostile Attribution (youth self-report)	579	1.07	3.64	2.43	0.46	.053	.056
Aggression (youth self-report)	578	50.0	83.0	53.42	6.18	1.885	2.826
Anxiety (youth self-report)	579	0.0	26.0	7.66	5.74	.741	-.154

Note. Violence Exposure represents a composite score of community violence and family violence; Reciprocated Friendships represent same sex, reciprocated friend nominations; Peer acceptance represents the number of 'hang out' nominations received by the target youth from both sexes in the classroom; Peer Intimacy/Closeness represents the target youth's responses to the IPPA peer questions; and Peer Rejection represents the same sex behavior ratings for the target youth from his/her peers of whether he/she is teased more than others; Prosocial Friend(s) represents the classmates' mean ratings of the target youth's two best friends' prosocial behavior; Antisocial Friend(s) represents the target youth's ratings of his/her friends' antisocial behavior; Hostile Attribution is represented by youth's total score; Aggression represents T-scores from the Achenbach Youth Self Report; and Anxiety represents youth's total score on the RCMAS.

APPENDIX K

Bivariate Correlations between Variables of Interest by Round and Gender

Variables of Interest	Gender
Round 1– Anxiety (youth self-report)	-.04
Round 2 – Anxiety (youth self-report)	.08
Round 3 – Anxiety (youth self-report)	.11**
Round 3 – Aggression (youth self-report)	.15**
Round 1 – Total Exposure to Violence	-.17**
Round 2 – Total Exposure to Violence	-.15**
Round 3 – Total Exposure to Violence	-.17**
Round 1 – Hostile Attribution (youth self-report)	-.06
Round 2 – Hostile Attribution (youth self-report)	-.11**
Round 3 – Hostile Attribution (youth self-report)	-.07
Round 1– Friends’ Prosocial Behavior (classmates’ behavior rating of target’s same-sex friend(s))	.21**
Round 1– Friends’ Antisocial Behavior (youth’s report of friend(s) behavior)	-.11*
Round 2– Friends’ Prosocial Behavior (classmates’ behavior rating of target’s same-sex friend(s))	.23**
Round 2– Friends’ Antisocial Behavior (youth’s report of friend(s) behavior)	-.07
Round 1– Reciprocated Friendships (reciprocated same-sex nominations)	.09*
Round 1 – Peer Acceptance (classmate nominations)	.00
Round 1– Peer Intimacy/Closeness (youth’s report of same-sex friend(s))	.15**
Round 1– Peer Rejection (classmates’ behavior rating of youth)	-.19**
Round 2– Reciprocated Friendships (reciprocated same-sex nominations)	.04
Round 2 – Peer Acceptance (classmate nominations)	.01
Round 2– Peer Intimacy/Closeness (youth’s report of same-sex friend(s))	.30**
Round 2– Peer Rejection (classmates’ behavior rating of youth)	-.21**

Note. Anxiety represents youth’s total score on the RCMAS; Aggression represents T-scores from the Achenbach Youth Self Report; Violence Exposure represents a composite score of community violence and family violence; Hostile Attribution is represented by youth’s total score; Prosocial Friend(s) represents the classmates’ mean ratings of target youth’s two best friends’ prosocial behavior; Antisocial Friend(s) represents the target youth’s ratings of his/her friends’ antisocial behavior; Reciprocated Friendships represent same sex, reciprocated friend nominations; Peer acceptance represents the number of ‘hang out’ nominations received by the target youth from both sexes in the classroom; Peer Intimacy/Closeness represents the target youth’s responses to the IPPA peer questions; and Peer Rejection represents the same sex behavior ratings for the target youth from his/her peers of whether he/she is teased more than others.