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# An ecological perspective on the role of nondisclosure in urban african american adolescents exposed to community violence: Using mediation and moderated mediation approaches

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AN ECOLOGICAL PERSPECTIVE ON THE ROLE OF NONDISCLOSURE IN  
URBAN AFRICAN AMERICAN ADOLESCENTS EXPOSED TO  
COMMUNITY VIOLENCE: USING MEDIATION AND MODERATED  
MEDIATION APPROACHES

A Dissertation Presented in Partial Fulfillment of the  
Requirements of the Degree of  
Doctor of Philosophy

BY

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NOVEMBER 2009

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VITA

The author was born in Boston, Massachusetts. She graduated from Freeport High School, Long Island, NY, received her Bachelor of Arts degree from University of Chicago in 1997. She also received her Master of Arts in Art Therapy from the School of the Art Institute of Chicago and her Master of Arts in Psychology from De Paul University.



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An Ecological Perspective of the Role of Nondisclosure in Urban African American Adolescents  
Exposed to Community Violence: Using Mediation and Moderated Mediation Approaches

**CHAPTER 1**

**INTRODUCTION**

Youth residing in high risk neighborhoods characterized by violence, crime, and poverty continue to experience major challenges in the United States. This is especially true for African American youth who are disproportionately represented in these neighborhoods (Bureau of Justice Statistics, 1990, 1991; US Census Bureau, 1998). Rates of community violence exposure among inner-city African American youth are consistently high with as many as 40% to 50% reporting some level of exposure (Schwab-Stone, et al., 1995). Given these negative living conditions, it is not surprising that low-income urban African American youth are at risk for numerous negative outcomes including internalizing problems (Hammack, Richards, Luo, Edlynn, & Roy, 2004; Muller, Goebel-Fabbri, Diamond, & Dinkage, 2000; Ozer & Weinstein, 2004), such as depression and somatic complaints, and externalizing behaviors, such as aggression and delinquency (Ceballo, Dahl, Aretakis, & Ramirez, 2001; Ceballo, Ramirez, Hearn, & Maltese, 2003; Margolin & Gordis, 2000).

Although there is substantial evidence that youth residing in low-income urban neighborhoods are at heightened risk for exposure to violence and negative mental health problems, research on the nature of risk and protective processes affecting youth in these neighborhoods is lacking. Without an understanding of risk and protective processes, the potential for preventing adverse psychological outcomes is hampered.

One such potential risk process is adolescents' motives for nondisclosing information to adults. The act of nondisclosure (Lane & Wegner, 1995; Pennebaker & Sussman, 1988) is

associated with physical and psychological symptoms in adults. Few studies have paid attention to the consequences of adolescents' nondisclosure and extant literature in this area has focused primarily on Caucasian youth. Extant research findings with adolescents, to date, are consistent with the adult literature (Dinizulu, 2006; Finkenauer, Engles, & Meeus, 2002).

Understanding the effects of adolescents' motives for nondisclosing information to adults is important for many reasons. For one, adolescents' nondisclosure to adults coupled with their experiences of violence may increase their chances for developing internalizing and externalizing symptoms because nondisclosure to adults may serve as a barrier to adult intervention and protection. Adults cannot intervene in risky situations if adolescents fail to disclose the nature of the risk.

On the other hand, disclosure may strengthen parent-child relationships (Gorman-Smith, Tolan, Zelli, & Huesmann, 1996; Kliewer & Kung, 1998) and elicit social support from extended family and non-kin adults. These two factors are potentially protective and thus, may buffer the negative effects of violence (Gorman-Smith & Tolan, 1998). One mechanism through which positive relationships may protect against negative outcomes and promote positive outcomes is disclosure. For example, the literature suggests that perception of trust in a parent-child relationship is associated with higher levels of disclosure (Darling, 2001) and disclosure in turn is associated with reduced internalizing symptomatology (Engles, Finkenauer, & van Kooten, 2006).

The literature also suggests that strong relationships with extended family and community members may promote disclosure and better psychological adjustment (Rhodes, Ebert, & Fisher, 1992), and similar to parent-child attachment, these connections of social support have also been found to buffer the adverse effects of violence experienced by

adolescents (Hammack, Richards, Luo, Edlynn, & Roy, 2004). Adolescents with social support cope better with violence exposure, develop stronger self-esteem and greater perceived sense of control (Sandler et al., 1998).

The present study examined Community Exposure to Violence, Nondisclosure, Parent-Child Attachment, and Social Support, as potential risk and protective factors in a school-based sample of urban African American adolescents. This study also presents an ecological perspective on the role of Nondisclosure in urban African American early adolescents. The Ecological Systems Theory (Bronfenbrenner, 1979) examines a child's development within the context of systems of relationships that form his or her environment, such as the microsystem (i.e., a system in which the adolescent has direct contact). Particularly, this study tested conceptual models in which adolescents' nondisclosure to adults (a microsystem occurring at the interpersonal level between adolescents and parents and/or adults) mediates the relation between Community Exposure to Violence (an exosystem system occurring at the environmental level) and psychological symptoms. In addition, moderated mediation analyses were conducted, to determine if the following microsystems, Parent-Child Attachment, and Social Support (from extended kinship and/or non-kinship adults in the neighborhood) are potential protective factors, which are expected to attenuate Nondisclosure mediating the relation between Community Exposure to Violence and Internalizing and Externalizing Symptoms.

### Nondisclosure

#### Definitions of Nondisclosure

Six different terms associated with the withholding of information have been described in the adolescent literature. These are nondisclosure, deception, lying, secrecy, topic avoidance, and self-concealment. Nondisclosure is generally viewed as the most inclusive term while the other



terms describe specific forms of Nondisclosure (Darling, 2001). Deception and lying are frequently used interchangeably and refer to intentionally trying to mislead someone (DePaulo & Kashy, 1998). Secrecy has been defined as purposefully denying others, who are important, non-trivial personal information (Vrij, Paterson, Nunkoosing, Soukara, & Oosterwegel, 2003). Topic avoidance refers to the intentional avoidance of a specific controversial topic, such as sex (Mazur & Hubbard, 2004). Self-concealment focuses on individuals' tendency to conceal personal information that is negative or distressing (Larson & Chastain, 1990). In the present study, literature on each of these forms of nondisclosure will be reviewed and Nondisclosure will be defined as the following: 1) withholding information from adults, and 2) adolescents' *motives* for withholding information from adults.

#### Symptoms Associated with Nondisclosure

Adult and adolescent findings. Extant literature shows that secret keeping is associated with adverse psychological and physical outcomes in adults (Finkenauer & Rime, 1998; Larson & Chastain, 1990; Pennebaker, 1989, 1990; Pennebaker & Sussman, 1988). Much of the literature reports the effects of withholding information (e.g., secrecy or nondisclosure) on internalizing symptomatology. For example, Larson and Chastain (1990) reported that self-concealment contributed to somatic complaints, anxiety, and depression above and beyond other stress factors associated with physical and psychological problems (e.g. traumatic experiences or lack of social support) in a sample of human service workers. Similarly, another study revealed that individuals who keep emotional secrets report more somatic complaints than people who do not keep emotional secrets (Finkenauer & Rime, 1998) and in a third study of undergraduates, withholding information was found to be positively correlated with depression, anxiety, and low self-esteem (Ichiyama et al., 1993).

Research also seems to suggest that there are social disadvantages resulting from withholding information. Nondisclosing separates the non-discloser from those who do not know about the distressing information, which may lead to feelings of loneliness (Finkenauer & Rime, 1998). Loneliness in turn, may predict symptoms of anxiety or depression. In sum, the adult literature suggests that nondisclosure is associated with psychological symptoms.

In addition to the literature that has established negative effects for nondisclosure, several studies with adults have tested for positive effects for disclosure. The adult literature suggests that disclosure is defined as a person, consciously or unconsciously, revealing personal information (e.g., thoughts, feelings, goals, fears, behaviors, likes, and dislikes) about oneself through the form of speaking (Farber, 2006; Pennebaker & O’Heeron, 1984) and/or writing (Pennebaker & Beall, 1986; Pennebaker, Kiecolt-Glaser, Glaser, 1988). To date, examining positive effects of disclosure have only been repeated for physical health outcomes. For example, undergraduates who wrote about their trivial or personal traumatic events reported improved immune functioning (Pennebaker, Kiecolt-Glaser, Glaser, 1988). Similarly, undergraduates who wrote about facts and emotions surrounding a trauma made fewer health center visits (Pennebaker & Beall, 1986). Sharing angry and depressed feelings about breast cancer prolonged patients’ lives compared to those cancer patients who did not disclose (Derogatis et al., 1979). Another study revealed that recent widows and widowers who talked about their feelings had fewer somatic and health problems than those who did not (Pennebaker & O’Heeron, 1984).

In terms of psychological symptoms, disclosure has been associated with improvements in mood (Pennebaker, Kiecolt-Glaser, & Glaser, 1988; Petrie, Booth, & Pennebaker, 1998) and psychological symptoms (e.g. depression and/or anxiety) (Sloan & Marx, 2004) among college

students who wrote about their traumatic experiences, and Gulf-war reservists who talked to others about their experiences (Southwick, Morgan, & Rosenberg, 2000). On the other hand, disclosure via writing as an intervention did not have an effect on health and psychological outcomes in a sample of undergraduates (Greenberg & Stone, 1992; Kloss & Lisman, 2002). Pennebaker and Beall (1986) found that undergraduates who wrote about the facts and emotions surrounding a trauma experienced more negative moods compared to the participants who did not journal. Women newly diagnosed with breast cancer who journaled about their mood over the course of a 12-week support group reported increased levels of anxiety and depression, post-intervention (Smith, Anderson-Hanley, Langrock, & Compas, 2005). Clearly, these research findings report consistent positive health effects of disclosure, but findings related to psychological symptoms and mood have been mixed with some studies showing positive gains and others finding no improvement or increased symptomatology as a result of disclosure. More studies are needed to clearly examine the effects of written and verbal (i.e. talking to others) disclosure on psychological symptoms.

With regard to behavioral problems, this author has found no studies in the adult literature that examined the effects of Nondisclosure on externalizing behaviors (e.g., aggression and delinquent behaviors, alcohol and drug abuse).

It is important to note that the theories and findings associated with Nondisclosure are predominantly based upon college students and adults in controlled/laboratory settings. Currently, there is scant literature examining Nondisclosure in younger adolescents. The few studies that have examined Nondisclosure in adolescents report findings that are similar to those in the adult literature. For example, keeping secrets from parents was associated with somatic complaints and depressive mood in a sample of adolescents from the Netherlands (Finkenauer,

Engles, and Meeus, 2002; Frijns, Finkenauer, Vermulst, & Engels, 2005). Some case studies have linked withholding information/secret keeping to psychotic symptoms in children (Saffer et al., 1979), and dysfunction in families (Evans, 1976; Swanson & Biaggio, 1985). There is no empirical evidence showing whether secrecy is associated with loneliness among adolescents (Finkenauer, Engels, & Meeus, 2002). However, adolescents may deprive themselves of social support, social validation, and affection by keeping distressing information to themselves. In this way, Nondisclosure may lead to the development of Internalizing Symptoms.

These few studies examining Nondisclosure or secrecy in the adolescent literature report effects for internalizing symptomatology rather than externalizing symptomatology. At this time, there are only two studies linking secrecy and externalizing behaviors in youth. One study demonstrated that keeping secrets from parents was associated with behavioral problems as it contributed to aggression and delinquency in 1173 adolescents from the Netherlands over a one year time period (Frijns, Finkenauer, Vermulst, & Engels, 2005). In contrast, not keeping secrets was found to be related to youth behavior problems. This study showed that children aged 6-13 years were found to have more externalizing problems when they remained less secretive about their mother's incarceration in the context of poor social support (Hagen & Myers, 2003). The literature does not provide enough information to clearly state the association that exists between secrecy or Nondisclosure and Externalizing Symptoms. Therefore, this study examined possible associations between Nondisclosure and Externalizing Symptoms in the context of community violence and also within the context of Parent-Child Attachment and Social Support.

#### Motives of Adolescents' Nondisclosure to Adults

There is little empirical data on why adolescents' withhold or nondisclose information, and the literature primarily reports one to three motives for nondisclosing information. A study

by Dinizulu (2006) has provided the most details about the motives related to adolescents' nondisclosure to adults. Therefore, much of the review of this literature will be based on the findings of the Dinizulu study. Dinizulu (2006) examined 21 motives of nondisclosure in a sample of 215 urban African American early adolescents. Factor analyses of these motives resulted in a four factor structure entitled Relationship Problems, Autonomy vs. Authority, Other Serving (e.g. keeping private out of loyalty to someone), and Peer Norms (e.g. avoid being a "snitch"). Empirical evidence (i.e. factor loadings, predictive associations) were strongest for the first two factors and extant literature (beyond the Dinizulu study) has generally reported motives that are consistent with one of those two factors. Thus, only motives related to Autonomy vs. Authority and Relationship Problems will be highlighted for this current study because the existing findings provides the most compelling data or rationale for investigating these categories.

Within the context of Autonomy vs. Authority, the motives found by Dinizulu are conceptually the same to the motives found in the current literature. Dinizulu measured five motives, and three of those motives are related to negative behavioral (e.g. fear of punishment) and emotional consequences (e.g. parent/adult worrying or overreacting), and to adolescents' desire to protect their privacy or autonomy. These motives emerged as the most influential reasons that motivate adolescents to nondisclose to adults not only for the Autonomy vs. Authority subscale, but for the entire measure as well. Similarly, so far, these three motives have been reported in the current literature as the only reasons why adolescents nondisclose to adults. Given the limited research on motives of adolescent nondisclosure, motives discussed in the current literature will be framed in the context of adolescent autonomy challenging adult authority (Autonomy vs. Authority) as influenced by the Dinizulu study.

As adolescents spend more time away from home, they have various opportunities to manage information, and thus make choices about disclosure or nondisclosure. Their choice to exert their autonomy over authority may be contingent upon the consequences if disclosure were to take place. For example, a sample of 120 Caucasian high school students chose to exercise their autonomy by nondisclosing information to adults due to fear of negative emotional or behavioral consequences, which was more likely to occur when parental rules were explicit (Darling, Cumsille, Caldwell, & Dowdy, 2006). In another study involving 215 African American urban adolescents, participants frequently reported nondisclosing information to avoid being punished by adults and to protect the adult from worrying (Dinizulu, 2006). Avoidant behavior was also seen in another adolescent sample who kept private to avoid parental disapproval (Marshall, Tilton-Weaver, & Bosdet, 2005; Stattin, Kerr, & Ferrer-Wreder, 2000). Fifty-eight percent of 180 Middle-Eastern adolescent participants, who reported moral transgression as their secret, ascribed secrecy to fear of punishment (Last & Aharoni-Etzioni, 2001). Similarly, adolescents involved in leisurely activities, disapproved by their parents, were less likely to disclose when disclosure would get them into trouble (Kerr, Stattin, & Trost, 1999).

Nondisclosing in fear of punishment is a form of autonomy because punishment often leads to restricting adolescents' autonomy including their access to privileges or their control over how they spend their time with peers or participating in various activities. Further, adolescents may also protect their autonomy by nondisclosing or lying to adults about their emotional problems because adolescents may want to resolve their emotional problems on their own without any adult intervention (Engles, Finkenauer, & van Kooten, 2006) or adolescents may make an "executive" decision to protect adults from worrying and thus, bear this emotional burden alone by nondisclosing certain information. Adolescents may also choose to reveal or

conceal information to parents to assert their autonomy and power or manipulate parents (Stattin, Kerr, & Ferrer-Wreder, 2000).

Adolescents also nondisclose to adults to protect their “arena of privacy” (Buhrmester & Prager, 1995). Adolescents have nondisclosed information to adults just because they feel it is their right to keep it to themselves as reported by over 77% of urban African American participants (Dinizulu, 2006). Additionally, previous research has shown that adolescents consistently reject parents’ legitimate authority to regulate personal issues, which pertain to control over one’s body, privacy, and choices regarding issues such as clothes, hairstyles, or recreational activities (Fuligni, 1998; Smetana, 1988, 2000; Smentana & Asquith, 1994). From the adolescent viewpoint, the consequences of personal issues are seen as not affecting others, and thus, these issues are viewed as beyond the boundaries of legitimate moral and conventional concern.

Within the context of relationship problems, the literature strongly suggests youth that nondisclose or keep secrets is reflective of problematic relationships (Engles, Finkenauer, & van Kooten, 2006; Finkenauer, Engles, & Meeus, 2002; Kerr & Stattin, 2000). However, a few motives have been specifically linked to problems experienced in these relationships. Examining a variety of motives of nondisclosure and adolescent-adult relationships together could provide understanding of possible reciprocal relations between these variables. Only Dinizulu (2006) has examined several motives affecting parent-child relationships. In that study, urban African American adolescents reported, on the Relationship Problems subscale of Nondisclosure, that the most important reasons why they keep things private from adults is that they do not want the adult to tell others, because they believe that they would be blamed, and they do not want to feel ashamed. This sample also reported that they nondisclose to adults because they are concerned

about what people would think and because they feel that no one would believe them. These reasons for nondisclosing information to adults may demonstrate a lack of trust and respect, which is indicative of relationship problems. Thus, each of these motives provides specific insight into the ways in which poor adult-adolescent relationships might influence motivation to nondisclose.

Underlying motivations related to Autonomy vs. Authority and Relationship Problems are likely to influence adolescents' analysis of the ratio of cost and benefit for disclosure. In the adolescent literature, studies seem to suggest that disclosure is defined as adolescents' willingness to reveal private information, such as personal, peer, and academic issues, and social activities to adults (without the adult asking) (Kerr & Stattin, 2000; Smetana, Metzger, Gettman, & Campione-Barr, 2006; Stattin & Kerr, 2000). From the perspective of social-cognitive theories (Bandura, 1977), adolescents may rely on their experience to help them determine whether they should disclose or nondisclose information to adults. They may recall whether an adult reacted in a supportive fashion and refrained from revealing information to other people. In the worst case scenario, they may have had an experience with an adult who was unsupportive and scathing, or too emotional (e.g., emotionally dysregulated). Adolescents may also recall the adult's stated opinions on topics related to the information that is being nondisclosed, and thus use this information to predict the adult's response. Adolescents may test the adult's response to a disclosure by jokingly or seemingly inadvertently introducing the topic and gauging the adult's response (Duck, 1988). For example a child may ask a parent or adult what would happen to someone who admitted witnessing an individual getting shot or to someone who has cheated on an exam. The adult's response may then be used to determine whether to disclose or nondisclose information.



In summary, there is limited research examining motives of Nondisclosure in adolescents. The few studies that do report motives of Nondisclosure relate to Autonomy vs. Authority: fear of negative behavioral and emotional consequences or desire to protect adolescent privacy. These motives likely influence adolescents' decisions about disclosing or nondisclosing information to adults. Equally important, linking motives to Relationship Problems allows for further insight about the reciprocal nature of relationships between adolescents and adults. Lastly, adolescents might choose to fully or partially disclose, or even lie about their beliefs, behaviors, plans, or activities based on their anticipation of their adults' potential reaction to full disclosure (Darling, Hames, & Cumsille, 2000). These series of adult-adolescent social interactions affecting adolescents' Nondisclosure are likely to be influenced by social-cognitive theories, which will be discussed more in depth in the following section.

One purpose of this study was to further examine Nondisclosure at the interpersonal level (parent-child, adult-child) within the context of community violence occurring at the environmental level. Understanding nondisclosure at these ecological levels will have implications for designing effective interventions that will facilitate healthy relationships between adults and adolescents, which in turn can promote healthy adolescent development.

#### Social-Cognitive Theory and Nondisclosure

Much of the literature regarding social-cognitive theory and similar constructs of Nondisclosure (e.g., secrecy) are based upon adults. Despite the difference in population and construct of withholding of information, some of the findings in the adult literature about secrecy can be extended to adolescents. Unfortunately, the people who most desperately need supportive feedback, such as those who are extremely depressed or have suffered a major loss, are the least likely to receive the support. They maximize their chances for personal adjustment by openly

expressing their distress, but they may also risk alienating their social network (Silver, Wortman, & Crofton, 1990). Research has shown that those who express their struggles elicit more rejection from others than do people who act as if they are coping quite well (Coates, Wortman, & Abbey, 1979) and that people respond negatively to depressed individuals. For instance, in one experiment, Strack and Coyne (1983) demonstrated that depressed people elicited depression, anxiety, hostility, and rejection from others with whom they interacted for only 15 min.

People also tend to be avoided by confidants altogether after revealing secrets to them (e.g., Coates et al., 1979; and Lazarus, 1985). For example, patients with cancer live with constant fear, but they do not share their fear with family, friends, and health care staff because these individuals do not respond well to such revelations (Spiegel, 1992). The patients, therefore, end up withdrawing from others and feeling isolated (Spiegel, 1992).

Another reason people give for not sharing their traumatic or negative secrets is that they are concerned that they will upset others if they do reveal secrets to them (Pennebaker, 1993; Pennebaker, Barger, & Tiebout, 1989). One study showed that people who lived with a person having depression reported that they were upset by that person's complaints of worthlessness and expressions of worry (Coyne et al., 1987). Research has also demonstrated that when people observe the distress of others, they often respond with sharp changes in mood (Tannenbaum & Gaer, 1965).

People also anticipate that others will give unhelpful responses to their revelations, such as unwanted advice or comments to the effect that the listener knows how the individual feels (Lehman, Wortman, & Williams, 1987; Pennebaker, 1993; Pennebaker et al., 1989). There is substantial evidence that when people do disclose private information surrounding a trauma to

others, they tend to receive unhelpful comments (Lehman et al., 1986; Lehman & Hemphill, 1990). Potential confidants interrupt individuals' disclosures and switch the topic of conversation to something other than the trauma. They also tend to impose on the individual their interpretation of the trauma (Coates et al., 1979).

Unwanted or unhelpful responses are intended to discourage open discussion and encourage recovery, yet they actually isolate the individual, dismiss the individual's feelings as being insignificant, and imply that the individual should get over the trauma more quickly than expected (Lehman et al., 1986). By encouraging someone in distress to look on the bright side, a confidant may convey to the person that the person's feelings and behaviors are not appropriate (Kessler et al., 1985). Moreover, when confidants offer advice, they may imply to the individuals that they are incapable of helping themselves (Brickman et al., 1982). Despite the fact that confidants make such abysmal attempts at providing support, people do know what responses would be helpful to individuals who have hypothetically experienced a trauma (Lehman et al., 1986). However, they respond to the individual in ways that dismiss the severity of the individual's distress to diminish their own stress levels that have been generated by the individual's troubles (Lehman et al., 1986).

Another reason why secret keepers get rejected may stem from the fact that they often are not able to articulate their feelings and motivations accurately when revealing their private concerns or problems (see Nisbett & Wilson, 1977). Although people tend to know how they feel, they frequently do not know why they have these feelings (Wilson, Lisle, & Schooler, 1988). When they do attempt to reveal their private feelings or problems, they may use cognitive explanations to describe these deep-seated emotions and may risk presenting distorted images of the feelings or problems (Wilson et al., 1989). As such, their confidants are not able to

understand the concerns or offer appropriate support and feedback following the revelation. For example, a woman might tell her husband that she wants to have an extramarital affair because she has never satisfied her curiosity about other men. The motivation may actually be that she feels neglected by him and wants some validation of her desirability, but because he does not understand her motivation, he cannot respond appropriately.

Two studies offer support for the notion that attempts to explain private feelings can backfire (Ebbesen, Duncan, & Konecni, 1975; Wilson & Kraft, 1993). Wilson and Kraft found that students in a dating relationship who were asked why their relationship was going either well or poorly described reasons that were inconsistent with their actual degree of happiness in their relationship. These students subsequently changed their attitudes in the direction of their reasons. Ebbesen et al. (1975) interviewed 100 technicians and engineers who had just been laid off from jobs at an aerospace company. They asked some of them anger-eliciting questions, such as “What instances can you think of where the company has not been fair with you?” When these same individuals were later asked to rate their attitudes toward the company, they were more hostile toward the company than those who had not been asked the anger-eliciting questions initially. By revealing a biased sample of their attitudes toward the company, these individuals may have created, in their minds, a distorted and quite hostile reality.

One hitch to these studies is that most researchers have explored situations in which the confidant or listener was someone who did not know the individual–secret keeper well. For example, in depression research (Strack and Coyne's, 1983) participants rejected strangers whom they were told were depressed or victimized. In cases where a confidant knows an individual well, or in cases where the confidant is highly trained such as in a counseling context, the confidant may offer more supportive feedback. In such cases, the confidant typically knows

positive aspects of the secret keeper to offset the negative secret or trauma, which may help the confidant avoid rejecting the secret keeper. For instance, in Coyne et al.'s (1987) study, people who lived with a person having depression felt distressed, but they continued to take care of the person.

### Summary

There are several good reasons why people so often choose to conceal their secrets from others. The research on individuals who experienced trauma or violence indicates that the individuals are likely to receive unsatisfactory responses when they do relate their traumatic experiences to others. This rejection and negative feedback could lead people to not share their secrets with the same person or with others in the future. Socially, the secret keeper has learned when it is safe and not safe to reveal secrets and the associated consequences (rewards and punishments) with revealing secrets.

### Exposure to Community Violence

#### Negative Effects of Exposure to Community Violence on African American Youth

The incidence of violence in the lives of adolescents has been a grave concern for an extended amount of time. Homicide is the second leading cause of death for adolescents in the United States and one of the leading causes of child mortality (Office of Juvenile Justice and Delinquency Prevention, 2001a). In 1998, the murder rate for youth under the age of 18 was seven per day (Office of Juvenile Justice and Delinquency Prevention, 2001a). Youth between the ages of 12 and 24 years were exposed to more violent victimization than any other age group (Bureau of Justice Statistics, 2000), and 1 in 18 victims of violent crime is under 12 years of age (Office of Juvenile Justice and Delinquency Prevention, 2001b). These statistics suggest that the number of children and adolescents exposed to violence is substantial.

African Americans are disproportionately represented in impoverished high-risk neighborhoods (e.g., high crime, violence, gangs) relative to all other Americans (Bureau of Justice Statistics, 1990, 1991; US Census Bureau, 1998). Consequently, African-American inner-city youth, in particular, are at risk for all forms of community violence. Bell (1991) reported that by the age of five, most children from poor inner-city communities have had first hand encounters with shootings. By adolescence, most have witnessed stabbings and shootings, and one-third has witnessed a homicide. Similar findings were found among a sample of 1,035 African American high school students participating in violence education programs in Chicago. Seventy-four percent of the participants reported witnessing a stabbing, shooting, killing, or robbery, and 47% reported being victims of serious violent events (Uehara, Chalmers, Jenkins, & Shakoor, 1996). Homicide is the leading cause of death among African American Youth (U.S. Department of Health and Human Services, 2001a), who are almost 10 times more likely than their White peers to be victims of homicide (Anderson & Smith, 2005), with the majority of these violent acts committed by other African American youth known to their victims (Centers for Disease Control, 2000).

School violence is a pervasive public health problem in the United States (Durant, Krowchunck, Keiter, Sinai, & Woods, 1999; Soriano, Soriano, & Jimenez 1994). A nationally representative survey of over 6,500 sixth through twelfth grade students indicated that nearly three-fourths of the students were aware of incidents of physical attack, robbery, or bullying at school, and more than one-half had witnessed these events since the beginning of the school year (Nolin, Davies, & Chandler, 1995). Across the nation, 4% of students missed at least one day of class per month because they felt unsafe at school (Center for the Study and Prevention of Violence, 2001). High standards of school achievement are often sacrificed in an atmosphere of

violence, disorder, and fear (Cirillo, 1998). Despite that school violence is widespread, violence remains less likely to occur at school than in other settings (Small & Tetrick, 2001). Nonetheless, youths aged 12 through 18 years were victimized by 1.2 million nonfatal violent crimes at school in 1998 (Small & Terick, 2001).

### Exposure to Community Violence and Symptoms

Traumatic symptoms (Berman, Kurtines, Silverman, & Serafini, 1996 ; Dempsey, Overstreet, & Moley, 2000 ; Fitzpatrick & Boldizar, 1993; Horowitz, Weine, & Jekel, 1995; Ozer & Weinstein, 2004) and other detrimental outcomes are associated with youth's exposure to community violence including externalizing behavior problems (Ceballo, Dahl, Aretakis, & Ramirez, 2001; Cooley-Quille, Turner & Beidel, 1995; Margolin & Gordis, 2000), juvenile justice problems (Margolin & Gordis, 2000). Youth exposed to chronic high levels of community violence are significantly more likely to show increased general activity and restlessness, with trends suggesting a relation between high violence exposure and externalizing behavior problems. For example, exposure to high levels of community violence led to peer-related aggression (Attar & Guerra, 1994), defensive and offensive fighting and possession of knives and guns (Jenkins & Bell, 1994). These findings are consistent with the literature that suggests chronic exposure to high levels of community violence leads to serious externalizing behaviors, where as acute (nonrecurring) exposure to community violence is more related to internalizing problems (Ceballo, Dahl, Aretakis, & Ramirez, 2001).

Traumatic experiences are also strongly linked to internalizing behaviors such as dissociation (Atlas & Hiott, 1994), suicidal ideation (Flannery, Singer, & Wester, 2001), somatization (Dinizulu, 2006; Ulschmid, 2002), general anxiety and distress (Hill & Madhere, 1996; Singer et al., 1995), PTSD (Martinez & Richters, 1993; Singer et al., 1995) and anger and

depression (DuRant, Getts, Cadenhead, Emans, & Woods, 1995; Fitzpatrick, 1993; Ozer & Weinstein, 2004; Rosenthal & Wilson, 2001). Specifically, Gorman-Smith and Tolan (1998) found that community violence exposure was related to an increase in depression among African American and Hispanic male adolescents over a 1-year time period even after controlling for prior depressive symptoms. In addition to feelings of depression, it is common for urban youth exposed to violence to report hopelessness (e.g. pessimistic future expectations), and negative coping strategies (DuRant, Cadenhead, Pendergrast, Slavens, & Linder, 1994 DuRant et al., 1995).

In sum, research suggests that youth exposed to community violence experience distress across a range of outcomes, including internalizing and externalizing problems (Fitzpatrick & Boldizar, 1993; Freeman, Mokros, & Poznanski., 1993; Martinez & Richters, 1993). The extant literature has been consistent in reporting this pattern of effects (Buka, Stichick, Birdthistle, & Earls; Cooley-Quille et al., 2001).

#### Exposure to Community Violence and Nondisclosure

Research indicates that many youth seek to talk about violent events that they experience. For example, results of studies by Campbell and Schwarz (1996) and Kliewer and colleagues (1998) suggest that adolescent and adult communications influence the psychological sequelae of violent experiences over and beyond the adolescents' experience of general support in their lives. In these studies, youth who were less constrained from talking with others about violent events reported the lowest frequency of intrusive memories of the violent events and the lowest symptoms of anxiety and depression. Talking with others about traumatic events may lead to symptom reduction if the discussions allow for the expression of feelings and thoughts, as well as the opportunity for the adolescent to receive insight to help them interpret their experiences.



Therefore adolescent's perceptions of others' responses when they share their experiences of violence are potentially meaningful in the development of stress-related symptoms (Ozer & Weinstein, 2004). On the other hand, fear of negative consequences, desire to preserve autonomy or desire to protect others might constrain adolescents from disclosing experiences involving violence exposure. Thus, these factors then make it difficult for youth to talk about violent events they experience.

Ozer and Weinstein (2004) examined the influence of perceived social constraint inhibiting disclosure on the relationship between exposure to violence and psychological functioning. In their sample of 349 7<sup>th</sup> grade Asian, African American, and Hispanic students, nearly half of the participants exposed to community violence reported feeling constrained from sharing their thoughts or feelings because of concerns about others' reactions (i.e., making listeners uncomfortable or upset). Students who reported such constraints were more likely to report higher PTSD symptoms (Ozer & Weinstein, 2004).

Taken together, these findings suggest that Nondisclosure might mediate the relation between exposure to community violence and psychological symptoms. This hypothesis, to my knowledge, has not yet been tested. The proposed study tested this model.

#### The Moderating Processes of Parent-Child Attachment

##### and Social Support

Substantial evidence is accruing supporting the moderating roles of Parent-Child Attachment (e.g. Burton & Jarrett, 2000; Gorman-Smith & Tolan, 1998; Kliwer et al., 1998; Overstreet et al., 1999) and Social Support (e.g. Fitzpatrick & Boldizar, 1993; Muller, Goebel-Fabbri, Diamond & Dinklage, 2000; Overstreet et al., 1999; Ozer & Weinstein, 2004) on the relation between Community Exposure to Violence and psychological symptoms. Eight studies

have shown that Parent-Child Attachment and Social Support are traditionally viewed as protective factors in the context of violence and adolescent symptomatology. Specifically, strong attachment and social support attenuate the effect of community violence on Internalizing and Externalizing Symptoms, and youth who have poor attachment and support, the association between Community Exposure to Violence and psychological symptoms strengthens.

Although there is evidence that these variables function as moderators in the relation between Community Exposure to Violence and symptoms, studies have not yet been conducted to examine the processes or mechanisms that explain why or how the protective effect occurs. One possible explanation is that strong relationships make it less likely that adolescents will nondisclose in response to exposure to violence. In other words, strong relationships may break the mediational chain between exposure to violence and symptoms, i.e. the mediational chain may only hold true for adolescents with poor Parent-Child Attachment and Social Support. Preliminary support for that hypothesis is reviewed below.

### Parent-Child Attachment

Nondisclosure. There is an abundance of research examining disclosure as it relates to Parent-Child Attachment. Kerr and Stattin (2000) found that both parent and adolescent reports of poor relationships with parents were inversely correlated with disclosure. Miller and Lane's (1991) findings indicate that children feel closer to parents to whom they disclose more. Darling (2001) found that mother's perception of trust in the parent-child relationship is associated with higher levels of disclosure. Similarly, Smetana and colleagues (2006) found that a context of mutual trust facilitates adolescents' disclosure to parents about various issues such as personal and moral issues. Specifically for this study, Smetana and colleagues (2006) assessed

adolescent's perceptions of trust in their parents and found that adolescents' trust in parents was more strongly associated with disclosure than parent's trust in their child.

In comparison to the disclosure literature, fewer investigations of the link between parent-child relationships and nondisclosure have been established. However, the few studies available strongly suggest that Nondisclosure or keeping secrets is reflective of problematic parent-child relationships (Engles, Finkenauer, & van Kooten, 2006; Finkenauer, Engles, & Meeus, 2002; Kerr & Stattin, 2000). For example, lying has been found to be associated with poorer communication patterns, less trust between parents and their child, and more alienation (Engles, Finkenauer, & van Kooten, 2006). The literature on lying also suggests that full disclosure by adolescents is ideal for parent-child communication and Nondisclosure is problematic (Steinberg, 1990). Similarly, adolescents' secrecy about personal and peer issues have been associated with less trust in the parent-child relationship (Smetana et al., 2006). Findings linking nondisclosure to poor relationships with parents and disclosure to good relationships with parents are based on European American older adolescents in the U. S. (Darling, 2001; Darling, Hames & Cumsille, 2000; Miller & Lane, 1991) and Swedish adolescents (Kerr & Stattin, 2000). Little is known about parent-child relationships and Nondisclosure among urban African American early adolescents. Nonetheless, these studies provide preliminary support for the hypothesis that Parent-Child Attachment effects Nondisclosure mediating the relation between community violence exposure and psychological symptoms.

Exposure to violence. Research on Parent-Child Attachment, particularly for African American youth, indicates that strong Parent-Child Attachment can influence the extent to which youth are affected by violence (Burton & Jarrett, 2000; Gorman-Smith & Tolan, 1998; Hill &

Madhere, 1996). For example, family cohesion (the quality and closeness of the relationship) has been shown to reduce the effects of stress in violent environments (Gorman-Smith, Tolan, Zelli, & Huesmann, 1996; Hammack, Richards, Luo, Edlynn, & Roy, 2004; Kliwer & Kung, 1998) such that youth from cohesive families, the relation exposure to community violence and externalizing behaviors is attenuated, and those who reported low family cohesion, the relation between exposure to community violence and externalizing behaviors is strengthened. Similarly, low family cohesion has been found to strengthen the relation between exposure to community violence and symptoms of anxiety and depression, and youth from cohesive families attenuates the relation between community violence and internalizing symptoms (Gorman-Smith & Tolan, 1998).

In summary, the literature suggests that Parent-Child Attachment moderate the relation between Community Exposure to Violence and psychological symptoms. These moderating effects have been established as protective. However, the literature does not report the mechanisms through which these moderation effects occur. One purpose of this study was to examine a possible mechanism through which this moderating process could be understood. Specifically, strong parent-child relationships might make it less likely that Nondisclosure mediates the relation between Community Exposure to Violence and Psychological Symptoms.

### Social Support

The concept of Social Support is not limited to one dimension for this study. Therefore, Social Support is examined at multiple ecological levels. For this study, Social Support will be examined at the extended family and community level. It is important to review each dimension, because each aspect may have different moderating effects and implications for the relation between Community Exposure to Violence and psychological Symptoms.

Definition. Most definitions of Social Support focus on the linkages of support received from all social units, both persons and groups, with which a person has contact (Boissevain, 1974). These contacts include relationships based on kinship, sentiment and exchange of material, emotional, and informational resources, as well as contacts with less defined functions. For this study, Social Support is operationalized as the frequency of Social Support the adolescent receives from extended family and from adults in their neighborhood/community. Specifically, this includes adults monitoring, attending activities, meeting and communicating with adolescents.

Levels of social support. As children progress toward and through adolescence, they typically are exposed more frequently and for longer durations to a broader array of social networks, as the predominant family context of childhood expands to include interactions with extended family, peers, and with people in the community and school settings (Barber & Erickson, 2001). Research has suggested that children and adolescents with supportive parents benefit more from additional social support outside of the home than those who have less positive relationships with their parents (Stocker, 1994). According to Barber and Erickson (2001), the quality of the parent-child attachment is the most influential predictor of the ability of the child and adolescent to establish social connections outside of the home. Through social relationships with parents, children and adolescents develop values, goals, rules, skills, and behaviors for engaging in social relationships outside of the home (Crockenberg et al., 1996; Scheier & Botvin, 1998). Thus, children who have relationships with parents that contain nurturant, supportive, and facilitative characteristics learn a supportive relationship style that they use with others. For example, children and adolescents learn social behaviors such as smiling, praising, spending quality time, and talking, which become useful in relationships with peers,

adults and extended family outside of the nuclear family. In essence, children learn from their parents' how to behave in other social interactions (Crockenberg et al, 1996).

Extended kinship. Extended kinship support is a valuable resource commonly used in African American families (Demo & Cox, 2000; Dilworth-Anderson et al., 1993; Harrison et al., 1990; Sudarkasa, 1997; Weiss, 1986). Extended family refers to relatives such as aunts, uncles, grandparents, and cousins. The African American extended family has been characterized as interdependent, bilateral, and multigenerational (Billingsley, 1968; Stack, 1974; Taylor, 2000; Wilkinson, 1993). Members often live in close proximity, have fluid household boundaries, and engage in social activities together. Many African Americans consider extended kinship support as an adaptive strategy that allows for the sharing of resources (Hunter, 1997; Stack, 1974; Taylor, 2000; Taylor et al., 1990; Tolson & Wilson, 1990), such as materials/goods, income, child care, household maintenance assistance, emotional support, counseling, and social regulation, just to name a few.

Empirical studies of extended kinship support largely focus on at-risk African American families and the role of grandmothers in rearing the children of teenage mothers (Brooks-Gunn & Furstenberg, 1986; Flaherty, 1988; Flaherty et al., 1994; McLloyd et al., 1994; Stack, 1974; Wilson, 1984). These studies have revealed that intergenerational and kinship relationships are especially important for single-parent and low-income African American families. Extended kin support has been shown to reduce the level of stress experienced by single parents, enhance parenting skills, and also facilitate the youth's positive development (Brooks-Gunn & Furstenberg, 1986). The results of these studies involving at-risk families emphasize that extended kinship support has indirect rather than direct effects, mainly through improving parenting quality (Lamborn & Nguyen, 2003). When parents, especially single mothers, receive

practical, social, and emotional support from extended family, parents tend to negotiate interactions with their children in a more positive manner (Furstenberg & Crawford, 1978; McLahahan et al., 1981; Wilson, 1984; 1986; 1989). In short, extended family networks minimize the negative behavioral patterns associated with poverty and challenging circumstances by encouraging positive parental interactions (Colletta, 1981).

In summary, an extensive review of the literature suggests that positive parent-child relationships help a child develop good relationships with extended family and that good kinship support can lead to better parent-child relationships. Thus, a reciprocal relationship appears to exist between these variables.

Community social support. Beyond the extended kin level, adults in the community may serve as another source of social support for adolescents. Adults in the community consist of but are not limited to teachers, members of clergy, coaches, youth group leaders, school counselors, baby sitters, parents of local friends, and neighbors. Literature suggests that regardless of the nature or extent of adversity to which an adolescent is exposed, the presence of a warm and caring adult can serve a protective function (Katz, 1997; Luthar & Zigler, 1991; Werner, 1995). Survivors of childhood adversity who identify at least one supportive adult from their past (not including a parent) demonstrate less violent behavior, better relationships with parents and peers (Grossman & Tierney, 1998), better psychological adjustment (Rhodes, Ebert, & Fisher, 1992) fewer conduct disorders (Rutter, 1972), and an overall improvement in psychological well-being, level of functioning, and quality of life than their less supported counterparts (Werner & Smith, 1992).

Social support and nondisclosure. There is no literature, to my knowledge, on the relation between Nondisclosure and Social Support from outside the family. However, as

reviewed above, there is evidence that those who have strong Parent-Child Attachment tend to disclose more and be more socially competent and better able gain social support from adults outside of the home. This suggests that youth with strong relationships outside the nuclear family may also be more willing to disclose to adults in these social networks.

Social support and exposure to community violence. Much of the research examining violence exposure and the protective effects of Social Support, from non-family, derives from the child maltreatment literature (Gold, Milan, Mayall, & Johnson, 1994; Jones, 1997; Kinard, 1995). Several studies have shown that high Social Support (kin and non-kin support) reduces the impact of both child sexual abuse (Asti, Lawrence, & Foy, 1993; Testa, Miller, Downs, & Panek, 1992) and physical abuse (Runtz & Schallow, 1997) on the development of psychopathology. For youth who are survivors of abuse within their family, having social support from an alternative caregiver may provide them with cognitive and emotional support as well as a model of appropriate social interaction (Caliso & Milner, 1994). Very few studies have examined the role of Social Support, specifically from adults outside the family as a buffer against the adverse effects of exposure to community violence (see Muller, Goebel-Fabbri, Diamond & Dinklage, 2000). Based on recent literature review, many of the studies combine Social Support as coming from family and adults outside of the family. To my knowledge, no studies have teased apart the effects of receiving Social Support from family and adults outside of the family in the context of community violence. The literature reports youth receiving Social Support from adults, which again include family and non-kin individuals.

Nevertheless, the available studies indicate so far that Social Support may play a buffering role to some extent (Berman et al., 1996; Hill, Levermore, Twaite, & Jones, 1996; Hammack, Richards, Luo, Edlynn, & Roy, 2004; Muller, Goebel-Fabbri, Diamond & Dinklage,



2000; Ozer & Weinstein, 2004). One protective effect has been found when youth use their social support systems to provide them with opportunities to voice their exposure to violence, and thus, process their experiences with adults within their network. This opportunity has been shown to facilitate adolescents coping with stressful experiences of violence exposure subsequently enhancing psychological development and well-being (Sandler et al., 1989). In a sample of urban adolescents, protective effects for Social Support, from non-related adults, were found in relation to exposure to community violence and internalizing symptoms (Ozer & Weinstein, 2004). Muller and colleagues (2000) examined both family violence and community violence separately in relation to Social Support and found that Social Support emerged as a protective factor with respect to the maladaptive effects of family violence. However, Social Support did not appear to buffer the maladaptive effects of community violence. This suggests that exposure to family violence may affect development differently than exposure to community violence (Muller, Goebel-Fabbri, Diamond & Dinklage, 2000). The current study attempts to better understand the role of Social Support from adults outside the family in the context of community violence.

In general, empirical research suggests that Social Support is more likely to buffer the adverse effects of violence experienced by adolescents within the family than it is to buffer the effects of violence experienced in the community (Belle, 1989; Berman et al., 1996; Coates; 1987, Hammack, Richards, Luo, Edlynn, & Roy, 2004; Hill, Levermore, Twaite, & Jones, 1996; Muller, Goebel-Fabbri, Diamond, & Dinklage, 2000).

In conclusion, similar to Parent-Child Attachment, Social Support has also been reviewed as a moderator protecting the well-being of adolescents in the context of community violence. The literature also does not report the mechanisms through which this moderator functions.

Thus, this study proposed and examined a possible mechanism through which this moderating process might occur. Specifically, strong social support would weaken Nondisclosure mediating the relation between Community Exposure to Violence and psychological symptoms. On the other hand, Nondisclosure is expected to mediate the relation in the presence of weak support.

### Rationale

This study tested various path models in an attempt to examine possible relations among Community Exposure to Violence, Nondisclosure, and psychological symptoms in urban African American adolescents. The main pathway of interest predicted that Nondisclosure will mediate the relation between Community Exposure to Violence (CETV) and symptoms, such that CETV predicts Nondisclosure, and Nondisclosure predicts psychological symptoms. This study also proposed that the subscales of the Nondisclosure measure, Autonomy vs. Authority and Relationship Problems, will each mediate the relation between CETV and psychological symptoms, such that CETV predicts Autonomy vs. Authority or Relationship Problems, and these subscales in turn predict psychological symptoms. This study also examined the influence of Parent-Child Attachment (PCA) and Social Support (SS) as possible moderators of this mediating path. Specifically, it is hypothesized that the association between CETV and symptoms as mediated by Nondisclosure, or the subscales of Nondisclosure, will be stronger when PCA and SS are weak. In contrast, the mediating relation is expected to not be significant in the presence of strong PCA and SS.

Integrative models such as these have not been tested in previous research as most of the literature examines moderating or mediating pathways separately. Thus, analyses of complex models that incorporate both types of mechanisms could provide the field with a comprehensive understanding of pathways and processes through which violence affects adolescents.

Statement of Hypotheses

Hypothesis I: The proposed conceptual model (see Figure 1, model a) in which Nondisclosure will mediate the relation between CETV and Internalizing and Externalizing Symptoms will fit the data.

Hypothesis II: The proposed conceptual model (see Figure 1, model b) Autonomy vs. Authority (Nondisclosure subscale) will mediate the relation between CETV and Internalizing and Externalizing Symptoms will fit the data.

Hypothesis III: The proposed conceptual model (see Figure 1 model c) Relationship Problems (Nondisclosure subscale) will mediate the relation between CETV and Internalizing and Externalizing Symptoms will fit the data.

Hypothesis IV: The relations among variables in the mediation model, explained in Hypothesis I, will be moderated by Parent-Child Attachment, such that the model will better fit the data in the presence of weak Parent-Child Attachment than it will in the presence of strong Parent-Child Attachment.

Hypothesis V: The relations among variables in the mediation model, explained in Hypothesis II, will be moderated by Parent-Child Attachment, such that the model will better fit the data in the presence of weak Parent-Child Attachment than it will in the presence of strong Parent-Child Attachment.

Hypothesis VI: The relations among variables in the mediation model, explained in Hypothesis III, will be moderated by Parent-Child Attachment, such that the model will better fit the data in the presence of weak Parent-Child Attachment than it will in the presence of strong Parent-Child Attachment.

Hypothesis VII: The relations among variables in the mediation model, explained in Hypothesis I, will be moderated by Social Support, such that the model will better fit the data in the presence of weak Social Support than it will in the presence of strong Social Support.

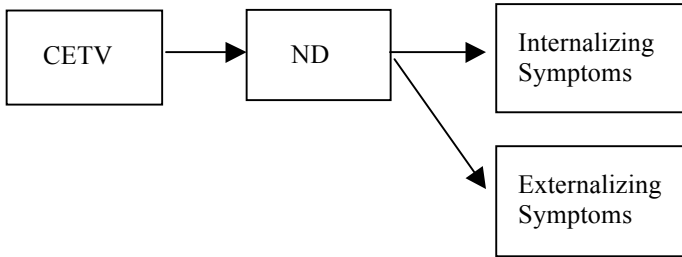
Hypothesis VIII: The relations among variables in the mediation model, explained in Hypothesis II, will be moderated by Social Support, such that the model will better fit the data in the presence of weak Social Support than it will in the presence of strong Social Support.

Hypothesis IX: The relations among variables in the mediation model, explained in Hypothesis III, will be moderated by Social Support, such that the model will better fit the data in the presence of weak Social Support than it will in the presence of strong Social Support.

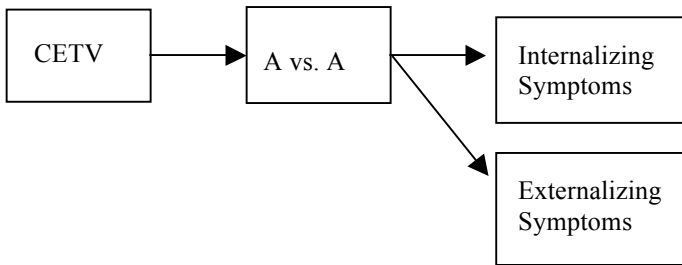
FIGURES

Figure 1. Path Analysis Model for all Hypotheses

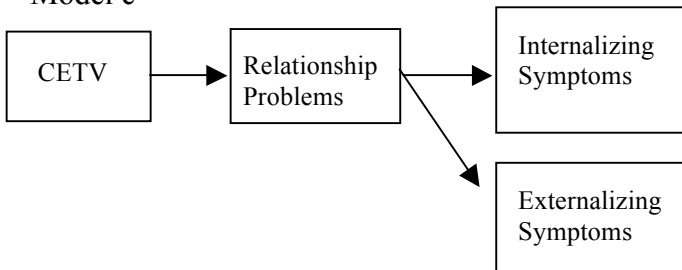
Model a



Model b



Model c



CETV= Community Exposure to Violence  
ND= Nondisclosure  
A vs. A= Autonomy vs. Authority

## CHAPTER II

### METHOD

#### Participants

A total of 153 urban African American youth (101 females and 52 males) in grades six through eight were recruited to participate in the study. Participants were between the ages of 11 and 15 years. Participants were recruited from schools located in low-income neighborhoods designated as high or moderate risk based on published summary data from Chicago Public Schools, local law enforcement agencies, and the latest available U.S. Census data. These data included percentages of low-income residents, crime statistics, and annual percentage of school turnover. The schools were located in neighborhoods predominately populated by African American and Latino residents. Additionally, the schools of homogeneous ethnic makeup were selected based on published Chicago Public School data. The schools from which the students were recruited were populated by approximately 70% to 98% African American students and had low-income rates of 95% to 98% (CPS, 2005). In order to participate, students had to complete an assent form, and return a consent form and a demographic survey completed by their primary caregiver(s). All students participated in regular education classes at three urban public schools.

#### Recruitment

African American youth were recruited from sixth, seventh, and eighth grade classrooms from three K-8 Midwestern urban schools (from different neighborhoods). During classroom visits, graduate students explained the study and distributed written information and consent/assent forms and demographic surveys and contact forms. Teachers collected consent and assent forms, and provided each student who returned these materials with demographics surveys, contact information forms, and a bag of chips. Students were also given a bag of chips

if their parent did not consent as long as the consent form was submitted to the teacher. Parents were invited to ask questions about the project and team members phoned parents to answer questions as they arose.

### Data Collection

Within each school, participants were pulled from different classes to partake in the two hour administration of seven measures and a satisfaction survey. Students who declined to participate in the study continued to participate in classroom instruction conducted by their teacher. Doctoral students administered surveys to groups of participants. Whenever possible, ethnic matches between participants and doctoral administrators were arranged. The measures were administered anonymously and had pre-written identification numbers on them.

On the day of administering the measures, teachers were asked to return the completed consent/assent, contact and demographic forms to participating students. This served as a ticket for students to be permitted into the space in which the study was conducted. During data collection, students were asked to sit at a desk. Doctoral students asked each student, at his/her desk, to submit the contact, demographic, and the consent/assent forms. This process was conducted to ensure that all students submitted a signed consent form and to ensure that the demographic and contact information forms were completed. At the time of collection of these forms, the demographic form was separated, and the doctoral students placed a pre-numbered sticker on the demographic form. That same number was also placed on the measure/questionnaire packet. This was done one at a time for each student. This ensured the demographics forms corresponded to the correct packet. Students who participated in the study received two movies passes (a value worth approximately \$19) immediately following the completion of the measures as compensation for their time. Upon completion of the measures,

participants received debriefing forms that included questions about their feelings about the study and their possible interest in additional debriefing or mental health services. No participant identified the need for additional debriefing or additional services.

### Measures

Reasons for Keeping Things Private (RFKTP)- Revised (McIntosh & Dinizulu, 2005) is a 21-item questionnaire that examines the reasons youth might have for nondisclosure of information to parents and other adults and the frequency with which they nondisclose for each reason. Representative questions are “How often do you keep something to yourself because you don’t want your parent/other adults to worry about you?” and “How often do you keep something to yourself because you feel ashamed about it? Frequency is rated on a 3-point Likert scale (1 = never, 2 = sometimes, 3 = a lot). Cronbach’s alpha for this sample was .87 indicating excellent internal consistency. Internal consistency was slightly higher for girls (.89) than for boys (.82). Factor analysis was used to develop the following subscales for the RFKTP measure and the following two were used for this study for mediation and moderated mediation analyses: 1) Relationship Problems ( $\alpha=.81$ ), 8 items, and 2) Autonomy vs. Authority ( $\alpha=.72$ ), 5 items. Sample item for Relationship Problems is “How often do you keep something to yourself because you feel there is no adult you could trust?” For Autonomy vs. Authority, a sample item is “How often do you keep something to yourself because you want freedom from rules?” Total scores were used to calculate total nondisclosure and the items specific to the subscales were used to calculate total scores.

Youth Self Report (YSR) (Achenbach, 1991). The YSR includes 112 items, which the adolescent rates on a 3-point scale as 0 = not true, 1 = somewhat or sometimes true, or 2 = very true or often true of himself or herself during the past six months. The YSR consists of two



empirically derived broad-band syndromes (internalizing and externalizing) and eight empirically derived narrow-band syndromes (withdrawn, somatic complaints, anxious-depressed, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior). For this study the internalizing and externalizing broad-band syndromes will be examined. Sample internalizing items include “I am too fearful or anxious,” “I cry a lot,” and “I feel worthless or inferior.” Sample externalizing behavior items include “I get in many fights”, “I am mean to others”, and “I physically attack people.” Normative data for the YSR are based on a nationally representative community sample of children and adolescents with separate norms for boys and girls (Achenbach, 1991). Total scores were used from the internalizing and externalizing subscales to calculate the T-scores that were used for current study. Reliability and validity are well established for the YSR (Achenbach, 1991). For this sample the alpha for internalizing symptoms was .89 and for externalizing symptoms was .92.

Exposure to Violence (Martinez & Richters, 1990). Lifetime exposure to violence was assessed by using a modified version of the Exposure to Violence Survey--Screening Version, a 58-item questionnaire developed on fifth and sixth grade low-income urban African American youth. The original version consisted of 58 true or false items. To provide additional information, participants responded to the items based on a five point Likert scale that ranges from “Never” to “Has happened more than six times.” The measure asked respondents to report whether they have witnessed or experienced 27 types of violence/crime including gang violence, drug trafficking, burglary, police arrests, assaults, physical threats, sexual assaults, weapon carrying, firearm use, and intentional injuries such as stabbings, gunshots, suicides, and murders. For this study, items pertaining specifically to community violence were selected. This means the items that surveyed family violence were advised to be not included (Personal

Communication, April 2008). There were a total of 49 questions that assessed the frequency of community exposure to violence. These items were calculated to yield a total score for each participant. Sample items consist of: “I have been in a serious accident where I thought that someone would get hurt very badly or die”, “I have been threatened with serious physical harm by someone.” Richters and Martinez (1990) report good test retest reliability for the measure ( $r = .90$ ) and the modified version, used in the present sample, demonstrated excellent internal consistency reliability ( $\alpha = .95$ ).

Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987). This study used the parent version of IPPA, which consists of 28 items. However, two different items were discarded because the questions were similar in content and wording to two items listed on the Relationship Problems Subscale of Nondisclosure. For this study, a total of 26 items instead of 28 were used. The IPPA was designed to assess adolescent-parent relations using the conceptual framework of attachment theory. The IPPA has been used with adolescents of a range of ages including college samples, such as the one on which it was originally tested (Armsden & Greenberg, 1987; Blain, Thompson, & Wiffen, 1993), samples in mid to late high school (O’Koon, 1997; Schneider and Younger, 1996), and middle-schoolers (Marcus & Betzer, 1996; Sund & Wichstrom, 2002). Each item is scored by the participant as “Always or almost always true,” “Often true,” “Sometimes true,” “Seldom true,” or “Almost never or never true.” Depending on whether the item is negatively stated (e.g. “Talking over my problems with my parents makes me feel ashamed or foolish”) or positively stated (e.g. “I like to get my parents’ point of view on things I’m concerned about”), responses are coded normally or reverse-coded.

The IPPA has also demonstrated high internal consistency in a study of urban African American adolescents (Gonzales, Cauce, Friedman, & Mason, 1996). Total scores were

calculated for each person and used in this study. The sample for this study also demonstrated good reliability in the present sample ( $\alpha = .85$ ).

Community Social Support and Connections Survey (McIntosh & Dinizulu, 2005). The Community Social Support and Connections questionnaire was adapted from existing measures of social integration (e.g Darling & Steinberg, 1997). The measure consists of 12 items that assess social connections and support primarily at the extended family and community level. However, for this study, only 8 items were used in the analyses because 4 of the items pertained specifically to parent-child involvement. As discussed earlier, the Inventory of Parent and Peer Attachment was used to assess parent-child attachment/relationship. The items are based on a three point Likert scale (0= Not Common at All to 3 =Very Common). A sample item is “How commonly do your neighbors attend your school events?” and “How commonly is it for relatives to ask you how school is going?” Total scores were calculated for each participant and used for the current study. The alpha for the entire sample for this study is .80.

## CHAPTER III

### RESULTS

#### Data Screening

Various screening analyses were conducted to prepare data for formal structural equation modeling (SEM). The variables Community Exposure To Violence (CETV), Nondisclosure, Relationship Problems and Autonomy vs. Authority subscales, Internalizing and Externalizing Symptoms, Social Support and Parent-Child Attachment were screened for outliers, skewness, kurtosis, and missing values. CETV displayed three cases that were outliers (more than three standard deviations above the mean) and a right tailed skewed distribution. To avoid reducing sample size, as advised by statistician David Henry at the Institution for Juvenile Research (personal communication, September 5, 2007), the outliers were recoded to the highest value that was three standard deviations above the mean for CETV. Recoding the values yielded a slight right tail skewed distribution indicating that more youth reported lower frequencies of exposure to community violence. Skewness was not further addressed because the youths' reports of their exposure to community violence were believed to be representative of their experiences. Even in this impoverished urban sample, one might not expect CETV to be normally distributed. Therefore, it is believed that the CETV distribution of the sample used for this study provides meaningful data about the adolescents' reports of their experiences of community violence. All other variables included in the study displayed a normal distribution, with no outliers, skewness, or kurtosis.

Missing Value Analyses (MVA) were conducted to handle cases with missing data points for all variables except CETV and Social Support, which did not have any missing data. Percentage of missing data ranged from 5% to 14% on particular measures with the

Nondisclosure measure having the highest percentage. MVA is traditionally used for data that has more than 10% percent missing, but to keep the sample size equivalent, MVA was applied to all measures. Little's missing completely at random (MCAR) test, which is a chi-square test, was used to determine the type of missing data in this study. If the p value for Little's MCAR test is not significant, then the data may be assumed to be MCAR. Based on Little's MCAR test, the Chi-square values were nonsignificant, and thus, the data for each variable were presumed to be MCAR, which indicates missing values are randomly distributed across all observations. Data defined as MCAR allows for using expectation maximization (EM), in MVA, to generate values for missing data. EM is an iterative process for estimating the value of unknown parameters given measurement data (e.g., correlations or covariance matrices), which are used to generate values for missing data. EM alternates between performing an expectation (E) step, which computes an expectation of the log likelihood with respect to the current estimate of the distribution for the latent variables, and a maximization (M) step, which computes the parameters that maximize the expected log likelihood found on the E step. These parameters are then used to determine the distribution of the variables in the next E step, and then in the next M step. The new estimates are used to impute data, and so on until the solution produces a final value for the unknown parameter.

Mean split analyses were conducted to divide youth's responses on the Parent-Child Attachment and Social Support measures into two groups each. Values above the mean were considered high/strong and values below were considered low/weak Parent-Child Attachment and Social Support.

When examining the moderators by cell, all of the data were normally distributed, except that CETV continued to be slightly right tail skewed for both levels of the moderators. Table 1

summarizes the sample size, the mean and standard deviations for each cell. Table 2 depicts a correlation table of the variables used in the study.

### Path Analyses

All SEM analyses were conducted using LISREL 8.8 (Joreskog & Sorborm, 2006). Six sets of path analyses were performed. The first three sets of analyses used the covariance matrix derived from the entire sample and the first of these analyses tested the hypothesized relations using total Nondisclosure as the mediator (see Table 3). The second tested the Nondisclosure subscale, Autonomy vs. Authority, as the mediator, and the third tested the subscale Relationship Problems as the mediator (see Table 3). The fourth set used the covariance matrix from the sample subsets (i.e., high vs. low Parent-Child Attachment or Social Support) to test the moderated mediation hypotheses using total Nondisclosure as the mediator (Tables 4 -7). Finally the fifth and six set used the covariance matrix from the sample subsets to test the moderated mediation hypotheses using the two subscales of the Nondisclosure measure (Tables 4-7).

Prior to testing for mediation, the fit of the proposed model was assessed (see Figure 1a). To determine if a model fits the data the chi-square and degrees of freedom must be considered. The fit statistics showed that the chi-square was significant, which typically indicates deviation of the model from the data. In an attempt to improve the fit of the model, modification indices were examined. These recommended adding bidirectional paths between Internalizing and Externalizing Symptoms, adding a path from Internalizing to Externalizing Symptoms, or allowing these symptoms to correlate. Adding bidirectional paths made the model unidentifiable, such that no T-scores, error variances or other parameters could be estimated. Adding a path from Internalizing to Externalizing Symptoms or allowing these symptoms to correlate, resulted in a model that had zero degrees of freedom and thus, no fit statistics were

generated because the model was saturated (see table 8, model a). A saturated model is a perfect fit to the data (i.e., chi-square is nonsignificant), which yields parameter estimates, but no fit statistics. For mediation analyses, the saturated model allowing Internalizing and Externalizing Symptoms to be correlated was selected because the modification indices indicated that the unexplained variance in the endogenous variables of these symptoms was correlated.

To determine if Nondisclosure mediates the relation between CETV and Internalizing and Externalizing symptoms, the steps recommended by Holmbeck (1997) were used. According to this method, the following conditions are necessary for establishing mediation using Structural Equation Modeling (SEM): 1) a model in which CETV (the predictor variable) predicts the outcome variable(s) (Internalizing and Externalizing Symptoms) fits the data; 2) a model in which CETV (the predictor variable) predicts Nondisclosure (the hypothesized mediator variable), which in turn predicts Internalizing and Externalizing Symptoms (the outcome variables) fits the data; 3) the pathways between CETV (the predictor variable) and Nondisclosure (the mediator variable) and between Nondisclosure (the mediator variable) and Internalizing and Externalizing Symptoms (the outcome variables) are significant and in the directions predicted. The fourth and final step in assessing whether there is a mediational effect is to assess the fit of the entire model (CETV → Nondisclosure → Internalizing/Externalizing Symptoms) under two conditions: (a) when the pathways from CETV to Internalizing and CETV to Externalizing Symptoms are constrained to zero and (b) when the pathways are not constrained. Further, the unconstrained pathways from CETV to Internalizing and Externalizing Symptoms coefficient values should be nonsignificant when the mediator is included in the model. Whether or not improvement of fit occurred is assessed with a chi-square difference test

on the basis of the difference between the two model chi-squares of the unconstrained and constrained models.

Table 1  
Descriptives of Variables by Cell

Moderators		CETV	Nondisclosure	Relationship	A vs. A*	Internalizing	Externalizing
				Problems		Symptoms**	Symptoms**
High Parent-Child Attachment	N=	76	76	76	76	76	76
Mean= 105.06	Mean=	36.98	26.19	6.32	4.48	56.11	53.01
	SD=	30.21	10.65	3.44	1.97	9.11	11.28
Low Parent-Child Attachment	N=	75	75	75	75	75	75
Mean= 80.58	Mean=	42.38	35.31	9.59	6.28	59.44	58.21
	SD	27.18	11.44	3.67	2.37	10.52	10.01
High Social Support	N=	78	78	78	78	78	78
Mean= 19.44	Mean=	37.26	28.01	7.14	4.96	55.87	53.41
	SD=	30.2	11.25	3.76	2.31	9.2	9.75
Low Social Support	N=	75	75	75	75	75	75
Mean= 14.00	Mean=	42.24	33.66	8.84	5.84	59.78	57.92
	SD=	27.15	12.00	3.90	2.33	10.37	11.68

\* A vs. A= Autonomy vs. Authority

\*\* Mean Scores provided are T-Scores

Table 2  
Correlation Matrix Used for Mediation Analyses

	1	2	3	4	5	6
Community Exposure to Violence	1					
Nondisclosure	.42**	1				
Autonomy vs. Authority	.40**	.79**	1			
Relationship Problems	.36**	.91**	.59**	1		
Internalizing Symptoms	.22**	.36**	.28**	.37**	1	
Externalizing Symptoms	.35**	.47**	.53**	.39**	.62**	1

\*\*p<.01



Table 3  
Correlation Matrix of Variables Used for  
Mediation Analyses

	1	2	3	4	5	6
Community Exposure to Violence	827.222					
Nondisclosure	144.180	142.394				
Autonomy vs. Authority	40.466	22.065	5.556			
Relationship Problems	27.116	42.304	5.458	15.302		
Internalizing Symptoms	62.113	42.895	6.573	14.362	99.107	
Externalizing Symptoms	109.387	61.918	13.561	16.595	67.209	119.81

Table 4  
Covariance Matrix used for Moderated Mediation Analyses: High  
Parent-Child Attachment

	1	2	3	4	5	6
Community Exposure to Violence	912.89					
Nondisclosure	154.6	113.06				
Autonomy vs. Authority	22.39	20.83	3.9			
Relationship Problems	44.61	37.98	4.7	11.87		
Internalizing Symptoms	109.62	41.6	5.38	15.46	83.06	
Externalizing Symptoms	142.65	50.94	10.07	13.86	64.11	127.37

Table 5

Covariance Matrix used for Moderated Mediation Analyses: Low Parent-Child Attachment

	1	2	3	4	5	6
Community Exposure to Violence	738.87					
Nondisclosure	111.01	130.87				
Autonomy vs. Authority	27.24	20.83	5.62			
Relationship Problems	28.01	37.98	4.71	13.5		
Internalizing Symptoms	6.99	29.47	4.82	7.98	110.67	
Externalizing Symptoms	63.86	49.72	12.47	10.96	62.44	100.33

Table 6

Covariance Matrix used for Moderated Mediation Analyses: High Social Support

	1	2	3	4	5	6
Community Exposure to Violence	912.12					
Nondisclosure	139.55	126.1				
Autonomy vs. Authority	25.98	20.54	5.36			
Relationship Problems	36.79	38.23	4.92	14.14		
Internalizing Symptoms	82.05	46.8	7.25	16.46	84.68	
Externalizing Symptoms	133.18	53.45	11.91	14.75	52.03	95.22

Table 7

Covariance Matrix used for Moderated Mediation Analyses: Low Social Support

	1	2	3	4	5	6
Community Exposure to Violence	737.29					
Nondisclosure	136.41	144.22				
Autonomy vs. Authority	26.4	21.38	5.43			
Relationship Problems	40.71	42.05	5.31	15.21		
Internalizing Symptoms	32.16	27.98	4.18	8.93	107.54	
Externalizing Symptoms	74.52	58.39	13.4	14.77	74.79	136.52

If there is a mediational effect, the A to C pathway (i.e., CETV to Internalizing and Externalizing Symptoms) of the constrained model should not improve the fit when the mediator is taken into account, and thus, the chi-square difference test should be nonsignificant. See Figure 1 for the hypothesized models. As shown, for example, in Figure 2, model a, the unconstrained model tested includes a path from CETV to Nondisclosure, followed by pathways from Nondisclosure to Internalizing and Externalizing Symptoms.

To test for mediation using SEM, fit statistics are not required (see Holmbeck, 1997), but the model must fit the data (as indicated by a nonsignificant chi-square). Fred Bryant, Ph.D. reported that the statistics that are needed to test for mediation are the parameter estimates (i.e., unstandardized coefficient values (B not  $\beta$ ), standard errors, and t value) and a chi-square difference test based on the comparison of fit between the model in which the A (i.e., the predictor) to C (i.e., the outcome) pathway is unconstrained and the model in which the pathway

is constrained to 0 (Personal Communication, December 15, 2008). As discussed earlier, the saturated model allowing Internalizing and Externalizing Symptoms to be correlated was chosen. A saturated model is a perfect fit to the data (i.e., chi-square is nonsignificant), which yields parameter estimates, but no fit statistics. The parameter estimates were used to test for mediation as outlined by Baron and Kenny (1986) and Holmbeck (1997).

Each of the proposed paths was individually tested (i.e., each pathway calculated separately in SEM) and was significant as required to test for mediation steps 1 through 3: step 1 CETV → Internalizing ( $B=.075$ ,  $t=2.73$ ) and Externalizing Symptoms ( $B=.132$ ,  $t=4.55$ ), step 2 CETV → Nondisclosure, ( $B=.174$ ,  $t=5.68$ ) and step 3 Nondisclosure → Internalizing ( $B=.301$ ,  $t=4.76$ ) and Externalizing Symptoms ( $B=.435$ ,  $t=6.62$ ). The fourth and final step in assessing whether there is a mediational effect is to assess the parameter estimates and to compare the fit of the unconstrained and constrained models (see Figure 2 model a and model b). The results of these analyses indicated that the Chi-square differences test ( $X^2=5.36$ ,  $df=2$ ,  $p=.07$ ) revealed no significant difference/improvement between the models. Additionally, this last step of testing for mediation showed that when assessing the parameter estimates of the entire unconstrained model, the pathway from CETV to Internalizing Symptoms (i.e., for the unconstrained model) was nonsignificant ( $B=.027$ ,  $t=.950$ ), suggesting mediation, but the pathway from CETV to Externalizing Symptoms was significant ( $B=.069$ ,  $t=2.32$ ), suggesting non-mediation or a partial mediating effect.

The model with CETV to Internalizing and Externalizing Symptoms pathways constrained to 0 (see Figure 2 model b) yielded an unsaturated model because there were two degrees of freedom remaining (resulting from constraining the pathways to 0) (see Table 8, model b) and fit statistics. Therefore, fit statistics for this model could be examined. To

determine if a model is a *good* fit to the data, current literature suggests that the following fit statistics must be considered and accompanying values are used as guidelines: 1) root-mean square error of approximation (RMSEA), having a pvalue of .05 or lower indicates a good fit, and values ranging from .08 to .10 indicates a mediocre fit (MacCallum, Browne, & Sugawara 1996), 2) the standard root-mean residual (SRMR) having a value of .08 or less indicates a good fit, 3) CFI having a value of .90 or above indicates a good fit and 4) the Non-Normed Fit Index (NNFI) (also known as Tucker-Lewis Index) having a value of .90 or above indicates a good fit (Bentler & Bonnet, 1980; Hu & Bentler, 1998). It is important to examine fit statistics when available to assess the fit of the models to a greater number of parameters of the data. The SRMR, CFI, and NNFI for the constrained model suggested a good fit of the model to the data. However, the RSMEA was .11, indicating a marginal poor fit. Taken together, these results generally indicate a good fit to the data due to three out of four fit statistics meeting the cut-off values.

Post-hoc probing of mediating effects involved conducting Sobel's test for significant reduction of the direct effect (i.e., the independent variable on the dependent variable) when the mediator is included in the model. Sobel's test results indicated a significant reduction of direct effect for the pathway from CETV to Internalizing Symptoms ( $t=3.23$ ,  $p<.001$ ), and from CETV to Externalizing Symptoms ( $t=3.79$ ,  $p<.000$ ). Taken together with the previously reported findings, this suggests that Nondisclosure fully mediated the relation between CETV and Internalizing Symptoms and partially mediated the relation between CETV and Externalizing Symptoms.

An additional measure of the extent of mediation can be determined by calculating the decomposition of the total effect (i.e.,  $\% = B_{\text{indirect effect}}/B_{\text{total effect}}$ ) to determine the effect the

mediator has on the pathways from CETV to Internalizing and Externalizing Symptoms (MacKinnon & Dwyer, 1993). Results of applying the formula to the present data revealed that 63% of the effect of CETV on Internalizing Symptoms and 48% of the effect of CETV on Externalizing Symptoms was mediated through Nondisclosure.

The second and third set of path analyses addressed the hypotheses that the two Nondisclosure subscales, Autonomy vs. Authority and Relationship Problems, mediate the relation between CETV and Internalizing and Externalizing Symptoms. It was proposed that CETV would predict Autonomy vs. Authority, and that this proposed mediator would predict Internalizing and Externalizing Symptoms (see Figure 2 model c). A similar model was proposed in which Relationship Problems served as the mediator (see Figure 2, model e). Similar to the findings for analyzing total Nondisclosure, results of SEM analyses revealed a significant chi-square for each of these proposed models. Modification indices for both subscales were examined and the recommendations (i.e., add bidirectional paths between Internalizing and Externalizing Symptoms, add a path from Internalizing to Externalizing Symptoms, or allow these symptoms to correlate) were exactly the same as those recommended in the model including total Nondisclosure as the proposed mediator. As with the previous model testing that applied the recommended modifications, the analyses yielded either one or more of the following outcomes: 1) the models had zero degrees of freedom, indicating a saturated model, 2) the analyses were unidentifiable and thus did not yield error variances, t-scores and other statistics or 3) the models had significant chi-square values. Similar to the first set of analyses, allowing the psychological symptoms to correlate resulted in a saturated model that had zero degrees of freedom, and thus, was a perfect fit to the data. As stated earlier, a

saturated model yields parameter estimates, but no fit statistics. This model was chosen to test for mediation for both subscales as fit statistics are not required for these analyses.

As proposed, the pathways from CETV to Autonomy vs. Authority ( $B=.033$ ,  $t=5.36$ ) and from Autonomy vs. Authority to Internalizing Symptoms ( $B=1.18$ ,  $t=3.58$ ) and Externalizing Symptoms ( $B=2.44$ ,  $t=7.59$ ) were tested individually and were found to be significant. The fourth and final step in assessing whether there is a mediational effect is to compare the fit of the unconstrained (see Figure 2, model c) and constrained models (see Figure 2, model d). The results of these analyses indicated that the Chi-square difference test ( $X^2=4.78$ ,  $df=2$ ,  $p=.08$ ) revealed no significant difference/improvement between the models. Further, this last step of testing for mediation showed that the path from CETV to Internalizing Symptoms was nonsignificant ( $B=.043$ ,  $t=1.48$ ) suggesting full mediation, but remained significant for Externalizing Symptoms ( $B=.062$ ,  $t=2.20$ ), suggesting non-mediation or a partial mediational effect.

The model with CETV to Internalizing and Externalizing Symptoms pathways constrained to 0 (see Figure 2, model d) yielded a model that fit the data with 2 degrees of freedom remaining (see Table 8, model d) and fit statistics. Therefore, fit statistics for this model could be examined. The SRMR, CFI, and NNFI were a good fit to the data; however, the RSMEA was .09, indicating a mediocre fit. Sobel's test results indicated a significant reduction of direct effect between CETV and Internalizing Symptoms ( $t=2.43$ ,  $p=.007$ ), and Externalizing Symptoms ( $t=4.09$ ,  $p<.000$ ). Taken together with the previously reported findings, this suggests that Autonomy vs. Authority fully mediates the relation between CETV and Internalizing Symptoms and partially mediates the relation between CETV and Externalizing Symptoms.

Results of applying the decomposition of total effect formula revealed that 43% of the

effect of CETV on Internalizing Symptoms and 54% of the effect of CETV on Externalizing Symptoms was mediated through Autonomy vs. Authority.

Results for the model that included the Relationship Problems subscale as the hypothesized mediator yielded a significant pathway from CETV to Internalizing Symptoms ( $B=.075$ ,  $t=2.73$ ) and Externalizing Symptoms ( $B=.132$ ,  $t=4.55$ ). As proposed, CETV predicted Relationship Problems ( $B=.049$ ,  $t=4.74$ ) and Relationship Problems predicted Internalizing Symptoms ( $B=.939$ ,  $t=4.88$ ) and Externalizing Symptoms ( $B=1.09$ ,  $t=5.17$ ). The fourth and final step in assessing whether there is a mediational effect is to compare the fit of the unconstrained (see Figure 2, model e) and constrained (see Figure 2, model f) models. The chi-square differences test ( $X^2=1.43$ ,  $df=2$ ,  $p=.230$ ) revealed no significant difference/improvement between the models. Further, this last step of testing for mediation showed that the path from CETV to Internalizing Symptoms was nonsignificant ( $B=.034$ ,  $t=1.20$ ) indicating full mediation, but remained significant for Externalizing Symptoms ( $B=.091$ ,  $t=3.06$ ), suggesting non-mediation or a partial mediational effect.

The model with CETV to Internalizing and Externalizing Symptoms pathways constrained to 0 (see Figure 2, model f) yielded a model that fit the data with two degrees of freedom remaining (see Table 8, model f) and fit statistics. Therefore, fit statistics for this model could be examined. The RSMEA, SRMR, CFI, and NNFI were a good fit to the data. Taken together, the fit statistics and mediational findings suggest that the Relationship Problems subscale fully mediates the relation between CETV and Internalizing Symptoms and partially mediates the relation between CETV and Externalizing Symptoms.

To ensure significance of mediational findings, Sobel's test was conducted and the percentage of the indirect effect of CETV on Internalizing and Externalizing Symptoms through



Relationship Problems was calculated. Sobel's test results indicated a significant reduction of the direct effect between CETV and Internalizing Symptoms ( $t=3.16$ ,  $p=.000$ ) and Externalizing Symptoms ( $t=3.03$ ,  $p=.001$ ). Taken together with the previously reported findings, this suggests that Relationship Problems fully mediated the relation between CETV and Internalizing Symptoms and partially mediated the relation between CETV and Externalizing Symptoms.

Results of applying the decomposition of total effects formula revealed that 55% of the effect of CETV on Internalizing Symptoms and 22% of the effect of CETV on Externalizing Symptoms was mediated through Relationship Problems.

### Moderated Mediation

The fourth, fifth, and six set of path analyses tested for moderated mediation using total Nondisclosure, Autonomy vs. Authority, and Relationship Problems as the proposed mediators (see Figure 3) and Parent-Child Attachment (PCA) and Social Support (SS) as the moderators. To test for moderation, multiple group analyses were used to compare the fit of the hypothesized mediation model for those youth who reported strong Parent-Child Attachment to the fit of the model for those youth who reported weak Parent-Child Attachment. Similar comparisons of model fit were made for youth reporting high versus low levels of Social Support. A total of six multiple-groups analyses each comparing the fit of two models (i.e., unconstrained vs. constrained) for each of the proposed mediators and for each of the proposed moderators (see Figure 3). In the first portion of these analyses, all parameters (path coefficients, error variances, etc.) were constrained across the moderators (i.e., parent-adolescent relationships and social connections) (e.g., Figure 3 Model 1a). This means that the parameters for the high and low group of the moderator were conducted to be the same for these analyses. The second portion of the analyses retained the basic form of the model, but allowed the parameter values to

differ across (unconstrained) high/strong and low/weak levels of the hypothesized moderators (i.e., Parent-Child Attachment and Social Support) (e.g., Figure 3 Models 1b (high unconstrained) and 1c (low unconstrained)). A chi-square difference test is then conducted to determine if the data fits significantly better across constrained or unconstrained conditions. This chi-square differences statistic must be significant ( $p < .05$ ) to establish moderation.

In each analysis, fit indices were examined to determine whether the constrained or unconstrained model was a better fit to the data. Evidence of a better fit for the unconstrained model would provide support for the moderation hypothesis. As described in the previous section on model fit statistics, the following indicators are generally considered evidence of good model fit: 1) RMSEA having a value of .05 or lower for a good fit or .08 to .10 for a mediocre fit, 2) SRMR having a value of .08 or less, 3) CFI having a value of .90 or above, and 4) NNFI having a value of .90 or above.

If moderation is established, the next step is to examine the pathways among the variables across the high and low group of the unconstrained models to determine which ones differ. Results of multiple group analyses testing possible differences in mediational pathways as a function of Parent-Child Attachment failed to reveal any evidence of moderation, which is indicated by the following results on Table 9: 1) models 1a, 1b, and 1c,  $\Delta X^2 = 4.13$ ,  $df = 5$ ,  $p = .53$ . The findings of the multiple group analyses testing possible differences in mediational pathways as a function of Social Support also failed to reveal any evidence of moderation, which is indicated by the following results on Table 9: 1) models 4a, 4b, and 4c,  $\Delta X^2 = 3.89$ ,  $df = 5$ ,  $p = .56$ . The fifth and sixth sets of multiple group analyses were conducted for mediational models including the Autonomy vs. Authority and Relationship Problems subscales, respectively, as mediators in place of the total Nondisclosure scale. Results of multiple group analyses testing

possible differences in Autonomy vs. Authority varying as a function of Parent-Child Attachment (Table 9, models 2a, 2b, and 2c,  $\Delta X^2= 6.51$ , *df*, 5,  $p=.26$ ), and Social Support (Table 9, models 5a, 5b, and 5c,  $\Delta X^2= 4.22$ , *df*, 5,  $p=.51$ ) also failed to reveal any evidence of moderation. Lastly, results of multiple group analyses testing possible differences in Relationship Problems as a function of Parent-Child Attachment (Table 9, models 3a, 3b, and 3c,  $\Delta X^2= 4.93$ , *df*, 5,  $p=.42$ ) and Social Support (Table 9 models 6a, 6b, and 6c,  $\Delta X^2= 4.23$ , *df*, 5,  $p=.52$ ) failed to reveal any evidence of moderation.

Table 8

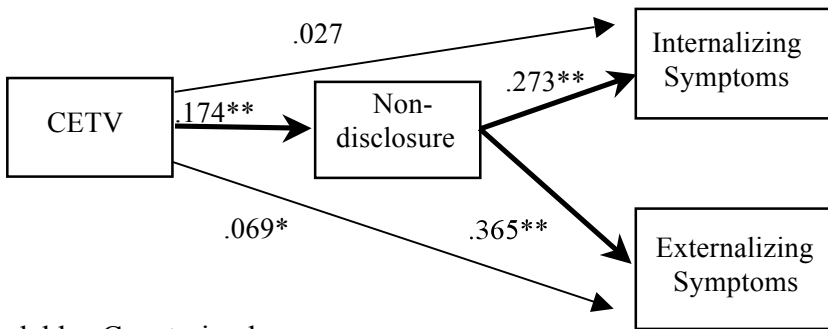
Fit Statistics for Path Models						
Model	X <sup>2</sup>	df	RMSEA	SRMR	CFI	NNFI
Mediation – Figure 2						
Model a unconstrained	0	0	---	---	---	---
Model b constrained	5.36	2	0.11	0.05	0.98	0.93
Model c unconstrained	0	0	---	---	---	---
Model d constrained	4.78	2	0.09	0.05	0.98	0.95
Model e unconstrained	0	0	---	---	---	---
Model f constrained	1.44	2	0.05	0.03	0.99	0.98

Table 9

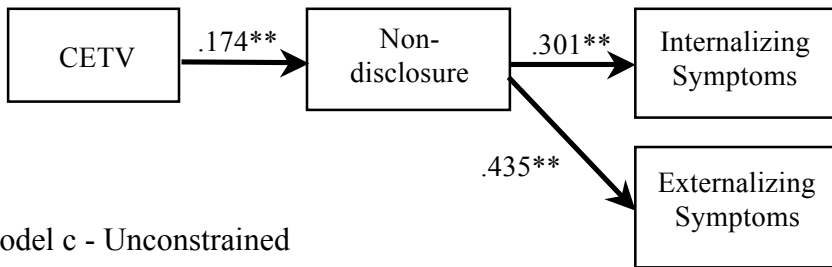
Model	X <sup>2</sup>	df	RMSEA	SRMR	CFI	NNFI
Moderated Mediation - Figure 3						
Parent Child Attachment						
1a constrained	11.79	9	0.06	0.08	0.98	0.97
1b high	7.66	4	0.11	0.07	0.97	0.92
1c low	7.66	4	0.11	0.09	0.97	0.92
2a constrained	15.07	9	0.09	0.11	0.95	0.94
2b high	8.56	4	0.12	0.08	0.96	0.90
2c low	8.56	4	0.12	0.09	0.96	0.90
3a constrained	13.73	9	0.08	0.09	0.96	0.94
3b high	8.80	4	0.13	0.08	0.96	0.88
3c low	8.80	4	0.13	0.09	0.96	0.88
Social Support						
4a constrained	10.99	9	0.05	0.09	0.98	0.98
4b high	7.10	4	0.10	0.10	0.97	0.93
4c low	7.10	4	0.10	0.11	0.97	0.93
5a constrained	10.04	9	0.04	0.09	0.99	0.99
5b high	5.82	4	0.07	0.09	0.98	0.95
5c low	5.82	4	0.07	0.09	0.98	0.95
6a constrained	11.8	9	0.06	0.09	0.96	0.97
6b high	7.57	4	0.11	0.10	0.97	0.91
6c low	7.57	4	0.11	0.12	0.97	0.91

Figure 2. Mediation Models Tested

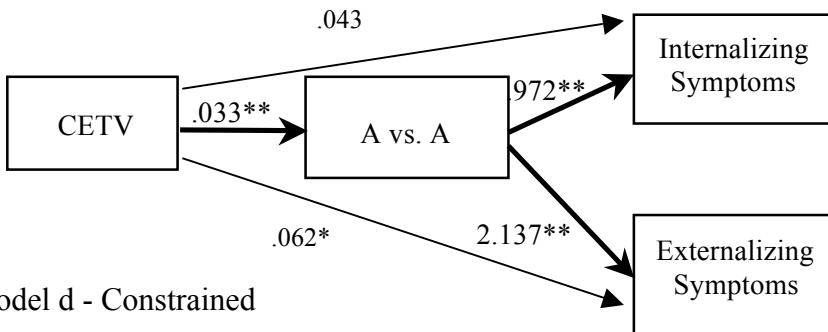
Model a - Unconstrained



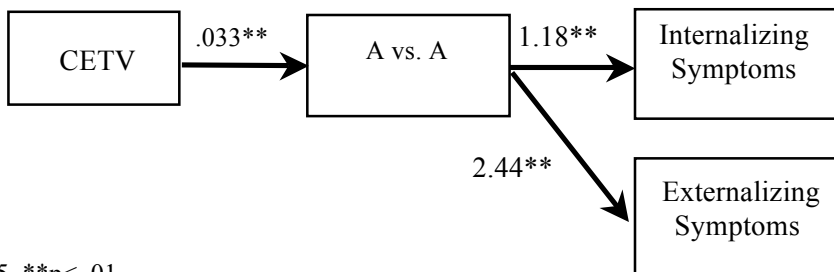
Model b - Constrained



Model c - Unconstrained



Model d - Constrained

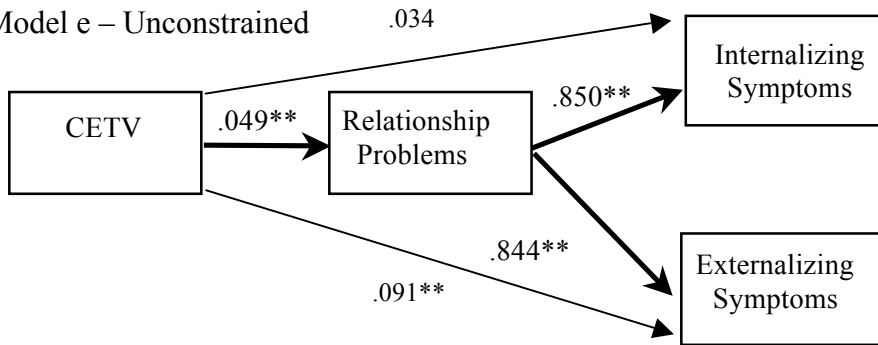


\*p<.05, \*\*p<. 01

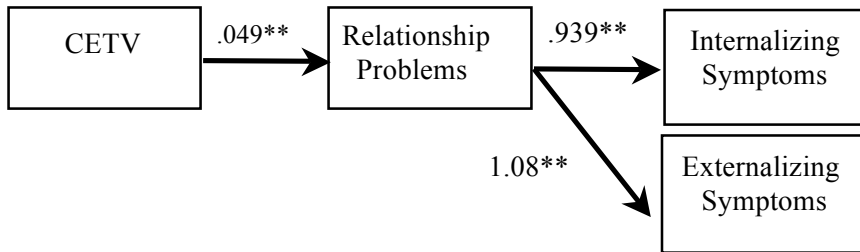
A vs. A= Autonomy vs. Authority

Mediation Models Tested

Model e – Unconstrained



Model f - Constrained

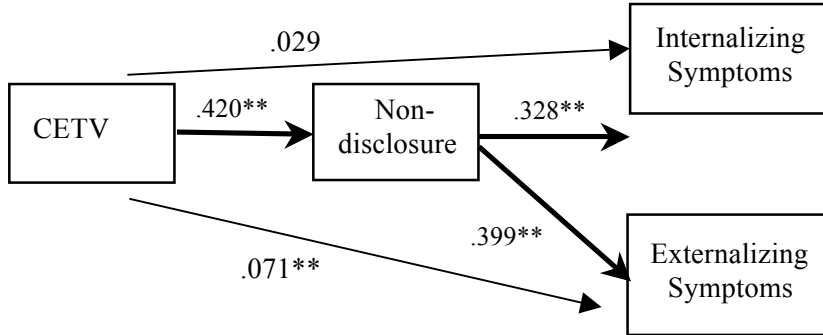


\*p<.05, \*\*p<.01

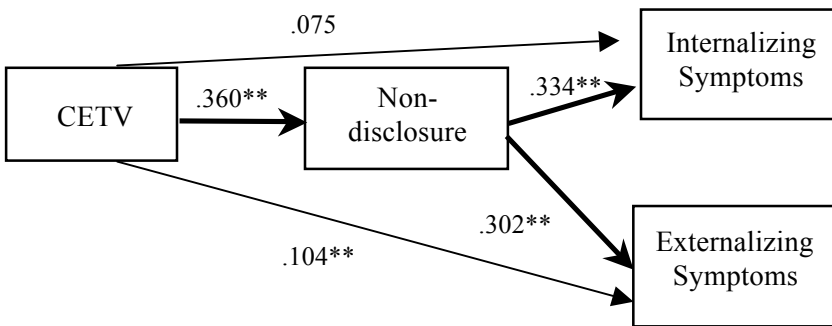
A vs. A= Autonomy vs. Authority

Figure 3. Models Tested Using Moderated Mediation with Nondisclosure

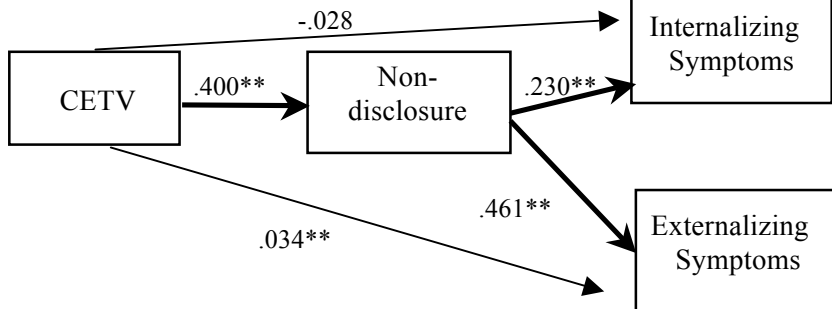
1a - Constrained



1b - Unconstrained High Parent-Child Attachment

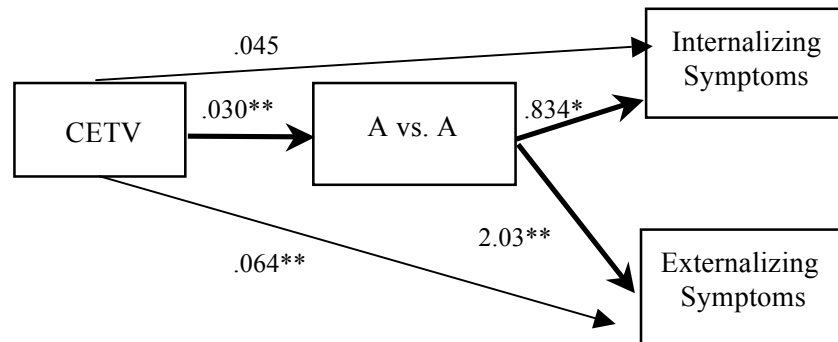


1c - Unconstrained Low Parent-Child Attachment



Models Tested Using Moderated Mediation with Autonomy vs. Authority

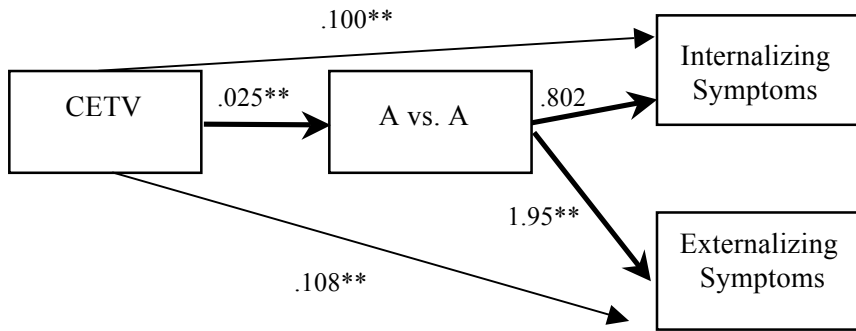
2a - Constrained High Parent Child Attachment



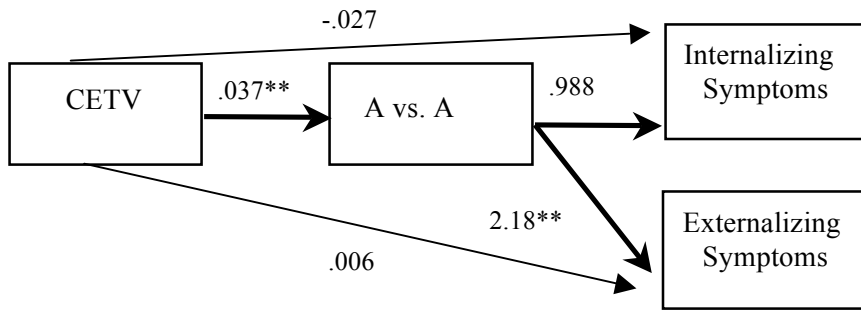
\* $p < .05$ , \*\* $p < .01$

A vs. A = Autonomy vs. Authority

2b - Unconstrained High Parent Child Attachment

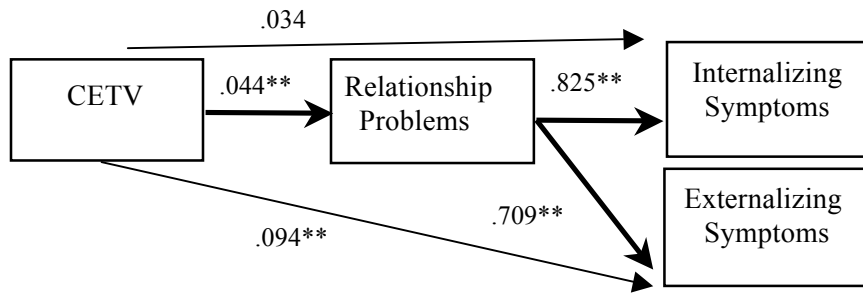


2c - Unconstrained Low Parent-Child Attachment

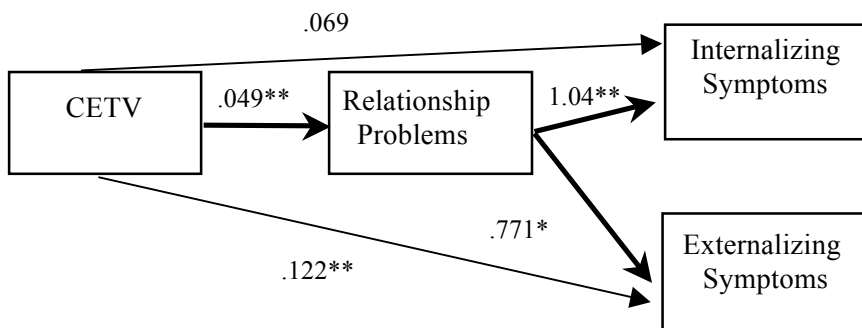


Models Tested Using Moderated Mediation with Relationship Problems

3a - Constrained Parent-Child Attachment

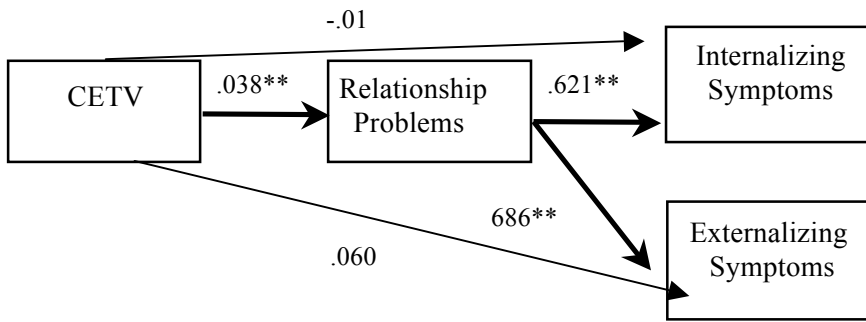


3b - Unconstrained High Parent-Child Attachment



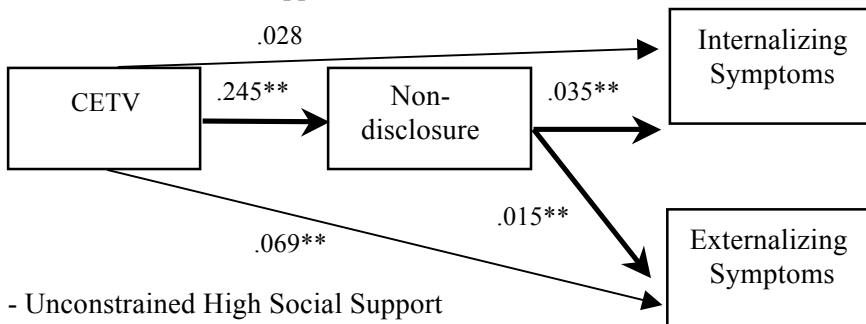


3c - Unconstrained Low Parent-Child Attachment

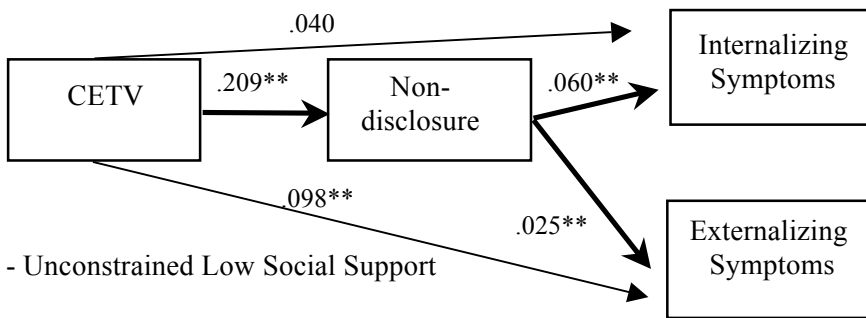


Models Tested Using Moderated Mediation with Nondisclosure

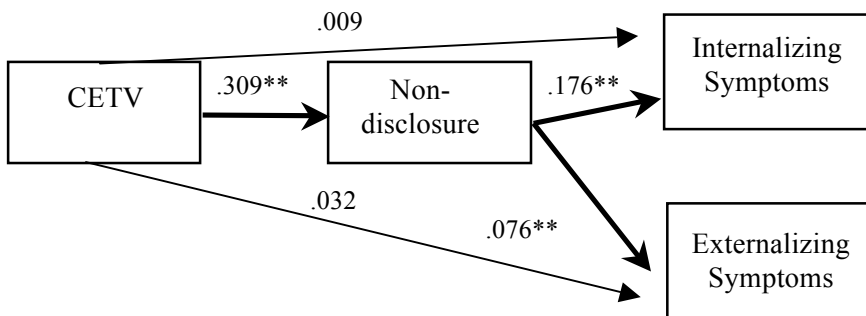
4a - Constrained Social Support



4b - Unconstrained High Social Support



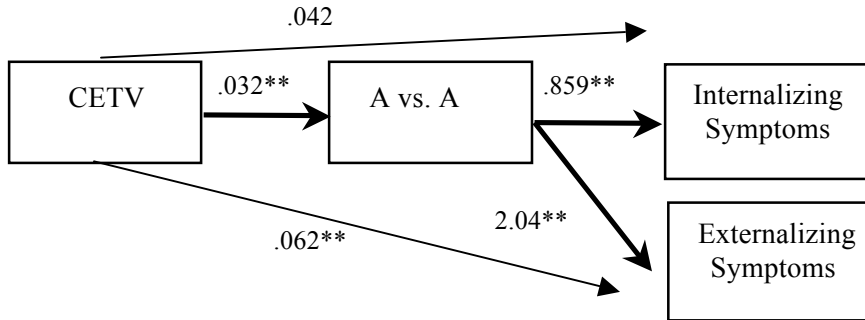
4c - Unconstrained Low Social Support



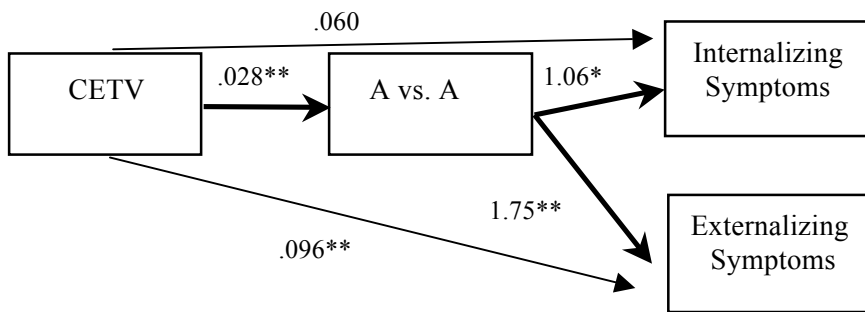
\*p<.05, \*\*p<. 01

Models Tested Using Moderated Mediation with Autonomy vs. Authority

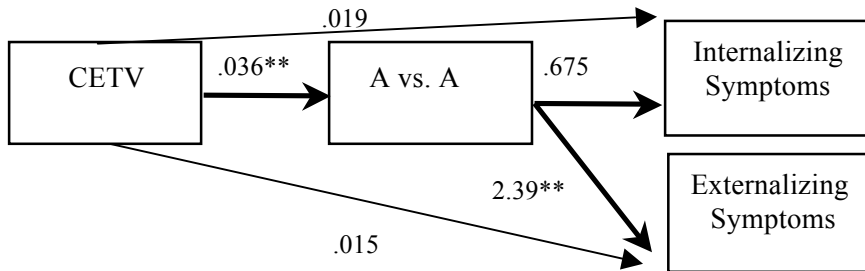
5a - Constrained Social Support



5b - Unconstrained High Social Support

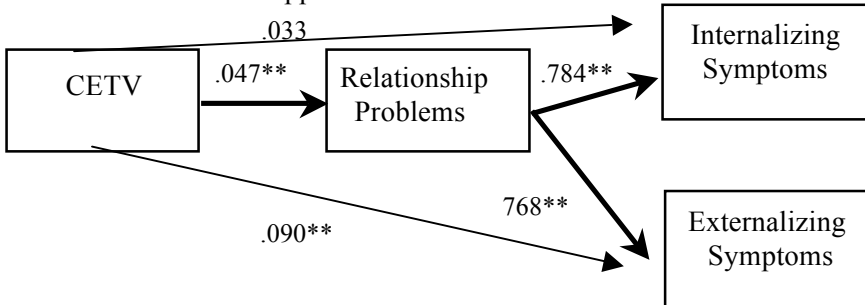


5c - Unconstrained Low Social Support



Models Tested Using Moderated Mediation with Relationship Problems

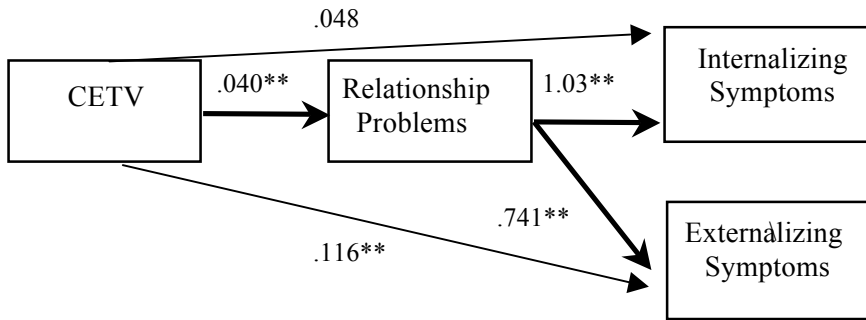
6a - Constrained Social Support



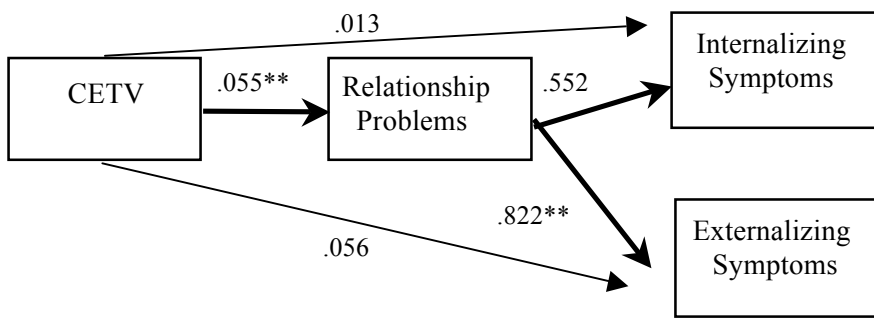
\*p<.05, \*\*p<.01

A vs. A= Autonomy vs. Authority

6b - Unconstrained High Social Support



6c - Unconstrained Low Social Support



\* $p < .05$ , \*\* $p < .01$

A vs. A = Autonomy vs. Authority

## CHAPTER IV

### DISCUSSION

This study represents the first attempt to test conceptual models in which adolescents' Nondisclosure to adults mediates the relation between CETV and psychological symptoms. This paper used structural equation modeling (SEM) to test the models that specified that: (1) Nondisclosure mediates the relation between CETV and Internalizing and Externalizing Symptoms, (2) Autonomy vs. Authority (Nondisclosure subscale) mediates the relation between CETV and Internalizing and Externalizing symptoms, and (3) Relationship Problems (Nondisclosure subscale) mediates the relation between CETV and Internalizing and Externalizing Symptoms. In addition, Parent-Child Attachment and Social Support were examined as potential protective factors, which were expected to attenuate the extent to which Nondisclosure, and the proposed subscales, mediate the relation between CETV and psychological symptoms.

This study found that the Nondisclosure measure, and its subscales, Relationship Problems and Autonomy vs. Authority, mediated the relation between CETV and Internalizing symptoms and Externalizing symptoms. The current study is the first, to this author's knowledge, to contribute this finding to the literature.

#### Nondisclosure as a Mediator

Consistent with the proposed hypothesis, Nondisclosure was found to mediate the relation between community exposure to violence (CETV) and Internalizing and Externalizing Symptoms (Campbell & Schwartz, 1996; Kliewer et. al., 1998; Ozer & Weinstein, 2004). This finding builds on very limited research examining constructs similar to Nondisclosure in the context of community violence. For example, in samples of predominantly African American

youth, Campbell and Schwartz (1996) and Kliewer and colleagues (1998) found that those youth who reported feeling more constrained from talking with others about violent events reported significantly higher symptoms of anxiety and depression. In a diverse sample consisting of African American, Latino, Asian, and Caucasian 7th grade students, nearly half of those participants exposed to violence reported feeling constrained from sharing their thoughts or feelings because of concerns about others' reactions (i.e., making listeners uncomfortable or upset) and these youth reported higher PTSD and depressive symptoms (Ozer & Weinstein, 2004). In addition, a few studies have shown that secrecy significantly predicted aggression and delinquent behaviors in adolescents (Engels, Finkenauer, & van Kooten, 2006; Frijns, Finkenauer, Vermulst, & Engels, 2005; Gervais, et al., 2000; Stouthamer-Loeber, 1986). None of these studies examined Nondisclosure as a mediator. The current study is the first to make that contribution to the literature.

#### CETV predicting Nondisclosure

Given that prior studies have not examined adolescents' nondisclosure to adults (or similar constructs) as a mechanism for explaining the well-established relation between CETV and psychological symptoms, it is not surprising that prior research also has not examined the links in this mediational chain including the relation between CETV and Nondisclosure. The mediational hypothesis suggests that adolescents' experience with community violence leads to greater nondisclosure of information to adults. Two conceptual perspectives can be used to explain why CETV might predict Nondisclosure: 1) social-cognitive and 2) avoidant coping processes.

Social-cognitive theorists suggest that individuals are motivated to make sense of or assimilate distressing experiences. According to Kliewer and colleagues (1998), youth face two

main tasks for adapting to violence exposure based upon social-cognitive processing theories: 1) they need to make sense of the experience cognitively, which is an intrapsychic process, and 2) they need to talk about their experiences with others in a way that will help them cope, which is an interpersonal process (Coates & Wortman, 1980; Janoff-Bulman, 1992; Lepore et al., 1996; Rime, 1995; Schwartz & Proctor, 2000; Silver & Wortman, 1980). Talking with supportive and empathic adults may help youth make sense of their experiences, learn adaptive coping strategies or gain control of their emotions (Clark, 1993; Garbarino et al., 1992; Lepore et al., 1996; Silver & Wortman, 1980). Unfortunately, adolescents who are chronically exposed to community violence, may encounter adults or have parents that are also suffering from the effects of violence and/or poverty, and thus are not supportive, empathic, or even emotionally available to help them make sense of their experiences of community violence. These adults are likely to advertently or inadvertently send negative messages, which discourage adolescents from discussing thoughts and fears related to community violence. These negative messages and emotions may be encoded and incorporated into youths' schema about how to understand and cope with violence. Thus, violent events in the community, and messages about disclosing these experiences are likely to serve as powerful learning contexts for adolescents and could strongly influence their belief and emotional regulation systems, and cognitive schemas that guide their social behavior (Jenkins & Bell, 1997; Tolan & Guerra, 1998) including nondisclosing information to adults.

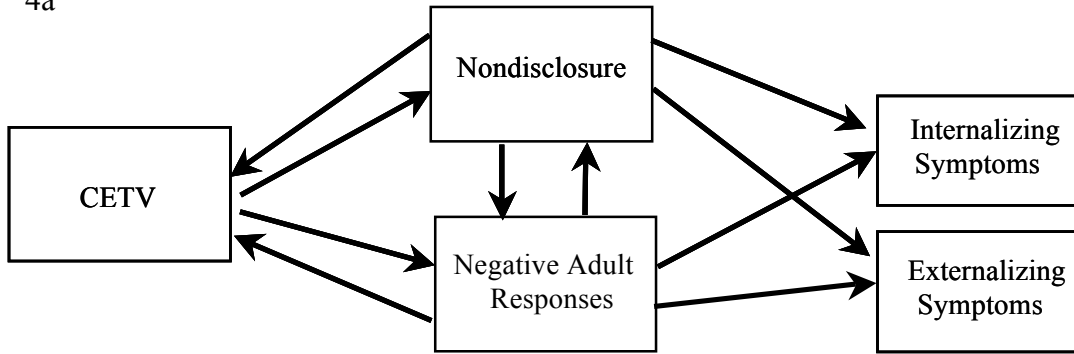
The proposed social-cognitive theory used to explain CETV predicting Nondisclosure suggest that adolescents in this study have prior experiences of nondisclosing information to adults, which implies that the act of nondisclosure, is likely a learned process that may have developed with increasing age. Youth in this study are early adolescents and report experiencing

a minimum of ten different types of community violence, thus, it is important to consider their prior experiences of interacting with adults shaping their acquisition and processing of social information. This premise can be supported by the decomposition of total effect findings, which indicates that Nondisclosure did not account for 100% (as indicated by Baron and Kenny's test for mediation), but 63% of the mediating effect between CETV and Internalizing Symptoms, and 48% of the mediating effect between CETV and Externalizing Symptoms. These results strongly suggest that there may be an additional mediator that explains the link between CETV and Nondisclosure and/or link between the CETV and psychological symptoms. In light of these findings, it is proposed that the current study's model be modified to account for an additional mediator, to explain the link between CETV and Nondisclosure (see Figure 4a). This additional mediator is called Negative Adult Responses. As discussed earlier, examples of Negative Adult Responses are negative messages or reactions parents or adults have in response to exposure to community violence. With the addition of the new mediator, the hypothesized model is redesigned as such: CETV predicting Nondisclosure and Negative Adult Responses, and both of these mediators would predict psychological symptoms (i.e., Internalizing and Externalizing Symptoms). In the same model, bidirectional pathways between the proposed mediators would also be included to illustrate how adolescents learn to nondisclose information by way of receiving negative responses from adults. Conversely, adolescents' nondisclosure to adults can also elicit negative responses from adults. Adults may exhibit various unfavorable responses when adolescents overtly or covertly withhold information from them.

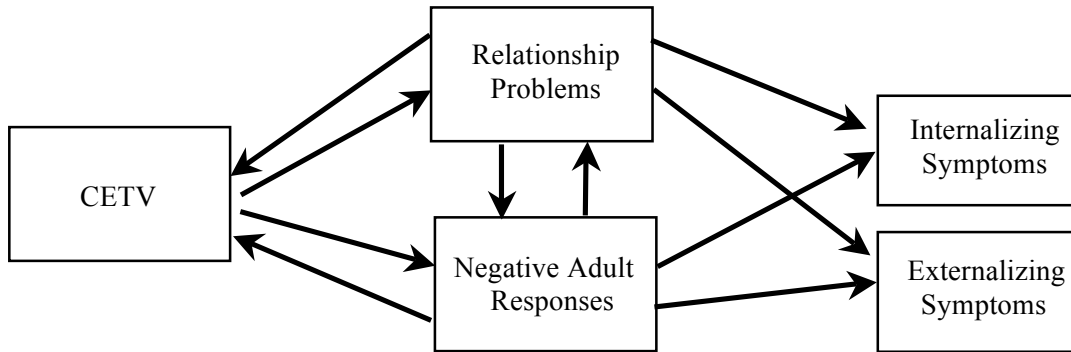
Given the possible influence of Negative Adult Responses, it is also proposed that a bidirectional pathway exists between CETV and Nondisclosure and between CETV and Negative Adult Responses. The purpose of these bidirectional pathways is to depict two cyclic

Figure 4. Hypothesized Models with New Mediator – Negative Adult Responses

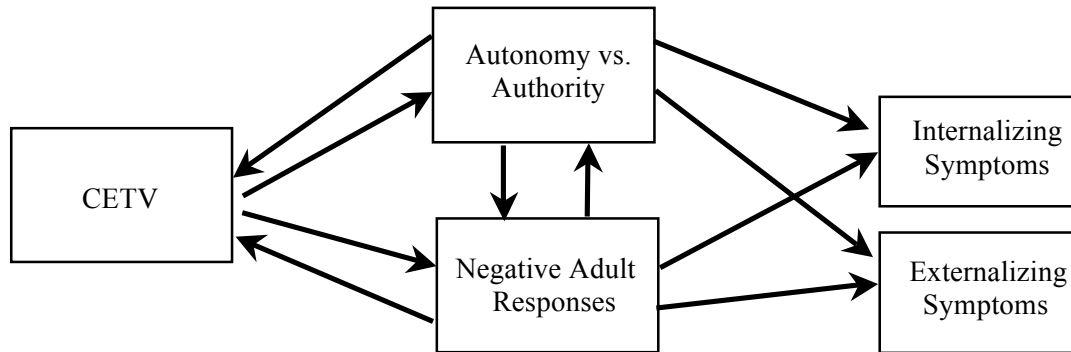
4a



4b



4c





experiences of how youth may remain chronically exposed to community violence. The first cycle involves CETV predicting Negative Adult Responses and Negative Adult Responses predicting Nondisclosure and Nondisclosure predicting CETV (see Figure 4a). The second cycle involves, CETV predicting Nondisclosure, and Nondisclosure predicting negative adult responses and negative adult responses predicting CETV. In these particular parts of the model, Nondisclosure and Negative Adult Responses predicting CETV suggest that adolescents are putting themselves at risk for more CETV, which could explain why adolescents in this study reported multiple exposures to community violence. Further, the bidirectional flow between Nondisclosure and Negative Adult Responses may also indirectly explain youth's chronic exposure to community violence, such that this "battle" of behaviors between adolescents and adults is a negative experience that may eventually influence these youth to be chronically exposed to community violence. These cycles are likely to repeat and perhaps become strongly linked throughout adolescent development unless an intervening variable stops it. Crick and Dodge (1994) suggested that as youth develop, their repertoires are likely to change and become more accessible, competent and sophisticated. Consequently, youth learn more skillful and adaptive ways of coping with conflict. The cycles discussed above may represent a skillful, but yet maladaptive way of adolescents managing their experiences of community violence over time. Cycles such as these are important to examine to further understand how social-cognitive processes can explain the relation between CETV and Nondisclosure. Future research is needed to test this model explaining the relation between CETV and Nondisclosure and to further understand the link between CETV and Internalizing and Externalizing Symptoms with African American early to late adolescents.

In addition to the social-cognitive explanations provided above, a predictive association between CETV and Nondisclosure may also be explained by factors occurring at an individual level. Such factors might include avoidant coping processes. Avoidant coping has been defined as coping strategies designed to “avoid actively confronting the problem” (Billings & Moos, 1981, p.141) and involves efforts to repress or block out the stressor, fantasize that it never happened, or avoid exposure to the stressor (Sandler, Tein, & West, 1994). These avoidant processes may occur, because adolescents who are exposed to community violence may be stimulated in various ways. They may experience intense feelings of fear, anxiety, and hopelessness, and their beliefs that their homes and neighborhoods are safe and secure, or that the world is just and fair may be shattered (Gabarino, Dubrow, Kostelny, & Pardo, 1992). These representations consequently alter the information processing capacities of youth, and thus, the manner in which they respond to community violence. As discussed in the child abuse literature, posttraumatic stress models suggest that: (a) precipitating stressors are relatively uncommon or unusual, (b) they tend to cause high levels of arousal, and (c) they tend to exceed the victim’s immediate coping abilities (Spaccarelli, 1994). Exposure to community violence fits this description. Thus, youth are confronted with community violence that makes it difficult for them to cope or integrate into their existing cognitive schemata such that distortions of affective or cognitive functioning are inevitable (Terr, 1986). These distortions may present in a persistent form of avoidance of stimuli that are reminiscent of the violent event. Thus, African American youth in this sample may find it challenging to process and actively cope with their chronic experiences of community violence, which may lead them to exhibit avoidant coping behaviors, such as Nondisclosure.

### Nondisclosure Predicting Symptoms

This study, found that Nondisclosure significantly predicted Internalizing Symptoms, which indicates that the more youth nondisclose information to adults, the more they experience internalizing distress. This finding is consistent with research showing that Nondisclosure and similar constructs (e.g., secrecy) are positively associated with anxiety, depression, and somatic complaints (Finkenauer & Rime, 1998; Frijns, Finkenauer, Vermulst, & Engels, 2005; Ichiyama et. al., 1993; Larson & Chastain, 1990; Pennebaker, 1989, 1990; Pennebaker & Sussman, 1988; Smetana, Metzger, Gettman, & Campione-Barr, 2006). Literature strongly suggests that keeping secrets requires physical work that involves hiding things, actively restraining oneself from revealing the information, preventing oneself from doing or expressing secret-related information or suppression of one's thoughts and feelings (Finkenauer, Engels, & Meeus, 2002; Pennebaker, 1989, 1990; Pennebaker & Sussman, 1988). These behaviors over time caused wear and tear of both body and mind, ultimately leading to internalizing symptoms.

Nondisclosure to adults may also lead to Internalizing Symptoms as a result of the adolescents' inability to effectively cope (i.e., using avoidant coping strategies) with chronic exposure to community violence. The child abuse literature relates avoidant coping to problems such as depression and anxiety complaints (see Spaccarelli & Fuchs, 1997). This finding may be extended to youth using avoidant coping strategies, such as Nondisclosure, to cope with their experiences of community violence. In relation to the newly proposed mediation model discussed earlier, Nondisclosure to adults may also lead to Internalizing Symptoms due to adolescents receiving Negative Adult Responses. These negative responses are likely to impair adolescents' social-cognitive processes, which leads to maladaptive ways of coping with exposure community to violence. The literature on youth exposure to community violence

indicates that distorted social-cognitive processes are positively associated with Internalizing Symptoms such as depression and anxiety (Shahinfar et al., 2000). This finding may help to understand Nondisclosure as a maladaptive coping mechanism, possibly influenced by Negative Adult Responses, leading to internalization of symptoms in African American early adolescents.

Nondisclosure predicting Internalizing Symptoms may also be explained by an increase in self-consciousness and heightened self-presentational concerns that are characteristic of adolescent development (Finkenauer, Engels, & Meeus, 2002). Within the context of community violence, adolescents may be too embarrassed to admit their shortcomings or express their feelings of anxiety or depression because they may falsely assume that everybody else is effectively coping with chronic exposures to violence, and they are alone failing. Further, if adolescents express their difficulties of coping with community violence, they may be perceived as “weak” or “vulnerable” and thus, likely identified as an easy target to be victimized by others in the community. By keeping their concerns, and shortcomings from their parents or adults, adolescents are likely at great risk to internalize symptoms.

Despite that Nondisclosure significantly predicted Internalizing Symptoms (within the full mediation model) and that Sobel’s test indicated that Nondisclosure fully mediated the relation between CETV and Internalizing symptoms, calculating the decomposition of total effect indicated that Nondisclosure did not account for 100%, but 63% of the mediating effect between CETV and Internalizing Symptoms. As discussed earlier, this finding suggests that there may be an additional mediator that explains the predictor and outcome link. From another viewpoint, the lack of full mediation may be accounted for by measurement error. The Nondisclosure measure (i.e., Reasons for Keeping Things Private) has yet to be validated and normed. Therefore, much of the measurement error may be accounted for by Nondisclosure. All

other constructs used in this study were derived from measures that have been widely used and present with rigorous psychometrics. Given that Nondisclosure did not account for 100% of the mediating effect, it is important to interpret this study's full mediation findings, as indicated by Sobel's test, with caution. As discussed above, there are two factors that need to be considered and investigated in future research. Conducting Sobel's test in the absence of calculating the decomposition of total effects can lead to misinterpretations and possible false conclusions about the findings of mediation models.

This study also found that Nondisclosure significantly predicted Externalizing Symptoms, but in the same model Externalizing Symptoms was also significantly predicted by CETV indicating that Nondisclosure partially mediated the relation between CETV and Externalizing Symptoms. This suggests that the more youth keep information private, the more they continue to exhibit externalizing behaviors; however, exposure to chronic community violence also strongly influences adolescents in this study to externalize possibly as a means to cope with the stress associated with chronic exposure. Adolescents in this study may find it challenging and frustrating to disclose information to adults and, thus, are likely in need to "act out" these experiences. To date, no studies have examined the link between Nondisclosure and Externalizing Symptoms; however, very few studies have shown that secrecy significantly predicted aggression and delinquent behaviors in adolescents (Engels, Finkenauer, & van Kooten, 2006; Frijns, Finkenauer, Vermulst, & Engels, 2005; Gervais, et al., 2000; Stouthamer-Loeber, 1986).

Similar to the theories related to Nondisclosure predicting Internalizing Symptoms, Nondisclosure to adults may also lead to Externalizing Symptoms as a result of the adolescents' inability to effectively cope (i.e., using avoidant coping strategies) with chronic exposure to

community violence. The child abuse literature indicates that avoidant coping is positively related to behavioral problems, such as aggression and development of risk behaviors (see Spaccarelli & Fuchs, 1997). This finding may be extended to youth using avoidant coping strategies, such as Nondisclosure, to cope with their experiences of community violence. With regard to the newly proposed mediation model, Negative Adult Responses may help explain adolescents' Nondisclosure to adults predicting Externalizing Symptoms. Adult negative responses are likely to impair adolescents' social-cognitive processes, which leads to maladaptive ways of coping with exposure community to violence. The literature on youth exposure to community violence indicates that distorted social-cognitive processes are positively associated with Externalizing Symptoms, mainly aggression (Schwartz & Proctor, 2000; Shahinfar et al., 2000; Shahinfar, Kupersidt, & Matza, 2001). This finding may also help to understand Nondisclosure as a maladaptive coping mechanism, possibly influenced by Negative Adult Responses, leading to Externalizing Symptoms in African American early adolescents.

Nondisclosure partially mediating or accounting for 48% of the effect of CETV on Externalizing Symptoms may be explained by the following premise. As stated earlier, the literature strongly suggests that keeping secrets or withholding information is a process that requires adolescents to be isolated from others, conduct physical work to prevent the "secret" from being revealed and suppressing their thoughts and feelings related to the "secret." Studies have shown that adolescents, going through a process such as this on a consistent basis has been found to be strongly linked to internalization of symptoms, more so than to externalization of behaviors (Frijns, Finkenauer, Vermulst, & Engels, 2005; Engels, Finkenauer, & van Kooten). Therefore, Nondisclosure, like secrecy, may be a construct that is more sensitive to the internal

processes of individuals given that this type of behavior involves seclusion or isolation, which can be anxiety provoking, depressing, or lead to physical complaints.

#### Nondisclosure Subscales as Mediators

In addition to providing support for hypothesized mediational models, this study also presents empirical evidence of reasons why African American adolescents nondisclose information to adults through their responses on the Nondisclosure subscales, Relationship Problems and Autonomy vs. Authority. Findings based on subscale analyses are discussed below.

#### The Mediating Role of the Relationship Problems Subscale

This study's investigation of the Relationship Problems subscale provides specific insights regarding interpersonal reasons why adolescents nondisclose information to adults after their experiences of CETV. The Relationship Problems subscale was also found to mediate the relation between CETV and Internalizing and Externalizing Symptoms. First, the interpretations of the link between CETV and the Relationship Problems Subscale will be considered, and then interpretations of the relation between the Relationship Problems subscale and psychological symptoms will be discussed.

CETV predicting relationship problems. The impact of community violence exposure is not felt by youth alone. Adolescents' exposure to community violence also affects their family and other caring adults in their community. Anxiety concerning the adolescent's health and well-being is a common parental reaction. Resources for parents and adults may be limited, which may lead to frustration and anger. Parents and adults may blame themselves for not protecting adolescents adequately. Thus, they may become overprotective or use punitive discipline in response to their adolescent's trauma-related acting out behaviors. Parents and

other adults may find themselves having to face the task of reassuring adolescents while trying to cope with their own fears, especially if there is a chronic risk for future community violence exposure. Exposure to community violence also compromises interpersonal relationships that are the fabric of children's daily lives. Because parents are key sources of social support, the disrupted parenting associated with the parents' own experiences of violence may exacerbate the negative effects of adolescents' exposure to violence (Margolin, Gordis, & Oliver, 2004). These factors are likely to cause strained relationships among family members and other caring adults, which may influence adolescents to nondisclose their experiences of violence to adults. Characteristics such as these may be described as Negative Adult Responses, as discussed earlier.

The Relationship Problems subscale lists motives that may explain why CETV predicts adolescent Nondisclosure. These motives are also important to consider for development of healthy adolescent-adult relationships. Some of these motives are, adolescents keeping private because they do not want their parent or other adults to share their private information, or because no one would believe them, or because of what people would think. These motives may demonstrate a lack of trust in the relationship (Kerr & Stattin, 2000), which may be problematic. Given that these relationship problems may exist, social-cognitive mechanisms (Bandura, 1977; Crick & Dodge, 1994; Dodge & Schwartz, 1997) also provide a logical theoretical link between CETV and adolescent Nondisclosure further clarifying why adolescents nondisclose information to adults. Since the population in this study are adolescents, it is important to consider prior experiences that may influence their reasons for nondisclosure. Adolescents are likely to rely on their previous experiences of talking to adults about traumatic events that lead to unfavorable outcomes, such as receiving unconstructive and unsupportive feedback, scathing remarks, or not



being able to freely express their feelings and thoughts. They may recall whether an adult reacted in a supportive fashion and refrained from revealing information to other people or if the adult became too emotional (e.g., emotionally dysregulated) or emotionally unavailable. As discussed earlier, these experiences may be encoded into their schema about how to manage their exposures of community violence. Experiences such as these may lead adolescents to nondisclose information to their parents or other adults due to motives that are linked to existing relationship problems.

Similar to the discussion regarding CETV predicting Nondisclosure, the decomposition of total effect findings indicates that Relationship Problems also did not account for 100% (as indicated by Baron and Kenny's test for mediation), but 55% of the mediating effect between CETV and Internalizing Symptoms, and 22% of the mediating effect between CETV and Externalizing Symptoms. These results suggest that there may be an additional mediator that explains the link between CETV and Relationship Problems and/or the link between the CETV and psychological symptoms. Therefore, it is proposed that the current study's model be modified to account for an additional mediator, to explain the link between CETV and Relationship Problems subscale (see Figure 4b). This additional mediator is Negative Adult Responses. With the addition of the new mediator, the model is redesigned as such: CETV predicting Relationship Problems and Negative Adult Responses, and both of these mediators would predict psychological symptoms (i.e., Internalizing and Externalizing Symptoms). In the same model, bidirectional pathways between the proposed mediators would also be included to illustrate how adolescents learn to nondisclose information by way of receiving negative responses from adults. Conversely, adolescents' nondisclosure (as defined by the Relationship Problems subscale) to adults can also elicit negative responses from adults.

Given the possible influence of Negative Adult Responses, it is also proposed that a bidirectional pathway exist between CETV and Relationship Problems and CETV and Negative Adult Responses. Like the model depicted in Figure 4a, the purpose of these bidirectional pathway is to depict two cyclic experiences of how youth may remain chronically exposed to community violence. The first cycle involves CETV predicting Negative Adult Responses and Negative Adult Responses predicting Relationship Problems and Relationship Problems predicting CETV (see Figure 4b). The second cycle involves, CETV predicting Relationship Problems, and Relationship Problems predicting Negative Adult Responses and Negative Adult Responses predicting CETV. In these particular parts of the model, Relationship Problems predicting CETV suggest that adolescents are at a higher risk for chronic CETV, which could explain why adolescents in this study reported multiple exposures to community violence. Relationship Problems predicting CETV may occur due to adolescents nondisclosing information (as motivated by relationship problems they have with parents and/or adults). The information that is withheld may warrant adult intervention that the adolescent may not receive, and thus, places them at risk for exposure to community violence. In the same part of the model, Negative Adult Responses also predicts CETV, which suggests that adolescents who receive frequent negative responses from adults may cause the relationship to be strained, and thus adolescents are less likely to seek support from these adults, which may also place them at greater risk for CETV. The bidirectional flow, in the newly proposed model between Relationship Problems and Negative Adult Responses may also indirectly explain youth's chronic exposure to community violence, such that these negative behaviors between adolescents and adults may eventually influence these youth to be chronically exposed to community violence. Similar to the model depicted by Figure 4a, these cycles are likely to repeat and

perhaps become strongly linked throughout adolescent development. These cycles are important to examine to further understand how negative social-cognitive processes can explain the relation between CETV and the Relationship Problems subscale. Future research is needed to test this model explaining the relation between CETV and Relationship Problems.

Relationship problems predicting symptoms. In the proposed mediational model, the Relationship Problems subscale significantly predicted Internalizing Symptoms, which suggests that the more youth nondisclose information to adults (as influenced by relationship problems), the more they experience internalizing distress. This model has not been examined previously in the literature. However, the findings from prior literature examining secrecy predicting Internalizing Symptoms can be extended to this finding. Extant research shows that similar constructs of Nondisclosure are associated with adverse psychological and physical outcomes (Finkenauer & Rime, 1998; Larson & Chastain, 1990; Pennebaker, 1989, 1990; Pennebaker & Sussman, 1988), such that the link between secrecy and internalizing symptomatology (i.e., anxiety, depression, somatic complaints) are strong (Finkenauer, Engels, & Meeus, 2002; Finkenauer & Rime, 1998; Frijns, Finkenauer, Vermulst, & Engels, 2005; Ichiyama et. al., 1993; Larson & Chastain; 1990). These findings are also consistent with the adult literature examining the effects of withholding information from others (Finkenauer & Rime, 1998; Larson & Chastain, 1990; Pennebaker, 1989, 1990; Pennebaker & Sussman, 1988).

A theoretical explanation of this finding may be related to the notion that keeping secrets from parents and/or adults undermines feelings of belongingness. This explanation is based on theoretical assumptions from the literature examining the effects of secrecy (Frijns, Finkenauer, Vermulst, & Engels, 2005). These assumptions can be extended to the current study's partial mediation finding. First, it is assumed that the need to belong constitutes a fundamental human

motivation (Baumeister & Leary, 1995). Second, by nature, secrets separate and possibly isolate the secret-keeper from those who do not know about the secret. Thus, on a psychological level, the secret-keeper should experience some degree of separation from secret-targets. Because the relationship with one's parents or adult is an important and lasting interpersonal relationship involving frequent interaction, it is proposed that the experience of separation from parents and adults that may accompany secrecy from them is a potentially powerful threat to belongingness. According to Baumeister and Leary (1995), deprivation of belongingness should cause a variety of ill effects, mainly internalizing problems such as physical, and emotional problems. These theoretical positions explains secrecy predicting Internalizing Symptoms, and empirical studies have shown that secrecy is a stronger predictor of Internalizing Symptoms (Finkenauer, Engels, & Meeus, 2002; Frijns, Finkenauer, Vermulst, & Engels, 2005; Lane & Wegner, 1995; Pennebaker, 1989) in comparison to externalizing behaviors (Frijns, Finkenauer, Vermulst, & Engels, 2005).

In reference to the newly proposed mediation model, Negative Adult Responses may help explain Nondisclosure (as defined by the Relationship Problems subscale) predicting Internalizing Symptoms. As discussed earlier, negative adult responses to community violence are likely to impair adolescents' social-cognitive processes, which may lead to 1) learning maladaptive ways of coping, such as nondisclosure, and 2) exhibiting Internalizing Symptoms. Exposure to community violence and negative responses from adults may influence adolescents to engage in conflict with, and perhaps feel distressed and isolated from adults. Thus, it is likely that a combination involving chronic exposure to community violence (experienced by adolescents and adults), Negative Adult Responses, and relationship problems (between

adolescents and adults), which likely promotes adolescent nondisclosure, are likely to lead to greater internalization of symptoms in African American early adolescents.

Similar to the model examining Nondisclosure as the mediator, Sobel's test indicated that Relationship Problems fully mediated the relation between CETV and Internalizing symptoms. However, Relationship Problems did not account for 100%, but 55% of the mediating effect between CETV and Internalizing Symptoms. As discussed earlier, this finding suggests that there may be an additional mediator (i.e., Negative Adult Responses) that explains the predictor and outcome link. Further, the lack of full mediation may be accounted for by measurement error stemming from the Nondisclosure measure. Therefore, results of Sobel's test must be interpreted with caution.

This study also found that the Relationship Problems subscale significantly predicted Externalizing Symptoms, but in the same model, Externalizing Symptoms was also significantly predicted by CETV, indicating that Relationship Problems only partially mediated or accounts for 22% of the relation between CETV and Externalizing Symptoms. This suggests that the more youth keep information private continue, the more they continue to exhibit externalizing behaviors, while exposure to chronic community violence also continues to strongly influence adolescents to externalize behaviors as a means to not only to cope with the stress associated with chronic exposure, but also the stressors associated with having poor relationships with their parents and/or adults. This finding may be supported by two explanations. First, the literature strongly suggests youth that nondisclose or keep secrets are reflective of problematic relationships (Engles, Finkenauer, & van Kooten, 2006; Finkenauer, Engles, & Meeus, 2002; Kerr & Stattin, 2000). Studies have shown that when parents or adults provide a supportive and trusting climate, youth are more apt to openly communicate about their experiences.

Adolescents in this study may find it difficult to disclose information to adults due to possible preexisting relationship problems, and thus, are likely in need to demonstrate socially unacceptable behaviors as a means to “release” their negative feelings (e.g., anger and frustration) associated with withholding information about their experiences of violence. Second, as discussed earlier, adolescents’ keeping secrets may experience some degree of separation and isolation from parents and adults, which is a potentially powerful threat to their belongingness. Deprivation of belongingness is also likely to cause some behavioral ramifications (Baumeister & Leary; 1995). These types of behavioral ramifications may be performed to seek attention from adults as an outcry for help to cope with the negative effects of community violence and possible feelings of isolation and separation from adults.

Given the newly proposed model, which includes Negative Adult Responses as an additional mediator, it is important to consider social-cognitive influences affecting Relationship Problems predicting Externalizing Symptoms. Similar to the discussion examining Relationship Problems predicting Internalizing Symptoms, negative adult responses to community violence are likely to impair adolescents’ social-cognitive processes, which may lead to 1) learning maladaptive ways of coping, such as nondisclosure, and 2) exhibiting Externalizing Symptoms. Exposure to community violence and negative responses from adults may cause a strained relationship between adults and adolescents and perhaps lead adolescents to feel distressed and isolated. Thus, it is likely that a combination involving chronic exposure to community violence (experienced by adolescents and adults), Negative Adult Responses, and relationship problems (between adolescents and adults), which promotes adolescent nondisclosure, are also likely to lead to greater externalization of symptoms in African American early adolescents.

With regard to decomposition of total effects findings, it is important to note that Relationship Problems accounted for more of the mediating effect between CETV and Internalizing Symptoms than CETV and Externalizing Symptoms. This discrepancy can be explained by adolescents' nondisclosure, as influenced by existing relationship problems with their parents and/or adults, causes them to become more isolated. Supportive relationships with adults are supposed to be an important and lasting interpersonal connection involving frequent interactions. As discussed earlier, isolation or separation from important relationships is a potential powerful threat to belongingness, which causes a variety of ill effects, mainly internalizing problems such as physical, and emotional problems (Baumeister & Leary, 1995).

#### The Mediating Role of the Autonomy vs. Authority Subscale

The Autonomy vs. Authority subscale mediated the relation between CETV and Internalizing and Externalizing Symptoms. This mediational chain suggests that CETV predicts adolescents to nondisclose information to adults as a means to preserve their autonomy and to avoid parents/adults placing restrictions on their freedom. Thus, adolescents asserting their autonomy by nondisclosing to adults may contribute to internalizing and externalizing behaviors (e.g., breaking home and school rules). To date, there is no literature that has examined these mediational links, but extant literature supports that adolescents will withhold information from adults to protect their autonomy, access privileges, (Darling, Cumsille, Caldwell, & Dowdy, 2006; Engles, Finkenauer, & van Kooten, 2006; Kerr, Stattin, & Trost, 1999), their privacy or control over their social and leisurely activities (Buhrmester & Prager, 1995; Fuligni, 1998; Smetana, 1988, 2000; Smetana & Asquith, 1994; Stattin, Kerr, & Ferrer-Wreder, 2000).

The interpretations of the link between CETV and the Autonomy vs. Authority Subscale will be considered, and then interpretations of the relation between the Autonomy vs. Authority subscale and psychological symptoms will be discussed.

CETV predicting autonomy vs. authority. The finding that CETV significantly predicted adolescent nondisclosure is also consistent with social-cognitive mechanisms (Bandura, 1977, Crick & Dodge, 1994, Dodge & Schwartz, 1997; Schwartz & Proctor, 2000). Adolescent prior personal or observational experiences of learning that talking to adults about traumatic events may lead to compromising their freedom and power to exert their autonomy. For example, within the context of community violence, African Americans' efforts to protect their adolescents may be exhibited through authoritarian and restrictive parenting practices (Garbarino 1993; Margolin & Gordis, 2000), which could mean that adults prohibit adolescents from leaving home to keep them safe from being harmed in the community. These practices ultimately limit adolescents' freedom to access social and leisurely activities within the community. As noted earlier, personal (e.g., effective strategies for coping with violence) and community resources (e.g., after school programs) for parents and adults may be limited, which can lead to frustration and anger. Thus, parents and adults may become overprotective or use punitive discipline in response to their adolescent's acting out behaviors. Parents and adults may find it difficult to cope with their own fears and experiences of violence, in addition to supporting adolescent autonomy in the context of chronic community violence. In these situations, adolescents may use prior experiences to determine in the future whether to nondisclose their experiences of violence to adults as a means to protect their freedom and autonomy.

Similar to the discussion regarding CETV predicting Nondisclosure and Relationship Problems, the decomposition of total effect findings indicates that Autonomy vs. Authority also



did not account for 100% (as indicated by Baron and Kenny's test for mediation), but 43% of the mediating effect between CETV and Internalizing Symptoms, and 54% of the mediating effect between CETV and Externalizing Symptoms. These results suggest that there may be an additional mediator that explains the link between CETV and psychological symptoms.

Therefore, it is proposed that the current study's model be modified to include Negative Adult Responses (see Figure 4c). The addition of the new mediator yields a new model as depicted in Figure 4c: CETV predicting Autonomy vs. Authority and Negative Adult Responses, and both of these mediators would predict psychological symptoms (i.e., Internalizing and Externalizing Symptoms). In the same model, bidirectional pathways between the proposed mediators would also be included to illustrate how adolescents learn to nondisclose information by way of receiving negative responses from adults. Conversely, adolescents' nondisclosure (as defined by the Autonomy vs. Authority subscale) to adults can also elicit negative responses from adults.

It is also proposed that a bidirectional pathway exist between CETV and Autonomy vs. Authority and CETV and Negative Adult Responses. Like the model depicted in Figure 4a and 4b, the purpose of these bidirectional pathway is to depict two cyclic experiences of how youth may remain chronically exposed to community violence. The first cycle involves CETV predicting Negative Adult Responses and Negative Adult Responses predicting Autonomy vs. Authority and Autonomy vs. Authority predicting CETV (see Figure 4c). The second cycle involves, CETV predicting Autonomy vs. Authority, and Autonomy vs. Authority predicting Negative Adult Responses and Negative Adult Responses predicting CETV. In these particular parts of the model, Autonomy vs. Authority and Negative Adult Responses predicting CETV suggest that adolescents are at a higher risk for chronic CETV, which could explain why adolescents in this study reported multiple exposures to community violence. Further, the

bidirectional flow between Autonomy vs. Authority and Negative Adult Responses may also indirectly explain youth's chronic exposure to community violence, such that these negative behaviors between adolescents desire to exert their autonomy by nondisclosing and adults responding to adolescents' lack of disclosure may eventually influence these youth to be chronically exposed to community violence. Similar to the model depicted by Figure 4a and 4b, these cycles are likely to repeat and perhaps become strongly linked throughout adolescent development. These cycles are important to examine to further understand how negative social-cognitive processes can explain the relation between CETV and the Autonomy vs. Authority subscale. Future research is needed to test this model explaining the relation between CETV and the Autonomy vs. Authority subscale.

Autonomy vs. authority predicting symptoms. Results of analyses testing the proposed mediational chain also revealed that Autonomy vs. Authority significantly predicted Internalizing Symptoms, suggesting that the more youth nondisclosed information to adults (as measured by the Autonomy vs. Authority subscale), the more they exhibited Internalizing Symptoms.

Currently, there is no literature that examines the specific links found in this particular model, but the findings from the limited literature on secrecy predicting Internalizing Symptoms can be extended to the current study. One important developmental task in adolescence is becoming autonomous (Finkenauer, Engels, & Meeus, 2002), and it is not uncommon for adults and adolescents to disagree on issues during this process. A lack of agreement between adolescents and adults can be associated with Internalizing Symptoms. Extant research shows that similar constructs of Nondisclosure (e.g., secrecy) is associated with anxiety, depression, and somatic complaints (Finkenauer & Rime, 1998; Frijns, Finkenauer, Vermulst, & Engels,

2005; Ichiyama et. al., 1993; Larson & Chastain, 1990; Pennebaker, 1989, 1990; Pennebaker & Sussman, 1988; Smetana, Metzger, Gettman, & Campione-Barr, 2006).

There is one explanation that would support the finding that Autonomy vs. Authority predicted Internalizing Symptoms. A study by Engels, Finkenauer, and van Kooten (2006) is the only study that examined the role of adolescent secrecy towards parents, which is a construct similar to Nondisclosure. This study suggests that adolescents not telling secrets to parents actively involves asserting their autonomy. For example, they used an existing scale (i.e., Self-Concealment scale; Larson & Chastain, 1990), which consists of 10 items assessing adolescents secrecy from parents such as the apprehension of the revelation of concealed personal information and tendency to keep information to oneself. Many of these items could arguably be viewed as motives influencing adolescents to be secretive towards their parents in order to protect their autonomy and freedom. This study examined secrecy predicting Internalizing Symptoms and revealed that secrecy significantly predicted depressed mood in a sample of Caucasian early adolescents from the Netherlands. Given this significant prediction, this finding can be used to help interpret the current study's result that the Autonomy vs. Authority subscale fully mediated the relation between CETV and Internalizing Symptoms.

With regard to the newly proposed mediation model, Negative Adult Responses may support the finding that adolescent Nondisclosure (as defined by the Autonomy vs. Authority subscale) leads to Internalizing Symptoms. As discussed earlier, negative adult responses to community violence are likely to impair adolescents' social-cognitive processes, which may lead to 1) learning maladaptive ways of coping, such as nondisclosure, and 2) exhibiting Internalizing Symptoms. Exposure to community violence and negative responses from adults are also likely to cause parent-adolescent/adult-adolescent conflict. These conflicts may involve adults using

punitive discipline strategies or a form of aversive behavioral control to limit adolescents' freedom and autonomy in the context of community violence. These conflicts may influence adolescents to exert their autonomy and freedom (by nondisclosing information to adults) more than exhibiting strategies to keep them less exposed to community violence. Thus, it is likely that a combination involving chronic exposure to community violence (experienced by adolescents and adults), Negative Adult Responses, and adolescents exerting their autonomy and power (by nondisclosing information to adults) are likely to lead to greater internalization of symptoms in African American early adolescents.

Sobel's test indicated that Autonomy vs. Authority fully mediated the relation between CETV and Internalizing symptoms. However, calculating the decomposition of total effect indicated that Autonomy vs. Authority accounted for 43% of the mediating effect between CETV and Internalizing Symptoms. As discussed earlier, this finding suggests that there may be an additional mediator that explains the predictor and outcome link. Negative Adult Responses is also proposed to be an additional mediator to explain the link between CETV and Internalizing Symptoms. Further, the lack of full mediation may be accounted for by measurement error stemming from the Nondisclosure measure.

Results of analyses testing the proposed mediational chain also revealed that Autonomy vs. Authority significantly predicted Externalizing Symptoms, However, in the same model, CETV also predicted Externalizing Symptoms, which indicates partial mediation (i.e., pathway did not drop to nonsignificance when the mediator was included in the model), and thus, Autonomy vs. Authority explains 54% of the relation between CETV and Externalizing Symptoms. Extant research shows that Nondisclosure and similar constructs (e.g., secrecy) are associated with behavior problems such as delinquency and aggression, which were significantly

predicted by adolescents' secrecy (Frijns, Finkenauer, Vermulst, & Engels, 2005), or lying (Engels, Finkenauer, & van Kooten, 2006; Gervais, et al., 2000; Stouthamer-Loeber, 1986) to their parents. In a longitudinal study of Caucasian youth, antisocial behavioral problems have been found to accumulate when lying behavior becomes more persistent over time, such that frequent liars showed more disruptive behaviors in comparison to those who were not frequent liars (Gervais, et al., 2000).

Similar to previous explanations of Nondisclosure and Relationship Problems predicting psychological symptoms, Autonomy vs. Authority predicting externalizing behaviors (and partially mediating the relation between CETV and Externalizing Symptoms) suggests that the more youth keep information private to protect their autonomy, the more they continue to exhibit externalizing behaviors. Additionally, exposure to chronic community violence also continues to strongly influence adolescents to externalize behaviors as a means to not only to cope with the stress associated with chronic exposure, but also the stressors associated with maintaining their freedom. Parents and/or adults often may use restrictive practices as a form of behavioral control to help keep adolescents safe from community violence (Crouter & Head, 2002; Walker-Barnes, & Mason, 2001). This is likely to inspire adolescents to keep private about their experiences of violence. Unfortunately, the price they pay to protect their autonomy, by way of nondisclosure, leads to externalizing behaviors. Youth may externalize as a means to juggle with their desire to protect their autonomy and cope with their experiences of community violence. This is a difficult combination to maintain and is likely lead adolescents to perhaps feel frustrated and overwhelmed and thus, demonstrate socially unacceptable behaviors.

Based on the newly proposed model, which includes Negative Adult Responses as an additional mediator, it is important to consider social-cognitive influences affecting Relationship

Problems predicting Externalizing Symptoms. Similar to the discussion examining Relationship Problems predicting Internalizing Symptoms, negative adult responses to community violence are likely to impair adolescents' social-cognitive processes, which may lead to 1) learning maladaptive ways of coping, such as nondisclosure, and 2) exhibiting Externalizing Symptoms. Exposure to community violence and negative responses from adults are also likely to cause parent-adolescent/adult-adolescent conflict. These conflicts may involve adults using punitive discipline strategies or a form of aversive behavioral control to limit adolescents' freedom and autonomy in the context of community violence. These conflicts may influence adolescents to exert their autonomy and freedom (by nondisclosing information to adults) more than practicing strategies to keep them less exposed to community violence. Thus, it is likely that a combination involving chronic exposure to community violence (experienced by adolescents and adults), Negative Adult Responses, and adolescents exerting their autonomy and power (by nondisclosing information to adults) are likely to lead to greater externalization of symptoms in African American early adolescents.

It is important to note that 54% of the relation between CETV and Externalizing symptoms was partially mediated through Autonomy vs. Authority whereas only 43% of this mediator explained the relation between CETV and Internalizing Symptoms. This finding is unique in comparison to examining Nondisclosure and Relationship Problems as mediators, which revealed a higher percentage accounting for the relation between CETV and Internalizing Symptoms. This reverse finding suggest that Autonomy vs. Authority is a more powerful partial mediator explaining the relation between CETV and Externalizing Symptoms. Extant literature argues that adolescent autonomy is associated with increased behavioral problems in the presence of poor family processes (Lamborn & Steinberg, 1993; Ryan & Lynch, 1989), such that

high-risk African-American youth are more angry and defiant in their autonomous acts, and thus, engage in more hostile autonomous externalizing behaviors (Florsheim, Tolan, & Gorman-Smith, 1996). Feldman and Rosenthal (1990), who studied differences in autonomy expectations across cultures, reported that expectations of early autonomy, among adolescents, are associated with conduct problems. In the context of violence, African-American families are oriented towards nurturing autonomy by promoting obedience and self-reliance as a means to help adolescents stay out of harm's way (Florsheim, Tolan, & Gorman-Smith, 1996). However, when adolescents deprive themselves an opportunity to share their experiences of violence at the cost of their well-being and protection of their freedom, they may externalize and thus, become more vulnerable for development of additional adverse outcomes.

#### Summary

This study found that Nondisclosure fully mediated the relation between CETV and Internalizing Symptoms, and partially mediated the link between CETV and Externalizing Symptoms. Similarly, the Nondisclosure subscales, Relationship Problems and Autonomy vs. Authority, were found to fully mediate the relation between CETV and Internalizing Symptoms, and partially mediate the link between CETV and Externalizing Symptoms. However, calculations of the decomposition of total effects indicated that all of the proposed mediators partially instead of fully mediated the link between CETV and Internalizing Symptoms. Calculating the percentages of the total effects suggested that: 1) there may be other mediator(s) that explain the CETV to Internalizing Symptoms pathway, and 2) measurement error may account for the lack of full mediation findings.

Examining the mediating role of Nondisclosure suggested a closer look at adolescents' perceptions of relationship problems with adults, and their desire to be autonomous. These

factors combined may reduce their willingness to talk with adults about the violent events they experience and subsequently suffer from psychological symptoms. Learning what particular relationship problems and autonomy motives influence adolescents to nondisclose information can help parents and adults acquire better intervention strategies for how to communicate and be more sensitive to adolescents' needs in the context of violence.

Lastly, this study highlighted the need to strongly consider social-cognitive/learning processes serving as a significant theoretical link between CETV and Nondisclosure (including the two subscales) underlying adolescents' motives to nondisclose information to adults. Based on this suggestion, this study proposed a new model that included an additional mediator to explain the link between CETV and Nondisclosure and the accompanying subscales. The addition of the new mediator, i.e., Negative Adult Responses, yielded a new model as depicted in Figures 4a, 4b, and 4c. These models also discussed two cyclic experiences of how youth may remain chronically exposed to community violence. These cycles are important to examine to further understand how negative social-cognitive processes can explain the relation between CETV and Nondisclosure and its subscales. For future research, learning about particular Negative Adult Responses the adolescents' experience will further explain why adolescents' nondisclose information to adults.

#### Moderated Mediation: The Effects of Parent-Child Attachment and Social Support

Results of moderated mediation path analyses suggest that Parent-Child Attachment and Social Support did not moderate the mediating role of Nondisclosure in the relation between CETV and Internalizing and Externalizing symptoms. Evidence of moderated mediation also did not emerge when the Relationship Problems, and Autonomy vs. Authority subscales were examined separately as mediators of the relation between CETV and Internalizing and



Externalizing symptoms. A closer analysis of the moderators revealed that there were no significant differences between the mediation models between high and low Parent-Child Attachment, and high and low Social Support. This suggests that the protective effects, usually known to be offered by parents and other caring adults in the context of violence (Aisenberg & Herrenkohl, 2008; Hammack, Richards, Luo, Edlynn, & Roy, 2004; Kliewer, Lepore, Oskin, & Johnson, 1998; Ozer & Weinstein, 2004; Rosario, Salzinger, Feldman, & Ng-Mak, 2008), did not emerge in this sample.

There are a few studies that have found that parent, family, and/or community support have failed to protect youth in extreme conditions of risk such as community violence and poverty. Hammack and colleagues (2004) found that in conditions of extreme risk, especially high levels of community violence, social support and maternal closeness failed to reduce the vulnerability for adverse mental health outcomes for African American youth. Similarly, in another study with African American youth, the effect of family supportiveness and helpfulness was attenuated when families were embedded in low socio-economic neighborhoods and confronted with powerful neighborhood stressors (i.e., violence and poverty) (Li, Nussbaum, & Richards, 2007). Findings in which a moderator effect occurs at low levels of risk, but fails to minimize adverse outcomes at high levels have been labeled a protective-reactive effect (Luthar, Cicchetti, & Becker, 2000) or promotive-reactive effect (Hammack et al., 2004). The highly adverse contexts, associated with urban poverty, overwhelmed the possible benefits of these protective factors. Hammack and colleagues (2004) suggested that some support factors that are typically conceived as contributing to resilience might at times fail to protect youth in conditions of extreme risk. The effects of community violence and urban poverty, therefore, may overwhelm the potentially health-promoting effects of protective elements such as Parent-Child Attachment or Social

Support. The Family Stress Theory (Hill, 1949) posits that family members experiencing stress and economic pressure might have difficulty remaining helpful and positive in their interactions. Thus, it is possible that all of the parents and adults in this sample are suffering from the deleterious effects of violence and stress making it difficult to be supportive and protective of adolescents in this study at any pathway exhibited in the three mediation models.

Conversely, let's say that the parents and adults are not significantly suffering from the deleterious effects of community violence, urban poverty, and stress, and thus, are providing adolescents with adequate support (i.e., support that is not attenuated). It is possible that the support provided is not enough to moderate each pathway of the mediational chains proposed in this study. The protective-reactive or promotive-reactive effect findings may also be extended to this situation, such that adult support also fails to protect youth in extreme conditions of community violence, poverty, and stress. Each day, families are faced with surviving the challenges of chronic community violence, and youth in particular may often worry about their well-being in situations that they should feel safe and protected. For example, youth may feel unsafe walking to and from, and may also have significant concerns about their safety at school. Youth may receive positive statements or lessons about safety (e.g., words of affection, or "be aware of your surroundings", "watch out for dangerous people") from their parents and caring adults, but these types of support may not be enough to prevent youth from nondisclosing information as well as gaining relief from experiencing sadness, fear, anxiety, and externalizing behaviors associated with chronic community violence.

Whether adults are able or unable to provide support, the protective-reactive or promotive-reactive effect appears to extend to the current study's findings. The following paragraphs discuss detailed conceptual explanations of how the protective-reactive/promotive-

reactive effects support the lack of moderation for the CETV to Nondisclosure pathway and from Nondisclosure to Internalizing and Externalizing Symptoms. Following this discussion, interpretations of the full mediation model with the Nondisclosure subscales as mediators will be discussed.

CETV to nondisclosure. For the pathway from CETV to Nondisclosure, there are three conceptual theories that may explain why this pathway was not moderated by Parent-Child Attachment and Social Support. First, from the perspective of adolescents receiving support from their parents and/or caring adults, avoidant coping processes may be a factor explaining why youth may have difficulty discussing their experiences of community violence. Youth may find it easier to avoid conversations, thoughts, and feelings related to the event. Further, parents and adults may not detect adolescents possibly exhibiting avoiding coping processes, and thus are not able to intervene. In both situations, the detrimental effects of community violence likely outweigh the support that adolescents may receive. This indicates that the support adolescents receive is not enough to buffer the effects of CETV. Second, from the perspective of adolescents not receiving support, it is possible that parents and other caring adults may not provide an environment for adolescents to safely talk about their experiences, which does not promote disclosure. As discussed earlier, adolescents may have previous experiences of learning that these adults exhibited negative reactions in response to community violence. Lastly, adults may not promote ongoing discussions about community violence, which may indicate a lower likelihood for parent and adult support to moderate the CETV to Nondisclosure pathway. If adults are more proactive about discussing community violence (in a supportive manner), youth may feel more comfortable discussing their experiences because they will have a sense of how adults may be supportive in response to community violence. Talking about community

violence is a grave issue that many people may not want to discuss because it may lead to symptoms of depression and anxiety. This type of avoidant behavior likely leads adults to respond to adolescents in crisis, which may allow for adults to think clearly, and respond in a supportive manner. Without knowledge of specific and effective strategies to manage the effects of community violence, it is probably much easier, psychologically, for adults to intervene during a crisis rather than promote ongoing discussions about how adolescents are affected by community violence.

Nondisclosure to psychological symptoms. There are two conceptual explanations that may support why moderation did not affect the pathways from Nondisclosure to Internalizing and Externalizing Symptoms. First, as discussed earlier, adolescents may have prior experiences of receiving negative adult responses from either personally disclosing or witnessing another peer disclosing experiences of community violence. This lack of support is a perfect recipe to discourage adolescents from disclosing their exposures to violence. Second, adults may provide a nurturing and supportive environment to promote disclosure, but the support is not enough to combat the negative effects of violence. Adolescents may feel very overwhelmed and may have adopted a schema that negatively affects their judgment and perception of others. For example, these adolescents may feel uncomfortable and not “open up” to adults possibly in fear of negative reactions despite positive messages they may receive from adults. Whether adolescents receive support or not, parents and adults have failed to protect adolescents from the detrimental effects of violence. Therefore, this study suggests that adolescents are likely to withhold or nondisclose information and, thus, experience various Internalizing and Externalizing Symptoms.

CETV to relationship problems. There are two conceptual explanations that may support why the pathway from CETV to the Relationship Problems subscale of Nondisclosure was not moderated by Parent-Child Attachment and Social Support. Youth may overall have a supportive relationship with their parents and other caring adults, and perhaps are able to discuss various sensitive topics, except for community violence. Conversely, youth may not have a supportive relationship with their parents and/or adults, which may suggest that these youth may not have anyone or very few people to talk about things in general, let alone their experiences of violence. In either situation, adults may have a history of negatively responding (e.g., yelling, displaying disapproval, ignoring) to hearing about adolescents' experiences of violence or have a history of trauma or violence, which may complicate their ability to sensitively attend to adolescents. For example, adults learning about teenage pregnancy or adolescent experimental drug use may be easier to manage and respond to in comparison to adolescents chronically witnessing shootings or personally being attacked by others in the community. The latter suggests more of a traumatic experience, for both adolescent and parent/adult, and thus, a difficult problem to cope with and solve. Discussion about community violence may be a challenging and daunting topic for adults to effectively manage because of the pervasive and adverse effects that extends across multiple ecological levels of adolescents lives. This can be overwhelming and may cause adults to feel helpless or demonstrate self-blame for not being more protective of adolescents. As discussed earlier, exposure to community violence compromises interpersonal relationships between youth and adults and disrupted parenting associated with the adults' own experiences of violence may exacerbate the negative effects of adolescents' exposure to violence. In light of these multiple factors, parent and adult support

systems may not be strong enough to buffer their own negative responses youth may perceive to experience if they disclose their chronic exposures of community violence.

Relationship problems to psychological symptoms. Similar to the CETV to Relationship Problems pathway, the pathway from Relationship Problems to Internalizing and Externalizing Symptoms also was not attenuated by high or low parent-child attachment and adult support. These findings may possibly be due to negative adult reactions, as described in previous sections. No matter how much support adults may provide to encourage discussion or if adolescents receive little support, adolescents may believe that it is not worth the risk to share their experiences if disclosure would potentially lead to conflict or additional problems in the relationship. Therefore, adolescents may believe it may be more of a benefit to keep experienced exposure to community violence private, and unfortunately they endure adverse psychological symptoms.

CETV to autonomy vs. authority. Parent and adult support may be present, but not strong enough to moderate the relation between CETV and the Autonomy vs. Authority subscale of Nondisclosure. This may occur possibly due to adolescent perceptions or expectations of negative adult reactions in response to adolescent exposure to community violence. In general, adolescents may have adults that nurture their independence and autonomy in various situations or settings. However, when community violence is involved, adults may take a proactive and protective stance, which may involve using restrictive parenting practices. Similar to supportive parents, adolescents may also receive negative reactions from unsupportive parents about their experiences of community violence, which could also lead to restrictive parenting practices, but perhaps the “rules” may be more extreme for a parent who is unsupportive. Given these viewpoints, adolescents, may not want to jeopardize their freedom and autonomy by disclosing

information to adults about their experiences, especially their exposures to community violence. Disclosure may involve adolescents being forced to have an earlier curfew, avoid certain neighborhoods/areas, limited involvement in social activities or staying home most of the time. Within supportive networks, these strategies may be viewed (by both adults and youth) as supportive means to protect adolescents, but adolescents may believe that their autonomy and freedom are more important than receiving this type of support from adults.

Autonomy vs. authority to psychological symptoms. Similar to earlier discussions, adolescents may not want to discuss their motives (i.e., motives listed on the Autonomy vs. Authority subscale such as because the adult will overreact, because don't want to be punished or have the adult worry) of why they nondisclose information to their parents or adults as a means to avoid negative reactions or restrictive practices. Whether adolescents receive support or not, they may believe that it is not worth disclosing if their autonomy and freedom are at risk. Consequently, to maintain their autonomy and freedom, adolescents may continue to nondisclose information to adults, but, unfortunately, this type of behavior leads to greater negative effects affecting their psychological wellness.

Methodological explanations. In addition to conceptual explanations for why the null findings emerged, it is also important to consider methodological limitations of this study, which might have contributed to an erroneous acceptance of the null hypothesis. In particular, the sample size for this study was likely too small to conduct moderated mediation analyses using SEM. A sample size ranging from 75 to 78 (per group) appeared to lack sufficient power to detect a significant moderating effect. Literature suggests various ways to calculate sample size. Guilford (1954) argued that N should be at least 200, while Comrey and Lee (1992) provided general guidance in determining adequacy of sample size: 100=poor, 200=fair, 300=good,

500=very good, 1,000 or more=excellent. By both of these standards, the present study lacked sufficient power to test the moderation hypothesis. Additional studies are needed to test this hypothesis with larger samples.

Lastly, it is important to note that this study used two measures, the Relationship Problems subscale and the Parent-Child Attachment, presents items that may overlap in terms of quality of relationships between parent and adolescents. Although, the Parent-Child Attachment measure (i.e., the Inventory of Parent and Peer Attachment) contained two items that clearly overlapped with the Relationship Problems subscale and were not calculated as part of the total scaled scores, one may argue that some of items may be conceptually related between these two measures. The overlapping of concepts or the covariance that may exist among the items between the two measures, likely decreases the likelihood of finding a differential or moderating effect between the independent variable (i.e., Parent-Child Attachment) and the dependent variable (i.e., Relationship Problems). Conversely, it could be argued that Parent-child Attachment and Relationship Problems are distinct constructs because the IPPA measure assesses for quality of parent-child attachment (see appendix A), which may be a precursor for the type of relationship adolescents have with their parents. The Relationship Problems subscale (see Appendix A) does not assess for quality of attachment, and would not be a precursor for the development parent-child attachment, given that the attachment process begins during infancy (Bowlby, 1973). Thus, there may be adequate distinction between the constructs, which may not affect the lack of moderated mediating findings found for this study. Research is needed to establish empirical distinction between attachment and the Relationship Problems subscale of Nondisclosure.



### Summary

In summary, these pattern of findings can be interpreted in at least three ways: 1) parents and adults are completely disadvantaged (i.e., suffering from the effects of violence and/or poverty) such that they were unable to provided social and emotional support to buffer the effects of violence, 2) the moderating effect truly did not occur because parent and adult support was present, but not strong enough to attenuate mediational chains, or 3) this study's sample size was too small to detect a significant moderating effect. This study suggests that all interpretations are valid arguments that need to be explored further in future research. Particularly, future research should test these hypothesized interpretations with a larger sample size.

### Limitations of study

In addition to the sample size limitations discussed earlier, there are a number of noteworthy limitations to the current study that may have influenced the findings. First, this study utilized a cross-sectional design, which limits the extent to which one can determine direction of effects. Longitudinal designs yield information about temporal precedence, and thus, allow examination of which variables are causes and which variables are effects (MacKinnon, et al., 2002). Previous works on the relation between cross-sectional and longitudinal models (e.g., Gollob & Reichardt, 1987, 1991) have revealed that cross-sectional designs and analyses cannot generally be counted on as faithful representations of longitudinal processes (Maxwell & Cole, 2003). Future research is needed to test a model in which Nondisclosure mediates the relation between CETV and Internalizing and Externalizing Symptoms using longitudinal designs.

Despite evidence that cross-sectional designs do not adequately test causal models, prior research provides reason for confidence that this study's results are consistent with a mediational hypothesis. In particular, numerous studies have examined the relation between CETV and psychological symptoms cross-sectionally and longitudinally. Results of longitudinal analyses support the hypothesized direction of effects in the present study, at least with regard to the pathway between Nondisclosure and psychological symptoms. For example, prior work has established that adolescents, who lie to their parents, report increasing psychological symptoms overtime (Engels, Finkenauer, & van Kooten, 2006; Gervais et al., 2000; Stouthamer-Loeber, 1986).

Second, this study had nearly twice as many females than males (101 females, 52 males), which could have influenced the lack of full mediational findings for Externalizing Symptoms according to the path analysis results and Sobel's test. Thus, this study may have had more power to detect full mediation for Internalizing Symptoms and not for Externalizing Symptoms. Numerous studies have shown gender differences in reporting of psychological symptoms (e.g., Achenbach et. al., 1987; Carson & Grant, 2008; Grant et. al., 2004; Maschi, Morgen, Bradley, & Hatcher, 2008; Dinizulu, 2006), such that females report experiencing more Internalizing Symptoms and males report more Externalizing Symptoms. One study revealed that African American girls reported heightened rates of depressive symptoms than their African American male counterparts (Grant et. al., 2004). Further, extant literature suggest that female adolescents have a higher incidence of psychopathology than male adolescents (McCabe, Lansing, Garland, & Hough, 2002; Romano, Tremblay, Vitaro, Zoccolillo, & Pagani, 2001). These differences appear to be fully accounted for by gender differences in internalizing problems, such as depression and anxiety (Beitchman, Kruidenier, Inglis, & Clegg, 1989; Davis, Matthews, &

Twamley, 1999; Lewinsohn et al., 1994; Romano et al., 2001). Externalizing problems, such as aggression and delinquency, occur at higher rates among adolescent boys (Beitchman et al., 1989; Offer & Schonert-Reichl, 1992; Overbeek et al., 2001). All of these findings seem to suggest that the uneven sample of gender presented in this study may have influenced the mediation results.

Finally, there are several limitations to the measurement, which might have influenced the findings. This study did not use multiple measures of each construct examined in the mediation and moderated mediation models. Using multiple measures (i.e., various observed variables) would have allowed for latent variables to be created, which would have *significantly* reduced or “purged” random error of measurement (Maxwell & Cole, 2007). With SEM, there is no assumption that the observed variables, as proposed in this study, are measured without error. Thus, reducing random error of measurement (or using latent variables) would increase the likelihood of association among constructs. Reducing random error of measurement also would allow for a better assessment of the strength and direction of the interrelationships among the dependent and independent variables, as well as better accuracy of the direct and indirect effects of variables in the model. For example, if several measures were used to measure Nondisclosure, then it is possible that Nondisclosure would have a higher percentage of explaining the effect between CETV and Internalizing and Externalizing Symptoms. Full mediation, i.e., 100% of the relation between the predictor and outcome can be explained by the mediator, rarely occurs due to random error of measurement. Using multiple measures/latent variables would reduce random error of measurement, which may increase the percentages calculated for the indirect effect. Third, the measures used to assess adolescents’ nondisclosure to adults and adolescents’ perceptions of social support have not yet been validated. Therefore,

it is important to interpret and generalize the findings relevant to these measures with caution.

Future research is needed to validate the Nondisclosure and Social Support measures.

#### Implications for Intervention and Future Research

Interpretation of the results of this study highlight multiple directions for future research. These will be discussed in reference to findings that emerged from mediation analyses, and then with reference to findings from moderated mediation analyses.

#### Mediation Findings

A primary contribution of this study is the finding that Nondisclosure mediated the relation between CETV and psychological symptoms for African American urban youth, but it did not provide information about the content of information adolescents nondisclosed to adults. Understanding such information could be useful for assessing the degree to which adolescents are placing themselves at risk for developing psychological symptoms (see Finkenauer, Engels, & Meeus, 2002; Frijns, Finkenauer, Vermulst, & Engels, 2005; Smetana, Metzger, Gettman, Campione-Barr, 2006; Youniss & Smollar, 1985). The conceptual mediation models proposed for this study could assume that Nondisclosure is about the content of CETV. However, the Nondisclosure measure did not explicitly assess for this. Future research should assess for content influencing adolescent's motives for nondisclosing information to adults. Investigating this proposed causal link may also provide insight on how to prevent youth from nondisclosing specific information related to their experiences of community violence. Prevention and intervention programming could focus on helping adolescents share distressing information and helping adults sensitively receive and cope with the content shared.

Second, research is needed to examine how social-cognitive processes (e.g. adult responses to previous adolescent disclosure) may lead to adolescent nondisclosure. This study

proposed that Negative Adult Responses, as an additional mediator, primarily to explain the link between CETV and Nondisclosure. This new model assumes that adolescents have prior experiences of negative adult interactions in response to community violence, and thus, have learned to nondisclose information due to negative adult responses. How an adult responds may determine whether or not adolescents will find it in their best interest to share their experience. These adults may often experience community violence and additional stressors that may exacerbate their ability to sensitively respond to adolescents. For example, adolescents may nondisclose if adult responses are scathing and unsupportive, or if the adult presents as emotionally drained or emotionally dysregulated, which could worsen adolescent internalizing and externalizing behaviors. Research is needed to examine the reciprocal nature between adolescent and adult interaction influencing adolescents' decision to nondisclose information. These suggestions have implications in terms of professionals helping adults understand the importance of maintaining or forming quality relationships with adolescents and teaching adults how to be more sensitive, empathic, receptive, and cope effectively when receiving information as well as being mindful of youth developing as autonomous individuals. Creating a theoretical model and testing for significance will pioneer the field in creating sensitive interventions aimed towards helping African American adolescents disclose important information about their experiences of community violence so that they can be better protected.

Third, this study has identified Nondisclosure, including the Autonomy vs. Authority and Relationship Problems subscales, as mediators that are disadvantageous to urban African American adolescents in the context of community violence. As discussed earlier, adolescents have various opportunities to manage information, and thus make active decisions to disclose or nondisclose information. Their choice to exert their autonomy over authority may be contingent

upon the consequences they believe will occur if disclosure were to take place. Adolescents may choose to reveal or conceal information to parents to assert their autonomy and power (Stattin, Kerr, & Ferrer-Wreder, 2000), which is developmentally appropriate. However, within the context of violence this developmental phase may place adolescents at risk despite having strong or weak relationships with their parent(s) and social support from the community.

Research is needed to identify how adolescents and adults can balance healthy development of autonomy while keeping communications open, and minimizing psychological symptoms within the context of violence. This type of balance may be achieved by creating community based intervention groups for youth and their families exposed to violence. Group leaders can provide culturally sensitive psychoeducation to youth and their families regarding adolescent development of autonomy, and the effects of violence exposure. Along with psychoeducation training, treatment would involve not only reducing the effects of violence, but also promoting effective communication patterns and reducing conflict between parents and/or adults and adolescents, and helping adults cope better (e.g. reduce feelings of worry, and being overwhelmed, crying) when they are exposed to distressing information to promote adolescent disclosure within the context of violence.

Fourth, as discussed previously, examining the study's mediation model in a longitudinal design is essential in order to truly establish directions of effects. Testing for potential developmental variations in pathways of the model also represents a promising avenue for future investigation. Examining the direction of effects including the magnitude of the coefficient values of each pathway becomes important to examine because as early adolescents develop, their motives for nondisclosure may change depending on context, such as the violence they may experience and the type of support they may have over time. It is likely that for older

adolescents, the coefficient values of the mediational paths will be higher or will yield stronger predictions than the mediational paths for early adolescents. Extant literature suggests that adolescents become more exposed to violence with increasing age (Dinizulu, 2006; Smetana, Metzger, Gettman, & Campione-Barr, 2006) and as a result, report higher levels of psychological symptoms than the younger counterparts (Dinizulu, 2006). Prior, literature also suggests that adolescents become increasingly secretive as they develop in to middle and late adolescence (Darling, Hames, & Cumsille, 2000; Smetana, Metzger, Gttman, & Campione-Barr, 2006). In a study with adolescents from the Netherlands, Finkenauer, Engels, and Meeus (2002) found an interaction for age group such that older adolescents kept more secrets from their parents also reported experiencing higher levels of psychological symptoms than did younger adolescents. As early adolescents develop they may become more strategic about nondisclosing and disclosing information (see Darling, Hames, & Cumsille, 2000) as a function of experience. They also may have learned different ways of coping with exposure to community violence, which may affect their reasons for nondisclosure and thus, experiences of psychological symptoms. Given that the literature is limited, future research should investigate a longitudinal study of Nondisclosure as a mediator between the relation of CETV and psychological symptoms.

#### Moderated Mediation Findings

Significant moderated mediation findings did not emerge for this study. However, the null findings suggest important implications for intervention. As proposed, it is possible that parents and adults in this study are suffering from the deleterious effects of community violence, urban poverty, and stress, and thus, are unable to provide adequate support to adolescents exposed to chronic community violence. Conversely, adults may be supportive of adolescents,

but the support provided may not be enough to buffer the effects of violence. In either situation, intervention and prevention programs are needed to help adults learn specific strategies to help minimize the effects of community violence on African American adolescents as well as teaching parents and adults to seek help from resources in the community that will address the negative effects of community violence. It is also recommended that support services should be provided to help adults cope with their own as well as their adolescent's experience of community violence. Often, parents and adults may feel overwhelmed by the effects of community violence and, thus, not effectively solve problems or search for resources in their community for help.

Community agencies should also provide outreach or conduct informational sessions regarding the services offered to the community. In order to help parents and adults become knowledgeable about resources in their community, and hopefully reduce any discomfort about seeking help, these programs should promote discussion about the effects of community violence including the possibility that adolescents will nondisclose information and experience adverse psychological symptoms. These programs should also be used to educate youth providers and organizations.

As discussed earlier, future research should test the current study's moderated mediation hypotheses, but with a larger sample of African American adolescents. Hopefully, these future studies will determine whether or not adults and parents can serve as protective factors for youth exposed to community violence.



## CHAPTER V

### SUMMARY

African American youth residing in high risk neighborhoods, characterized by violence, crime, and poverty are at risk for developing numerous negative outcomes including internalizing (Hammack, Richards, Luo, Edlynn, & Roy, 2004; Muller, Goebel-Fabbri, Diamond, & Dinkage, 2000; Ozer & Weinstein, 2004) and externalizing problems (Ceballo, Dahl, Aretakis, & Ramirez, 2001; Ceballo, Ramirez, Hearn, & Maltese, 2003; Margolin & Gordis, 2000). There is also substantial evidence that youth residing in low-income urban neighborhoods are at heightened risk for exposure to violence. Low-income urban African American youth have been shown to be at increased risk for exposure to violence and psychological symptoms and that research has linked exposure to community violence to psychological symptoms. However, there has been little investigation of mediating processes that might explain these associations. Such an investigation could be helpful for developing preventive interventions that might break intervening pathways among these associations.

Due to the poor current state of mental health of low-income ethnic minority youth (Surgeon General's Report, 2001), it is important to investigate the role of nondisclosure as a risk factor affecting psychological outcomes in urban African American adolescents from high risk neighborhoods. Nondisclosure among urban African American adolescents from neighborhoods affected by violence is associated with adverse psychological outcomes (Dinizulu, 2006; Ozer & Weinstein, 2004) and can serve as a barrier to adult intervention and protection. If African American adolescents fail to disclose, parents cannot effectively monitor and intervene in risky and violent situations (Ceballo, Ramirez, Hearn, & Maltese, 2003). The literature also suggests that strong relationships with extended family and community members

may promote disclosure and better psychological adjustment (Rhodes, Ebert, & Fisher, 1992), and buffer the adverse effects of violence experienced by adolescents (Hammack, Richards, Luo, Edlynn, & Roy, 2004).

This study tested a conceptual model in which adolescents' nondisclosure to adults mediates the relation between CETV and Internalizing and Externalizing Symptoms. In addition, moderated mediation analyses were conducted in order to test the hypotheses that Parent-Child Attachment and Social Support from extended kin and non-kin adults would attenuate the hypothesized relations among variables proposed in the mediation models. Structural Equation Modeling (SEM) was used to conduct mediation and moderated mediation analyses. Post-hoc analyses were also conducted for significant mediation effects to determine the percentage of variance accounted for by indirect effects.

SEM analyses revealed that Nondisclosure fully mediated the relation between CETV and Internalizing Symptoms, and partially mediated the relation between CETV and Externalizing Symptoms. The subscales of Nondisclosure, Relationship Problems and Autonomy vs. Authority also fully mediated the relation between CETV and Internalizing Symptoms, and partially mediated the relation between CETV and Externalizing Symptoms. However, calculation of decomposition of total effects, revealed that Nondisclosure did not fully account for the relation between CETV and Internalizing Symptoms. Giving these findings, Baron and Kenny's steps testing for mediation (particularly, when the independent variable and dependent variable drops to nonsignificance when the mediator is present indicating full mediation) must be interpreted with caution. Results of moderated mediation path analyses suggested that Parent-Child Attachment and Social Support did not moderate the mediating role of Nondisclosure between CETV and Internalizing and Externalizing Symptoms. Similar null

findings emerged when Relationship Problems, and Autonomy vs. Authority were examined as mediators.

This research provides empirical support regarding the role of Nondisclosure in urban African American adolescents. Particularly, this study revealed the disadvantages of adolescents' nondisclosure to adults, and provided insight about developmental and relationship factors influencing adolescents' nondisclosure to adults. This study also suggested the need to further understand the role of nondisclosure in various ecological contexts (e.g., interpersonal interactions between youth and adults), and social-cognitive processes that may influence adolescents' nondisclosure to adults. Additionally, this study raised important discussions about how adult support fails to protect youth in contexts of community violence (i.e., protective-reactive/promotive-reactive effects). The findings from this study have implications for intervention and prevention programs aimed to improve adolescent and adult communications and to minimize the effects of CETV. Lastly, the findings from this study offer a unique contribution to the literature on risk factors affecting urban African American youth experiencing disproportionate levels of community violence.

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**APPENDIX A**  
**MEASURES**

**Reasons for Keeping Things Private – Revised (McIntosh & Dinizulu, 2005)**

How often do you keep something to yourself because you don't want your parent/ other adults to worry about you?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
How often do you keep something to yourself to keep from being punished?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
How often do you keep something to yourself because you feel ashamed about it?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
because you are protecting someone else?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
because someone made you?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
because you feel there is no adult that you could trust?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
because your parent/other adult would overreact?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
because of what people would think?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
because you want freedom from rules?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
because no one would believe you?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
because you want to keep getting away with it?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
because you would be blamed for it?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
because you didn't want your parent/other adult to tell other people?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
because you are being loyal to a friend?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
How often do you keep something to yourself to avoid an argument?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
How often do you keep something to yourself because you don't want to look like you always run to an adult?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot

How often do you keep things to self because don't want to be a snitch/rat?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
How often do you keep things to self because want to avoid someone get back at you?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
How often do you keep things to self because you feel the right to keep to yourself?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot
What other reasons do you have for keeping things to yourself?			
How often do you keep something to yourself for these other reasons?	<b>0</b> Never	<b>1</b> Sometimes	<b>2</b> A lot

**Relationship Problems - Subscale**

Keep things to self because no one would believe you

Keep things to self because would be blamed

Keep things to self because no adult you can trust

Keep things to self because of what people would think

Keep things to self because don't want adult to tell others

Keep things to self because want freedom from rules

Keep things to self because feel ashamed

Keep things to self because want to avoid someone get back at you

**Autonomy vs. Authority - Subscale**

Keep things to self because don't want adult to worry

Keep things to self because don't want to be punished

Keep things to self because want to keep getting away with it

Keep things to self because parent/adult would overreact

Keep things to self because you feel the right to keep to self

### Exposure to Violence

1. I have been chased by gangs or other people.
2. I have seen someone else chased by gangs or other people.
3. I know someone who has been chased by gangs or other people.
4. I have friends who are gang members.
5. I have been asked to use, sell, or give out illegal drugs.
6. I have seen other people get asked to use, sell, or give out illegal drugs.
7. I know someone who has been asked to use, sell, or give out illegal drugs.
8. I have seen other people use, sell, or give out illegal drugs.
9. I have been in a serious accident where I thought that someone would get hurt very badly or die.
10. I have seen someone else have a serious accident where I thought that someone would get hurt very badly or die.
11. I know someone who has been in a serious accident where I thought that someone would get hurt very badly or die.
12. I have been at home when someone has broken into or tried to force their way into the house or apartment.
13. I have been away from home when someone has broken into or tried to force their way into the house or apartment.
14. I have seen someone trying force their way into somebody else's house or apartment.
15. I know someone whose house or apartment has been broken into.
16. I have been picked-up, arrested, or taken away by the police.
17. I have seen someone else get picked-up, arrested, or taken away by the police.
18. I know someone who has been picked-up, arrested, or taken away by the police.
19. I have been threatened with serious physical harm by someone.
20. I have seen someone else get threatened with serious physical harm.
21. I know someone who has been threatened with serious physical harm.
22. I have been slapped or hit by a family member.
23. I have been punched or kicked by a family member.
24. I have seen someone else get slapped or hit by a member of their family.
25. I have seen someone else get punched or kicked by a member of their family.
26. I know someone who has been slapped or hit by a member of their family.
27. I know someone who has been punched or kicked by a member of their family.
28. I have been slapped, punched, or hit by someone who is NOT a member of my family.
29. I have seen another person getting slapped, punched, or hit by someone who is NOT a member of their family.
30. I know someone who has been slapped, hit, or punched by someone who is NOT a member of their family.
31. I have been beaten up or mugged.
32. I have seen someone else getting beaten up or mugged.
33. I know someone who has been beaten up or mugged.
34. I have been sexually assaulted or raped.
35. I have been sexually abused or molested.
36. I have seen someone else being sexually assaulted or raped.
37. I have seen someone else being sexually abused or molested.

38. I know someone who has been sexually assaulted or raped.
39. I know someone who has been sexually abused or molested.
40. I have seen someone carrying or holding a gun or knife (do not include police, military, or security officers).
41. I know someone who carries or holds a gun or knife (do not include police, military, or security officers).
42. I have been attacked or stabbed with a knife.
43. I have seen someone else getting attacked or stabbed with a knife.
44. I know someone else who has been attacked or stabbed with a knife.
45. I have seen someone who has been badly hurt after a violent act.
46. I have been badly hurt after a violent act.
47. I know someone who has been badly hurt after a violent act.
48. I have seen or heard a gun fired in my home.
49. I have been shot or shot at with a gun.
50. I have seen someone else get shot or shot at with a gun.
51. I know someone who has been shot or shot at with a gun.
52. I have seen a dead person somewhere in the community (do not include wakes or funerals).
53. I have heard about a dead person found somewhere in the community (do not include wakes or funerals).
54. I have seen someone committing suicide.
55. I have known someone who committed suicide.
56. I have seen someone being killed by another person.
57. I have known someone who was killed by another person.
58. I have been in a situation not already described where I was very scared, or thought I would get hurt very badly, or even die.



### **Inventory of Parent and Peer Attachment**

1. My parents respect my feelings.
2. I feel my parents are successful as parents.
3. I wish I had different parents.
4. My parents accept me as I am.
5. I have to rely on myself when I have a problem to solve.
6. I like to get my parents' point of view on things I'm concerned about.
7. I feel it's no use letting my feelings show.
8. My parents sense when I'm upset about something.
- \*9. Talking over my problems with my parents makes me feel ashamed or foolish.
10. My parents expect too much from me.
11. I get upset easily at home
12. I get upset a lot more than my parents know about.
13. When we discuss things, my parents consider my point of view.
14. My parents trust my judgment.
15. My parents help me to understand myself better.
16. I tell my parents about my problems and troubles.
17. I feel angry with my parents.
18. I don't get much attention at home.
19. My parents encourage me to talk about my difficulties.
20. My parents understand me.
21. I don't know whom I can depend on these days.
22. When I am angry about something, my parents try to be understanding.
- \*23. I trust my parents.
24. My parents don't understand what I'm going through these days.
25. I can count on my parents when I need to get something off my chest.
26. I feel that no one understands me.
27. If my parents know something is bothering me, they ask me about it.
28. My parents have their own problems, so I don't bother them with mine.

\* Items deleted from analyses

### **Social Support Questions**

- 1) How common is it for adults in the neighborhood to talk to kids your age?
- 2) How common is it for adults in the neighborhood to watch out for kids your age?
- 3) How common is it for adults in your neighborhood to talk to each other about the kids in the neighborhood?
- 4) How common is it for kids your age to be friendly with adults in the neighborhood?
- 5)\* How common is it for parents to discipline other kids in the neighborhood? (tell them when they are doing something wrong?)
- 6)\* How common is it for your parents or guardians to attend school activities?
- 7) How common is it for your other relatives to attend school activities?
- 8) How common is it for you to see your neighbors at school activities?
- 9) How common is it for your relatives to ask you how school is going?
- 10) How common is it for your neighbors to ask you how school is going?
- 11)\* How many of your friends do your parents or guardians know?
- 12)\* How many of your friends' parents/guardians know you?

\* Items deleted from analyses.