

A Dissertation

Entitled

Impact of Real Life and Media Violence:
Relationships between Violence Exposure, Aggression, Hostility, and Empathy
Among High School Students and Detained Adolescents

By

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Submitted as partial fulfillment of the requirements for the
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Adolescents in the United States today are among the population most at risk for experiencing violence. Adolescents also spend the vast majority of their free time engaged in media consumption, much of which includes increasingly violent content. Research has demonstrated that exposure to both real life and media violence is associated with increased hostility and aggressive behavior and decreased empathy. However, not all adolescents will be affected by violence exposure in the same way. Those who are exposed to personal and community violence, or who have a predisposition to aggressive behavior, may be more at risk for the negative effects of violence exposure.

The present study explored the effects of real life and media violence exposure on two populations, 216 high school students (109 girls) and 96 adolescents (13 girls) detained in a juvenile detention center. Participants completed seven self-report

instruments measuring exposure to real life and media violence, psychopathology, hostile attributions, aggression, empathy, and social desirability. Due to the differences in the samples, results were analyzed separately.

Consistent with the hypotheses and the General Aggression Model, real life and media violence exposure was significantly associated with and significantly predicted increased aggression, increased hostile attributions, and decreased empathy for the high school student sample. Additionally, psychopathology was a significant mediating variable for the relationship between real life violence and aggression.

For the detained adolescents, exposure to real life violence was positively associated with aggression and psychopathology, but was not significantly associated with hostile attributions or empathy. Media violence was not associated with aggression, hostile attributions, or empathy. These results are not consistent with the hypotheses and may reflect desensitization processes or differences in aggressive practices among this high risk sample.

Results of this study suggest the need for further work in the areas of prevention and interventions for violence-exposed adolescents in order to reduce negative outcomes. Additionally, future research may wish to focus more attention on high risk individuals to better understand the process through which these adolescents react to violence exposure.

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Chapter One

Introduction

Adolescents in the United States today are among the population most at risk for experiencing violence (U.S. Bureau of Justice Statistics, 2005). In addition to the numerous consequences for society as a whole, individuals exposed to violence are personally affected by this experience. While adolescents differ in their response to experiencing or witnessing violence, a typical response to violence exposure (particularly repeated exposure) includes developing a view of the world as a negative and unsafe place and viewing others as hostile or threatening (Price & Glad, 2003). Research has shown that increases in hostile thoughts and aggressive behavior toward others, as well as decreases in empathy toward others are common consequences of exposure to personal or community violence (DuRant et al., 1994; Moses, 1999; Sams & Truscott, 2004).

While not all adolescents are exposed to violence in the home or community, the average adolescent is exposed to enormous quantities of violence through the media each year (Huston et al., 1992; Wilson et al., 1998). Popular forms of entertainment such as television, film, music videos, and video games have all been the subjects of recent research on effects of violent media. Individual and meta-analytic studies demonstrate that exposure to violent media increases hostility and aggressive behavior and decreases feelings of empathy towards others (e.g., Anderson, 2004).

As social and clinical psychologists become more aware of the adverse effects of violence, including media violence, it becomes important to identify who is most at risk.

Slater and colleagues (2003) identify adolescents most at risk for the negative effects of media violence as those who have a history of exposure to real life violence, have aggressive tendencies, and actively seek out violent media. However, research to date has not tested this hypothesis by comparing the effects of violence on higher and lower risk groups. The present study seeks to do just this, by comparing the effects of real life and media violence on delinquent and non-delinquent adolescents; two groups with varying levels of risk factors.

The next chapter provides an overview of the literature associated with adolescent experiences of violence, with an emphasis on media violence, and the negative effects of such exposure. Anderson's General Aggression Model will be used as a possible explanation for the ways in which both real life and media violence exposure can increase hostility and aggression and decrease empathy. Finally, justification is given for the selection of the two samples, and specific hypotheses of the present study will be stated.

Chapter Two

Literature Review

Americans experience or witness acts of violence and violation nearly every day. Less severe examples include school bullying, workplace harassment, family arguments and social injustice. These relatively common experiences of violence affect Americans physically and psychologically. Weingarten states that we respond to daily violence with symptoms she calls “common shock” and may include increased desensitization, bravado, distractibility, or distress (Weingarten, 2003).

Each year, a number of Americans will also become victims and witnesses to more severe violent crimes, such as rape, assault, burglary, and homicide. According to the Bureau of Justice (2005), rates of violent crime in the U.S. have decreased in recent years. However, adolescents and young adults aged 12-24 continue to experience the highest rates of violence. While adolescent/young adult males are the most frequent victims of violence (except sexual violence), a statistical trend in the past few years is closing this gender gap, indicating that all adolescents are at high risk for experiencing violence (Bureau of Justice Statistics, 2005).

Effects of Real Life (Personal and Community) Violence on Adolescents

Individuals vary in their response to victimization or witnessing of violence. However, many adolescents who experience violence in the home or community begin to see the world as a negative and unsafe place where others are hostile, relationships are unsupportive, and they themselves are unworthy of love or protection (Price & Glad,

2003). Adolescents' exposure to violence, whether directly or through witnessing, could result in a multitude of problems including low self-esteem, symptoms of psychopathology, substance use, impaired identity formation, increased aggressiveness, and risk for future criminal behavior (Pynoos & Eth, 1985; Pine & Cohen, 2002; Weisman, 1993). Gender seems to influence which of these symptoms will develop, with girls more likely to meet criteria for mood disorders and boys more likely to exhibit behavior symptoms (Moses, 1999; Shaw, Applegate, & Schorr, 1996; Udwin, Boyle, Yule, Bolton, & O'Ryan, 2000).

Affective disorders such as anxiety and depression often develop following experiences of violence (Breslau, Davis, Andreski, & Peterson, 1991; Bolton, O'Ryan, Udwin, Boyle, & Yule, 2000; Hubbard, Realmuto, Northwood, & Masten, 1995), particularly physical/sexual abuse (Brown, Cohen, Johnson, & Smailes, 1999; Fergusson, Lynskey, & Horwood, 1996) and witnessing domestic violence (McClosky & Lichter, 2003). For example, in a sample of 221 low-income African American youth (102 boys and 119 girls ages 7-18, mean age = 12), 70% reported at least one incident of violent victimization and 27% of the sample met criteria for PTSD (Fitzpatrick & Boldizar, 1993). In a sample of 337 high school students (aged 14 through 19, 62% girls) exposure to community violence in general predicted depression for girls and witnessing violence against family members was specifically associated with depression in boys (Moses, 1999).

In a recent longitudinal study of long term effects of domestic violence, 296 mothers and children were interviewed at three different times. Children were girls and boys between the ages of six and twelve at the first interview and averaged between

fourteen and sixteen years old during the following two data collections. About half the sample was made up of children who lived in a household with domestic violence perpetrated by the father, while the other half of the sample served as a control group with no history of domestic violence (as reported by mothers). It was found that children who grew up in a household with marital violence reported more depression as adolescents than those who did not witness violence in the home (McCloskey & Lichter, 2003).

In another longitudinal study, a community sample of 375 children (188 boys and 187 girls) were interviewed at five different times (ages five, seven, nine, fifteen, and twenty-one) for history of physical or sexual abuse and current psychological functioning. Approximately 11% of the sample reported experiencing abuse as a child (before the age of 18). At age 15 and 21, abuse survivors were significantly more likely than non-abused participants to have psychological problems, with about 80% of them meeting criteria for a psychological disorder. Specifically, higher rates of depression, PTSD, antisocial behavior, drug use, and suicidal ideation were reported by the participants with abuse histories (Silverman, Reinherz, & Giaconia, 1996).

In addition to internalizing psychopathology, some children and adolescents who are exposed to violence react by becoming increasingly hostile or violent themselves. For instance, among 100 boys and girls recruited through elementary schools (average age of seven; girls = 51), boys who had been abused or maltreated in the home were more likely than non-maltreated boys to attribute hostile intentions to parents, teachers, and peers (Price & Glad, 2003). In the McCloskey and Lichter (2003) study mentioned previously, the children who grew up in a household with marital violence became significantly more

aggressive towards peers and parents as adolescents than those who did not witness violence in the home. In the Moses (1999) study, exposure to community violence predicted increased hostility for boys and girls attending inner city high schools. Additionally, DuRant and colleagues (1994) surveyed 225 African American youth aged 11-19 (mean age = 14, 126 girls and 99 boys) and found that previous exposure to violence (either through victimization or witnessing violence) was the strongest predictor of the adolescents' own violent behavior, particularly frequent fighting. This aggressiveness may even extend into adulthood. For instance, a review by Kaufman and Zigler (1987) found that about 30% of children who experienced abuse later abused their own children.

Real Life Violence Exposure and Empathy. Empathy is a construct that has been related to violence exposure as well as to aggression. It is thought that empathy develops in response to positive socialization experiences in which children view empathic models and obtain feedback about their behavior choices (Feshbach, 1997). Positive socialization experiences and parental feedback may be lacking in youth who grow up in abusive homes or who are exposed to high degrees of community violence. In fact, empathy has been negatively associated with family discord and aggression and positively associated with prosocial behavior, secure attachment, and psychological health (Feshbach, 1997). Research has found an association between lack of empathy and conduct disorder (Cohen & Strayer, 1996). Specifically, among 62 adolescents (29 boys, 33 girls, mean age = 15) half diagnosed with conduct disorder, it was found that empathy was lower among the adolescents diagnosed with conduct disorder. Empathy was also associated with lower levels of antisocial and aggressive attitudes for all adolescents (Cohen & Strayer). A

meta-analysis utilizing various modes of measuring empathy found significant relationships between empathy and aggressive and antisocial behavior (Miller & Eisenberg, 1988). Hastings and colleagues (2000) followed 82 children (31 girls, 51 boys) from ages four or five until age nine or ten. Those children with externalizing behavior problems displayed less empathy than the non-disordered group of children at follow-up. In this study, maternal socialization approaches also predicted level of empathy.

It seems likely that violence exposure plays a role in both the increased aggression and decreased empathy found among youth. For example, children who came from families in which there was domestic violence demonstrated less empathy in role enactment, social inference, and role-taking than did a group of control children (Hinchey & Gavelek, 1982). A more recent study found that low empathy levels combined with experiencing community violence significantly predicted aggression (Sams & Truscott, 2004).

The research reviewed here suggests a connection between exposure to real life violence and numerous negative effects, such as psychological problems, increased hostility, increased aggression, and decreased empathy. There are many possible explanations for why such associations exist. For instance, children who are exposed to violence may have difficulty with emotion regulation, leading to desensitization to cues that would normally trigger empathic responding (Eisenberg, 2000; Osofsky, 1995). In addition, children exposed to violence often come to attribute hostile intent to others (hostile attribution bias), especially in ambiguous situations (Price & Glad, 2003; Slaby & Guerra, 1988). These same children tend to develop proviolence attitudes (Baldacci,

2003), and have learned that aggression is an acceptable alternative that “works” for them (i.e., is socially effective) (Crick & Dodge, 1989). It is easy to see how desensitization to the effects of violence, increased attention to violent cues, and a hostile attribution bias would lead youth to perceive and process the world as a hostile and violent place (Crick & Dodge, 1994). Add into the mix a combination of proviolence attitudes and previous reinforcement for aggressive behavior and it becomes even more likely that adolescents will select what they consider to be an appropriately hostile or aggressive response in daily social interactions.

Exposure to Media Violence

While adolescents’ victimization and witnessing of personal and community violence is a significant problem, fortunately not all adolescents will be exposed to such experiences. However, it is nearly impossible to find an adolescent who has not been exposed to a significant amount of media and therefore, media violence (including violence in movies, television, video games, and music videos). Nation-wide surveys on media usage have found that the majority of American families with children own at least one television set, a VCR or DVD player, a computer, and a video game system (Rideout, Vandewater, & Wartella, 2003; Woodard, 2000). In fact, children spend more time engaged in media consumption than they do in any other activity with the exception of attending school and sleeping (Roberts, Foehr, Rideout, & Vrodie, 1999). Children and adolescents average about 25 hours a week watching television and 7 hours per week playing computer or video games (Gentile & Walsh, 2002). Thus, by the time most Americans turn 18, they have clocked over 24,000 media hours, with over half of these hours containing violence (Gentile & Walsh, 2002). In fact, a survey by Huston and

colleagues (1992) estimates that the typical child views 10,000 murders, rapes, and aggravated assaults per year on television alone. Because this study is over 10 years old, this number is likely to be much higher today.

Parents, however, may not be aware of the amount or content of the media their children experience. For instance, in the study conducted by Roberts and colleagues (1999), 49% of children ages two through eighteen reported that there are no rules about how much television they are allowed to watch each day or what programs are appropriate. Older children and adolescents (aged seven through eighteen) reported that they almost never watch television with a parent. This is important to note, as parents can play a role in directing children to less violent programming. Consider, for example, that about 80% of the programs airing on cable channels contain violence, while less than 20% of public broadcasting programs contain violence (Wilson et al., 1998).

Video game playing time is also poorly supervised. In a survey of adolescents in grades eight to twelve, 90% reported that their parents have never checked the ratings on video games before purchasing them (Walsh, 2000). Another study indicated that the majority of parents are unaware of their children's favorite video games and underestimate the amount of violence their children are exposed to through these games (Funk, Hagan, & Schimming, 1999).

According to the National Television Violence Survey (Wilson et al., 1998) 61% of all television programs contain at least some violence. Furthermore, the violence in these programs is often trivialized, glamorized, or portrayed as humorous. To illustrate, 75% of all violent acts on television result in no punishment or negative consequences; 44% of violent offenders exhibit attractive qualities, and 40% of violent scenes involve

humor. Although movies have received less research attention than television, violent content and portrayal are often similar (Browne et al., 2002).

Listening to music and viewing music videos are also popular forms of entertainment for adolescents. In one survey, adolescents reported listening to music 40 hours a week (Klein et al., 1993). Music is often played as a background accompaniment while performing other activities, such as driving, eating, completing homework, or talking on the phone. In fact, most adolescents (70%) do not pay sufficient attention to know or comprehend the lyrics to their favorite songs (Greenfield et al., 1987). However, adolescents who listen to heavy metal music (a violent genre) tend to have better recall, with 40% accurately remembering the lyrics to their favorite songs (Greenfield et al., 1987).

Music videos are similar to television and movies as a visual medium. They are also one of the newest and least studied media (along with video games). However, they have quickly become a staple of entertainment for youth. For example, most adolescents reported spending between 30 and 60 minutes per day watching music videos on MTV (Christenson & Roberts, 1998). Music videos are generally less violent than television and film, with only 15% of all videos depicting violence (Smith & Boyson, 2002). However, the prevalence of violence varies depending on the style of music, with rap and heavy metal music videos containing the most violence (DuRant et al., 1997). These genres also contain the most violent lyrics (Anderson, Carnagey, & Eubanks, 2003).

Researchers have categorized music videos as either performance (a singer or group performs the song) or concept videos (a story is told that goes along with or adds to the lyrics). Performance videos are considered relatively benign, while concept videos

have drawn more attention in that they contain higher levels of violence. In fact, one study reported that violence is found in 57% of concept videos (Sherman & Dominick, 1986). Themes of destruction, death, ridicule of social institutions, and aggression against authority were found in 44% of concept videos (Davis, 1985). Strasberger and Wilson (2002) claim that these nihilistic themes are meant to captivate the presumably rebellious sides of the targeted adolescent audience.

Another recent source of entertainment media, video games, requires the most active participation of consumers. In contrast to the passive viewing of violent content that occurs with television, film, and music videos, violent video game players are rewarded for implementing violent strategies. Similar to televised violence, violence in video games is presented as justified, without negative consequence, and fun (Funk, 1995). Studies indicate that approximately 55-89% of popular video games contain violence (Children Now, 2001; Walsh, 1999). In a recent survey of middle school students, 99% of boys and 84% of girls reported that their preferred video games contain violence (Funk, Fox, Chan, & Gayetsky, 2004).

Adolescents are not uniformly exposed to the same type and quantity of violent media. Research has found that boys actively seek out and are exposed to greater amounts of violent media than are girls. For instance, compared with girls, boys are more likely to prefer violent cartoon characters (Nathanson & Cantor, 2000) and violent video games (Funk, Buchman, & Germann, 2000). Additionally, popular television programs marketed toward boys (e.g., *Digimon*, *X-Men*, wrestling programs, and *Jackass*) tend to feature a great deal of violence. Explanations for boys' preferences for violent media have been explained as differences in biology and gender-role socialization (Oliver,

2000). Whatever the cause, boys' violent media preferences leave them more at risk for the negative effects of violent media exposure, such as aggression.

Effects of Media Violence on Adolescents

While some researchers remain skeptical about the detrimental effects of media violence (e.g., Rhodes, 2000), meta-analysis shows strong relationships between exposure to media violence and both emotional and behavior problems, particularly aggressive thoughts and behavior (Anderson et al., 2003). Effects of media violence may be quite similar to the effects of real life violence, with research support beginning to accumulate for associations between media violence and increased psychopathology, increased hostility, aggression, and decreased empathy.

There has been some preliminary research on the relationship between media violence and psychopathology, including internalizing disorders. For instance, Funk and colleagues (2002) found that adolescents with a preference for violent video games scored significantly higher on a self-report measure of psychopathology and its Thought Problems subscale than did adolescents who preferred non-violent games. Furthermore, similar relationship with the Internalizing and Anxious-Depressed scales approached clinical significance, suggesting a possible relationship between violent video game preference and emotional difficulties.

More commonly found is the relationship between violent media and externalizing problems such as aggressive thoughts, attitudes, emotions, and behavior (Anderson & Dill, 2000; Calvert & Tan, 1994). The relationship between media violence and increased hostility and aggression has been found for various media, including television, movies, songs/music videos, and video games. Furthermore, effect sizes for

the association between media violence and aggression have increased since the 1970s, indicating that people are consuming more violent media, the media are becoming increasingly violent, or some combination of these factors (Bushman & Anderson, 2001).

Television/Movies. Simple correlational studies have demonstrated a relationship between exposure to television violence and aggressiveness. For instance, an early survey of adolescents (boys and girls in grades seven through twelve) found that students who reported a preference for violent television scored higher in overall aggressive and violent behavior compared to those who preferred less violent programs (Hartnagel, Teevan, & McIntyre, 1975). Experimental studies add support for a causal role for television and movie violence in increasing aggression. One of the most well known studies in this area is the classic research by Bandura and colleagues that exposed children to a film in which the main character engaged in aggressive behavior against a plastic Bobo doll punching bag. Children who were exposed to this video were more aggressive during their own play with a similar doll than were children not exposed to the violent modeling (Bandura, Ross, & Ross, 1961). Research since that time has corroborated the finding that children can learn aggressive behavior from television and movie role models.

Additional studies involving children found that fourth and fifth graders (N = 42, 21 boys) who watched a violent video took longer to intervene when presented with an aggressive situation than those who had not seen the violent film, suggesting an increased tolerance for violent behavior after viewing violence (Molitor & Hirsch, 1994). In an experiment by Josephson (1987), 396 boys in the second and third grades watched either a violent or non-violent television program and then engaged in a game of floor hockey.

The boys who viewed the violent film exhibited more physical and verbal aggression during the hockey game than did the control group.

These effects are also found in adolescence and adulthood. For instance, among college students, those shown violent films have displayed more aggressive thoughts (Bushman, 1998) and aggressive emotions (Anderson, 1997) than students shown non-violent films. College men who viewed violent sexual movies were more likely to administer a harsh punishment (electric shock) to a woman who had angered them than were men who had viewed a nonviolent sexual film or a neutral film (Donnerstein & Berkowitz, 1981). In another study, both men and women undergraduates demonstrated increased hostility after viewing violent films for a week than did participants who had watched non-violent films (Zillman & Weaver, 1999).

A longitudinal study by Huesmann and colleagues surveyed 557 boys and girls (in first through fourth grades). At a 15-year follow-up with 329 of these children, those girls and boys who reported violent television viewing at ages six through nine demonstrated a higher level of aggressive behavior in their mid-twenties (Huesmann, 1986; Huesmann, Eron, Lefkowitz, & Walder, 1984; Huesmann & Miller, 1994; Huesmann, Moise-Titus, Podolski, & Eron, 2003). Additionally, children's identification with same-sex aggressive characters and the perception that TV violence is realistic also correlated with adult aggression and in fact, predicted an increase in aggressive behavior. Those children who scored in the upper 20% of TV violence exposure displayed a higher frequency of very serious antisocial and violent behavior. These relationships held constant even when controlling for intelligence, socioeconomic status, and overall television exposure. Furthermore, aggressive behavior as a child was not predictive of violent television

viewing several years later, suggesting a causal role for television violence in later aggression (Huesmann et al.).

These same researchers replicated this study in five different countries across three years obtaining similar results (Eron & Huesmann, 1987). Specifically, in four of the five countries studied, early childhood exposure to television violence predicted later aggression. These findings held true for both boys and girls. However, in these studies, the reverse situation was also significant, that aggressive behavior later predicted violent television viewing. This indicates that the connection between media violence and aggressive behavior goes both ways. That is, aggressive people prefer violent media and consuming violent media can increase one's aggressiveness (Huesmann & Miller, 1994). As Slater and colleagues explain, the relationship between exposure to violent media and aggression should be thought of as a "downward spiral" with both variables continuously affecting each other (Slater, Henry, Swaim, & Anderson, 2003).

Song Lyrics/Music Videos. The study of violence portrayed in songs and music videos is in most respects, in its infancy. However, results are surprisingly similar to those found for other types of media violence in that listening to violent lyrics or watching violent scenes set to music can increase aggressive thoughts, feelings, and behavior. For instance, a series of five experiments by Anderson and colleagues (2003) demonstrated that college students who listened to songs with violent lyrics felt more hostile and experienced an increase in aggressive thoughts compared to students who listened to similar non-violent songs. These results were found across songs and music genres.

There is some concern that adolescents who prefer certain types of music, such as rap and heavy metal, will become more violent based on the high violence content in the lyrics of these songs. A survey of almost 3,000 girls and boys ages 14 through 16 found that those who engaged in five or more risk behaviors (including smoking cigarettes or marijuana, drinking alcohol, cheating in school, skipping school, having sex, and stealing money) were significantly more likely to report a preference for heavy metal music (Klein et al., 1993). In a study of adolescents in an inpatient psychiatric unit, a majority of adolescents with substance dependency and conduct-disordered behavior preferred heavy metal music (Weidinger & Demi, 1991). However, Roe (1984) found that feeling alienated from mainstream culture precedes a developed preference for heavy metal music, indicating that listening to heavy metal may be associated with but not a cause of violent or risky behavior. More research, including experimental studies, is needed in this area in order to determine the effects of violent song lyrics.

Music videos are even more similar than simple audio-based songs to television and film in the type of violent content and effects. For instance, desensitization to violence has been demonstrated on both a short and long-term basis after exposure to violent music videos (Rehman & Reilly, 1985). In an experiment involving 56 undergraduates (37 women), students who viewed rock music videos with antisocial content reported more liking for and acceptance of a confederate's antisocial behavior immediately after viewing than did students who watched neutral videos (Hansen & Hansen, 1990). In another experiment, 46 African American boys (ages 11-16) were exposed to a half hour of either violent rap videos, non-violent rap videos, or no videos. Boys who watched the violent videos reported greater acceptance of the use of violence

in solving problems than did those who had watched non-violent or no videos (Johnson, Jackson, & Gatto, 1995). In another study, a significant decrease in aggressive behavior was observed among adolescent and young adult male inmates in a forensic inpatient facility after access to MTV was eliminated from the ward (Waite, Hillbrand, & Foster, 1992).

The combination of sexual content mixed with violence in music videos is also problematic. Two studies have demonstrated an increase in acceptance of dating violence following the viewing of rap videos (Johnson, Adams, Ashburn, & Reed, 1995; Johnson, Jackson, & Gatto, 1995). In the study mentioned earlier (Johnson, Jackson, & Gatto, 1995), adolescent boys who had watched violent rap videos (some depicting violence toward women) reported greater acceptance of the use of violence against women in comparison to boys who viewed non-violent rap or no videos. In a second study (Johnson, Adams, Ashburn, & Reed, 1995) 60 African American girls and boys (ages 11-16) were exposed to either no videos or rap videos depicting women as sexually subordinate to men. Adolescent girls reported significantly greater acceptance of dating violence against women following exposure to the sexually subordinate depiction of women in the music videos than did the control group. There was no significant effect for boys in this study, who reported relatively high levels of acceptance of teen dating violence even in the control group.

Video Games. Violent video games are another type of medium associated with increased hostility and aggression. For instance, exposure to violent video games has been related to stronger pro-violence attitudes (Funk, Bechtoldt-Baldacci, Pasold, & Baumgardner, 2004), as well as aggressive thoughts and behavior (Anderson & Dill,

2000). These results have been found among children, adolescents, and adults. Specifically, research has demonstrated that among children, those who had higher levels of violent media exposure were more likely to make hostile attributions when interacting with others and to receive higher peer and teacher ratings of aggressive behavior (Buchanan, Gentile, Nelson, Walsh, & Hensel, 2002). Additionally, boys who had just played a violent video game were more physically aggressive toward peers than those who had played a non-violent game (Irwin & Gross, 1995). Adolescents who typically played violent video games were more hostile, reported more arguments with teachers, and had been in more physical fights with peers (Gentile, Lynch, Linder, & Walsh, 2004). Similarly, both men and women of college age were more likely to administer high intensity shocks after playing a violent video game than were those who played a non-violent game (Bartholow & Anderson, 2002).

A series of video game studies was reported by Anderson and colleagues (2004), including original research (using female and male college students with *N*s ranging from 130 to 800, depending on the specific study), and a meta analysis. These researchers found that playing violent video games increases the accessibility of aggressive thoughts and behavior. The correlational studies in their series found that repeated exposure to violent video games was associated with trait aggressiveness. Furthermore, associations were found between exposure to violent video games and persistent aggressive cognitions as well as self-reported aggressive behavior. The associations between violent video game exposure and aggression remained significant even when controlling for such variables as gender, narcissism, emotional susceptibility, and the Big Five personality traits.

In another recent meta-analysis, Anderson (2004) found that among children, adolescents, and college students, exposure to violent video games is significantly associated with increases in aggressive affect (N = 2016), cognition (N = 2567), behavior (N = 5240), and physical arousal (508), and to decreases in prosocial behavior (N = 683). Methodologically stronger studies in this meta-analysis yielded stronger effect sizes than the weaker studies. Additionally, Anderson reported that experimental studies included in this analysis demonstrated a causal link between video game violence and aggression.

However, when aggressive attitudes are partialled out of the equation, the relationship between video game violence exposure and aggressive behavior becomes nonsignificant (Anderson et al., 2004). This suggests that playing violent video games increases aggressive thoughts, which then increases the risk of aggressive behavior. Similar support is found in a study by Gentile and colleagues (2004), in which hostility was found to mediate the relationship between violent video game exposure and aggression for 607 adolescents (52% male, mean age = 14).

In addition to the research linking violent video games and aggression, there is also support for the idea that playing violent video games may decrease empathy. In children, violent video game playing has been associated with lower levels of empathy (Funk et al., 2004; Sakamoto, 1994). For example, in a study by Funk and colleagues (1998), among 52 sixth graders, those who reported a high preference for violent games and high frequency of game playing demonstrated lower empathy than children who played less frequently or preferred non-violent games. Long term exposure to violent video games was also associated with lower empathy among a sample of 150 fourth and fifth graders (Funk et al., 2004). Among adolescents, those who report a violent video

game as their favorite had lower empathy than adolescents who chose non-violent games (Barnett et al., 1997). These associations also exist for other types of media. For example, college men who watched films containing violence against women demonstrated less empathy during a mock trial for a woman who was violently raped than did those students who viewed non-violent films (Linz, Donnerstein, & Penrod, 1984). Although research in this area is preliminary, there is some evidence supporting the hypothesis that exposure to media violence, particularly over the long term, may lead to lower empathy.

Explaining the Relationship between Violence Exposure and Aggression: The General Aggression Model

As can be seen by this review, numerous studies have demonstrated a link between violence exposure (both real life and media) and adverse consequences, such as increases in aggressive behavior, hostility, psychopathology, and decreases in empathy. Although all of these negative effects are concerning, researchers have placed much emphasis on understanding the relationship between violence exposure and aggression, as aggressive behavior has the potential for the greatest cost to others and society as a whole.

There have been many explanations for why individuals act aggressively. Problems with aggression or with “youth violence” have received much attention in the scientific community. Researchers have discovered a multitude of factors that increase the probability that adolescents will engage in aggressive or violent acts, including variables involving the adolescents themselves (e.g., attitudes supportive of violence, hostile attribution bias, history of aggression, history of bullying or being bullied/abused, mental health problems), their families (e.g., violence or disruption in the family, parental

drug use or antisocial activities, poverty, poor attachments, and weak support systems), their schools (e.g., unsafe schools, low commitment, academic failure, delinquent peers), their communities or overall environment (e.g., exposure to community and media violence, poverty and poor economic opportunities, access to weapons, and social injustice) (Thornton, Craft, Dahlberg, Lynch, & Baer, 2000; Evans & Rey, 2001; Gifford, 2004; Swenson, Henggeler, Taylor, & Addison, 2005).

Interestingly, the list of risk factors *for* aggression or violence is replete with examples *of* violence, such as being a witness to or victim of violence, violent families, violent peers, and violent neighborhoods. In other words, when young people's lives are flooded with violence and problems, they are more apt to react with aggression themselves.

Anderson's General Aggression Model (GAM) provides an explanation for how violence exposure increases the risk of future aggressive behavior (Anderson & Bushman, 2002; Anderson & Carnagey, 2004; Anderson et al., 2004; Anderson & Huesmann, 2003). The model states that aggressive behavior is based largely on knowledge structures (cognitive scripts or schemas) created by social learning processes. Specifically, the GAM model states that input variables, routes, and outcomes interact in a cyclical manner to affect aggression (see Figure 1). Input variables consist of person variables (e.g., an individual's genetic predisposition, personality characteristics, and attitude) and situation variables (such as a violent environment). These inputs (person and situation variables) do not directly affect aggression, but instead affect an individual's present internal state (e.g., their thoughts, feelings, and physical sensations) which may be positive or negative, pleasant or hostile. This internal state affects one's decision

making capabilities, leading to either thoughtful or impulsive action, and finally to an aggressive or non-aggressive act during a given social encounter.

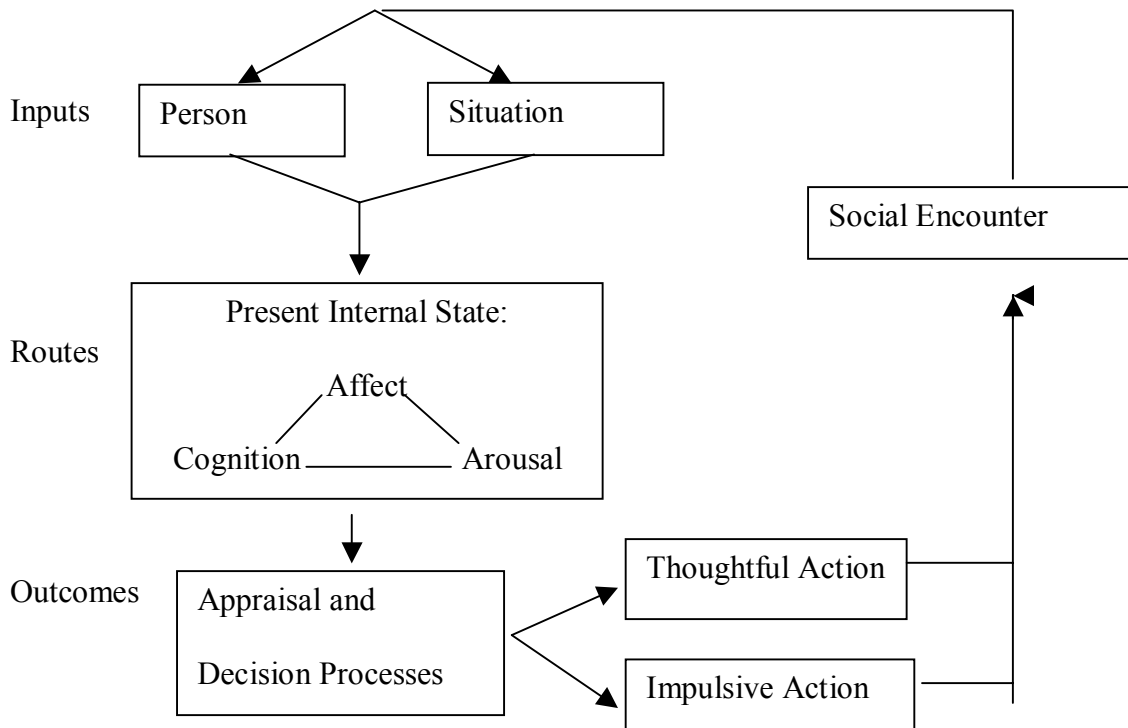


Fig. 1. *The General Aggression Model* (Anderson & Bushman, 2002; Anderson et al., 2004).

The GAM details the ways in which aggression can result in both the short and long term. To illustrate, a person who is high on trait hostility (a person variable), grows up witnessing violence in the community (a situation variable), and begins to develop aggressive thoughts and expectations about the world. Imagine that this person has just finished watching a violent movie or playing a violent video game (immediate situation variable). The violent media experience may lead to physiological arousal and also aggressive cognitions by priming the person's aggressive thoughts, expectations, and

hostile attribution bias, which in turn might lead to hostile feelings. This aggressive internal state, particularly combined with impulsive action, will influence one's behavior, increasing the odds that this person will engage in an aggressive act.

Over the long term, people who are exposed to violence learn to perceive, interpret, judge, and respond to events in an aggressive way. The General Aggression Model stresses that social learning is taking place during all of our daily interactions with others, whether these are "real" (e.g., family, friends, coworkers), or "imagined" (e.g., media). Each violent episode that one experiences either in real life or through media exposure is one more learning trial, which eventually desensitizes the person to violence and changes their aggression-related knowledge structures including perceptions and expectations of every day conflict. Anderson and colleagues (2004) emphasize aggressive cognitions and violence desensitization as the most important variables for the development of an aggressive personality style.

The General Aggression Model details proposed pathways leading to aggression. For the purposes of this study, a pathway resulting in aggression could read as follows: exposure to real life and media violence are *situation variables* that affect an adolescent's *internal state* by increasing hostile attributions or decreasing empathy. Significant violence exposure increases the risk of psychopathology, which may affect an individual's *appraisal and decision making process* resulting in poor or impulsive *actions*. This combination of factors can ultimately lead to aggressive behavior during a given *social encounter*.

Thus, based on the GAM (and consistent with previous research) violence exposure should be associated with and predict variables such as hostile attributions,

empathy, and aggression. Additionally, psychopathology (which can affect internal states, appraisals, and decision making skills) may serve as a mediator between violence exposure and aggressive behavior. These theories will be further explored in the current study.

Violent Media and Developmental Changes during Adolescence

The General Aggression Model provides an explanation for the ways in which violence exposure results in increases in aggressive behavior. However, this model does not specify those who are most at risk for reacting to violence (particularly media violence) with aggression. Research suggests that adolescents may be the age group most vulnerable to the negative effects of violent media due in part to developmental changes occurring at this time period (Kirsh, 2003). Based on a review of the aggression and violent video game literature, Kirsh found an interesting developmental pattern occurring in which young adolescents (e.g., ages eight through thirteen) play more violent video games and are more aggressive than older adolescents and adults. For instance, Roberts and colleagues (1999) found that violent video game playing decreases with age after early adolescence. Similarly, physical aggression (as well as parent and sibling conflict) tends to peak at around 13 to 15 years and decreases with age thereafter (Loeber & Stouthamer-Loeber, 1998; Steinberg, 2001).

Kirsh (2003) suggests that biological and psychosocial changes occurring during adolescence results in adolescents' increased risk for aggressive behavior. Biological changes in adolescents include an increase in adrenal and gonadal hormones, which have been weakly associated with increases in aggressive behavior (Spear, 2000). Changes in brain functioning also occur at this time. Synaptic pruning during adolescence enhances

the ability of the prefrontal cortex to efficiently process and evaluate situations, leading to consideration of consequences and rational judgments. Kirsh states that during adolescence (before these brain changes are complete), problems may be dealt with in a more impulsive and emotional fashion, rather than in the more rational and thought-out process that occurs with adults.

There are a number of psychosocial changes that also occur during adolescence, including adjustment to rapid physical growth and maturation, increasing sexual feelings, cognitive and social challenges at school, and changes in relationships with parents and peers (Kirsh, 2003; Steinberg, 2001). Perhaps because of the challenges of adjusting to physical, social, and cognitive changes, adolescence can be a time of increased negative emotions and depression. Kirsh argues that this increase in negative affect and depression leads to negatively biased social information processing which in turn increases the likelihood of reacting aggressively to provocation.

As the biological and psychosocial factors trigger some adolescents' aggressive tendencies, they may be more drawn to sensation seeking or violent activities, such as playing violent video games (Kirsh, 2003). According to Kirsh, in later adolescence, developmental changes resulting in a decrease in aggressive behavior should also decrease adolescents' preference for violent media. This provides a possible explanation for why younger adolescents consume more violent media than do older adolescents and adults.

The high consumption of violent media by some adolescents may serve to create or reinforce aggressive cognition, affect, and arousal. It may be that adolescents are more affected by this aggressive arousal due to developmental changes they are experiencing.

However, if similar levels of cognitive, affective, and physiological arousal do occur, adolescents may still be at a disadvantage as they are more likely to engage in impulsive behavior and to make poor decisions (e.g., deficits in the decision making process of the General Aggression Model).

Adolescents Most At Risk for Negative Effects of Media Violence

Research clearly indicates that, in some situations, violence exposure can increase aggressive thoughts, feelings, and ultimately, behavior. Adolescents may be more vulnerable to the effects of violence exposure, particularly regarding media violence. However, media violence does not affect each individual to the same degree. While all adolescents today are exposed to media violence, there are likely some groups that are more at-risk for the negative effects of media violence than others. According to the General Aggression Model, we would expect that adolescents who have a history of real life violence exposure would be more at risk for aggression due to learning aggressive scripts, increased perceptions and expectations of violence, and decreased sensitivity to the consequences of violence. For these adolescents, violent media may serve to simply confirm their view of the world as a violent place where aggression is necessary and expected. Furthermore, adolescents who have more aggressive tendencies to begin with should be more at risk for aggression, as their personal aggressive traits will interact with and prime other variables in the model.

Through a series of interviews, Garbarino (1999) observed that the number of risk factors affecting adolescents is an important predictor of their aggression. For instance, most children and adolescents can cope with one or two risk factors (such as living in poverty or exposure to community violence) without increasing their aggressiveness.

However, aggressive behavior appears to be more likely in children and adolescents who experience three or more risk factors.

Similarly, when describing their downward spiral model, Slater and colleagues (2003) reported that the negative effects of media violence might be small in “normal” youth who do not have aggressive tendencies and do not seek out much violent media. However, these researchers cautioned that youth with aggressive tendencies are more at risk as they are likely to seek out violent media, resulting in an increase in their level of aggression and the beginning of a downward spiral of violent media use and aggressive acts.

Delinquency. The description of an adolescent who has aggressive tendencies, has experienced violence in real life, and seeks out media violence, appears to be characteristic of adolescents involved in the juvenile justice system. In fact, research has shown that delinquent adolescents have been exposed to a greater degree of community and personal violence and that they demonstrate higher rates of aggression and lower levels of empathy in comparison to non-delinquent adolescents (e.g., Brown, Henggeler, Brondino, & Pickrel, 1999; Joliffe & Farrington, 2004; Steiner, Garcia, & Matthews, 1997). It seems reasonable to conclude that the delinquent population (adolescents involved in the legal system) would be more at-risk for negative effects of media violence.

Delinquent adolescents have many risk factors in comparison to non-delinquent adolescents. Possibly one of the greatest of these is a history of exposure to real life violence (and the subsequent increase in aggression or violent criminal behavior). For example, in a study assessing the prevalence of PTSD in delinquent males (N = 85, aged

13-20), half of the sample reported witnessing interpersonal violence as a traumatic event and 32% met full criteria for a diagnosis of PTSD (Steiner, Garcia, & Matthews, 1997). Among 10,036 male and female elementary and high school students from inner city Chicago, those students who witnessed real life violence were more likely to become perpetrators of violence than were students who had not witnessed violence (Shakoor & Chalmers, 1991). A similar study found that real life violence exposure was associated with criminal offending in a sample of 120 juvenile delinquents (ages 12-17) diagnosed with substance abuse or dependence (Brown et al., 1999).

Previous research has demonstrated associations between lower empathy and increased aggression among delinquent adolescents. Lee and Prentice (1988) surveyed 36 delinquent and 18 non-delinquent boys (mean age = 16) and found that the delinquent group scored significantly lower than the control group on measures of role-taking, logical cognition, and moral reasoning. In a study by Kaplan and Arbuthnot (1985), 20 delinquent adolescents were compared with 20 non-delinquent adolescents (girls = 50%, mean age = 15). Delinquent adolescents were found to perform more poorly on an unstructured affective empathy task than did non-delinquent adolescents.

Cohen and Strayer (1996) found that empathy was lower in conduct-disordered adolescents (n = 30) than in high school students (n = 32) and that lower empathy was associated with antisocial and aggressive attitudes for all participants. In a study of 81 delinquent boys and 74 non-delinquent boys ages 13 to 18, it was found that delinquent boys scored significantly higher on the Personal Distress scale of an empathy measure than did the non-delinquent boys (Lindsey, Carlozzi, & Eells, 2001). Lindsey and colleagues suggest that delinquent adolescents tend to become more emotionally reactive

in intense situations than do non-delinquent adolescents (perhaps the result of witnessing or experiencing violence in the home and community). They further state that this emotional reactivity reflects a self-oriented perspective that inhibits the ability to focus on the distress of the victim.

Finally, a meta analysis conducted by Jolliffe and Farrington (2004) found that among adolescent and adult offenders (both female and male) low cognitive empathy was strongly related to offending and low affective empathy was weakly related to offending. However, this relationship became non-significant when controlling for intelligence and low socioeconomic status. The authors suggest that more research is needed to examine the relationship between cognitive functioning, socioeconomic status, empathy, and criminal behavior.

Research indicates that delinquent adolescents are exposed to more real life violence, behave more aggressively, and demonstrate less empathy, than do comparison groups of non-delinquent adolescents. However, thus far no studies have explored the differing effects of media violence on delinquent versus non-delinquent populations. A meta analysis by Savage (2004) found that exposure to violent media is not associated with *criminal* aggression, yet she did not dispute the association between media violence and non-criminal aggressive behavior (as well as aggressive thoughts and feelings).

Statement of the Problem

Adolescents make up the population most at risk for violent crime (Bureau of Justice, 2005). This exposure to violence could result in any number of problems including low self-esteem, symptoms of psychopathology, substance use, impaired identity formation, increased aggressiveness, and risk for future criminal behavior

(Pynoos & Eth, 1985; Pine & Cohen, 2002; Weisman, 1993). Particularly common responses to violence exposure include affective disorders such as anxiety and depression (Breslau, Davis, Andreski, & Peterson, 1991; Bolton, O’Ryan, Udwin, Boyle, & Yule, 2000; Hubbard, Realmuto, Northwood, & Masten, 1995), and externalizing problems, particularly aggression (DuRant et al., 1994; McCloskey & Lichter, 2003; Moses, 1999; Price & Glad, 2003). Finally, decreases in empathy have also been associated with exposure to personal and community violence (Cohen & Strayer, 1996; Feshbach, 1997; Hastings et al., 2000; Miller & Eisenberg, 1988; Sams & Truscott, 2004). Because of the prevalence and negative consequences associated with it, violence exposure should be considered a serious problem for adolescents.

Additionally, on any given day, adolescents are also exposed to a great deal of media violence (Roberts, Foehr, Rideout, & Vrodie, 1999). Meta-analysis shows strong relationships between exposure to media violence and both emotional and behavior problems, particularly aggressive thoughts and behavior (Anderson et al., 2003). Effects of media violence may be quite similar to the effects of real life violence, with research support beginning to accumulate for associations between media violence and increased psychopathology, increased hostility, aggression, and decreased empathy (Anderson et al., 2003). Thus, media violence should also be considered problematic for some adolescents.

Anderson’s General Aggression Model (GAM) explains the ways in which violence exposure, and particularly media violence exposure, increases the risk of future aggressive behavior (Anderson & Bushman, 2002; Anderson & Carnagey, 2004; Anderson et al., 2004; Anderson & Huesmann, 2003). This model states that aggressive

behavior is based largely on knowledge structures created by social learning processes. For instance, person and situation variables affect the individual's internal state represented by affect, cognition, and arousal, which then influences the individual's actions. Research suggests that adolescents may be most vulnerable to the negative effects of violent media, due in part to developmental changes occurring at this time period and to adolescents' impulsivity, emotionality, and poor development of decision making abilities (Kirsh, 2003).

While adolescents as a group may be vulnerable to the effects of violence exposure, adolescents involved in the legal system are thought to be at even higher risk for both violence exposure and resulting increases in aggression and decreases in empathy. For instance, research has shown that delinquent adolescents have been exposed to a greater degree of community and personal violence and that they demonstrate higher rates of aggression and lower levels of empathy in comparison to non-delinquent adolescents (e.g., Brown, Henggeler, Brondino, & Pickrel, 1999; Joliffe & Farrington, 2004; Steiner, Garcia, & Matthews, 1997). It seems reasonable to conclude that the delinquent population would also be more at-risk for exposure to media violence and its associated increase in aggression and decrease in empathy. However, no studies to date have explored the impact of real life and media violence on delinquent versus non-delinquent adolescents. This is the problem that the current research will address.

Explanation of the Current Study: Effects of Violence Exposure for High School and Detained Adolescents

This study proposed to explore the relationships of violence, and specifically violent media, on two groups of adolescents: those involved with the criminal justice

system (detained adolescents), and those with no criminal history who are currently enrolled in public schools (high school adolescents). Consistent with previous research and with the General Aggression Model, it was expected that exposure to both real life and media violence would be associated with increased hostility, increased aggression, and decreased empathy in both of these groups. It was also expected that exposure to real life and media violence will predict greater levels of hostility and aggression, and lesser empathy. Additionally, media violence was expected to add to the prediction of aggression over and above that of real life violence, indicating a unique contribution to this problem. Finally, the role of psychopathology was explored to determine whether this variable plays a mediating role between violence exposure and aggression.

Hypotheses

The specific hypotheses for this study follow:

- 1.) Differences are expected between the two samples on the major study variables. Specifically, detained adolescents are expected to report significantly higher levels of exposure to both real-life and media violence when compared to the high school students. Additionally, detained adolescents are expected to report significantly higher levels of psychopathology, aggression, hostility, and lower levels of empathy than do the high school students.
- 2.) Differences are expected between boys and girls on the main study variables. Specifically, boys are expected to report significantly higher levels of exposure to both real-life and media violence when compared to girls. Additionally, boys are expected to report significantly higher levels of psychopathology, aggression, hostility, and lower levels of empathy than are the girls.

- 3.) Exposure to real life violence will be related to increased hostility, increased aggression, increased psychopathology, and decreased empathy for both high school and detained adolescents.
- 4.) Exposure to media violence will be related to increased hostility, increased aggression, increased psychopathology, and decreased empathy for both high school and detained adolescents.
- 5.) Hostility will be predicted by gender, delinquency status, and exposure to real life and media violence for both high school and detained adolescents.
- 6.) Aggression will be predicted by gender, delinquency status, and exposure to real life and media violence for both high school and detained adolescents.
- 7.) Empathy will be predicted by gender, delinquency status, and exposure to real life and media violence for both high school and detained adolescents.
- 8.) Media violence will add to the prediction of hostility, empathy, and aggression, (over and above the real life violence variable) for both high school and detained adolescents.

Exploratory Question:

- 1.) What is the role of psychopathology in mediating the relationship between violence exposure and aggression for high school and detained adolescents?

Chapter Three

Method

Participants

Two samples of participants were studied, one consisting of adolescents currently attending high school and the other consisting of adolescents detained in a juvenile detention center (JDC). The sample of high school students was made up of 216 participants in total. There were 109 females, 101 males, and six students who did not identify their gender. Students were currently in grades nine through twelve, with approximately 25% of the sample from each grade. The students' ages ranged from 14 to 19, with a mean age of 16. The majority of students (88.5%) reported their ethnicity as European American/White. The remaining 11.5% was made up of 5% Hispanic students, 3% Other, 1.5% Asian, 1% Biracial, and .5% African American/Black. Students reported their average parent education level as completion of high school and some college courses. When asked about legal problems, 25% of the students endorsed having been "in trouble with the law" at some time in their lives; 17% reported having previously been arrested, and 8% reported having spent time in a juvenile detention center.

The sample of adolescents from the juvenile detention center consisted of 96 adolescents. There were 79 males, 13 females, and four individuals who did not report a gender. The detained adolescents reported being in grades six through twelve. Their ages ranged from 13 to 17, with a mean age of 16. Adolescents from the JDC reported their ethnicity as follows: 50% described themselves as Black/African American, 27%

White/European American, 12% Biracial, 10% Hispanic, and 1% Other. These adolescents reported a typical parental education level of having completed high school or taken some college courses. Detained adolescents reported having been in the JDC an average of five times.

Measures

All participants completed a demographic information sheet describing their gender, age, ethnicity, grade level, and parent or guardian's education level and career (see Appendix A). They also completed seven questionnaires measuring exposure to real life violence, exposure to media violence, general psychopathology, hostility, aggression, empathy, and social desirability.

In order to gauge real life violence exposure, participants completed the Screen for Adolescent Violence questionnaire (SAVE; Hastings & Kelley, 1997). This instrument measures school, home, and community violence exposure by utilizing 32 items rated on a Likert scale (see Appendix B). Principal components analysis on this measure has revealed three factors: traumatic violence, indirect violence, and physical/verbal abuse. Cronbach's alpha ranges from .90 to .94, indicating good internal reliability. Two-week test retest coefficients ranged from .53 to .92. The SAVE has been found to correlate with similar constructs such as the Trauma Symptom Checklist for Children (TSCC; Briere, 1989), the Impact of Events Scale (IES; Horowitz, Wilner, & Alvarez, 1979), and the Youth Self Report (YSR; Achenbach, 1961), as well as with neighborhood crime rates. Additionally, it has been found to adequately distinguish between low and high violence exposure groups.

The Free Time Questionnaire was utilized to measure media violence exposure (FTQ; Funk, 2004). This questionnaire assesses participants' exposure to television, film, video games, and music videos (see Appendix C). Participants reported the average amount of time per week they typically spend engaging in each type of media consumption. Next, they listed up to three favorite television shows, movies, video games, and music videos placing their favorites into predetermined categories, some of which reflect violent content and others that reflect non-violent content.

For example, the video game categories consisted of figuring out, learning; sports, no fighting; reach goals, kill or be killed, real people; story or game, no fighting or destruction; reach goals, kill or be killed, cartoon characters; and sports with fighting. The television categories consisted of figuring out, learning, educational; cartoon characters with fighting or destruction; cartoon characters, no fighting or destruction; sports, no contact between players (example: golf); sports with contact between players (example: football); game show; talk show; story about real people with fighting or destruction; and story about real people, no fighting or destruction. The categories for movies consisted of figuring out, learning; sports, no contact between players; sports with contact between players; real people, fighting, destruction; real people, no fighting or destruction; cartoon characters, with fighting or destruction; and cartoon characters, no fighting or destruction. Finally, the categories for music/music videos consisted of has a good beat; easy to dance to; sounds/looks angry; has sexy words or scenes; has fighting words or scenes; and sounds/looks happy or fun. To score this measure, in each category, the number of violent media preferences were added together and divided by the total responses in order to obtain percentages of violent media exposure.

General psychopathology was screened using the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997; see Appendix D). This questionnaire has five scales including hyperactivity, emotional symptoms, conduct problems, peer problems, and prosocial behavior. However, due to time limitations, the prosocial behavior scale (consisting of five items) was removed from the questionnaire. Because the items measuring prosocial behavior do not contribute to the Total Problems scale, this deletion of items did not affect the final total for this measure. Participants endorsed items on a three-point scale. This instrument has been able to significantly discriminate between community and clinical samples (Goodman, Meltzer, & Bailey, 1998). It has also been able to correctly identify psychiatric diagnoses for a majority of children with conduct, hyperactivity, depressive, and anxiety disorders (Goodman, Ford, Simmons, Gatward, & Meltzer, 2000; Goodman, Renfrew, & Mullick, 2000). The SDQ has been shown to correlate well with more comprehensive measures of general psychopathology in children such as the Achenbach Child Behavior Checklist (Goodman & Scott, 1999) and the Rutter questionnaires (Elander & Rutter, 1995).

Two instruments were used to measure hostility and aggression. The Social Situations Hostile Attribution Survey was used to measure hostile attributions (SSHAS; Appendix E). This instrument is adapted from Crick and colleagues (Crick, 1995; Nelson & Crick, 1999) and contains stories which describe an instance of provocation with ambiguous intent. Participants answered two questions following each story. The first question presented possible reasons for the main character's behavior (reflecting either hostile or benign intent). The second question asked whether the main character intended to be unkind or was merely being thoughtless. This measures participants' perception of

hostility in two situations, namely instrumental provocation (e.g., breaking a peer's CD player) and relational provocation (e.g., whispering and laughing as a peer walks by). Acceptable internal reliability has been found for both instrumental (Cronbach's alpha = .74) and relational (Cronbach's alpha = .81) provocation (Buchanan, Gentile, Nelson, Walsh, & Hensel, 2002). Participants in the current study completed items measuring relational hostility.

The Aggression Scale (AS; Orpinas & Frankowski, 2001) measures verbal and physical aggressiveness among young adolescents (Appendix F). This self-report instrument consists of 11 statements that are rated on the frequency of engagement in the activity over the past week (e.g., teasing and fighting with others). This scale has demonstrated a Cronbach's alpha coefficient of .88, indicating high internal consistency. The instrument significantly correlates with teacher ratings of student aggressiveness and student self-reported number of fights and number of days carrying a weapon. Factor analysis has identified two factors, physical/verbal aggression and anger. Scores have demonstrated stability at both 1 and 2-year follow-ups (Orpinas & Frankowski, 2001). For the current study, the two items reflecting "anger" were removed, leaving nine items purely measuring aggressive behavior.

The Children's Empathy Questionnaire (CEQ; Funk, Fox, Chan, & Gayetsky, 2004) was used to measure empathy toward others (Appendix G). The CEQ is composed of 16 statements, rated on a three-point Likert type scale (e.g., "I understand how other kids feel," "Other people's problems really bother me"). A total score is calculated across all items with higher scores indicating greater empathy. A previous version of this

instrument revealed a Cronbach's alpha of .71, demonstrating a strong one-factor solution.

Finally, participants completed a short form of the Crandall Social Desirability Test for Children (CSDTC; Carifio, 1994; Appendix H) in order to measure socially desirable response style. The CSDTC short form was developed by employing factor analysis techniques with the original 48-item version of the CSDTC (Crandall, 1975). The short form has 12-items measuring socially desirable responding. Items include "I never talk back to my parents", "I never shout when I feel angry", and "I always wash my hands before every meal." The Cronbach's alpha coefficient for this instrument is .77. Test-retest reliability was demonstrated to be .87 at four days.

Procedure

Participants for this study were recruited through three public high schools in the Northwest Ohio area and through the local Juvenile Detention Center. Public schools were contacted and upon permission of the school principal, information and permission slips were distributed to all students deemed eligible to participate by the school (generally those students taking a study hall class). Parental permission and student informed consent were obtained prior to students' participation in the study (see Appendix I for all consent forms). Students were tested in groups, with number of participants varying by class size.

In addition to completing the packet of self-report instruments required for the present study, students also completed five measures for an unrelated study. These measures include excerpts from the University of California Los Angeles Post-traumatic Stress Disorder Index (UCLA PTSD Index), the Children's Trauma Questionnaire, the

Youth Psychopathy Inventory, the Anticipated Future Parenting measure, and a Past Parenting measure. The students completed the packet of questionnaires within a 50-minute class period, many finishing well before the end of the hour. Upon completion of the study, they were given a piece of candy for their participation. Students' names were also entered into a drawing for a \$25.00 gift card to a local mall.

At the Juvenile Detention Center, the Honorable Judge James Ray, administrative Juvenile Court judge, granted permission for detained adolescents to participate in the study. These adolescents were informed of their individual right to either agree or decline participation, with no adverse consequences should they decide not to participate. Like the high school students, the detained adolescents were also informed of the risks and benefits of the study via a consent form. Additionally, they were given a contact number they could use to discuss any concerns about the study with a mental health professional from a local mental health center. This person was not affiliated in any other way with the study. Upon agreement, detained adolescents completed the questionnaires in small groups, often with only two adolescents to a room. Some of the adolescents requested help in completing the forms, due to a low reading level. In these instances, items were read individually to the adolescent. Completion times varied, with many adolescents taking more than an hour to complete the packet. Detained adolescents also received candy while participating in the study.

Chapter Four

Results

Data Integrity

Data was originally collected from 221 high school adolescents and 96 detained adolescents. Of the sample of high school students, five participants were excluded from the final data analyses. One student was removed due to a significant number of missing items. Data from four additional students was removed due to high scores (above 90%) on the CSDTC social desirability measure. These scores were at the top of the distribution of scores and suggested that the students were responding to the measure in a socially desirable manner (denying minor and common faults). Because a high score on this measure could indicate that the students responded in a similar and inaccurate manner to the other study measures, the data from these students was removed. This leaves a total of 216 students in the final analyses.

No data was excluded from the sample of detained adolescents. None of these participants had a significant number of missing items or a significantly high score on the social desirability measure. The higher response rate and possibly more truthful response style of the detained adolescents may have been due to the format in which they participated. For example, by meeting in smaller groups, the researcher was able to check in on participants, answer their questions individually, and ensure that they had completed their packets. Thus, all 96 participants from the JDC were included in the analyses.

Group Differences

During data collection, it was clear that there were several differences between the participants recruited from high schools and those recruited from the JDC. For instance, a high percentage of the adolescents from the JDC were males and belonged to ethnic minority groups, while the high school adolescents were about evenly distributed between males and females and were mostly European American. Before analyzing the data, comparisons were made between these two groups on the major study variables.

No significant differences were found between the detained adolescents and the high school adolescents with regard to social desirability and hostile attributions (means for these measures were similar for both groups). However, the difference between means was statistically significant for all other major variables including exposure to real life violence ($t = -10.72$, $df = 149.05$, $d = -1.76$, $p < .01$), media violence ($t = -2.63$, $df = 110.43$, $d = -.50$, $p = .01$), psychopathology ($t = -3.16$, $df = 159.84$, $d = -.50$, $p < .01$), empathy ($t = 5.88$, $df = 171.26$, $d = .90$, $p < .01$), and aggression ($t = -5.88$, $df = 132.57$, $d = -1.02$, $p < .01$). Based on Cohen's d , the effect sizes for media violence and psychopathology were medium, while those for real life violence, empathy, and aggression were large. See Tables 1 and 2 for a list of means and standard deviations by participant group and gender.

Specifically, detained adolescents reported more exposure to real life and media violence, higher levels of psychopathology, lower levels of empathy, and higher levels of aggression than the high school students. Due to these differences between the two samples, they were analyzed separately.

Table 1

Means and Standard Deviations of Main Study Variables for High School Adolescents

Variable	High School Girls		High School Boys		High School Total	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Real Life Violence	45.20	11.29	50.95	14.50	48.68	14.42
Media Violence	5.90	7.61	12.44	10.39	8.97	9.71
Hostile Attributions	4.74	2.97	5.24	2.74	5.04	2.87
Empathy	39.32	5.41	33.79	6.59	36.63	6.60
Aggression	6.32	8.64	9.71	9.88	8.43	10.29
Psychopathology	12.28	6.19	11.97	5.80	12.23	6.04
Social Desirability	15.91	2.28	15.62	2.23	15.81	2.26

Table 2

Means and Standard Deviations of Main Study Variables for Detained Adolescents

Variable	Detained Girls		Detained Boys		Total JDC Sample	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Real Life Violence	68.08	11.94	69.99	16.05	69.72	15.91
Media Violence	6.61	7.00	14.31	11.44	13.06	11.23
Hostile Attributions	5.75	2.53	5.21	3.01	5.26	2.90
Empathy	33.67	7.35	31.32	6.88	31.68	6.89
Aggression	16.62	12.57	18.36	15.24	18.61	15.42
Psychopathology	18.62	5.82	14.35	6.31	14.74	6.49
Social Desirability	16.31	2.53	15.90	2.19	15.99	2.24

Additionally, group differences were calculated for gender in the high school sample, which had approximately equal numbers of girls and boys. No significant differences were found between high school girls and boys with regard to hostile attributions or psychopathology (means for these measures were similar for both groups).

However, the difference between means for boys and girls was statistically significant for all other major variables including exposure to real life violence ($t = -3.18$, $df = 188.80$, $d = -.46$, $p < .05$), media violence ($t = -4.48$, $df = 126.19$, $d = -.80$, $p < .001$), empathy ($t = 6.58$, $df = 193.65$, $d = .95$, $p < .001$), and aggression ($t = -2.62$, $df = 197.32$, $d = -.37$, $p < .01$). Based on Cohen's d , the effect sizes for media violence and empathy were large, while the effect sizes for real life violence and aggression were medium. Based on these differences, separate analyses were conducted by gender for the high school sample.

High School Adolescent Sample – Descriptive Analyses

Descriptive statistics were computed for each measure, namely the real life and media violence measures (SAVE and FTQ), the Strengths and Difficulties Questionnaire (SDQ), hostility and aggression measures (SSHAS and AS), and the Children's Empathy Questionnaire (CEQ). Means and standard deviations are listed in Table 1 with brief descriptions below.

On the measure of real life violence (SAVE), boys endorsed a significantly higher rate of real life violence exposure than the girls. Among both genders, high school students were more likely to endorse items indicating that they had been a witness to violence (e.g., seen or heard something) rather than being a victim of violence. Common items (more than 70% of the sample endorsed) included seeing people scream at each

other, hearing about someone getting beat up, hearing about someone getting shot and killed, and seeing the police arrest someone.

The measure of media violence (FTQ) is composed of two parts. The first measures how much time participants spend with media and the second part measures the degree of violence within their media preferences. Time per week spent in each media category was determined using the midpoint of the range endorsed by students with a maximum of 15 hours per week. In this sample, high school students reported spending an average of 19.7 hours per week engaged in media consumption. There was a gender difference, with boys consuming about four hours more of media per week than the girls. Video and computer games accounted for the majority of this difference, as boys reported playing more video and computer games than did girls. See Table 3 for a summary of students' media use, including results by gender and specific forms of media.

Table 3

High School Adolescents' Reported Weekly Media Use

Media Category	Girls	Boys	Total Sample
Video Games	1.8	5.1	3.5
Television	6.0	6.6	6.3
Movies	3.5	4.2	3.8
Music/Music Videos	6.2	5.9	6.1
Total Media	17.5	21.8	19.7

Note. All numbers are hours per week engaged in media use. $N = 215$ for total sample, 109 girls.

In addition to calculating overall media exposure, the FTQ also provides information on exposure to media violence. For instance, students listed up to three of their favorite television shows, movies, songs, and video games. They then chose a category that best described these preferences, with categories being classified as violent or nonviolent. In all types of media, boys reported a greater preference for violence in their media than did girls. The greatest difference in preferences between boys and girls was in the areas of video games and movies, in which boys preferred more violent content. See Table 4 for a summary of the percentage of violence in student’s media preferences, including results by gender.

Table 4

Percentage of Violence in High School Adolescents’ Preferred Media

Media Category	Girls	Boys	Total Sample
Video Games	32%	67%	51%
Television	33%	51%	42%
Movies	40%	71%	54%
Music/Music Videos	16%	29%	23%
Combined Media	30%	54%	42%

Finally, a total media violence variable was formed by multiplying the time spent engaged in each type of media by the percentage of violence reported in each category. These numbers were added together in order to calculate the total media violence exposure variable. There was a significant gender difference for this variable, with boys obtaining scores twice as high as girls. This indicates that boys tend to consume more

violent media than girls as well as spend more time with this type of media. See Table 5 for a summary of the total media violence scores and individual media scores, by gender.

On the measure of psychopathology (SDQ), boys and girls obtained mean scores that are statistically equivalent, indicating that students in this study experienced a similar level of emotional distress.

Table 5

High School Adolescents' Total Media Violence Scores

Media Category	Girls	Boys	Total Sample
Video Games	.87	3.73	2.31
Television	2.09	3.76	2.92
Movies	1.59	2.87	2.16
Music/Music Videos	1.31	2.32	1.81
Total Media Violence	5.90	12.44	8.97

Note. All numbers are means for media violence variables. $N = 215$ for total sample, 109 girls.

Mean scores on the SDQ did not reach “clinical significance” or the level that indicates clinically significant psychopathology suggestive of a possible emotional or behavior problem. This suggests that based on this screening measure, the majority of the sample falls within the average range of psychological health. Common items endorsed included symptoms of distractibility, restlessness, and difficulty getting along with peers.

Students obtained fairly similar scores on the hostility measure (SSHAS), regardless of gender. Most students tended to choose answers reflecting positive or

neutral explanations for the social vignettes, with the exception of one of the stories (the hallway situation) which elicited more negative explanations.

Boys reported significantly more aggressive acts than did girls on the aggression measure (AS). However, overall students generally reported a small number of aggressive acts. The most common items endorsed reflected verbal, rather than physical aggression (e.g., “I said things about a student to make other students laugh.”)

On the measure of empathy (CEQ), students generally reported empathic responses to the items, with girls reporting significantly more empathy than boys. There were only a few items that were not commonly endorsed, such as feeling upset when a teacher is ill or a student gets into trouble and feeling like crying when seeing someone cry.

High School Adolescent Sample – Preliminary Analyses

Pearson correlations were conducted for the main study variables. Specifically, correlations were conducted between exposure to real life violence and media violence and the expected negative effects, including hostility, aggression, empathy, and psychopathology. It was expected that these correlations would be positive, with the exception of empathy and violence exposure, which was expected to show a negative correlation. An alpha level of .05 was used for each of the Pearson r significance tests. See Table 6 for the correlations between the main study variables. See Table 7 for correlations between the main study variables and specific forms of media.

Overall, the correlations obtained were as expected. Exposure to real life violence was positively associated with psychopathology ($r = .56, p < .01$), hostile attributions ($r =$

.32, $p < .01$), and aggression ($r = .61, p < .01$) and negatively associated with empathy ($r = -.38, p < .01$).

Table 6

Correlations between Main Study Variables for High School Adolescents

Variable	Gender ^a	CSDTC	SSHAS	SDQ	CEQ	SAVE	AS	FTQ
Gender	--	-.06	.09	-.03	-.42**	.22**	.18**	.34**
CSDTC	--	--	-.26**	-.43**	.33**	-.24**	-.29**	-.10
SSHAS	--	--	--	.45**	-.23**	.32**	.32**	.29**
SDQ	--	--	--	--	--	.52**	.43**	.28**
CEQ	--	--	--	--	--	-.38**	-.49**	-.40**
SAVE	--	--	--	--	--	--	.61**	.53**
AS	--	--	--	--	--	--	--	.53**
FTQ	--	--	--	--	--	--	--	--

Note. CSDTC = Crandall Social Desirability Test for Children, SSHAS = Social Situations Hostile Attribution Survey, SDQ = Strengths and Difficulties Questionnaire, CEQ = Children’s Empathy Questionnaire, SAVE = Screen for Adolescent Violence Exposure, AS = Aggression Scale, and FTQ = Free Time Questionnaire. * $p < .05$, ** $p < .01$. ^aGender was dummy coded as follows: girls = 0, boys = 1.

This means that high school students in this sample who reported experiencing a greater amount of real life violence also exhibited greater symptoms of psychopathology, a higher number of hostile attributions, more aggressive behavior and less empathy than did students who had less violence exposure. The association between real life violence and factors such as hostile attributions and empathy was medium, while the association

between real life violence and factors such as psychopathology and aggression was large (Cohen, Cohen, West, & Aiken, 2003). These results were similar for both girls and boys.

For a summary of these correlations, see Table 8.

Table 7

Correlations between Main Variables and Media Variables for High School Adolescents

Variable	Game	TV	Movie	Song
Gender	.38**	.23**	.22*	.14
CSDTC	-.07	-.15*	-.15*	-.17*
SSHAS	.12	.19	.10	.29**
SDQ	.17*	.09	.13	.39**
CEQ	-.26**	-.29**	-.30**	-.35**
SAVE	.29**	.16*	.29**	.45**
AS	.29**	.29**	.41**	.29**
FTQ	.79**	.72**	.71**	.56**
Game	--	.40**	.52**	.26**
TV	--	--	.34**	.15*
Movie	--	--	--	.22**
Song	--	--	--	--

Note. CSDTC = Crandall Social Desirability Test for Children, SSHAS = Social Situations Hostile Attribution Survey, SDQ = Strengths and Difficulties Questionnaire, CEQ = Children's Empathy Questionnaire, SAVE = Screen for Adolescent Violence Exposure, AS = Aggression Scale, and FTQ = Free Time Questionnaire. * $p < .05$, ** $p < .01$.

Additionally, the correlations were as expected for the media violence variable. Specifically, exposure to media violence was positively associated with psychopathology ($r = .28, p < .01$), hostile attributions ($r = .29, p < .01$), and aggression ($r = .53, p < .01$) and negatively associated with empathy ($r = -.40, p < .01$).

Table 8

Correlations between Real Life Violence (SAVE) and Psychopathology, Hostile Attributions, Aggression, and Empathy among High School Adolescents

Variable	Girls	Boys	Total
Pathology (SDQ)	.57	.46	.52
Hostility (SSHAS)	.32	.30	.32
Aggression (AS)	.52	.53	.61
Empathy (CEQ)	-.33	-.42	-.38

Note. N for total sample = 209 for SDQ, 206 for SSHAS, 211 for AS, and 210 for CEQ.

For girls, N = 104 for SDQ, 105 for SSHAS, 106 for AS, and 104 for CEQ. For boys, N = 101 for SDQ, 96 for SSHAS, 100 for AS, and 101 for CEQ. All correlations significant at the .01 level.

The results of these correlation analyses mean that high school students in this sample who reported greater exposure to media violence also exhibited greater symptoms of psychopathology, a higher number of hostile attributions, more aggressive behavior and less empathy than did students who had less media violence exposure. The association between media violence and factors such as psychopathology and hostile attributions was mild, while the association between media violence and factors such as

aggression and empathy was moderate. These results were similar for both girls and boys. See Table 9 for a summary of the correlations.

Table 9

Correlations between Media Violence (FTQ) and Psychopathology, Hostile Attributions, Aggression, and Empathy among High School Adolescents

Variable	Girls	Boys	Total
Pathology (SDQ)	.38**	.27*	.28**
Hostility (SSHAS)	.31**	.25*	.29**
Aggression (AS)	.65**	.46**	.53**
Empathy (CEQ)	-.24*	-.44**	-.40**

Note. For the total sample, N = 161 for SDQ, 162 for SSHAS, 163 for AS, and 162 for CEQ. For girls, N = 88 for SDQ, 90 for SSHAS and AS, and 88 for CEQ. For boys, N = 72 for SDQ, 70 for SSHAS, 71 for AS, and 72 for CEQ. * $p < .05$, ** $p < .01$.

High School Adolescents Sample – Primary Analyses

Three regression analyses were conducted to predict the following variables: hostile attributions, aggression, and empathy. In each regression, gender was entered first, followed by exposure to real life violence and exposure to media violence. The first regression was conducted in order to predict hostile attributions. Results demonstrate that gender was not a significant predictor of hostile attributions. However, real life and media violence did significantly predict hostile attributions ($p < .001$), accounting for up to 13% of the variance in this variable. See Table 10 for a summary of these results.

Gender did not significantly predict aggression, however real life and media violence did. Gender accounted for 3% of the variance. Real life violence added 34% (p

< .001) and media violence added 9% ($p < .001$) to the prediction. All three variables combined accounted for 46% of the variance in aggression. See Table 11 for a summary of these results.

Table 10

Summary of Regression Analysis for Variables Predicting Hostile Attributions

Variable	ΔR^2	B	$SE B$	β
Step 1				
Gender	.01	.63	.46	.11
Step 2				
Gender		.00	.46	-.03
Real Life Violence (SAVE)	.11**	.01	.02	.35
Step 3				
Gender		-.18	.47	-.03
Real Life Violence (SAVE)		.01	.02	.28
Media Violence (FTQ)	.13**	.01	.03	.17

Note. SAVE = Screen for Adolescent Violence Exposure, FTQ = Free Time

Questionnaire. ** $p < .001$.

Finally, all three variables (gender, real life violence, and media violence) predicted empathy. Gender accounted for 16% of the variance in empathy ($p < .001$), with real life violence adding another 16% ($p < .001$) and media violence adding 3% ($p < .05$). All three variables combined accounted for 35% of the variance in empathy. See Table 12 for a summary of these results.

Table 11

Summary of Regression Analysis for Variables Predicting Aggression

Variable	ΔR^2	<i>B</i>	<i>SE B</i>	<i>B</i>
Step 1				
Gender	.03	3.42	1.43	.19
Step 2				
Gender		-.00	1.21	.00
Real Life Violence (SAVE)	.37**	.48	.05	.61
Step 3				
Gender		-1.23	1.15	-.07
Real Life Violence (SAVE)		.35	.05	.45
Media Violence (FTQ)	.46**	.34	.07	.36

Note. SAVE = Screen for Adolescent Violence Exposure, FTQ = Free Time

Questionnaire. ** $p < .001$.

It was further predicted that exposure to media violence would add to the prediction of hostility, aggression, and empathy over and above that of real life violence. Media violence adds a minimal amount to the prediction of hostile attributions (2% of the variance) and empathy (3% of the variance) and a small amount (9%) to the prediction of aggression.

High School Adolescent Sample – Exploratory Analysis

Based on theory and previous research, it was predicted that real life violence would be associated with aggression. Results from the present study demonstrate this relationship. Although the study design does not permit causal interpretations, it is likely

that exposure to real life violence leads to an increase in aggressive behavior. Additionally, psychopathology was found to be associated with aggression, indicating that perhaps increasing symptoms of psychopathology lead to increased aggressive behavior. Furthermore, psychopathology is positively associated with exposure to real life violence. Due to these relationships, it was hypothesized that psychopathology would act as a mediating variable between real life violence and aggression, for both high school students and detained adolescents.

Table 12

Summary of Regression Analysis for Variables Predicting Empathy

Variable	ΔR^2	<i>B</i>	<i>SE B</i>	<i>B</i>
Step 1				
Gender	.16**	-5.14	.92	-.41
Step 2				
Gender		-3.39	.88	-.27
Real Life Violence (SAVE)	.32**	-.24	.04	-.43
Step 3				
Gender		-2.69	.90	-.21
Real Life Violence (SAVE)		-.19	.04	-.34
Media Violence (FTQ)	.35**	-.15	.05	-.21

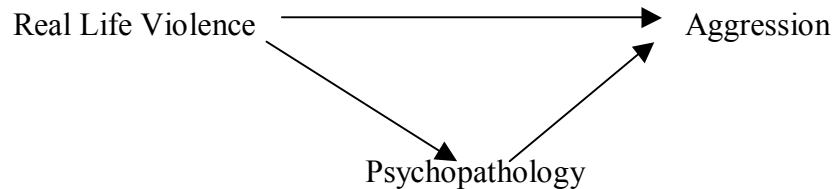
Note. SAVE = Screen for Adolescent Violence Exposure, FTQ = Free Time

Questionnaire. **p < .001.

The hypothesized model for the mediation is depicted in Figure 2, with exposure to real life violence resulting in increased symptoms of psychopathology which leads to

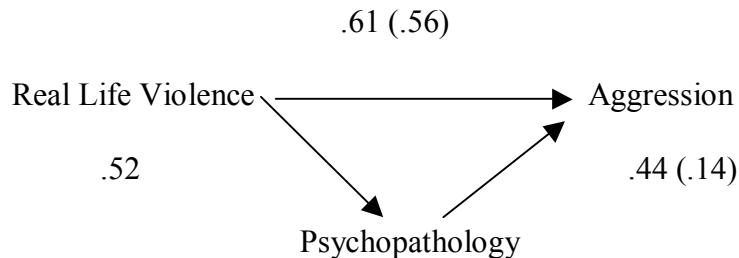
increases in aggressive behavior. A partial mediation may also be in effect as exposure to real life violence leads directly to aggression as well, or through other routes.

Figure 2: *Model of Psychopathology as a Mediating Variable for Real Life Violence and Aggression*



Among the high school students, psychopathology was found to partially mediate the relationship between real life violence and aggression (Sobel $z = 2.16, p < .05$). The standardized coefficient of real life violence on aggression was .56 direct and .05 indirect. See Figure 3 for a depiction of these results.

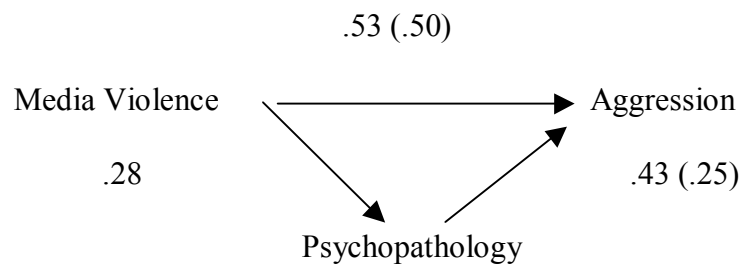
Figure 3: *Results of Mediation Analysis (Real Life Violence, Psychopathology, and Aggression) for High School Adolescents*



Additionally, although media violence exposure was not associated with psychopathology and aggression in the detained adolescent sample, these associations were significant for the high school student sample. Thus, the mediation analysis was repeated for the high school sample to explore whether psychopathology might serve as a mediating variable between media violence and aggression for the high school student group.

Among this sample, psychopathology was found to partially mediate the relationship between media violence and aggression (Sobel $z = 2.65, p < .01$). The standardized coefficient of media violence on aggression was .50 direct and .03 indirect. See Figure 4 for a depiction of these results.

Figure 4: *Results of Mediation Analysis (Media Violence, Psychopathology, and Aggression) for High School Adolescents*



Detained Adolescent Sample – Descriptive Analyses

Descriptive statistics were computed for each measure completed by detained adolescents (specifically the SAVE, FTQ, SDQ, SSHAS, AS, and CEQ). Means and standard deviations were calculated to describe these measures, with separate analyses by gender (See Table 2 for full listing).

On the measure of real life violence (SAVE), detained adolescents were more likely to endorse items indicating that they had been a witness to violence (e.g., seen or heard something), rather than a victim of violence. They endorsed a greater number of violent experiences than did the high school sample. Compared to the high school sample, common items (endorsed by more than 70% of the sample) among the detained adolescent group included more items reflecting victimization (“grownups scream at me”) as well as more high risk violent actions, such as seeing someone carry a knife/gun, seeing someone pull a gun on someone, and hearing gunshots. Unlike the high school

sample, in which boys endorsed a higher rate of real life violence exposure than the girls, the detained adolescents reported similar levels of real life violence exposure.

The media violence measure (FTQ) is composed of two parts. The first measures how much time participants spend with media and the second part measures the degree of violence within their media preferences. Time per week spent in each media category was determined using the midpoint of the range endorsed by adolescents with a maximum of 15 hours per week. On the FTQ, detained adolescents reported spending an average of 28.72 hours per week engaged in media consumption. There was no significant difference between girls' and boys' total media use, as average number of hours per week was similar for both genders. See Table 13 for a summary of detained adolescents' media use, including results by gender and specific media types.

In addition to calculating overall media exposure, the FTQ also provides information on exposure to media violence. For instance, students listed up to three of their favorite television shows, movies, songs, and videogames. They then chose a category that best described these preferences, with categories being classified as violent or nonviolent. Detained adolescents reported violence in about 47% of their general media use. In all categories, boys reported greater preference for violence in their media than did girls. See Table 14 for a summary of the percentage of violence in detained adolescents' media preferences, including results by gender.

Finally, a total media violence variable was formed by multiplying the time spent engaged in each type of media by the percentage of violence reported each category. These numbers were added together in order to calculate the total media violence exposure variable.

Table 13

Detained Adolescents' Reported Weekly Media Use

	Girls	Boys	Total Sample
Video Games	3.5	6.1	5.6
Television	8.3	8.2	8.4
Movies	6.5	5.5	5.8
Music/Music Videos	9.7	8.8	9.0
Total	28.0	28.6	28.8

Note. All numbers are hours per week engaged in media use. $N = 94$ for total sample, 12 for girls and 78 for boys.

Table 14

Percentage of Violence in Detained Adolescents' Preferred Media

	Girls	Boys	Total Sample
Video Games	26%	56%	54%
Television	9%	45%	39%
Movies	67%	72%	70%
Music/Music Videos	6%	28%	24%
Combined Media	27%	50%	47%

Similar to the results obtained by high school students, there was a significant gender difference for this variable, with boys obtaining scores twice as high as girls. This indicates that boys tend to consume more violent media than girls, as well as spend more

time with this type of media. See Table 15 for a summary of the total media violence scores and individual media scores, by gender.

Table 15

Detained Adolescents Total Media Violence Scores

Media Category	Girls	Boys	Total Sample
Video Games	1.80	3.52	3.23
Television	.56	3.73	3.36
Movies	3.18	4.15	3.97
Music/Music Videos	.71	2.58	2.23
Total Media Violence	6.61	14.31	13.06

Note. All numbers are means for media violence variables. $N = 91$, 13 girls.

On the measure of psychopathology (SDQ), detained adolescents obtained a mean score of 14.74. Girls endorsed slightly more distress than boys, with the mean score for girls in the borderline clinical range and the mean score for boys nearing the borderline range. Common items (endorsed by over 70% of the sample) included becoming easily distracted and easily angered.

On the hostility measure (SSHAS), detained adolescents tended to choose answers reflecting positive/neutral as well as negative explanations for the social vignettes, with the stories earning mixed responses from the group overall.

On the measure of aggression (AS), adolescent boys tended to report slightly more aggressive acts than did girls. Common items were those that reflected verbal aggression, such as making fun of others and calling them names.

On the measure of empathy (CEQ), girls reported slightly more empathic responses than did boys. Overall, detained adolescents reported empathic responses for the majority of items on this test.

Detained Adolescent Sample – Preliminary Analyses

Pearson correlations were conducted between the main study variables for detained adolescents. Specifically, correlations were conducted between exposure to real life and media violence and the predicted negative effects of hostility, aggression, empathy, and psychopathology. It was expected that these correlations would be positive, with the exception of the empathy and violence exposure relationship, which was expected to show a negative correlation. An alpha level of .05 was used for each of the Pearson r significance tests. See Table 16 for a summary of the correlations between the main variables and Table 17 for the correlations between the main variables and the specific media variables.

Unlike the results for the high school student sample, the associations obtained for the detained adolescents were not as strong as was expected. The correlations with real life and media violence were conducted with the group of detained adolescent boys only, due to the small number of girls in this sample. Exposure to real life violence was positively associated with psychopathology ($r = .42, p < .01$) and aggression ($r = .39, p < .01$) but not with hostile attributions ($r = .15$) or empathy ($r = -.19$). This means that detained boys in this sample who reported experiencing a greater amount of real life violence also exhibited greater symptoms of psychopathology and more aggressive behavior. However, empathy and hostile attributions were not significantly associated with exposure to real life violence. See Table 18 for a summary of these results.

Table 16

Correlations between Main Study Variables for Detained Adolescents

Variable	Gender	CSDTC	SSHAS	SDQ	CEQ	SAVE	AS	FTQ
Gender	--	-.06	.08	-.03	-.42**	.22**	.18**	.34**
CSDTC	--	--	-.19	-.17	.11	-.16	-.15	-.38**
SSHAS	--	--	--	.10	-.22*	.09	.22*	.10
SDQ	--	--	--	--	-.07	.37**	.26*	.13
CEQ	--	--	--	--	--	-.17	-.25*	-.14
SAVE	--	--	--	--	--	--	.42**	.03
AS	--	--	--	--	--	--	--	.14
FTQ	--	--	--	--	--	--	--	--

Note. CSDTC = Crandall Social Desirability Test for Children, SSHAS = Social Situations Hostile Attribution Survey, SDQ = Strengths and Difficulties Questionnaire, CEQ = Children's Empathy Questionnaire, SAVE = Screen for Adolescent Violence Exposure, AS = Aggression Scale, and FTQ = Free Time Questionnaire. * $p < .05$, ** $p < .01$.

Additionally, correlations were conducted for the media violence variable. In this sample, exposure to media violence was not significantly associated with psychopathology ($r = .22$), hostile attributions ($r = .10$), aggression ($r = .21$) or empathy ($r = -.12$). See Table 19 for a summary of these correlations.

Table 17

Correlations between Main Variables and Specific Media Variables for Detained Adolescents

Variable	Game	TV	Movie	Song
Gender	.38**	.23**	.22**	.14
CSDTC	-.26*	-.27*	-.35**	-.09
SSHAS	.23*	.13	-.08	-.07
SDQ	.12	-.04	-.02	.13
CEQ	-.05	-.11	-.07	-.16
SAVE	-.12	-.05	.09	.22*
AS	.10	.01	.07	.18
FTQ	.60**	.78**	.70**	.62**
Game	--	.37**	.18	.06
TV	--	--	.47**	.23
Movie	--	--	--	.30**
Song	--	--	--	--

Note. CSDTC = Crandall Social Desirability Test for Children, SSHAS = Social Situations Hostile Attribution Survey, SDQ = Strengths and Difficulties Questionnaire, CEQ = Children's Empathy Questionnaire, SAVE = Screen for Adolescent Violence Exposure, AS = Aggression Scale, and FTQ = Free Time Questionnaire. * $p < .05$, ** $p < .01$.

Table 18

Correlations between Real Life Violence (SAVE) and Psychopathology, Hostile Attributions, Aggression, and Empathy among Detained Adolescents

Variable	Boys' Media Violence	Total Sample
Pathology (SDQ)	.42**	.37**
Hostility (SSHAS)	.15	.09
Aggression (AS)	.39**	.42**
Empathy (CEQ)	-.19	-.17

Note. For detained boys, N = 69 for SDQ, 70 for SSHAS, 73 for AS, and 72 for CEQ.

** $p < .01$.

Table 19

Correlations between Media Violence (FTQ) and Psychopathology, Hostile Attributions, Aggression, and Empathy among Detained Adolescents

Variable	Boys' Media Violence	Total Sample
Pathology (SDQ)	.22	.13
Hostility (SSHAS)	.10	.10
Aggression (AS)	.21	.14
Empathy (CEQ)	-.12	-.14

Note. For detained boys, N = 55 for SDQ, 56 for SSHAS, 58 for AS and CEQ. No correlations were significant.

Detained Adolescent Sample – Primary Analyses

Three regression analyses were conducted to predict the following variables: hostility, aggression, and empathy. These analyses were conducted with the sample of

detained adolescent boys, due to the small number of girls in the sample. In each regression, exposure to real life violence was entered first, followed by exposure to media violence. The first regression, the prediction of hostility, was non-significant. Based on the sample of detained boys, neither real life nor media violence predicted hostile attributions. See Table 20 for a summary of these results.

Table 20

Summary of Regression Analysis for Variables Predicting Hostile Attributions

Variable	ΔR^2	B	$SE B$	β
Step 1				
Real Life Violence (SAVE)	-.02	.00	.03	.01
Step 2				
Real Life Violence (SAVE)		.00	.03	.00
Media Violence (FTQ)	-.03	.00	.03	.10

Note. SAVE = Screen for Adolescent Violence Exposure, FTQ = Free Time

Questionnaire.

The second regression demonstrated that real life violence was not a significant predictor of aggression but media violence was significant ($p < .05$). Real life violence accounted for 4% of the variance in explaining aggression, while media violence added 6% of the variance, resulting in 10% for the combined variable prediction. See Table 21 for a summary of these results.

Finally, real life violence was a significant predictor for empathy, while media violence was not. Real life violence accounted for 5% of the variance in empathy ($p <$

.05). Media violence did not add to this prediction. See Table 22 for a summary of these results.

Table 21

Summary of Regression Analysis for Variables Predicting Aggression

Variable	ΔR^2	<i>B</i>	<i>SE B</i>	<i>B</i>
Step 1				
Real Life Violence (SAVE)	.04	.19	.10	.25
Step 2				
Real Life Violence (SAVE)		.18	.10	.23
Media Violence (FTQ)	.10*	.28	.14	.27

Note. SAVE = Screen for Adolescent Violence Exposure, FTQ = Free Time

Questionnaire. * $p < .05$.

Table 22

Summary of Regression Analysis for Variables Predicting Empathy

Variable	ΔR^2	<i>B</i>	<i>SE B</i>	<i>B</i>
Step 1				
Real Life Violence (SAVE)	.05*	-.12	.06	-.27
Step 2				
Real Life Violence (SAVE)		-.12	.06	-.26
Media Violence (FTQ)	.05	-.01	.08	-.11

Note. SAVE = Screen for Adolescent Violence Exposure, FTQ = Free Time

Questionnaire. * $p < .05$.

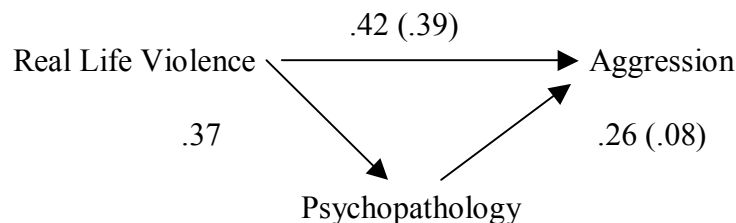
It was further predicted that exposure to media violence would add to the prediction of hostility, aggression, and empathy over and above that of real life violence. Media violence did not add to the prediction of empathy and hostile attributions but did add a small amount (6%) to the prediction of aggression.

Detained Adolescent Sample – Exploratory Analyses

Based on theory and previous research, it was predicted that real life violence would be associated with aggression. Results from the present study demonstrate this relationship. Specifically, psychopathology was found to be associated with aggression, indicating that perhaps increasing symptoms of psychopathology lead to increased aggressive behavior. Furthermore, psychopathology is positively associated with exposure to real life violence. Due to these relationships, it was hypothesized that psychopathology would act as a mediating variable between real life violence and aggression.

Among the detained adolescents, results were nonsignificant, indicating that psychopathology did not act as a mediator between real life violence and aggression for this sample (Sobel $z = .75$). The standardized coefficient of real life violence on aggression was .39 direct and .03 indirect. See Figure 5 below.

Figure 5: *Results of Mediation Analysis for Detained Adolescents*



Chapter Five

Discussion

The purpose of this study was to examine relationships between violence exposure (both real life and media) and levels of aggression, hostility, and empathy among two populations, namely adolescents attending public high school and adolescents detained in a juvenile detention center. There were significant differences between these two samples in terms of gender, ethnicity, degree of violence exposure (both real life and media violence), and levels of aggression, psychopathology, and empathy. Due to these differences, the analyses were conducted and reported separately in the Results section. The interpretation and implications of these results will also be reported separately here.

Discussion of Results for the High School Adolescents

The high school sample was composed of approximately equal numbers of girls and boys. There were differences between genders on the main variables of this study. Specifically, boys reported significantly more exposure to real life and media violence, greater levels of aggression, and less empathy. These results are consistent with the previous research as well as theories of biological differences and gender role socialization (Oliver, 2000). Interestingly, there were no differences between genders on the hostile attribution variable, suggesting that perhaps girls and boys interpret ambiguous situations similarly, but their behavioral reactions to such interpretations may differ.

Based on the General Aggression Model, it was hypothesized that both real life and media violence exposure would be associated with aggressive behavior and to related variables, such as hostility and empathy. Results of correlation analyses support these hypotheses for high school students. Specifically, both real life and media violence correlated positively with aggression and hostile attributions and negatively with empathy. These associations held true for both girls and boys. Additionally, exposure to real life violence was correlated with psychopathology, an additional study variable. These results are similar to those found in previous studies, in which violence exposure has demonstrated significant associations with aggression (e.g., Huesmann et al., 2003; McCloskey & Lichter, 2003), hostile attributions (Anderson et al., 2003; Price & Glad, 2003), empathy (Funk et al., 2004; Sams & Truscott, 2004), and psychopathology (Anderson & Dill, 2000; Bolton et al., 2000).

Regression analyses were conducted in order to test the hypotheses that real life and media violence would be able to predict aggression, hostility, and empathy. Predictors were entered as follows: gender, followed by real life violence, and then media violence. Gender did not significantly predict aggression or hostile attributions, but it did predict empathy. Exposure to real life and media violence both significantly predicted all three outcome variables (aggression, hostile attributions, and empathy). Exposure to real life violence accounted for the majority of the variance (37% for aggression, 11% for hostile attributions, and 16% for empathy). A small amount of variance was accounted for by adding media violence (e.g., 9% for aggression, 2% for hostile attributions, and 3% for empathy).

The prediction was strongest for aggression, indicating that 46% of the variance in adolescents' aggressive behavior can be predicted by their exposure to real life and media violence. Additionally, real life violence was the strongest of all the predictors, accounting for the majority of the variance in all three variables. While real life violence is the strongest predictor, media violence was able to add to the prediction even above real life violence, indicating the importance of this variable as well. These results are consistent with previous research (Huesmann et al., 2003; McCloskey & Lichter, 2003) as well as the General Aggression Model, which hypothesizes that situation variables such as exposure to violence may eventually lead to increased probability of aggressive actions in a given social encounter (Anderson et al., 2004).

Psychopathology was determined to partially mediate the relationship between violence exposure (both real life and media violence) and aggression. This indicates that exposure to violence in either form may lead to increases in psychopathology which would in turn increase the risk of aggressive action. This result further supports the General Aggression Model in that it fits neatly into the hypothesized pathway toward aggression. For example, a situation variable (real life or media violence exposure) may result in increases in psychopathology which in turn affects the routes (internal state is altered) and outcomes (appraisal and decision making abilities may be impaired) leading to a greater potential for aggressive outcome during the social encounter (Anderson et al., 2004). These results also suggest that adolescents with a significant amount of psychopathology may be at high risk for aggressive behavior, particularly following exposure to violence.

Results of this study highlight the important connection between exposure to violence and negative affects, such as increased levels of aggression, hostility, psychopathology, and decreased levels of empathy. The results are especially significant because exposure to real life and media violence is relatively common during adolescence, suggesting that many adolescents are likely to demonstrate these adverse affects. While these relationships between violence exposure and negative affects add to the research knowledge base, results of this study also have public policy, prevention, and clinical treatment implications, indicating that additional steps to action can be taken.

Perhaps one of the first steps would be to educate the public, including parents and policy makers, about these results, and most especially about the strong connections between violence exposure and aggression. For example, the current study is only one in many that have found associations between media violence exposure and aggression. According to Bushman and Anderson (2001), while the scientific confidence in this finding has been increasing over the past 30 years, the media has consistently reported only a very weak association between these variables.

Although there may be many reasons for the downplaying of effects of media violence (including a vested interest in violent media), Bushman and Anderson advocate that researchers get involved in clearing up this misinformation to prevent the widening discrepancy between news reports and current scientific knowledge. Disseminating correct information can include research presentations and media interviews to educating policy makers. Additionally, psychologists who function in the role of teachers or therapists may also have opportunities to share knowledge of the risks associated with violence exposure with students, parents, and adolescents themselves.

While education is important, prevention or reduction of violence exposure should be even more critical for reducing aggression. Due to the finding that real life violence accounted for the largest amount of variance in adolescents' aggressive behavior, hostile attributions, and empathy, preventing real life violence seems crucial, but it is not easy. Because real life violence is such a complex, multifaceted problem, violence prevention efforts may need to be broad and varied. Preventive approaches can involve individuals, educators, schools, neighborhoods, religious leaders, policymakers, ethnic groups, mental health professionals, law enforcement, businesses or special organizations, and more (McElhaney & Effley, 2000). Although it is beyond the scope of this paper to review all prevention programs, a wide array of successful violence prevention approaches do exist and have targeted adolescents (e.g., Swenson, Henggeler, Taylor, & Addison, 2005), families (e.g., Thornton, Craft, Dahlberg, Lynch, & Baer, 2000), students and schools (e.g., Erickson, Mattaini, & McGuire, 2004; Swearer, 2005), and entire communities (e.g., Holpsopple, Krall, & Pittman, 2004; McElhaney & Effley, 1999).

In contrast to the difficulties with reducing real life violence, prevention or reduction of media violence exposure may be easier to achieve. For example, parents or other caregivers can easily choose to limit children's media consumption in the home and with the help of rating systems, can attempt to screen out the most violent television programs, games, movies, and songs. Research has shown that moderate restrictions on violent media consumption are associated with reductions in aggressive behavior (Cantor & Wilson, 2003). In contrast, children who face either high or low restrictions in their violent media consumption tend to be more aggressive (Nathanson, 1999). Children with

low restrictions are exposed to a great deal of violence and children with high restrictions tend to view more violence with friends or away from parental monitoring and to report a greater desire for violent media (i.e., the “forbidden fruit” effect) (Kirsh, 2006). Thus, moderate restriction of violent content is likely to be most beneficial for reducing aggression.

Finally, when prevention or reduction efforts are not effective, more intensive intervention may be needed. For children who consistently consume violent media, parents can intervene by engaging their children in active mediation. This consists of discussing acceptable and unacceptable behavior while children are engaged in media consumption. For example, parents or guardians may make negative comments about the violent content of the media, list likely or real-world consequences of the violent acts, and focus on the victim’s feelings. These strategies are typically more likely to work with younger children than with older children or adolescents, due to the possibility that parental comments to adolescents may be interpreted as condescending or lecturing (Nathanson & Yang, 2003; Kirsh, 2006).

Adolescents who have been exposed to significant real world violence may need more intensive psychotherapeutic interventions. For instance, individuals who have witnessed or experienced violent victimization are likely to benefit from interventions targeting symptoms of trauma (e.g., trauma-focused cognitive behavioral therapy). Those who have been exposed to a great deal of violence and are currently aggressive themselves are likely to benefit from therapies targeting a high risk population (e.g., multi-systemic therapy).

Based on the mediation model, adolescents who are exposed to violence are at increased risk for symptoms of psychopathology, resulting in increases in aggressive behavior. Because psychopathology is an important mediating variable, any interventions designed to reduce symptoms of psychopathology will also likely to decrease the risk of future aggressive behavior. Finally, therapists should be aware that adolescents who have a history of violence exposure are more likely to behave aggressively in the future and that preventive interventions may be necessary. This type of intervention has been used with childhood abuse victims in order to prevent the cycle of abuse from continuing (Dixon, Browne, & Hamilton-Giachritsis, 2005; Fagan, 2005). A similar approach could be useful for those with a history of violence exposure, even if current aggression levels appear to be mild.

Discussion of Results for the Detained Adolescents

Results for the detained adolescents were quite different from the results obtained for the high school students. This is likely due to the fact that the samples differed on several variables, such as gender, minority status, level of violence exposure, psychopathology, aggression, and empathy. The detained adolescents had witnessed or experienced more violence than the average student, exhibited more symptoms of psychopathology, had less empathy for others, and behaved more aggressively.

The samples may also differ on other background or environmental variables that were not measured in the study, such as family structure, culture, or environment, such as geographic location. For instance, because the high schools were located a distance from the center of the city, most of the students lived in suburbs or outlying areas, while the

typical adolescent in the JDC comes from one of several neighborhoods within the city itself.

Additionally, because there were far more boys than girls in the JDC, the sample was not representative of both girls and boys. Gender differences were not calculated due to the small number of girls who participated in the study. Thus, it is unknown whether the gender differences would be as great in a high risk sample as in a typical population.

Results of correlation analyses demonstrate that for detained adolescents exposure to real life violence is associated with aggression and psychopathology. These results are consistent with numerous previous studies suggesting that exposure to violence is associated with symptoms of psychopathology and increases in aggression (Bolton et al., 2000; McCloskey & Lichter, 2003). Additionally, these were also the variables with the strongest correlation among the high school sample. However, real life violence exposure was not significantly related to levels of hostility or empathy in the detained adolescent sample. Although surprising, these results are similar to those of Sams and Truscott (2004) who found that in a sample of urban, at-risk adolescent boys, community violence exposure was related to aggression but not to empathy.

These results are interesting because they indicate that perhaps the route of violence exposure leading to aggression is different for high risk adolescents than for an average sample of adolescents. For instance, it would be expected that exposure to real life violence could increase hostile attributions, decrease empathy for others, and place adolescents at risk for reacting with aggressive behavior themselves (and such may be the pathway for average adolescents). It is possible that this type of aggression reflects more of a *hostile aggression* response in which a feeling of anger leads to the aggressive

response with the goal being to hurt or injure another (Atkins, Stoff, Osborne, & Brown, 1993).

However, for high risk adolescents, exposure to real life violence, particularly violence that occurs repeatedly in the family and community, may lead to an increase in *instrumental aggression*. That is, these adolescents may learn that in their given environment, aggressive acts are both more accepted and more likely to lead to some type of reward or advantage such as material objects/property, cooperation from others, status, reputation, identification with a group, and so on (Atkins et al., 1993). Although instrumental aggression is likely to result in discomfort or pain for the victim, this is not the sole intention of the aggressor. Because instrumental aggression is simply a means to some other goal, it may occur without significant emotional investment (such as increased hostility or low empathy) that characterizes other forms of aggressive behavior. If this is the case, it would provide an explanation for why real life violence is associated with aggression for high risk (in this case, detained) adolescents but is not associated with hostile attributions or empathy.

Correlation analyses were also conducted for the media violence exposure variable. Again, in contrast to expectations and results from the high school sample, media violence exposure was not significantly associated with aggression, empathy, hostile attributions, or psychopathology for detained adolescents. There may be several explanations for these findings. First, because the detained adolescents reported higher rates of violence exposure in general, they may have under-reported or had difficulty categorizing the violent content in their preferred media (e.g., incorrectly categorizing violent media into non-violent categories). Additionally, the high levels of media

violence exposure in this group could indicate desensitization to media violence. If detained adolescents were less sensitive to violent media's effects, this could result in weaker or non-significant associations with the study's variables.

Results of regression analyses were also non-significant, indicating that for detained adolescents, real life and media violence exposure did not predict levels of aggression, hostility, or empathy. Differences in how detained adolescents respond to violence exposure or use violence may account for the discrepancy.

Finally, for detained adolescents, psychopathology was not a significant mediating variable for the relationship between real life violence exposure and aggression. This is in contrast to the results for the high school students. Once again, it is possible that the type of aggression makes a difference (for example, hostile versus instrumental aggression). A study by Atkins and colleagues (1993) provides some support for this explanation. In this study of clinically referred adolescent boys (ages 8-14), significant associations were identified between rates of impulsivity (high impulsive errors on a continuous performance test) and acts of hostile aggression (employing a noise response against an opponent during the experimental game). However, impulsivity was not related to acts of instrumental aggression (tilting the game away from an opponent to gain advantage). This indicates that one symptom of psychopathology, poor impulse control, can increase the risk for hostile or reactive aggression. However, associations may be weaker and non-significant if adolescents also consistently use other forms of aggression (such as instrumental aggression) that have not demonstrated the same associations with psychopathology.

While the pathway from violence exposure to aggression is difficult to predict for high risk adolescents, an association remains, particularly regarding exposure to real life violence and negative outcomes such as psychopathology and aggression. Due to these relationships, prevention and intervention for these adolescents will be important.

For high risk adolescents involved in the juvenile justice system, such as the population used in the current study, intervention often begins during the adolescents' stay in a detention center or correctional facility. For instance, policies against fighting or use of physical intimidation should reduce real life violence exposure for at least the duration of stay in the facility (although adolescents may continue to be exposed to violence indirectly through discussion with other adolescents who relate violent experiences). Reduction of media violence may be especially beneficial in this setting. For example, Waite and colleagues (1992) found that the frequency of aggressive behavior among adolescent and young adult male inmates significantly decreased after access to MTV was eliminated from the ward. Reducing media violence exposure may also halt the process of desensitization, especially for adolescents with a longer stay in the detention center or other facility.

Additionally, due to the high rate of aggressive behavior exhibited by adolescents involved with the juvenile justice system, it is safe to assume that (similar to the current sample), many of these adolescents have experienced violence in the past and are presently experiencing symptoms of psychopathology. Due to the associations between violence exposure, psychopathology, and aggression, identification and treatment of these individuals may be critical for reducing the risk of future aggression.

Using a thorough assessment process, professionals may detail the adolescents' history, including victimizations, notify authorities as needed in situations of ongoing abuse, and diagnose possible psychopathology. Treatment of psychological problems may begin within the facility. Additionally, appropriate referrals or ongoing follow-ups may be necessary after the adolescent returns home. Interventions aimed at reducing further violence exposure and symptoms of psychopathology are likely to decrease adolescents' risk of future aggression and perhaps reduce rates of future dealings with the juvenile justice system.

Limitations and Implications for Future Research

The present study relied exclusively on participants' self report. There may be several limitations with this method, particularly that participants may have inaccurately reported information about themselves. This could result from participants' difficulty reading or understanding questions, carelessness in completing forms, or to differences in perceptions of one's own behavior. Problems with reading or understanding measures and carelessness in filling out forms were minimized by having investigators present to answer questions and check progress and (at the JDC) having adolescents participate in small groups with an investigator reading the questions if needed. In future studies, problems with accuracy of perceptions during self report may be minimized by using multiple methods to collect data including parent or teacher reports and recorded information about aggression (e.g., school or police records).

Another limitation of this study is the differences in the samples. Specifically, the sample of detained adolescents included very few girls, which meant that detained boys and girls could not be compared and results will not generalize to other detained girls.

Additionally, there were many differences between the high school sample and the detained adolescent sample, including differences in ethnicity and possible differences in geographic location or community culture. Due to this, the samples are not able to be directly compared in a way that would be possible with a study of samples that only differ on a key variable. There was more heterogeneity in the high school student sample, particularly with their involvement in the legal system and exposure to violence. The similarity of the detained adolescents on some of the variables may have affected the strength of the results for this group. Also, the study did not measure types of aggression, which may have differed between the samples and may provide additional information if used in future studies.

An additional limitation may be the instrument used to measure psychopathology (the Strengths and Difficulties Questionnaire). Although there was a range of scores on this measure and significant differences between the two groups, the detained adolescents' mean score did not reach clinical significance on this measure. This is surprising due to the types of problems and difficulties often seen in this population and suggests that this brief screening measure may not have been sensitive to the type of psychopathology present in the detained adolescent population.

Future research will be needed to better explain the differences between low and high risk adolescents. Specifically, more research on groups of children who have been exposed to violence and are at risk for or presently exhibit aggression will be beneficial. Thus far, research results on violence exposure and negative outcomes such as aggression, hostility, and empathy have been fairly consistent when using average samples. However, work with samples of high risk individuals often yields unexpected

results. In addition to more research on high risk adolescents, future research should focus on testing pathways to violence among all adolescents (e.g., using the General Aggression Model), and interventions to reduce aggression among adolescents who have witnessed, experienced, or participated in violence.

Chapter Five

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Appendix A: Demographic Information Sheet

DEMOGRAPHIC INFORMATION

Please circle the letter or fill in the blank with information about yourself.

GENDER: A) Female B) Male

AGE: _____ GRADE IN SCHOOL: _____

ETHNICITY:

- A) White/European American
- B) Black/African American
- C) Hispanic American
- D) Asian American
- E) Biracial (please describe): _____
- F) Other (please describe): _____

MOTHER/FEMALE GUARDIAN’S JOB: _____

MOTHER/FEMALE GUARDIAN’S EDUCATION LEVEL:

- A) Some high school
- B) Graduated from high school
- C) Some college
- D) Graduated from college
- E) Graduated with a post-graduate degree (Masters, Ph.D., M.D.)
- F) Don’t know/Don’t have

FATHER/MALE GUARDIAN’S JOB: _____

FATHER/MALE GUARDIAN’S EDUCATION LEVEL:

- A) Some high school
- B) Graduated from high school
- C) Some college
- D) Graduated from college
- E) Graduated with a post-graduate degree (Masters, Ph.D., M.D.)
- F) Don’t know

Have you ever been in trouble with the law or involved with juvenile court? (circle) YES
NO

Number of times arrested: _____

Number of times in juvenile detention center: _____

Number of times you have moved: _____

Appendix B: Screen for Adolescent Violence

We are interested in hearing about your experiences of the bad things that you have seen, heard of, or that have happened to you. Please read and answer the following statements about violent things that have happened at home, at school, or in your neighborhood involving you. For each statement please circle the word that best describes how often these things have happened.

For example, if you “have seen someone carry a gun” at your home, school, or neighborhood sometimes, you would circle the word **sometimes**. Please make sure your answers are things you have seen in real life, not on television. (For example, if you’ve only seen a person carrying a gun on television, you would circle **never** on this paper).

How often it happens at home, school, or neighborhood:

- | | | | | |
|--|--------------|------------------|--------------|---------------|
| 1. I have seen someone carry a gun. | Never | Sometimes | Often | Always |
| 2. Someone has pulled a gun on me. | Never | Sometimes | Often | Always |
| 3. Grownups beat me up. | Never | Sometimes | Often | Always |
| 4. Someone my age threatened to beat me up. | Never | Sometimes | Often | Always |
| 5. I have been shot at. | Never | Sometimes | Often | Always |
| 6. I have seen the police arrest someone. | Never | Sometimes | Often | Always |
| 7. Someone my age hits me. | Never | Sometimes | Often | Always |
| 8. I have seen someone get killed. | Never | Sometimes | Often | Always |
| 9. I have seen a grownup hit a kid. | Never | Sometimes | Often | Always |
| 10. I have heard about someone getting shot. | Never | Sometimes | Often | Always |
| 11. Someone has pulled a knife on me. | Never | Sometimes | Often | Always |
| 12. Grownups threaten to beat me up. | Never | Sometimes | Often | Always |
| 13. I have had shots fired at me. | Never | Sometimes | Often | Always |
| 14. I have seen someone carry a knife. | Never | Sometimes | Often | Always |

Remember: circle the answer that reflects how often this has happened to you either at home, at school, or in your neighborhood.

- | | | | | |
|--|--------------|------------------|--------------|---------------|
| 15. I have seen someone get shot. | Never | Sometimes | Often | Always |
| 16. I have been attacked with a knife. | Never | Sometimes | Often | Always |
| 17. I have seen a kid hit a grownup. | Never | Sometimes | Often | Always |
| 18. I have seen people scream at each other. | Never | Sometimes | Often | Always |
| 19. I have seen someone pull a gun on someone. | Never | Sometimes | Often | Always |
| 20. I have seen someone get beaten up. | Never | Sometimes | Often | Always |
| 21. I have heard about someone getting killed. | Never | Sometimes | Often | Always |
| 22. I've heard of someone attacked with a knife. | Never | Sometimes | Often | Always |
| 23. I have heard of someone getting beaten up. | Never | Sometimes | Often | Always |
| 24. I have seen someone pull a knife on someone. | Never | Sometimes | Often | Always |
| 25. I have been badly hurt. | Never | Sometimes | Often | Always |
| 26. I've seen someone get attacked with a knife. | Never | Sometimes | Often | Always |
| 27. I hear gunshots. | Never | Sometimes | Often | Always |
| 28. I have seen someone get badly hurt. | Never | Sometimes | Often | Always |
| 29. I've run for cover as people started shooting. | Never | Sometimes | Often | Always |
| 30. Grownups scream at me. | Never | Sometimes | Often | Always |

31. I have heard of someone carrying a gun.

Never **Sometimes** **Often** **Always**

32. Grownups hit me.

Never **Sometimes** **Often** **Always**

Appendix C: The Free Time Questionnaire

Free Time Questionnaire

Please answer the following questions as completely as you can. Remember, your answers are completely private and no one will know how you answered.

TIME

1. How **long** have you been playing video and/or computer games?
 Don't play at all/anymore 1 year to 2 years
 less than one month 2 to 5 years
 one month to 1 year more than 5 years

2. Time spent in an average **week** playing video or computer games.
 no time 7 to 10 hours each week
 1 to 2 hours each week 11 to 14 hours each week
 3 to 6 hours each week 15 or more hours each week

3. Time spent in an **average week** watching television
 no time 7 to 10 hours each week
 1 to 2 hours each week 11 to 14 hours each week
 3 to 6 hours each week 15 or more hours each week

4. Time spent **this past week** watching television
 no time 7 to 10 hours each week
 1 to 2 hours each week 11 to 14 hours each week
 3 to 6 hours each week 15 or more hours each week

5. Time spent in an average **week** watching movies (rentals and in the theater)
 no time 7 to 10 hours each week
 1 to 2 hours each week 11 to 14 hours each week
 3 to 6 hours each week 15 or more hours each week

6. Time spent in an average **week** spent listening to/watching music videos.
 no time 7 to 10 hours each week
 1 to 2 hours each week 11 to 14 hours each week
 3 to 6 hours each week 15 or more hours each week

7. Check **one** category that describes how often you watch television news
 never once every day
 once or twice a week more than once every day
 3 to 6 times a week

ACTIVITIES

VIDEO AND COMPUTER GAMES

1.) Write down the name of your **most favorite** video or computer game: _____

Check **one** group of words that best describes your **favorite** video or computer game:

- figuring out, learning
- sports, no fighting
- reach goals, kill or be killed, real people
- story or game, no fighting or destruction
- reach goals, kill or be killed, cartoon characters
- sports with fighting
- I have no favorite video game

2.) Write down the name of your **second** favorite video or computer game: _____

Check **one** group of words that best describe your **second favorite** video or computer game:

- figuring out, learning
- sports, no fighting
- reach goals, kill or be killed, real people
- story or game, no fighting or destruction
- reach goals, kill or be killed, cartoon characters
- sports with fighting
- I have no second favorite video game

3.) Write down the name of your **third** favorite video or computer game: _____

Check **one** group of words that best describes your **third favorite** video or computer game:

- figuring out, learning
- sports, no fighting
- reach goals, kill or be killed, real people
- story or game, no fighting or destruction
- reach goals, kill or be killed, cartoon characters
- sports with fighting
- I have no third favorite video game

TELEVISION

1.) Write down the name of your **most favorite** television program: _____

Check **one** group of words that best describes your **most favorite** television show:

- figuring out, learning, “educational”
- cartoon characters
- sports, no contact between players (example: golf)
- sports with contact between players (example: football)
- game show
- talk show
- story about real people with fighting or destruction
- story about real people, no fighting or destruction
- I have no favorite television show

2.) Write down the name of your **second** favorite television program: _____

Check **one** group of words that best describes your **second** favorite television show:

- figuring out, learning, “educational”
- cartoon characters
- sports, no contact between players (example: golf)
- sports with contact between players (example: football)
- game show
- talk show
- story about real people with fighting or destruction
- story about real people, no fighting or destruction
- I have no favorite television show

3.) Write down the name of your **third** favorite television program: _____

Check **one** group of words that best describes your **third** favorite television show:

- figuring out, learning, “educational”
- cartoon characters
- sports, no contact between players (example: golf)
- sports with contact between players (example: football)
- game show
- talk show
- story about real people with fighting or destruction
- story about real people, no fighting or destruction
- I have no favorite television show

MOVIES

1.) Write down the name of your all-time **most** favorite movie (from the theatre, tv, or video rental): _____

Check **one** group of words that best describes your all-time **most** favorite movie (from the theatre, tv, or video rental).

- figuring out, learning
- sports, no contact between players
- sports with contact between players
- real people, fighting, destruction
- real people, no fighting or destruction
- cartoon characters
- I have no favorite movie

2.) Write down the name of your **second** favorite movie (from the movie theatre, tv, or video rental): _____

Check **one** group of words that best describes your **second** favorite movie (from the theatre, tv, or video rental).

- figuring out, learning
- sports, no contact between players
- sports with contact between players
- real people, fighting, destruction
- real people, no fighting or destruction
- cartoon characters
- I have no second favorite movie

3.) Write down the name of your **third** favorite movie (from the movie theatre, tv, or video rental): _____

Check **one** group of words that best describes your **third** favorite movie (from the movie theatre, tv, or video rental).

- figuring out, learning
- sports, no contact between players
- sports with contact between players
- real people, fighting, destruction
- real people, no fighting or destruction
- cartoon characters
- I have no third favorite movie

SONGS/MUSIC VIDEOS

1.) Write down the name of your all-time **most** favorite song/music video: _____

Check **all** of the words that best describe your all-time **most** favorite song or music video.

- ___ has a good beat
- ___ easy to dance to
- ___ reminds me of myself/my life
- ___ has sexy words or scenes
- ___ has fighting words or scenes
- ___ I have no favorite song or music video

2.) Write down the name of your **second** favorite song/music video: _____

Check **all** the words that best describe your **second** favorite song or music video.

- ___ has a good beat
- ___ easy to dance to
- ___ reminds me of myself/my life
- ___ has sexy words or scenes
- ___ has fighting words or scenes
- ___ I have no favorite song or music video

3.) Write down the name of your **third** favorite song/music video: _____

Check **all** the words that best describe your **third** favorite song or music video.

- ___ has a good beat
- ___ easy to dance to
- ___ reminds me of myself/my life
- ___ has sexy words or scenes
- ___ has fighting words or scenes
- ___ I have no favorite song or music video

How would you describe your favorite type of music?

Please number from 1 to 3: 1 = favorite, 2 = second favorite, 3 = third favorite.

- | | | |
|--------------------------|-----------------|----------|
| ___ Pop (popular music) | ___ Rock | ___ Jazz |
| ___ Rap | ___ Heavy Metal | ___ Folk |
| ___ Country | ___ Classical | |
| ___ Light/Easy Listening | ___ Oldies | |

Appendix D: Strengths and Difficulties Questionnaire

Strengths and Difficulties Questionnaire

For each item, please mark the box for No (Not True), Maybe (Somewhat True) or Yes (Certainly True). It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of how things have been for you over the last six months.

I am restless: I cannot sit still for long.	No	Maybe	Yes
I get a lot of headaches, stomachaches, or sickness.	No	Maybe	Yes
I get very angry and often lose my temper.	No	Maybe	Yes
I would rather be alone than with people of my age.	No	Maybe	Yes
I usually do as I am told.	No	Maybe	Yes
I worry a lot.	No	Maybe	Yes
I am constantly fidgeting or squirming.	No	Maybe	Yes
I have one good friend or more.	No	Maybe	Yes
I fight a lot. I can make other people do what I want.	No	Maybe	Yes
I am often unhappy, depressed, or tearful.	No	Maybe	Yes
Other people my age generally like me.	No	Maybe	Yes
I am easily distracted; I find it difficult to concentrate.	No	Maybe	Yes
I am nervous in new situations. I easily lose confidence.	No	Maybe	Yes
I am often accused of lying or cheating.	No	Maybe	Yes
Other teens pick on me or bully me.	No	Maybe	Yes
I think before I do things.	No	Maybe	Yes
I take things that are not mine from home, school, etc.	No	Maybe	Yes
I get along better with adults than people my own age.	No	Maybe	Yes
I have many fears; I am easily scared.	No	Maybe	Yes
I finish the work I'm doing. My attention is good.	No	Maybe	Yes

Appendix E: Social Situation Hostile Attribution Survey

The Social Situations Survey

Directions: You will be reading several stories. Try to imagine that the situation in each story is happening to you. Please answer the questions after each story by putting a circle around the letter for the best answer according to how you would feel.

REMEMBER – Imagine that you are the person in the story.

Library Situation

Imagine that you are supposed to meet a friend in front of the library and you are looking for him/her. You can't wait to see your friend because you have to tell him/her about something important that happened to you. After a few minutes you go into the library. When you find your friend, he/she is talking with someone else – someone that you don't like very much. Your friend says that you can all study together as a group.

1. Why did your friend choose to include that person?
 - a. My friend was mad at me about something.
 - b. My friend didn't know that I wanted to talk with him/her alone.
 - c. My friend was ignoring me to get back at me for something.
 - d. My friend didn't see me in front of the library.

2. In this situation, do you think that your friend was
 - a. deliberately trying to be mean?
 - b. just being thoughtless, but not deliberately trying to be mean?

Mall Situation

Imagine that you are going to the mall to do some shopping with a friend. You are supposed to meet near the food place where you and your friend always eat together. Just as you are coming down the escalator to meet your friend, you see her/him coming out of another store with another person that you don't really like. They look like they have been shopping together for a while because they have a bunch of bags with them.

1. Why did your friend choose to go shopping with someone else instead of you?
 - a. My friend was trying to diss me.
 - b. My friend just forgot we were supposed to meet.
 - c. My friend was ignoring me to get back at me for something.
 - d. My friend just came early and was still going to meet me later.
2. In this situation, do you think that your friend was
 - a. deliberately trying to be mean?
 - b. just being thoughtless, but not deliberately trying to be mean?

Concert Situation

Imagine that a concert that you really want to see is happening this weekend. You overhear two students you know say they are going to the concert. They say a bunch of students are all going together because they can get cheap tickets. They ask around after class to see if anyone wants to go with them, but no one asks you. They act like you are not even there.

1. Why didn't the students ask you to go to the concert?
 - a. The students were planning to ask me to go later.
 - b. The students were deliberately ignoring me to make me mad.
 - c. The students were trying to diss me.
 - d. The students haven't had a chance to ask me to go yet.
2. In this situation, do you think that the students were
 - a. deliberately trying to be mean?
 - b. just being thoughtless, but not deliberately trying to be mean?

Hallway Situation

Imagine that you are standing in the hallway one morning before class. As you are standing there, two students from your class walk by. As they walk by you, they look at you, whisper something to each other, and then they laugh.

1. Why did the two students laugh when they walked by you?
 - a. The students were “bad mouthing” me (spreading rumors).
 - b. The students were laughing at a joke that one of them told.
 - c. The students were just having fun.
 - d. The students were trying to make me mad.
2. In this situation, do you think that the two students were
 - a. deliberately trying to be mean?
 - b. just being thoughtless, but not deliberately trying to be mean?

Invitation Situation

Imagine that you are in the bathroom one day after class. While you are in there, two other students you know come in and start talking to each other. You hear one of them invite the other one to a party at his/her house. The student says that there are going to be a lot of people at the party. You have not been invited to this party.

1. Why hasn't the student invited you to the party at his/her house?
 - a. The student doesn't want me to come to the party.
 - b. The student hasn't had a chance to invite me yet.
 - c. The student is ignoring me to get back at me for something.
 - d. The student was planning to invite me later.
2. In this situation, do you think that the two students were
 - c. deliberately trying to be mean?
 - d. just being thoughtless, but not deliberately trying to be mean?

Walk Situation

Imagine that you are taking a walk to the store one day. After you walk a block or two, you see two students that you know from a class. As you pass by them you say, “hi.” The two students act as if you are not there – they don’t say anything to you. Then they say something to each other that you can’t hear and they continue to walk the other way.

1. Why didn’t the two students say hello to you?
 - a. They didn’t see me standing there.
 - b. They didn’t hear me say hi to them.
 - c. They were talking behind my back.
 - d. They were ignoring me to make me mad.

2. In this situation, do you think that the students were
 - a. deliberately trying to be mean?
 - b. just being thoughtless, but not deliberately trying to be mean?

Appendix F: The Aggression Scale

The Aggression Scale

Please answer the following questions thinking of what you actually did during the last 7 days. For each question, mark with a circle how many times you did that behavior during the last 7 days.

How many times during the last 7 days....	0	1	2	3	4	5	6+
1). I teased students to make them angry.	0	1	2	3	4	5	6+
2). I fought back when someone hit me first.	0	1	2	3	4	5	6+
3). I said things about other kids to make other students laugh.	0	1	2	3	4	5	6+
4). I encouraged other students to fight.	0	1	2	3	4	5	6+
5). I pushed or shoved other students.	0	1	2	3	4	5	6+
6). I got into a physical fight because I was angry.	0	1	2	3	4	5	6+
7). I slapped or kicked someone.	0	1	2	3	4	5	6+
8). I called other students bad names.	0	1	2	3	4	5	6+
9). I threatened to hurt or to hit someone.	0	1	2	3	4	5	6+

Appendix G: Children's Empathy Scale

Below is a list of statements about situations that happen to people every day. Please read each statement carefully. Mark the answer that describes how you feel. Your answers are private and no one will know how you answered.

1. When I'm mean to someone, I usually feel bad about it later.

No	Maybe	Yes
1	2	3

2. I'm happy when the teacher says my friend did a good job.

No	Maybe	Yes
1	2	3

3. I would get upset if I saw someone hurt an animal.

No	Maybe	Yes
1	2	3

4. I understand how other people feel.

No	Maybe	Yes
1	2	3

5. I would feel bad if my mom's friend got sick.

No	Maybe	Yes
1	2	3

6. Other people's problems really bother me.

No	Maybe	Yes
1	2	3

7. I feel happy when my friend gets a good grade.

No	Maybe	Yes
1	2	3

8. When I see a person who is upset it really bothers me.

No	Maybe	Yes
1	2	3

9. I would feel bad if the student sitting next to me got in trouble.

No	Maybe	Yes
1	2	3

10. It's easy for me to tell when my parent or guardian has a good day at work.

No	Maybe	Yes
1	2	3

11. It bothers me when my teacher doesn't feel well.

No	Maybe	Yes
1	2	3

12. I feel sorry for people who can't find anyone to hang out with.

No	Maybe	Yes
1	2	3

13. Seeing a person who is crying makes me feel like crying.

No	Maybe	Yes
1	2	3

14. If two people are fighting, someone should stop it.

No	Maybe	Yes
1	2	3

15. It would bother me if my friend got grounded.

No	Maybe	Yes
1	2	3

16. When I see someone who's happy, I feel happy too.

No	Maybe	Yes
1	2	3

Appendix H: Crandall Social Desirability Test for Children

About Me

Please circle either True or False for each statement as it applies to you.

- | | | |
|---|------|-------|
| 1. I am always respectful to older people. | True | False |
| 2. Sometimes I don't feel like doing what my teachers want me to. | True | False |
| 3. Sometimes I have felt like throwing things or breaking them. | True | False |
| 4. I never talk back to my parent or guardian. | True | False |
| 5. When I make a mistake, I always admit that I am wrong. | True | False |
| 6. I sometimes feel like making fun of other people. | True | False |
| 7. I always wash my hands before every meal. | True | False |
| 8. Sometimes I wish I could just hang out instead of going to school. | True | False |
| 9. I have never been tempted to break a rule or law. | True | False |
| 10. Sometimes I dislike helping my parent/guardian even though I know they need my help around the house. | True | False |
| 11. Sometimes I say things just to impress my friends. | True | False |
| 12. I never shout when I feel angry. | True | False |

Appendix I: Consent Forms

Parents... We need your help!
You can help us understand more about youth violence.

A study about violence will be conducted at your child's school under the supervision of Dr. Jeanne Funk from the University of Toledo. We hope that all students will participate. Students who have permission and agree to participate will be asked to provide basic demographic information and will complete seven questionnaires measuring exposure to violence (in the community and through the media), feelings of hostility, aggression, and empathy toward others.

This session, which will take place at your child's school during regular hours of attendance, will last about 30 minutes. All answers will be confidential and your child's name will never be used in any research report.

Participants will be entered into a drawing for a \$25.00 Westfield Gift Card which can be used at any Westfield location, such as the Franklin Park Mall. If your child wishes to stop participating, she or he may do so at any time, and still have a chance to win the gift card.

There may be some minor risks associated with this study. It is possible that your child may feel anxious when asked to share experiences of violence exposure. If this does occur, students will be encouraged to speak with the school counselor or psychologist. The benefit of this project is that we may learn more about youth exposure to violence and its relation to hostility, aggression, and empathy. This information may help us develop more effective violence prevention and treatment programs. If you choose not to participate, this will not affect you or your child's relationship with the school or with the University of Toledo.

If you permit your child to participate in this study, please sign below and ask your child to return it to her/his teacher.

CONSENT: My son/daughter may participate in the youth violence study.

Name of student (please print
print)

Name of parent/guardian (please

Signature of parent

Date of signature

Public Schools: Informed Consent for Research

Project Title: Effects of Media Violence on Typical and Delinquent Adolescents

Student Investigator: Jennifer Gunderson, M.A.

Faculty Advisor: Jeanne Funk, Ph.D.

Affiliation: University of Toledo Psychology Department

_____ school agrees to allow students who have parental consent and who give their consent themselves to participate in the project titled *Effects of Media Violence on Typical and Delinquent Adolescents*, to be conducted by Jennifer Gunderson, a graduate student from the University of Toledo. I understand that participating students will be asked to complete seven questionnaires measuring exposure to violence (in the community and through the media), psychopathology, hostility, aggression, and empathy. Students will also complete five brief questionnaires associated with a separate study. This should take students approximately 45 minutes total. Student responses will remain anonymous and all information will be kept strictly confidential.

Authorized Signature

Date of Signature

Public School Students: Informed Consent for Research

Student Investigator: Jennifer Gunderson, M.A.

Faculty Advisor: Jeanne Funk, Ph.D.

Affiliation: University of Toledo Psychology Department

You are asked to participate in a study that looks at how your experiences in life and through the media (for example, watching TV and movies) might be related to your feelings and behavior. If you agree to participate in this study, you will be asked to write down basic information about yourself and to complete seven different questionnaires. There are no right or wrong answers, so please be honest on all questionnaires. These usually take 20 to 30 minutes to complete. You will not be writing your name on any of the questionnaires so all of your answers will be anonymous and confidential – this means no one will ever know how you answered the questions.

We would like you to participate in this study, but you are free to say no or to stop working on questionnaires at any time. You will not be punished if you decide you do not want to be in the study.

There is a risk that you might feel upset when reading some of the questions (for example, about your feelings or experiences of violence). The benefit of this study is that you are helping us to learn more about teens' experiences, feelings, and behaviors. To thank you for participating in this study, your name will be entered into a drawing to win a 25.00 Westfield gift card, which can be used at Franklin Park Mall. If you decide to stop during the study, you will still have a chance to win the gift card.

If you have any questions, please ask them now.

By signing below, you agree to participate in this study.

Signature

Date

Lucas County Juvenile Detention Center: Informed Consent for Research

Project Title: Media Violence Exposure in Delinquent and Non-Delinquent Adolescents

Student Investigator: Jennifer Gunderson, M.A.

Faculty Advisor: Jeanne Funk, Ph.D.

Affiliation: University of Toledo Psychology Department

I, Judge James Ray of the Lucas County Juvenile Detention Center, agree to allow adolescents who give their consent to participate in the project titled *Media Violence Exposure in Delinquent and Non-Delinquent Adolescents*, to be conducted by Jennifer Gunderson, a graduate student from the University of Toledo. I understand that participating adolescents will be asked to complete seven questionnaires measuring exposure to violence (in the community and through the media), psychopathology, hostility, aggression, empathy, and socially desirable responding. Students will also complete five brief questionnaires associated with a separate study. This should take adolescents approximately 45 minutes total. Participant responses will remain anonymous and all information will be kept strictly confidential. I am aware of the risks involved in this study, specifically that some adolescents might become distressed while completing the questionnaires. I am also aware of study benefits, including increasing our knowledge of the effects of violence.

Signature

Date of Signature

JDC Participants: Informed Consent for Research

Student Investigator: Jennifer Gunderson, M.A.

Faculty Advisor: Jeanne Funk, Ph.D.

Affiliation: University of Toledo Psychology Department

You are asked to participate in a study that looks at how your experiences in life and through the media (for example watching TV and movies) might be related to your feelings and behavior. If you agree to participate in this study, you will be asked to write down basic information about yourself and to complete seven different questionnaires. There are no right or wrong answers, so please be honest on all questionnaires. These usually take 20 to 30 minutes to complete. You will not be writing your name on any of the questionnaires so all of your answers will be anonymous and confidential – this means no one will ever know how you answered the questions.

We would like you to participate in this study, but you are free to say no or to stop working on questionnaires at any time. You will not be punished if you decide you do not want to be in the study.

There is a risk that you might feel upset when reading some of the questions (for example, about your feelings or experiences of violence). The benefit of this study is that you are helping us to learn more about teens' experiences, feelings, and behaviors. To thank you for participating in this study, you will receive a piece of candy. If you decide to stop during the study, you can still choose a piece of candy.

If you have any questions, please ask them now.

By signing below, you agree to participate in this study.

Signature

Date