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Talia Jackson
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ABSTRACT

The aim of this study was to investigate the relationship between exposure to violence in the home and attachment characteristics in youth with sexually harmful behaviors. In this study the following was investigated: whether maternal/paternal attachment plays a mediating role in the relationship between exposure to violence in the home (both experienced and witnessed) and adolescent sexual/non-sexual offending. The sample size was 296 male youth with sexually harmful behaviors placed in six residential treatment facilities. Four mediation models were used to examine attachment and exposure to violence in the home in youth with sexually harmful behaviors. Results showed no support for attachment as a mediator in the relationship between exposure to violence in the home and sexual or non-sexual offending in sexually abusive youth. The findings showed a high prevalence of exposure to multiple form of violence in the home in youth with sexually harmful behaviors. Significant correlations were found between attachment characteristics and non-sexual crimes. Sexual offending was only significantly correlated with maternal alienation. Clinical implications include early intervention for children and adolescents living in violent homes, and interventions that focus on trauma in the treatment of youth with sexual harmful behaviors. Future research on youth with sexually harmful behaviors should examine the effect of exposure to violence in the home and attachment on the development of non-sexual offending.

**AN EXAMINATION OF THE RELATIONSHIPS BETWEEN EXPOSURE TO
VIOLENCE IN THE HOME AND ATTACHMENT CHARACTERISTICS AMONG
YOUTH WITH SEXUALLY HARMFUL BEHAVIORS**

A project based upon an independent investigation
submitted in partial fulfillment of the requirements
for the degree of Master of Social Work.

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Background

Prevalence and Effects of Childhood Exposure to Violence in the Home Among the General Population

While the focus of this study is on adolescents with sexually harmful behaviors, it is helpful to start by looking at the effects and prevalence of violence in the home among youth in the general population of the United States. This will provide a scope and context within which to place findings about adolescents with sexually harmful behaviors. In the United States, estimates for the number of children and adolescents that witness violence in the home are between 10 million (Straus, 1991) and 15.5 million (McDonald, Ramisetty-Mikler, Caetano, & Green, 2006) annually. Straus (1991) estimated that over a third of children in the United States have witnessed some level of violence between their parents. While, McDonald et al., (2006) concluded that 29.4% of children are witnesses to some amount of domestic violence and 13.3% witness severe domestic violence. Finkelhor, Turner, Ormrod, and Hamby (2009) did not project the total number of children and adolescents exposed annually to domestic violence but found in a nationally representative sample that 9.8% of children, age 0 to 17, had witnessed family assault in the past year and 20.3% within their lifetime. Within the United States the rate of childhood (ages 0-17) exposure to violence in the home is as high as 30% (McDonald, et al., 2006) and linked a variety of problematic internalizing and externalizing behaviors.

There is a large body of literature that catalogues the effects of exposure to violence in the home on preschool children and children under the age of 12. Fewer researchers have focused on the effects of exposure to violence in the home on adolescents. Researchers that have studied the effects of exposure to violence in the home on adolescents have found increased rates of internalized mental health problems such as: anxiety (Fergusson & Horwood, 1998),

depression (Becker, Stuewig, Herrera, & McCloskey, 2004), and low self-esteem (Buckner, Beardslee, & Bassuk, 2004). In addition, researchers have reported an association between adolescent exposure to violence in the home and a wide range of externalizing behavior problems, such as: conduct disorder (Becker et al., 2004; Fergusson & Horwood, 1998), oppositional defiance disorder (Boden, Fergusson, & Horwood, 2010), and ADHD (Becker et al., 2004). These research findings have been accompanied by findings of increased delinquency and aggression among adolescents exposed to violence in the home (Kernic et al., 2003; Margolin, Vickerman, Oliver, & Gordis, 2010; Mrug & Windle, 2010). Researchers have used Bowlby's Attachment Theory to examine the behavioral patterns among children and adolescents exposed to violence in the home.

Attachment Theory

Attachment is the bond between child and caregiver that develops in infancy, cultivated when a caregiver is available and responsive to an infant (Bowlby, 1969, 1973, 1982). According to Bowlby, (1982) the attachment bond is a biological function that provides protection and gives the infant an overarching sense of safety and security, which is essential to personal development. Bowlby (1973) thought that attachment bonds were responsible for the development of internal models or representations of both the self and others. The representation of the self and others established in infancy through attachment bond serves as a prototype for future relationships (Bowlby, 1973). The findings of Ainsworth in her empirical research supported the attachment theory laid out by Bowlby (Ainsworth, 1964; Ainsworth & Bell, 1970, 1972; Tracy & Ainsworth, 1981). In later research, Ainsworth (1978) in collaboration with others, separated infants into three attachment categories: secure, anxious-resistant (sometimes called anxious-ambivalent), and avoidant. These attachment categories or styles have been used

by others doing research on attachment. Researchers have studied the impact of exposure to violence in the home on the quality of attachment between primary caregivers and youth.

The Effects of Exposure to Violence in the Home on Attachment Style

While there is a small body of research on the effects of exposure to violence on attachment bonds between caregiver and child/adolescent in the general population, the effects of violence exposure on attachment bonds have not been studied in youth with sexually harmful behaviors. However, within the general population research indicates that child and adolescent exposure to violence in the home can impact attachment bonds. Domestic violence was a predictor of insecure attachment at age one in the children of mothers that experienced domestic violence during pregnancy and children of women that experienced high amounts of domestic violence in pregnancy continued to exhibit insecure attachment behavior into age four (Levendosky, Bogat, Huth-Bocks, Rosenblum, & von Eye, 2011). A study composed of high risk subjects found 75% of the infants classified as insecurely attached at 15 months were exposed to varying levels of violence in the home (Zeanah et al., 1999). In the same study, children with no exposure to violence in the home were more likely to be securely attached (Zeanah et al., 1999).

Research on adolescents has shown an association between exposure to family violence and less secure attachment characteristics in caregiver/adolescent relationships (Levendosky, Huth-Bocks, & Semel, 2002; Sousa, et al., 2011; Sternberg, Lamb, Guterman, Abbott, & Dawud-Noursi, 2004). Adolescents exposed to violence in the home were more likely to be classified as avoidant in attachment style (Levendosky et al., 2002). In undergraduates with a history of exposure to violence in the home, parental warmth did not play a mediating role in attachment style, and these students were more likely to exhibit insecure attachment styles (Harper, Arias, &

House, 2003). Research has shown that exposure to violence in the home disrupts the attachment bond between caregiver and child at multiple points in childhood and beyond into young adulthood. Although, the impact of exposure to violence in the home on attachment has not been looked at in youth with sexually harmful behaviors, research has focused on exposure to violence in the home and sexually abusive youth.

Exposure to Violence in the Home among Youth with Sexually Harmful Behaviors

Little research has been done on the prevalence and effect of exposure to violence in the home on youth who have engaged in sexually harmful behaviors. Herrera and McCloskey (2001) found that children who witness marital violence were almost twice as likely to be involved in the juvenile court, as children with no history of exposure to violence. Youth who engage in sexually harmful behaviors reported witnessing more parental violence than other violent offenders (Fagan & Wexler, 1988). In comparative study of juvenile offenders, all offender groups witnessed a similar level of violence within the home, but sex offenders and violent offenders witnessed almost three times the amount of severe violence in the home as non-violent offenders (Caputo, Frick, & Brodsky, 1999).

In addition to witnessing high amounts of violence in the home, research has shown that youth with sexually harmful behaviors have high rates of exposure to and experience of physical and sexual abuse, as well as neglect and emotional abuse (Burton, Duty, & Leibowitz, 2011; Ford & Linney, 1995; McMackin, Leisen, Cusack, LaFratta, & Litwin, 2002; Seto & Lalumiere, 2010; Veneziano, C., Veneziano, L., & LeGrand, 2000). In a study of male youth with sexually harmful behaviors residing in residential treatment facilities, McMackin et al., (2002) found 77.5% were exposed to three or more types of trauma. Research on the prevalence of youth with sexually harmful behaviors that have experienced sexual abuse ranges from 9% (Fagan &

Wexler, 1988) to 92% (Veneziano et al., 2000). A meta-analysis of over 50 studies, conducted by Burton and Schatz (2003) indicated that around 40% of youth with sexually harmful behaviors experience sexual abuse. As an offender group, youth with sexually harmful behaviors with a history of sexual victimization experienced more violence in the home than youth with sexually harmful behaviors that did not report sexual abuse (Burton et al., 2011a). The high rate of exposure to various types of violence in the home has been associated with non-sexual criminality among youth with sexually harmful behaviors (Burton, Leibowitz, Eldredge, Ryan, & Compton, 2011, Fagan & Wexler, 1988).

Research has shown that youth with sexually harmful behaviors have a history of committing non-sexual crimes (Becker, Cunningham-Rathner, & Kaplan, 1986; Burton et al., 2011b; Fagan & Wexler, 1988; Jonson-Reid & Way, 2001; Seto & Lalumière, 2010). Becker et al., (1986) reported 28.4% of youth with sexually harmful behaviors had committed non-sexual crimes, ranging from one to three or more times. While, Burton et al., (2011b) found 60% of youth with sexually harmful behaviors to have committed serious non-sexual crimes such as: theft, auto theft, and drug use. Although, Fagan and Wexler (1988) did not discuss the connection between exposure to violence in the home and levels of non-sexual crime among youth with sexually harmful behaviors, these two variables were both present in their data. Youth with sexually harmful behaviors had higher rates of physical and sexual abuse and more exposure to parental violence and committed slightly more violent crime than other violent offenders (Fagan & Wexler, 1988). Burton et al., (2011b) reported a direct connection between history of exposure to violence in the home and increased non-sexual criminality in youth with sexually harmful behaviors. Exposure to violence in the home increased the crime scores of youth with sexually harmful behaviors by an average of 2.5% (Burton et al., 2011b). While

research on exposure to violence in the home and youth with sexually harmful behaviors has shown a connection between levels of violence and patterns of non-sexual offending, research on attachment in this population has focused on the role attachment may play in the development of sexual aggression. Research on how attachment characteristics contribute to sexual offending started in the adult population.

Adult Sex Offenders and Attachment Style

In the last few decades research on the relationship between attachment style and sexual offending has primarily focused on adult males. Adult sex offenders have significantly higher rates of insecure attachment style when compared to the normative, non-offender population (Lyn & Burton, 2004; Smallbone & Dadds, 1998; Stirpe, Abracen, Stermac, & Wilson, 2006; Ward, Hudson, & Marshall, 1996). In Lyn and Burton's 2004 study of incarcerated adult men, the number of sex offenders classified as fearfully attached was three to four times higher than estimates in the non-offending population.

Marshall has done a considerable amount of research on the role of attachment style in the etiology of adult sex offending. He asserts that an insecure attachment to a caregiver in childhood will impact the quality of subsequent peer and romantic relationships in adolescence and adulthood (Marshall, 2010). Based on the research of Marshall in collaboration with others, a path can be traced from poor childhood attachment, to poor interpersonal relationships later in life (characterized by low self-esteem, fear of intimacy and social rejection, use of sex to cope with stress, deficits in intimacy, and profound loneliness) and sexually offending behavior (Cortoni & Marshall, 2001; Marshall, 1989, 2010; Marshall & Mazzucco, 1995; Stirpe et al., 2006). The research has shown that there are high levels of insecure attachment among adult sex

offenders and attachment theory has become a significant part of etiological models for sexual offending.

Youth with Sexually Harmful Behaviors and Attachment Style

Research has shown that youth begin to engage in sexually inappropriate behavior in early to mid adolescence (Longo, 1982; Saunders, Awad, & Levene, 1984; Zolondek, Abel, Northey, & Jordan, 2001) and that many adult sex offenders reported committing their first offense in adolescence (Groth, Longo, & McFadin, 1982; Knight & Prentky, 1993). If attachment is an important part of understanding the development of sexual offending and this behavior often starts in adolescence, then it is critical to take a closer look at the attachment characteristics in juveniles with sexually harmful behaviors. Few researchers have looked at the role of attachment style in the development of sex offending behavior among adolescents.

Miner et al., (2009) found that youth with sexually harmful behaviors who offend against children have a higher rate of anxious attachment style than other juvenile offender groups. Miner et al., (2009) also found high rates of peer isolation, problems interacting with the opposite sex, and elevated sex-drive in combination with high rates of sexual fantasy among youth with sexually harmful behaviors. Based on these characteristics, Miner et al., (2009) concluded that in this population the effects of attachment anxiety seem to lead to peer isolation and feelings of social insecurity, which can lead to sexually harmful behaviors. Research by others adds to the etiological model outlined by Miner and his colleagues. Fagan and Wexler (1988) found youth who engage in sexually harmful behaviors to have social deficits, which stemmed from weak personal bonds in early life. Miner and Munns (2005) reported that youth with sexually harmful behaviors felt socially isolated from: peer groups, within the school setting, and within the family. Research indicates that while insecure attachment style is not a

direct predictor of sexually harmful behavior in youth, it may be an important contributor to the social development patterns of youth with sexually harmful behaviors.

The literature review outlines the prevalence and detrimental effects of exposure to violence in the home on adolescents. As shown, there is some research to indicate that exposure to violence in the home impacts attachment. little research has been done on the prevalence of exposure to violence in the home and its impact on attachment characteristics in youth with sexually harmful behaviors. Although researchers studying adult sexual offenders have found that attachment characteristics contribute to the etiology of sexual offending, less research has been done on this subject among youth with sexually harmful behaviors. Research has looked at the impact of attachment on sexual offending in youth with sexually harmful behaviors, but research has not looked at the impact of attachment on non-sexual offending in this population. This study will focus on the relationship between exposure to violence in the home, attachment characteristics, and adolescent sexual and non-sexual offending. More specifically, this study will look at whether maternal/paternal attachment plays a mediating role in the relationship between exposure to violence in the home (both experienced and witnessed) and adolescent sexual/non-sexual offending.

Research Questions

- 1) What is the prevalence of exposure to violence in the home among youth with sexually harmful behaviors?
- 2) Is there a relationship between exposure to violence in the home and adolescent sexual aggression or non-sexual crime?
- 3) Is the relationship between violence in the home and sexual aggression mediated by maternal attachment?

- 4) Is the relationship between violence in the home and non-sexual crime among youth with sexually harmful behaviors mediated by either maternal or paternal attachment?
- 5) Is the relationship between witnessed violence in the home and non-sexual crime among youth with sexually harmful behaviors mediated by maternal attachment?

Methodology

The current study involves secondary data analysis of a large data set of sexually abusive youth. Human subjects approval for the data collection was obtained from the State Institutional Review Board (IRB) by Dr. David Burton and colleagues. Approval was given for the current study to do secondary data analysis of the data collected by Dr. David Burton and colleagues. After consents and assents were given, data were gathered and recorded to maintained confidentiality. Data were obtained from youth residing in six residential facilities in a Midwestern state. Some of the participants had committed sexual offenses while others had committed non-sexual offenses.

Among the total sample (N =505; 502 surveys were usable) of male sexually abusive youth (N==332) and male delinquent youth (N=170) the average age was 16.64 (SD=1.52). The average age did not differ between the group of sexual and non sexual offenders ($t(478) = 1.30, p = .192$). The groups did not differ in the final year of school completion ($t(478) = .93, p = .354$), with an average of 9th grade (SD = 1.53 grades). Differences were found in the racial configurations of the two groups ($\chi^2(1) = 11.72, p = .001$). Within the non-sexual offender group, 63.2% identified as youth of Color (58.6% as African American, 2.6% as Hispanic/Latino and 2.0% as Native American) and 36.8% identified as White. Among the sexual offender group: 46% identified as youth of Color (31.1% as African American, 8.0% as Hispanic/Latino and 6.9% as Native American) and 54% identified as White. Only the sexual offender group

was used for the analysis in this study. The sample size of sexually abusive youth was reduced (N=296) for the mediation models presented in this study accounting for missing data.

Procedures

Data collection took place within the facilities in small groups of between 8 and 12 participants. This was accomplished in classroom settings in each facility with pencil and paper surveys. Participants filled out pencil and paper surveys, administered by trained social work graduate student, which took about two hours to complete. The surveys were read to the 12 participants with reading challenges by trained graduate students or professional social workers. The data collection was lead by faculty or professional licensed social workers. In addition, participants were supervised during the data collecting process by trained social work graduate students, professional social workers, or social work faculty and facility staff.

Measures

The Self Reported Sexual Aggression Scale (SERSAS) is a multi-item instrument that measures sexually aggressive behavior during the course of one's lifetime (Burton 2003; Burton, Miller & Shill 2002). The SERSAS measures severity of perpetration and the level of coercion used in sexual aggressive behaviors through a checklist of sexual acts and relationships. To measure the amount of force used in sexually aggressive behaviors, the participants were asked the question "have you ever conned or forced someone to..." in regard to each item on the checklist. A 14-point rank order scale measured the complexity and severity of the participant's sexual aggression, ranging from 1 = exposure, to 14 = penetration, oral sex, exposure, and fondling. Another scale measured severity and complexity within the level of force used by participants during victimization. This scale ranged from 1 to 7: 1 = used games to convince the victim to have sex; 2 = used threats; 3 = used games and threats; 4 = used force on the victim; 5

= used force and games; 6 = used force and threats; and 7 = used force, games, and threats. The SERSAS measure has been shown to have an 8-week test-retest reliability in prior studies, with a reliability of $r = .96$ in a small sample (Burton et al., 2002).

The Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987) is a measurement that uses self-reporting to assess the quality of adolescent attachment to mother, father, and peers. This measure looks at conceptions of emotional and cognitive working models, psychological security, sense of trust, communication, and extent of anger and alienation in adolescents. The IPPA has good internal reliability and cross validity (Armsden, 1986, Armsden & Greenberg, 1987, Buist, Dekovic, Meeus, & van Aken, 2004; Lewis, Woods, & Ellison, 1987). All of the scales were tested for reliability with Cronbach's alpha and found acceptable, with the exclusion of peer alienation and peer attachment. As a result peer alienation and peer attachment will not be used in future analysis.

The Childhood Trauma Questionnaire (CTQ; Bernstein, et al., 1994) is a 34-item retrospective self-report measure for adolescents 12 and older that assesses five trauma variables: sexual abuse, physical abuse, emotional abuse, physical neglect, and emotional neglect. The CTQ had high internal consistency and good test-retest reliability. Participants were asked to rate the frequency of their experiences as a child with each type of abuse in response to questions beginning with "When I was growing up . . ." The following are examples of items within the CTQ: for sexual abuse, "Someone threatened to hurt me or tell lies about me unless I did something sexual with them;" for physical abuse, "People in my family hit me so hard that it left me with bruises or marks;" and for emotional abuse, "People in my family said hurtful or insulting things to me." The CTQ uses a 5-point Likert scale ranging from 1 (never true) to 5 (very often true). This measure is short in duration and relatively non-intrusive. This study used

the CTQ total score in the analytic models. Cronbach's alpha was calculated for the five types of abuse, containing 5 to 10 items per scale, and ranged from .74 to .93. In the current study the CTQ was used to measure the prevalence of violence experienced in the home by youth with sexually harmful behaviors.

The Self-Reported Delinquency Measure (SRD; Elliot, Huizinga, & Ageton, 1985) was used to gather data on non-sexual crimes. The SRD contains 32 questions and uses a 7-point frequency scale that ranges from 0 (never) to 7 (2-3 times daily). These frequency scales are used to answer questions on topics spanning from drug use to aggression. The SRD has a number of subscales that assess criminal involvement such as, alcohol use, drug use, felony assault, felony theft, general delinquency, property damage, public disorderly, robbery, and selling drugs. The inter-item reliability of the subscales in this measure was acceptable to good, with general delinquency $\alpha = .68$, property damage $\alpha = .74$, felony theft $\alpha = .88$, public disorderly $\alpha = .52$, alcohol use $\alpha = .80$, drug use $\alpha = .45$, robbery, felony assault $\alpha = .65$, and drug sales $\alpha = .84$.

The home exposure to violence scale was computed using 8 items from a larger survey that assessed exposure to violence. In the current study this scale was used to measure the frequency of witnessed and threatened violence in the home. The question for each item started with "how many times have you..." The first four items measured exposure to threats of bodily harm, asking participants if someone had ever threatened to stab, shoot, kill, or beat them up. The other four items measured witnessed violence, asking if participants had seen a relative or friend get shot, stabbed, beaten up, or killed. Items were measured with a 4-point frequency scale: 1 = never, 2 = once or twice, 3 = a few times, and 4 = many times.

Results

Prevalence of Exposure to Violence in the Home

The first research question in the current study asked how much youth with sexually harmful behaviors were exposed to violence in the home. Prevalence of exposure to violence in the home among youth with sexually harmful behaviors was assessed using two measures, a home exposure to violence scale which measured threatened and witnessed violence in the home and the Childhood Trauma Questionnaire (CTQ), which measured five kinds of experienced violence/victimization in the home (see Table 1).

Table 1: Prevalence of Experienced Violence in the Home

Experienced Violence in the Home	Sexually Abusive Youth
Emotional abuse	81.0% (N=260)
Physical abuse	85.4% (N=276)
Sexual abuse	75.1% (N=241)
Emotional neglect	85.0% (N=273)
Physical neglect	92.4% (N=279)

The scale that assessed threatened and witnessed violence in the home measured frequency of exposure ranging from zero times to greater than 3 times. Only those youth with sexually harmful behaviors that reported threatened or witnessed violence in the home three or more times are including in the analysis. Among youth with sexually harmful behavior eight-seven (29.9%) reported had experienced threats of stabbing, fifty-nine (20.3%) threats of being

shot, seventy-seven (26%) threats of death, and eighty-seven (30%) threats of being beaten (see Table 2).

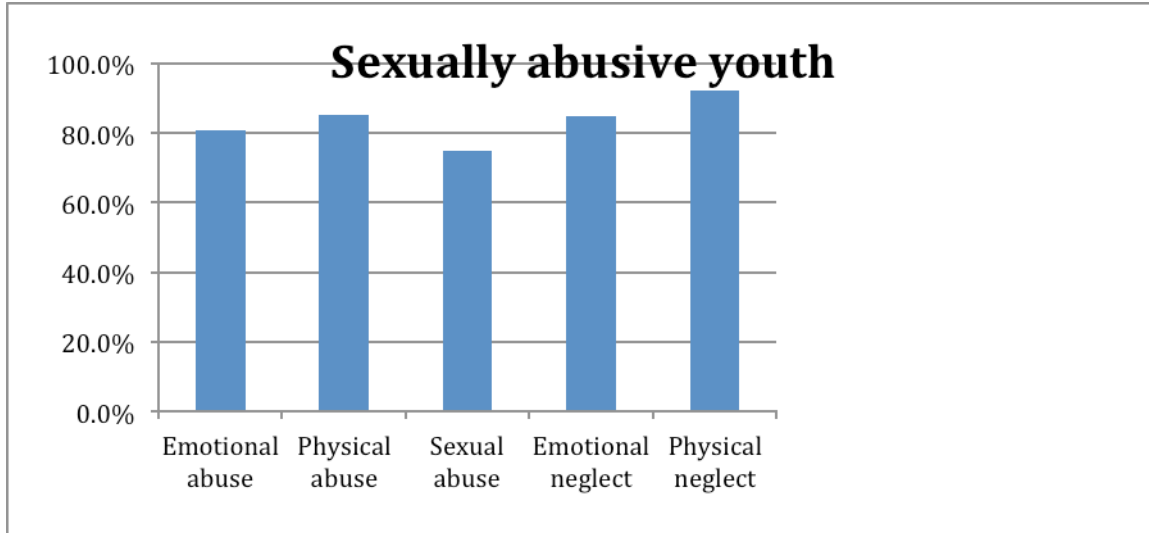
Table 2: Prevalence of Witnessed or Threatened Violence

	Threaten to stab you	Threaten to shoot you	Threaten to kill you	Threaten to beat you up	Seen relative shot	Seen relative stabbed	Seen relative beat up	Seen relative killed
Frequencies	87	59	77	87	22	23	87	22
Missing	5	6	7	6	6	6	5	4

Of the four categories on witnessed violence in the home, eighty-seven (29.9%) youth with sexually harmful behaviors had seen a relative beat up, twenty-two (7.59%) had seen a relative get shot, twenty-three (7.93%) had seen a relative stabbed, and twenty-two (7.53) had seen a relative killed (see Table 2).

A very high proportion of youth with sexually harmful behaviors in this study reported experiencing multiple forms of violence in the home. The majority of participants reported exposure to all five types of trauma assessed in the CTQ (see Table 3). Of the youth with sexually harmful behaviors that responded to the CTQ (n= 296) 92.4% experienced physical neglect, 85.4% physical abuse, 85% emotional neglect, 81% emotional abuse, and 75.1% sexual abuse (see Table 3). The results of the CTQ indicate that the majority of youth with sexually harmful behaviors have experienced many forms of violence in the home and have a complex history of trauma.

Table 3: Prevalence of Experienced Violence in the Home



Correlations

Correlations were done to evaluate the relationships between the research variables outlined in the research questions. In the correlations (tables 4-7) the columns labeled experienced violence in the home was measured with the CTQ and the columns labeled witnessed violence in the home was measured with the home exposure to violence scale. The second research question asked about the relationship between exposure to violence in the home and adolescent sexual aggression or non-sexual crimes. The results of the correlations in Table 4, with listwise deletion of missing values, indicated that there was a significant correlation between *experienced violence in the home*, measured with the CTQ and sexual offense characteristic (total force; $p=.000$). The correlations also showed a significant correlation between both witnessed and experienced violence in the home and non-sexual crimes ($p=.000$) (see Table 4). Each of these correlations were positive, which means that when violence in the home increases or decreases sexual offense characteristics and non-sexual crime increases or decreases among youth with sexually harmful behaviors.

The third research question asked about the relationship between violence in the home, sexual aggression, and maternal attachment. The correlations between maternal attachment, measured with The Inventory of Parent and Peer Attachment (IPPA), exposure to violence in the home (witnessed and experienced), and sexual aggression, measured with The Self Reported Sexual Aggression Scale (SERSAS), are presented in Table 4. The results of the correlations with listwise deletion of missing values indicated that only the *maternal alienation* subscale of the IPPA was significantly correlated with any sexual offense characteristic (total force; $p=.042$). There was a positive association between *maternal alienation* and *total force*, which indicates that the greater the level of maternal alienation the greater the use of total force or sexual aggression; the opposite is also true, the lower the level of maternal alienation the lower the use of sexual aggression in youth with sexually harmful behaviors (see Table 4).

Table 4: Correlations of Exposure to Violence in the Home, Maternal Attachment, and Sexual and Non-sexual offending.

	Witnessed Violence in the Home	Experienced Violence in the Home	Sexual Perpetration Severity	Total Force	Total number of all victims reported	Non- sexual crime
Witnessed Violence in the Home	1	.477** 0.000	0.041 0.540	.143* 0.033	0.030 0.655	.556** 0.000
Experienced Violence in the Home	.477** 0.000	1	0.099 0.142	.252** 0.000	.194** 0.004	.395** 0.000
Maternal Trust	-.210** 0.002	-.425** 0.000	-0.057 0.400	-0.102 0.128	-0.101 0.131	-.239** 0.000
Maternal Alienation	.310** 0.000	.425** 0.000	0.026 0.703	.136* 0.042	0.070 0.298	.246** 0.000
Maternal Communication	-.214** 0.001	-.384** 0.000	-0.064 0.337	-0.077 0.250	-0.120 0.074	-.178** 0.002
Maternal Attachment	-.250** 0.000	-.446** 0.000	-0.056 0.406	-0.100 0.134	-0.105 0.118	-.233** 0.000

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

c. Listwise Deletion N=224

Table 5: Correlations of Exposure to Violence in the Home, Paternal Attachment, and Sexual and Non Sexual Offending

	Witnessed Violence in the Home	Experienced Violence in the Home	Sexual Perpetration Severity	Total Force	Total number of all victims reported	Non-sexual crime
Witnessed Violence in the Home	1	.472** 0.000	0.060 0.406	0.121 0.093	0.052 0.468	.536** 0.000
Experienced Violence in the Home	.472** 0.000	1	0.116 0.107	.260** 0.000	.222** 0.002	.364** 0.000
Paternal Trust	-.235** 0.001	-.357** 0.000	-0.080 0.266	-0.037 0.608	-0.058 0.419	-.213** 0.001
Paternal Alienation	.159* 0.026	.293** 0.000	0.075 0.295	-0.037 0.605	0.050 0.489	.191** 0.002
Paternal Communication	-.192** 0.007	-.291** 0.000	-0.051 0.481	-0.015 0.833	-0.051 0.475	-.178** 0.004
Paternal Attachment	-.221** 0.002	-.351** 0.000	-0.077 0.283	-0.005 0.950	-0.056 0.434	-.223** 0.000

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

c. Listwise Deletion N=195

The fourth research question asked about the relationship between violence in the home, maternal and paternal attachment, and non-sexual crimes among youth with sexually harmful behaviors. The results of correlations between *maternal attachment/paternal attachment* and *non-sexual crimes* with listwise deletion of missing values showed significant correlation with a

number of the IPPA subscales relating to the mother (see table 6) and the father (see table 7). The subscale of *maternal attachment* in the IPPA was significantly correlated with *non-sexual crimes*; $p = .000$ (see table 6). These two variables were negatively associated, which indicates that when *maternal attachment* increases the level of *non-sexual crime* decreases and inversely when *maternal attachment* decreases *non-sexual crime* increases in youth with sexually harmful behaviors (see table 5). Similar to *maternal attachment*, the subscale of *paternal attachment* in the IPPA was significantly correlated with *non-sexual crime* and had a negative association among youth with sexually harmful behaviors (see table 7).

Table 6: Significant Maternal Correlations

	Witnessed Violence in the Home	Experienced Violence in the Home	Non-sexual Crime
Witnessed Violence in the Home	1	.489** 0.000	.556** 0.000
Experienced Violence in the Home	.489** 0.000	1	.395** 0.000
Maternal Trust	-.264** 0.000	-.500** 0.000	-.239** 0.000
Maternal Alienation	.298** 0.000	.434** 0.000	.246** 0.000
Maternal Communication	-.242** 0.000	-.450** 0.000	-.178** 0.002
Maternal Attachment	-.283** 0.000	-.511** 0.000	-.233** 0.000
Non-sexual Crime	.556** 0.000	.395** 0.000	1

** . Correlation is significant at the 0.01 level (2-tailed).

b. Listwise Deletion N=300

Table 7: Significant Paternal Correlations

	Witnessed Violence in the Home	Experienced Violence in the Home	Non-sexual Crime
Witnessed Violence in the Home	1	.484** 0.000	.536** 0.000
Experienced Violence in the Home	.484** 0.000	1	.364** 0.000
Paternal Trust	-.254** 0.000	-.361** 0.000	-.213** 0.001
Paternal Alienation	0.119 0.055	.246** 0.000	.191** 0.002
Paternal Communication	-.219** 0.000	-.298** 0.000	-.178** 0.004
Paternal Attachment	-.238** 0.000	-.350** 0.000	-.223** 0.000
Non-sexual Crime	.536** 0.000	.364** 0.000	1

** . Correlation is significant at the 0.01 level (2-tailed).

b. Listwise Deletion N=260

The fifth research question explored the relationship between witnessed violence in the home, maternal attachment, and non-sexual crime among youth with sexually harmful behaviors. Witnessed violence in the home was assessed with the home exposure to violence scale. A significant correlation was found between *maternal attachment* and *witnessed violence in the home*, ($p=.000$). These variables were negatively associated, which indicates that when *maternal attachment* increases, *witnessed violence in the home* decreases and inversely, when *maternal*

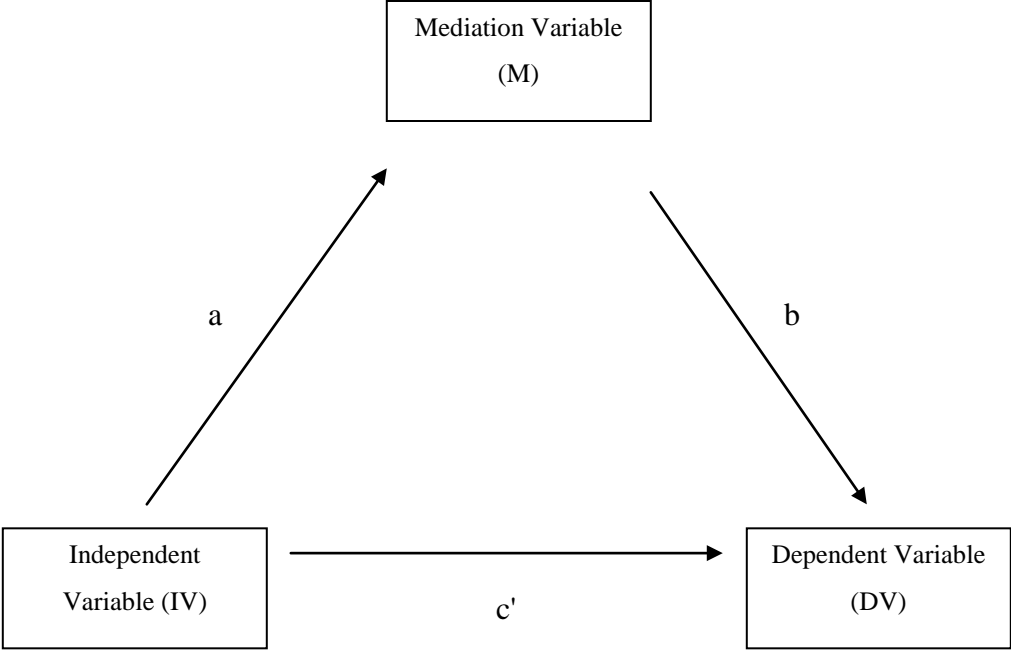
attachment decreases, *witnessed violence in the home* increases in youth with sexually harmful behaviors.

Mediation Models

Based on the findings of the correlations (see tables 4-7), the relationships between exposure to violence in the home (both witnessed and experienced) and sexual and non-sexual offending were tested in a series of mediation models.

A variable is an intervening variable or mediator (M) to the degree it accounts for the relationship between the independent variable (IV) and the dependent variable (DV) (see Figure 1) (Kenny, 2013). Whether a variable can be considered a mediator is based on if the path between the IV and the DV, also called the direct effect (represented by c' in Figure 1), remains significant once the mediator is introduced. Partial mediation is supported when the direct effect (path c') is significantly reduced with the addition of the mediator. Partial mediation is determined by the size of the indirect effect, which is the product of the path coefficients ($a \times b$) (see Figure 1) (Kenny, 2013). Complete or total mediation is supported when after the mediator is added the IV no longer affects the DV (Kenny, 2013). Another way of explaining complete mediation is that when the mediator is introduced the direct effect (path c') is reduced to zero (Kenny, 2013).

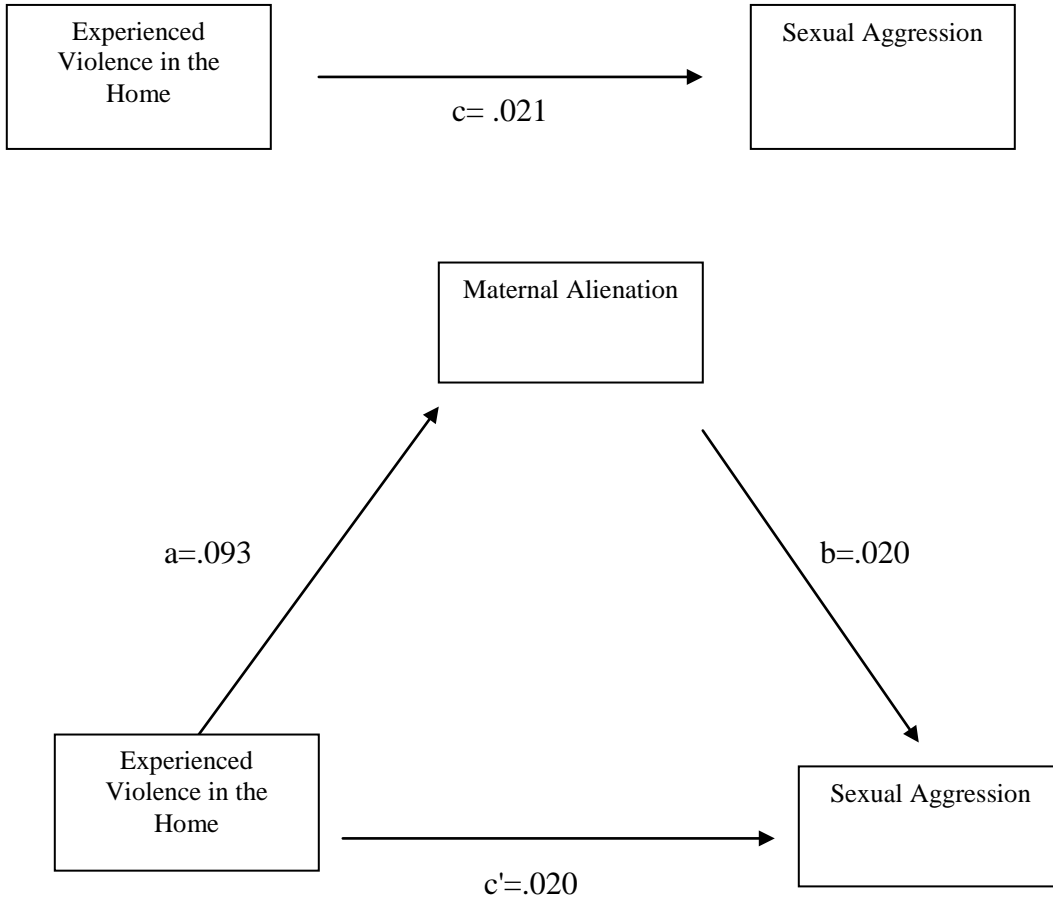
Figure 1: Mediation Model Example



In the current study it was hypothesized that maternal attachment would account for part of the relationship between (IV) violence in the home and (DV) sexual aggression. In the correlations of maternal attachment (see table 4) the only subscale of IPPA that was significantly correlated with sexual aggression was *maternal alienation*. The correlations indicated that *maternal alienation* was the only subscale with the significance to be used as a potential mediation variable in the relationship between experienced violence in the home and sexual aggression (see figure 2). In the first mediation model the direct effect, the simple regression of experienced violence in the home predicting sexual aggression (total force) was significant (see figure 2). The indirect effect ($.093 \times .020 = .002$) of the mediation variable *maternal alienation* was too small to significantly change the relationship between the IV and DV (see figure 2). In other words, the relationship between experienced violence in the home and sexual aggression remained significant even once maternal alienation was introduced as a possible mediator. This implies that maternal alienation is not a mediating factor in the relationship between experienced violence in the home and sexual aggression among youth with sexually harmful behaviors.

Figure 2: Mediation Model One

Total Effect

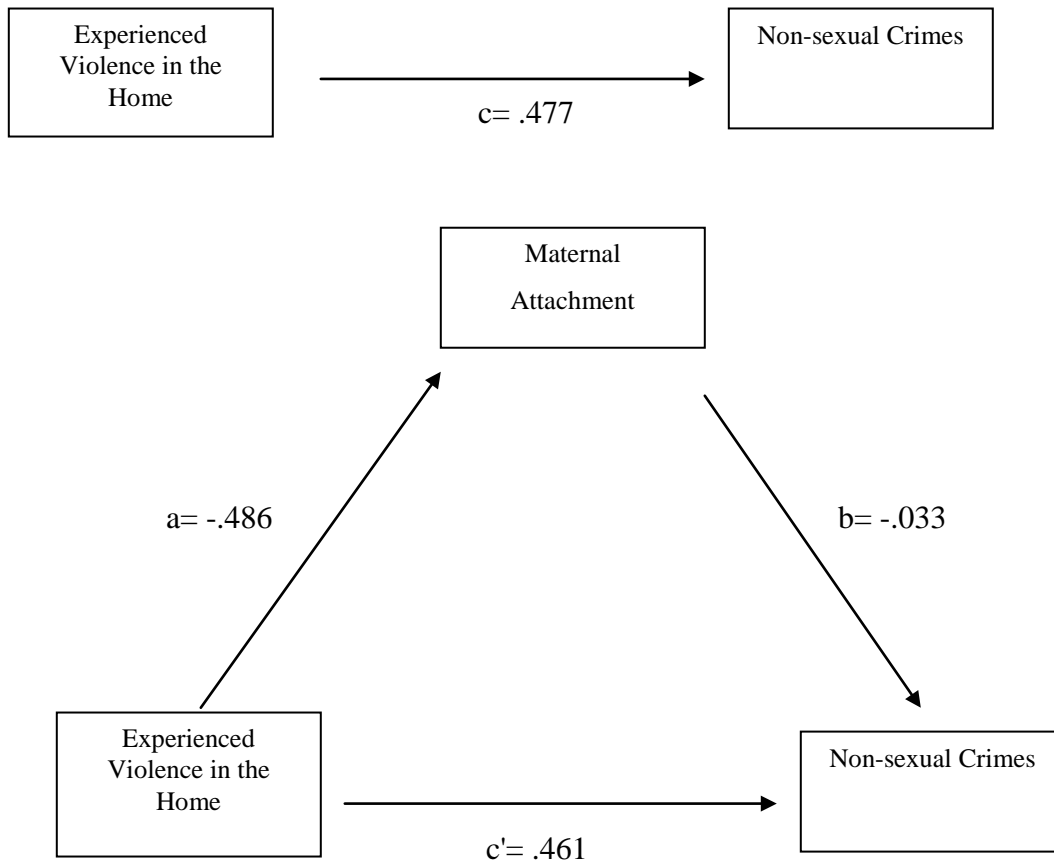


The total effect, the simple regression of experienced violence in the home predicting sexual aggression (total force) is .021, which is very significant (x predicting y remained significant in all the mediation models in this study). The indirect effect = $.093 \times .020 = .002$ was small, indicating no support for the mediation model with maternal alienation as the mediator in predicting total force used in sexual offending.

The second hypothesis for the current study was that the mediation variables *maternal attachment* and *paternal attachment* would account for part of the relationship between (IV) violence in the home and (DV) non-sexual crimes (see figures 4 and 5). Again, in the second and third mediation models the direct effect, the simple regression of experienced violence in the home and non-sexual crimes was significant (see figures 3 and 4). In the second mediation

model, the indirect effect ($-.486 \times -.033 = .016$) of the mediation variable *maternal attachment* was small (see figure 3). In order for maternal attachment to be a mediating factor in the relationship between the IV and DV in model two the direct effect would have to be reduced enough to be non-significant or the indirect effect would have to be large enough to reach significance (see figure 3). Maternal attachment does not account for a great enough portion of the relationship between experienced violence in the home and non-sexual crimes to act as a mediator.

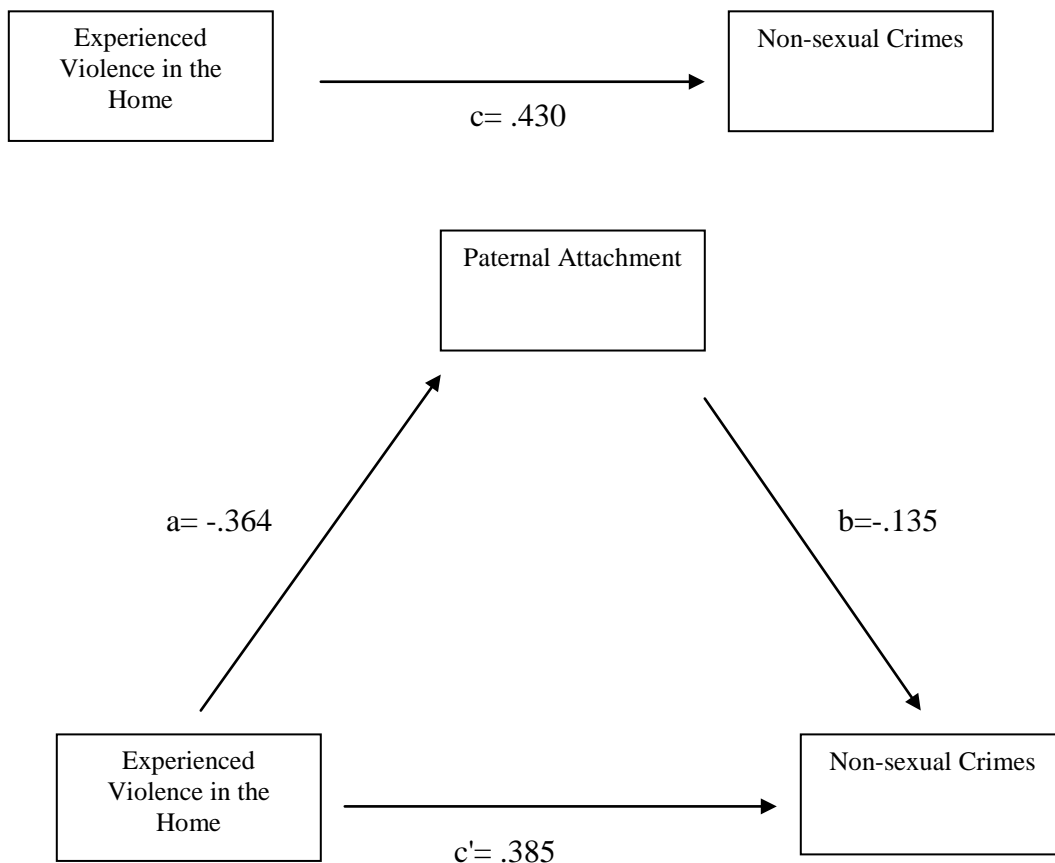
Figure 3: Mediation Model Two



There is a *small* indirect effect (.016) of maternal attachment as a mediator between experienced violence in the home and nonsexual crimes. The direct effect has to be nonsignificant to show support for mediation, which was not the case in Model 2. The total effect of experienced violence in the home predicting nonsexual offenses, even with the introduction of the mediator ($\beta = .477, p < .001$), indicating that youth who reported more experience with violence in the home also endorsed more nonsexual crimes.

Similarly, in mediation model three (see figure 4) the indirect effect ($-.364 \times -.135 = .049$) of mediation variable *paternal attachment* does not reach significance as a mediator. Which indicates that paternal attachment does not mediate the relationship between experienced violence in the home and non-sexual crimes.

Figure 4: Mediation Model Three



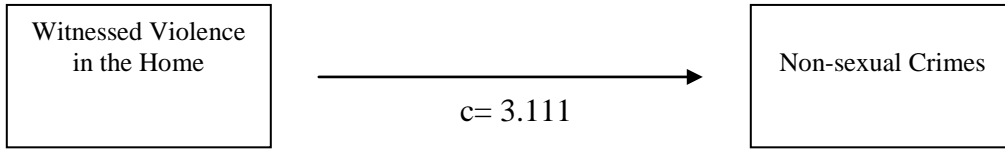
There is a small indirect effect (.049) of paternal attachment as a mediator between experienced violence in the home and non-sexual crimes. In order for mediation to be supported the direct effect (x predicting y) should be reduced or become nonsignificant. As in models 1 and 2, this was not the case in Model 3. The total effect of experienced violence in the home predicting non-sexual crimes ($\beta = .430, p < .001$) indicates that paternal attachment is not a significant mediator between experienced violence in the home and non-sexual crimes.

The third hypothesis for the current study was that the mediation variable *maternal attachment* would account for part of the relationship between (IV) witnessed violence in the home and (DV) non-sexual crimes (see figure 5). In the fourth mediation model the IV of witnessed violence in the home was measured with the home exposure to violence scale rather

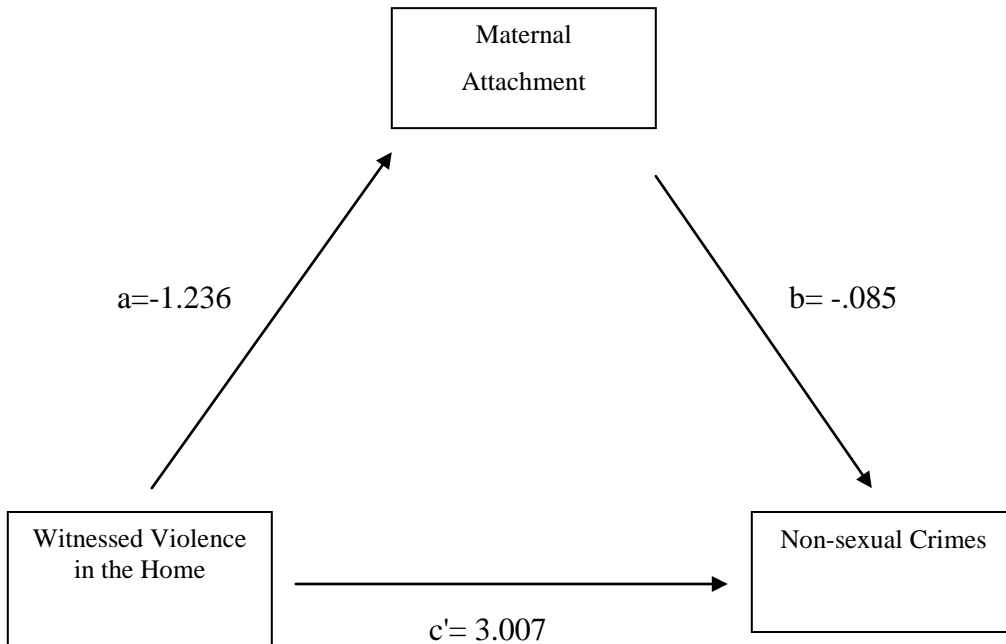
than with the CTQ, which was the measure used in the three previous mediation models for the IV of experienced exposure to violence in the home. In the fourth mediation model the direct effect, the simple regression of witnessed violence in the home and non-sexual crimes was significant (see figure 6). The indirect effect of mediation variable *maternal attachment* was $(-1.236 \times -.085 = .105)$ (see figure 5). Again, as was the case in the three mediation models described above, maternal attachment makes up an insignificant portion of the total effect (the direct effect + the indirect effect) providing no support for mediation. Mediation model four indicates that the relationship between witnessed violence in the home and non-sexual crime among youth with sexually harmful behaviors is not mediated by maternal attachment.

Figure 5: Mediation Model Four

Total Effect



Mediation Model 4



As in models 1, 2, 3, there were no supports for mediation in Model 4. The indirect effect (.105) of maternal attachment was too small to be mediator between witnessed violence in the home and non-sexual crimes. The total effect of witnessed violence in the home predicting non-sexual crimes ($\beta = 3.111, p < .001$) remains significant even with the introduction of maternal attachment as a mediator, *indicating that youth who reported greater witnessed violence in the home also endorsed more nonsexual crimes*

Four mediation models with predictor variables *experienced violence in the home* and *witnessed violence in the home* were conducted. The analyses showed no support for (M) mediator in the relationship between (IV and DV) (see figures 3-6). The relationship between

exposure to violence in the home both experienced and witnessed and sexual/nonsexual offending was still significant after the introduction of attachment as a possible mediator, which lends no support for full or partial mediation.

Discussion

The results indicated a high prevalence of exposure to violence in the home among youth with sexually harmful behaviors. The large majority of those surveyed reported exposure to all five types of maltreatment assessed, indicating that youth with sexually harmful behaviors have complex trauma histories. These findings were consistent with other research on exposure to violence in the home, which found a high prevalence of sexual and physical abuse, and neglect in youth with sexually harmful behaviors (Burton et al., 2011a; McMackin et al., 2002; Veneziano et al., 2000).

Based on the prevalence of experienced violence in the home it was surprising that a much lower percentage of youth with sexually harmful behaviors reported witnessed violence in the home. In this study the highest number of youth with sexually harmful behaviors, almost 30%, witnessed beating in the home. This prevalence is similar to the percentage of children and adolescents in the general population that witness violence in the home (McDonald et al., 2006). The prevalence of violence witnessed in the home reported in the current study is consistent with Saunders et al., (1984) but lower than that reported by Caputo et al., (1999)

Within the correlations, it was surprising that out of all of the subscales measured by the IPPA, for both mother and father, only *maternal alienation* was significantly correlated with sexual aggression. This finding was unexpected based on the previously noted research (Cortoni & Marshall, 2001; Marshall, 1989, 2010; Marshall & Mazzucco, 1995; Miner et al., 2009; Stirpe et al., 2006), which connected attachment characteristics in youth with sexually harmful

behaviors to sexual offending. An unpublished study of juvenile delinquents used the same data set as the current study to compare attachment and offending characteristics between sexually abusive youth and non-sexually abusive youth (Burton & Peterson, in press). This study by Burton and Peterson (in press) found low attachment scores within both juvenile offender groups, but that youth with sexually harmful behaviors had higher levels of alienation from both parents, and peers, were less attached, and felt less trusting of their parents than non-sexually abusive youth (Burton & Peterson, in press). These findings by Burton and Peterson (in press) showing more severe issues in youth with sexually harmful behaviors provided support for a non-comparison study solely on how attachment functioned in youth with sexually harmful behaviors that also looked at exposure to violence in the home.

Another interesting finding within the correlations was that multiple subscales of the IPPA were significantly correlated with non-sexual crimes in youth with sexually harmful behaviors. Research on attachment characteristics in this population has primarily focused on the connection between attachment and sexual aggression. While attachment has been linked to social deficits (Fagan & Wexler, 1988; Miner et al., 2009) and comprehensive feeling of isolation (Miner & Munns, 2005) in youth with sexually harmful behaviors, and research has shown high rates of non-sexual offending in this population, the variables of attachment and non-sexual crime have not been studied together.

The current study posited that attachment played a mediating role in the relationship between exposure to violence in the home and sexual and non-sexual offending behaviors. Attachment as a mediation variable did not reach significance in any of the four models proposed in this study. More specifically, the current study showed that attachment alone does not predict exposure to violence in the home, or make up a statistically significant portion of the relationship

between violence and offending. Maternal and paternal attachment did not wield enough statistical force to impact the strength of exposure to violence in the home as a predictor of sexual and non-sexual offending. The non-significance of attachment as a mediator in this study was surprising because a moderate amount of research has asserted that attachment plays a role in the etiology of sexual offending behavior particularly in adults (Cortoni & Marshall, 2001; Marshall, 1989, 2010; Marshall & Mazzucco, 1995; Stirpe et al., 2006) but also among youth with sexually harmful behaviors (Miner et al., 2009).

As previous research indicates, attachment may be an important factor in the development of sexual offending behavior but the results of this study showed a more significant relationship between exposure to violence in the home and both sexual and non-sexual offending among youth with sexually harmful behaviors. That sexual aggression is connected to exposure to violence is consistent with other research that has found youth with sexually harmful behaviors to hail from violent homes (Burton et al., 2011a,b; Ford & Linney, 1995; McMackin et al., 2002; Seto & Lalumiere, 2010). Hunter (2004) found that childhood exposure to violence specifically against women increased non-sexual aggression and delinquency in youth with sexually harmful behaviors. The connection between exposure to violence and non-sexual offending in youth with sexually harmful behaviors is probably most easily explained by inter-generational transmission of violence and social learning theory.

Clinical Implications

The high prevalence of exposure to violence in the home among the youth in this study and the significant relationship between this violence and both sexual and non-sexual offending has clinical implications. These findings highlight the need for early intervention for children and adolescents living in violent homes.

In the current study upwards of 75% of these youth reported exposure to multiple forms of maltreatment indicating that this is a highly traumatized population. McMackin et al., (2002) found that rates of post-traumatic stress disorder (PTSD) in youth with sexually harmful behaviors increased based on the amount of trauma exposure (McMackin et al., 2002). Additionally, trauma related feelings of helplessness were identified as offense triggers for 79% of youth with sexual harmful behaviors (McMackin et al., 2002). Based on the high rates of trauma reported in the current study and present in the literature, youth with sexual harmful behaviors would benefit from early assessment and treatment for PTSD.

Limitations

There are a number of limitations associated with this study. Due to the fact that cross-sectional data was used, caution should be taken when making causal conclusions about the relationships between variables within this study. In addition, this study used only one attachment measurement and although the IPPA was found to have validity and to be reliable overall, the non-significant nature of the findings in this study creates questions about what other attachment measures would yield. The IPPA is a self-report measure, which does not account for social desirability. Future research might benefit from other attachment measures such as archival data and information collected from parents, clinicians, and other professionals. This study is further limited by the its sample, entirely made up of incarcerated youth in residential treatment facilities, making any findings unable to be generalized to non-adjudicated youth or youth in community based treatment programs. Finally, as the sample for this study was all male, these findings cannot be applied to female youth with sexually harmful behaviors.

Future research

Much of the literature about attachment characteristics and youth with sexually harmful behaviors has focused on how attachment may contribute to sexual offending. However, in the current study multiple attachment characteristics were significantly correlated with non-sexual crimes. Future research is needed to determine how attachment interacts with the development of non-sexual delinquency in youth with sexually harmful behaviors.

An additional area for future research is in the relationship between home exposure to violence, both witnessed and experienced, and non-sexual crime in youth with sexually harmful behaviors. One of the reasons continued research is needed on this topic is that among youth with sexually harmful behaviors recidivism for non-sexual crimes is much higher than recidivism for sexual offending (Burton & Meezan, 2004; Leversee, 2010).

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