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Impact of Self-Esteem, Adult Attachment, and Family on
Conflict Resolution in Intimate Relationships

A thesis
presented to
the faculty of the Department of Psychology
East Tennessee State University

In partial fulfillment
of the requirements for the degree
Master of Arts in Psychology

by
Jessica Lynne Holt
May 2007

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ABSTRACT

Impact of Self-Esteem, Adult Attachment, and Family on

Conflict Resolution in Intimate Relationships

by

Jessica Lynne Holt

This study examined the use of physical aggression in intimate relationships and the effects of self-esteem, adult attachment, and witnessing violence in the family of origin on such.

Participants were 189 males and 379 females enrolled in classes during the fall semester 2006 at East Tennessee State University. Participants were recruited via 2 methods and participated either via an online survey through the Psychology department or paper-based surveys administered to random cluster samples of students. The 2 versions differed only in administration format. The surveys consisted of a demographic questionnaire, CTS2 for their relationships, CTS for their parents' relationship, Rosenberg Self-esteem Scale, and ECR-R. A 2 x 2 x 3 x 2 MANOVA was undertaken to assess main effects and interactions of gender, interparental violence, self-esteem, and adult attachment. Significant main effects emerged for all independent variables with a significant interaction between gender and interparental violence for 4 dependent variables.

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CHAPTER 1

INTRODUCTION

Violence is a subject that evokes substantial interest in both the public and research sector. The public is concerned with becoming a victim of violence while voraciously consuming anything depicting violence in the media. Research interests in violence span many areas. These research foci have included but are not limited to domestic violence, highly publicized domestic murder, infanticide, and highly dramatic politically and racially-motivated acts of violence.

While violence among strangers is most often feared, people are much more likely to become victims at the hands of people they know (Worcester, 2002). Women especially are more likely to be victimized by those with whom they are in intimate relationships (Worcester). Violence in intimate relationships has become the focus of substantial research in recent years (see for example, Archer, 2000a; Carr & VanDeusen, 2002; Dasgupta, 2002; Dowd, 2001; Fiebert & Gonzalez, 1997; Hendy et al., 2003; Lewis & Fremouw, 2001; Roark, 1987; Saunders, 2002; Stith, Smith, Penn, Ward, & Tritt, 2004; Straus, 1999; Swan & Snow, 2002). While interpersonal violence in general is cause for concern, that which is experienced within an intimate relationship is especially troublesome. Intimate violence is paradoxical in that people should feel safe within intimate relationships. When violence is present in such a relationship, the safety and love that should epitomize these relationships is compromised.

Defining Intimate Violence

When people think of intimate violence, they most often think of violence occurring within married couples. However, intimate violence also occurs within dating couples, both heterosexual and homosexual (Dowd, 2001). According to Tennessee legal code, domestic violence is *that violence which involves adults or minors who are current or former spouses, live*

or have lived together, dating or have dated, been involved in a sexual relationship, related by blood or adoption, currently or formerly related by marriage, or an adult or minor child of a person in one of the aforementioned categories (Tennessee Code Annotated §36-3-601, 2004).

Intimate violence can take many forms. The most often discussed is physical violence. However, verbal aggression, psychological aggression, and sexual aggression are also seen as forms of intimate violence (Sharpe & Taylor, 1999; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Physical aggression can range from mild (e.g., slapping, pushing, hitting) to severe (e.g., beating up, choking, and using a gun or knife). Community samples find that the mild forms of physical violence are much more common than the more severe forms (Lewis, Travea, & Fremouw, 2002; Marshall & Rose, 1990; Sharpe & Taylor; Straus, 1979; Swan & Snow, 2002). Verbal and psychological aggression can also take many forms. These types of aggression are often characterized by swearing at or insulting a partner, stomping out of a house, yard, or room, or threatening to hit or throw something at a partner (Sharpe & Taylor). Sexual aggression can range from pressuring a partner to have sexual relations to forced intercourse (Straus et al.).

Measuring Intimate Violence

Straus (1979) identified three modes of dealing with conflict that are important for the catharsis theory of violence control. The first includes rational discussion, argument, and reasoning. The second mode involves symbolic aggression consisting of verbal and nonverbal acts that hurt or include threats. The final mode of conflict resolution is made up of the use of physical force against another in order to resolve conflict. These three modes correspond to the three subscales of the Conflict Tactics Scale (CTS) developed by Straus to measure interpersonal

conflict. The three corresponding subscales are reasoning, verbal aggression, and physical aggression.

Since the development of the CTS more than 25 years ago, it has become the standard method of measuring violence in interpersonal relationships (Archer, 1999; Straus, 1999; Straus & Gelles, 1990; Swan & Snow, 2002). While self-report measures are limited by the respondents' ability to accurately recall past events and their willingness to be honest when disclosing socially undesirable behavior, research indicates that studies using the CTS have more agreement among couples than other measures (Archer, 1999). While the CTS was originally developed to be used in an interview, the Revised Conflict Tactics Scale (CTS2) was developed as a self-administered survey (Straus et al., 1996). In addition, the CTS2 added two scales in order to measure two dimensions of intimate violence neglected in the original form: sexual aggression and injury.

While the CTS is the most commonly used measure of interpersonal violence, it is not free from criticism. The main area on which the CTS is criticized is its strict quantitative nature (Dasgupta, 2002; Swan & Snow, 2002; Worcester, 2002). The CTS only measures how many times a specific tactic has been used and received in a given time period. This does not allow for any inferences on the context of the incident. A quantitative measure only assesses the quantity of the behavior. It neglects to assess who initiated the incident, the consequences of the behavior, or motivations for engaging in the behavior. In addition to revamping the CTS in order to make it a self-administered survey, the lack of a measure of consequences was also addressed when designing the CTS2. The injury scale on of the CTS2 assesses injuries sustained as a result of partner violence (Straus et al., 1996). While qualitative aspects of intimate violence are important to understanding the behavior and prevention, quantitative aspects are also important. It is

important to assess how prevalent a problem is in order to determine whether there is, in fact, a problem and how serious it is.

Current Study

The current study focuses on intimate violence in the relationships of college students. Samples of college students are often used in the investigation of intimate violence (e.g., Carr & VanDeusen, 2002; Jenkins & Aube, 2002; Lewis et al., 2002; Makepeace, 1981; Makepeace, 1986). The reason for this use of college students is twofold. On one hand, it is a matter of convenience. Much research is undertaken on college campuses and college students are a very accessible population. On the other hand, college is a time when people often enter their first serious relationships. People become involved in more relationships in college and are exposed to many people (Makepeace, 1981; Roark, 1987). Therefore, college samples are particularly important to the assessment of intimate violence as dating relationships can establish a repertoire of behavior in intimate relationships that can continue into marriage.

While it is recognized that intimate violence occurs in dating relationships, marital relationships, and homosexual as well as heterosexual couples, the current study will focus on heterosexual relationships. While there are some factors associated with homosexuality (i.e., social stigma) that may make them more prone to stress and conflict, this study will not be addressing these.

The current study will investigate heterosexual relationships without differentiating between those who are married and those who are not. As the sample was one of college students, an assumption could be made that the majority of participants would not be married. In addition, some research has found no correlation between marital status and intimate violence, indicating the occurrence of intimate violence in marital and dating relationships may be more

similar than not (Fiebert & Gonzalez, 1997). While factors inherent to marital relationships may make these relationships prone to conflict, dating relationships can also be fraught with discord. Marital relationships have unique stressors such as children and financial interdependence. However, marital relationships are relatively stable. While many marriages ultimately end in divorce, there is a security in the mate that is absent in dating relationships. Dating relationships are stressful in that there is a sense of freedom to leave the relationship and increased availability to alternative mates. Therefore, dating and marital relationships both possess their unique sets of stressors that can influence the use of violence in the relationship.

The focus of the current study was on the use of physical violence in intimate relationships. While verbal, psychological, and sexual aggressions are also important, they were not the primary focus of this study. Physical violence was defined based on the physical violence subscale of the CTS2. The primary focus of this study was on the perpetration of intimate violence, not on victimization. However, as intimate violence appears to have a strong reciprocal nature (Holt, 2005; Gwartney-Gibbs et al., 1987; Lawson, 2003; Lewis et al., 2002; Marshall & Rose, 1990), victimization was also measured and subjected to limited analyses.

Stith et al. (2004) examined factors based on a nested theory of factors impacting intimate violence. These factors are characterized on three different levels: exosystem (i.e., offenders' social structures, etc. connecting offender to larger culture); microsystem (i.e., characteristics of immediate setting, relationship dynamics, family unit, etc.); and ontogenic (i.e., individual factors of the offender). It is suggested that factors at the microsystem and ontogenic levels will have stronger effects on violence because of their closer proximity (Stith et al.). In the same vein, exosystem factors are purported to have a weaker effect as they are more distal.

In line with this ideology, the current study will investigate three ontogenic factors that are purported to be salient to the use of intimate violence. The factors under consideration in the current study are self-esteem, adult attachment style, and witnessing interparental violence during childhood. All of these factors would be considered ontogenic as they are individual characteristics of the perpetrator.

Theory

Social Learning Theory

Originally, learning theory posited individuals learn behaviors through directly experiencing reinforcements or punishments. This theory was later refined into the social learning theory. Social learning theory differs from learning theory by suggesting individuals can learn vicariously (Bandura, 1973). Simply put, social learning theory does not imply learning occurs only via personal experience. Rather, people can learn by observing the reinforcement or punishment of the behavior of others. Bandura observed this phenomenon during his famous experiment with the Bobo dolls. During this experiment, Bandura observed children imitating the behavior of adult models. The children were more likely to imitate the behavior if they observed the model being rewarded and less likely if they observed the model being punished. This theory is related to the intergenerational transmission of violence which is, in part, guiding the current study. The commonality between the two is the phenomenon of vicarious learning. The intergenerational transmission of violence theorizes children learn to use violence in their later love relationships through witnessing their parents' use of violence in the absence of negative reinforcements.

Attachment Theory

In order to study attachment styles, developmental psychologists Ainsworth, Blehar, Waters, and Wall (as cited in Karen, 1998) developed an experimental technique named the strange situation in order to assess attachment. In the strange situation, mothers and their children would come into a room together with researchers present. Then, the mother would leave for some time. The researchers attempted to interact with the children and observed their behavior during the separation and upon reunion. Ainsworth et al. found that the children evidenced either behavior that could be classified as secure, ambivalent, or avoidant. Securely attached children, though distressed when their mother left, eagerly greeted her upon her return and were accepting of her and her affections. These children sought out their mothers when they were distressed and were confident that she would be available when needed. Avoidantly attached children, while at times distressed by their mother's departure, were indifferent to her upon her return. These children also showed some random aggressive tendencies towards their mothers while being clingy and demanding. Finally, ambivalently attached children seem to share characteristics with both the secure and avoidant children. They show distress upon separation like secure children, yet are rejecting or angry upon the mothers' return, refusing to be comforted. Like avoidantly attached children, ambivalently attached children were demanding and clingy. In addition, ambivalently attached children are the most overtly anxious of the three attachment styles.

Research

The phenomenon of violence is one that has been the subject of seemingly limitless research purporting to identify the antecedents of such behavior. In terms of intimate violence among college students, many studies have been undertaken in an attempt to establish prevalence rates of intimate violence. Makepeace (1981) estimated that approximately one in five college

students had some direct personal experience with intimate violence in a dating relationship. More recently, when Lewis and Fremouw (2001) examined existing literature on dating violence, they found prevalence rates ranging from 21% to 45% with an average of 30%. For purposes of this study, literature was reviewed that investigated the factors that were of interest to this study. Studies exploring the link between the perpetration of intimate violence and a history of witnessing interparental violence were reviewed. Next, the relationship between adult attachment styles and perpetration of intimate violence were examined via relevant literature. Finally, the link between self-esteem and perpetration of intimate violence was explored.

Intergenerational Transmission of Violence

Social learning theory developed by Bandura (1973) was a precursor to the intergenerational transmission of violence. Bandura observed that children exposed to aggressive models more readily aggressed when given the opportunity. Interestingly, the children did not have to experience the positive or negative reinforcements themselves as initially thought based on learning theory. Instead, it appeared that the children were experiencing the reinforcements vicariously. If they saw the adult model rewarded for their aggressive behavior, the children were subsequently more likely to model that behavior. However, if the children witnessed punishment of the aggressive adult model, they were less likely to model the aggressive behavior. From these findings emerged the intergenerational transmission of violence. This theory suggests that children who witness violence in their family of origin are more likely to engage in violence in their later love relationships. This is especially relevant if there are, or if the children perceive there are, positive reinforcements associated with the aggressive behavior.

In order to assess the relevance of an intergenerational transmission of violence, research has investigated the link between interparental violence and intimate violence. Carr and

VanDeusen (2002) sought to assess the relationship for family of origin violence and dating violence for college males. In this study, witnessing interparental violence was the only significant predictor of perpetrating physical violence against a dating partner. This finding lends support to the intergenerational transmission of violence. Interestingly, witnessed violence was more influential than experienced violence. However, these findings must be viewed in light of some limitations. Carr and VanDeusen did not use a truly random sample. They surveyed males through random mailings to both Greek and non-Greek members and in-class recruitment. Data were not analyzed based on recruitment methods. It is not unreasonable to imagine that fraternity members may have different views and experiences than those males who are not members of fraternities.

In addition to learning violent behavior from witnessing parental models, learning also occurs within peer relationships and a person's own love relationships. Gwartney-Gibbs et al. (1987) sought to examine the importance of these factors to a person's use of violence. Findings of this study indicate that of males with abusive parental models, 69% inflicted abuse, 32% inflicted violence, and 26% inflicted sexual aggression where abuse indicates verbal-symbolic aggression, violence means physical violence, and sexual aggression equates forced or coerced sexual intercourse (Gwartney-Gibbs et al.). The percentages increase if parents were both violent and abusive. For these males, 87% were abusive, 54% were violent, and 40% engaged in sexual aggression. If males reported having nonviolent, nonabusive parents, the probability of them inflicting courtship aggression was greatly reduced. For females, a trend towards significance was observed for a positive relationship between inflicting courtship aggression and aggressive parents (Gwartney-Gibbs et al.). However, these findings were not statistically significant. The findings of this study suggest that witnessing interparental violence may affect males and

females differently. In this study, males were more influenced by interparental violence.

Gwartney-Gibbs et al. collapsed all of the variables into strict dichotomous variables indicating whether a behavior had ever been inflicted or sustained. This reduces the variability of the responses and can reduce the power of results.

In addition to studying the violence of college students, other researchers have chosen to focus on high school students and their experiences with dating violence. O'Keefe (1998) surveyed over 1,000 students in public high schools. While there does appear to be a link between witnessing interparental violence and engaging in violence in later love relationships, it is not an absolute. This is similar to child victims of sexual abuse. While most perpetrators of sexual abuse were themselves victims, most victims do not go on to perpetrate sexual abuse. O'Keefe sought to investigate factors that could mediate the relationship between witnessing interparental violence and engaging in dating violence. In order to examine those participants who witnessed the most severe interparental violence, only those whose reported witnessing of interparental violence was reported at the 75th percentile or higher for this sample were retained for analyses. Males who were of lower socioeconomic status, had more exposure to violence in their school and community, were more accepting of dating violence, and had lower self-esteem were more likely to inflict dating violence (O'Keefe, 1998). Females were more likely to inflict dating violence if they were more exposed to community and school violence, had poorer school performance, and experienced child abuse. For the receipt of dating violence, socioeconomic status and accepting of dating violence were significant predictors for males while poorer school performance and experiencing child abuse were significant for females. A limitation of this research is the use of high school students as the sample. High school students have had a limited

number of dating relationships; therefore, they do not have an extensive background from which to draw.

Studies focusing on high school students highlight the importance of early intervention strategies for intimate violence. Findings that high school students with relatively little experience in dating relationships have experienced dating violence are sobering. Foshee, Bauman, and Linder (1999) surveyed eighth and ninth grade students in a rural area. Foshee et al. found that 15% of males and 28% of females reported initiating at least one act of physical violence against a dating partner. This finding is somewhat surprising given the limited dating experience of eighth and ninth grade students. For males and females, witnessing interparental violence and being hit by an adult were positively associated with perpetration of dating violence. When the data were analyzed differentially based on gender, witnessing interparental violence, being hit by an adult, and being hit by their mother emerged as significant predictors of a more aggressive conflict response for females. For males, witnessing interparental violence and receiving violence from an adult predicted a more aggressive conflict response style. While these findings lend support to the intergenerational transmission of violence, this study does suffer from some limitations. Because of legal obligations for mandatory reporting of child abuse, the measures for child abuse consisted of only one question asking whether the participant had ever been spanked or hit by their mother or father. Limiting the measure to only one question restricts the inferences that can be drawn from the answers. In addition, the single question that was asked combined spanking and hitting which are very different occurrences. In much the same way, interparental violence was assessed via a single question. Caution must be used when drawing conclusions based on a single question.

Attachment Styles

Parent-child relationships have many important implications for later adult relationships of the child. Not only can modeling, such as occurs with the intergenerational transmission of violence, influence children's later love relationships, but the attachment between parents and children can color their attitudes and predispositions. Three different attachment styles have been theorized to develop during childhood (Karen, 1998). These three attachment styles are classified as either secure or insecure styles. The insecure style is subdivided into anxious-ambivalent or avoidant. Psychoanalytic theorists have long viewed the relationship between mother and child as being of paramount importance. According to theories of attachment, attachment styles develop in infancy and remain constant throughout ones' life. The attachment style is determined by the child's relationship with their mother. If the mother is emotionally available to the child, then the child becomes securely attached. However, if the mother is not available or is inconsistent in her attention and affection for the child, the attachment becomes insecure (Karen).

During his groundbreaking research on attachment, Bowlby (1973) proposed attachment develops during childhood as a result of the availability and supportiveness, or lack thereof, experienced by children in relation to their primary caregiver, particularly the mother. Bowlby's theory of attachment was based upon an internal working model to account for the stability of attachment to adulthood. The internal working model consists of two proposed steps. The first step relies upon the actual presence or absence of an attachment figure from the early months of life throughout life acting as a potential protective feature in any potentially alarming situation. The second step relates to the individual's confidence, or lack thereof, that in the absence of the attachment figure, the attachment figure will nonetheless be available, readily accessible, and

responsive should contact be desired. Bowlby suggests that the first step is most important with younger individuals. As the individual ages, the second step becomes more important with it becoming dominant after puberty. The internal working model proposes that these early experiences are internalized and shape expectations of later relationships, both peer and romantic.

The resultant attachment styles are proposed as being relatively stable and expressed in later adult love relationships. A 30-year longitudinal study from infancy to adulthood found infant attachment to be related to experiences in romantic relationships in early adulthood (Sroufe, Egeland, Carlson, & Collins, 2005). Those adults who are securely attached tend to report more happiness, trust, friendship, and acceptance in their love relationships (Mayseless, 1991). In contrast, those who are ambivalently attached were more likely to describe their relationships as being an emotional roller coaster. The highs are described as euphoric hopefulness while the lows are characterized by intense jealousy and depression. Those with ambivalent attachment reported falling in love easily and at first sight. In addition, ambivalently attached adults were more obsessively preoccupied with their partner and desired more unity than their securely attached counterparts. Finally, those avoidantly attached adults indicate difficulty falling in love. Their love relationships are characterized by lower levels of friendship, trust, acceptance, and happiness than secure adults. In addition, avoidantly attached adults exhibit a fear of closeness and intimacy. In relationships, while avoidant and ambivalent adults are described as having low ego-resilience, avoidant adults are described as being hostile and distant while the ambivalent adults appear anxious and distressed (Mayseless).

In terms of conflict resolution, avoidant adults seem to employ tactics in order to avoid confrontation, while ambivalently attached adults tend to attempt domination of their partners in

conflict situations (Maysless, 1991). Based on this and other characteristics of insecurely attached adults, avoidant and ambivalent adults appear to be more inclined to become involved in intimate violence than those who are securely attached (Dutton, 2000; Maysless). For those avoidantly attached adults, being in control and having power in interpersonal relationships is of paramount importance because of their proclivity to distrustfulness and self-reliance (Maysless). These individuals come across as cool and aloof while their hostility is usually shrouded in passive-aggressiveness. While their aggression seems to be more covert, their aggression can become physical if the culture condones such behavior or violence has been learned such as through the intergenerational transmission of violence.

While avoidant adults appear to exhibit more covert aggression, ambivalent adults seem to be more prone to express their aggression in more overt fashions (Maysless, 1991). Ambivalent individuals are characterized as being supremely jealous and insecure while desiring to control their partner. Ambivalent individuals expect inconsistency and rejection from their partners and treat their partner in much the same manner, at times expressing anger and hostility. A pattern of jealousy, possessiveness, and dissatisfaction with their partner and relationship culminates in ambivalent individuals being caught in a love-hate relationship, wanting to leave but feeling unable to do so (Maysless). All of these characteristics appear to increase the ambivalently attached adult's proclivity to use violence in intimate relationships. These people appear to use violence as a means to pull their partner back to them because of their jealousy and fear of abandonment.

While attachment is theorized to be affected by different factors such as security in their mother as a secure base from which to explore, other factors are also purported to be influential to attachment. One such factor is witnessing interparental violence. While the intergenerational

transmission of violence suggests that violence is passed down through the generations via modeling of observed behaviors, interparental violence can also weaken parent-child bonds thus weakening attachment (Dutton, 2000). Dutton suggests that witnessing a parent be victimized compromises the child's sense of security in relation to this parent. The ensuing thought process would be lead to uncertainty of the parent's ability to provide safety for the child when the parent is observed being victimized.

Self-Esteem and Intimate Violence

Investigations into the relationship between violence and self-esteem have been contradictory. Some research suggests people with high self-esteem have a greater proclivity to aggression (Baumeister, Bushman, & Campbell, 2000; Baumeister, Smart, & Boden, 1996; Papps & O'Carroll, 1998; Salmivalli, 2001), while others have suggested people with low self-esteem are more likely to be aggressive (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Holt, 2005; Sharpe & Taylor, 1999). When perusing characteristics of individuals with low self-esteem, such as uncertainty, shyness, avoidance of risk and potential loss, submissiveness, and lack of confidence, common sense suggests that these attributes would make a person aversive to aggression. However, the relationship is not nearly as clear-cut as one would imagine.

Laboratory experiments to investigate the relationship between high self-esteem and aggression have found that individuals with high, unstable self-esteem, conceptualized as high self-esteem coupled with narcissism, reacted more aggressively when confronted with an ego threat than those with either low self-esteem or high self-esteem coupled with low narcissism (Bushman & Baumeister, 1998). This is the theory of threatened egotism, which was first proposed in the mid to late 1990s by Bushman and Baumeister. However, this theory may not be

particularly relevant to the study of intimate violence. Findings from a study of threatened egotism as a predictor for perpetration of intimate violence found no relationship between threatened egotism, conceptualized as high self-esteem coupled with high narcissism, and the perpetration of intimate violence (Holt, 2005). Instead, low self-esteem was found to be a significant predictor of intimate violence for females but not males (Holt).

While delinquency does not equate aggression, delinquency, like aggression, is an expression of externalizing problems. Donnellan et al. (2005) found, based on parent and teacher reports, low-self esteem to be negatively correlated with externalizing problems. In addition, antisocial behaviors were divided into either aggressive or nonaggressive items. Self-esteem was found to have a significant negative relationship with both aggressive and nonaggressive antisocial behaviors. Findings of this study lend support to the theory that low self-esteem is related to aggression. In addition, Donnellan et al. investigated narcissism as well as self-esteem. While high narcissism was found to be related to a measure of total aggression, low self-esteem was related a measure of physical aggression. These findings suggest that self-esteem and narcissism could both be related to aggression; however, their contribution is independent of each other.

These findings were consistent with findings of Sharpe and Taylor (1999) that were self-esteem has inconsistent implications for intimate violence. Sharpe and Taylor investigated individual factors purported to be influential to involvement in intimate violence. This study found low self-esteem to be associated with both perpetration and victimization of intimate violence for females only. Surprisingly, high self-esteem was associated with perpetration and victimization for males. One suggestion for this discrepancy for males and females is the importance that relationships have for females. Females seem to be more often defined by their

relationships; therefore, they may react violently when they feel the relationship is threatened. On the other hand, depending on how self-esteem is conceptualized, low self-esteem could be an effect of intimate violence rather than a cause. If self-esteem is conceptualized as a fluid state, low self-esteem could be a result of victimization. However, if self-esteem is conceptualized as a relatively stable trait of an individual, as in the current study, low self-esteem would be seen as being established prior to the perpetration or victimization of intimate violence.

Statement of the Problem

The purpose of this study was to explore the impact of witnessing violence in the family of origin, low self-esteem, and an insecure adult attachment style on a person's proclivity to employ physically aggressive conflict resolution tactics within the context of an intimate relationship. Research into the phenomenon of intimate violence is important for many reasons. Some researchers (Carlson, 1987) suggest that domestic violence is the most underreported crime in the United States. The effects of domestic and intimate violence are far reaching. Not only are there physical and psychological effects of intimate violence for those immediately involved (Carlson, 1987; Makepeace, 1981; Saunders, 2002; Straus, 1980; Worcester, 2002), there are also broad effects that have a substantial impact on others (Foshee, Bauman, & Linder, 1999; Gwartney-Gibbs, Stockard, & Bohmer, 1987; O'Keefe, 1998). Children living in homes plagued by violence are more likely to experience violence in their later love relationships (Cantrell, 1995; Carr & VanDeusen, 2002; Dutton, 2000; Flynn, 1990; Foshee et al., 1999; Gwartney-Gibbs et al., 1987; Marshall & Rose, 1990; O'Keefe). Research suggests that the manner in which this occurs might not be limited to modeling but could also result from weakened attachment with parents resulting in insecure attachment styles (Dutton; Mayseless,

1991). It is important to take a proactive approach to the problem of intimate violence in order to curtail such behavior and improve the outcome for future generations.

Hypotheses

The current study consisted of four hypotheses related to intimate violence. The 1st hypothesis investigated the relationship between self-esteem and intimate violence. This hypothesis proposed that participants who perpetrate intimate violence would have lower self-esteem than those who did not. Hypothesis 2 addressed adult attachment styles of perpetrators of intimate violence. This hypothesis suggested that perpetrators of intimate violence would be more likely to exhibit insecure adult attachment styles than those who had not acted violently towards an intimate. The 3rd hypothesis addressed the issue of witnessing interparental violence. It was expected that those participants who reported having witnessed interparental violence would also report having perpetrated higher levels of intimate violence than individuals who had not witnessed violence in their family of origin. Finally, the 4th hypothesis incorporated all of the above. The 4th, and final, hypothesis assessed the effects of self-esteem, adult attachment, and interparental violence on the use of violence in intimate relationships. It proposed the highest rates of perpetration would be observed for those participants with insecure adult attachment, low self-esteem, and who had witnessed interparental violence.

CHAPTER 2

METHODS

Participants

Participants in the current study were recruited from the student population of a mid-sized public university in the Southeastern region of the United States. The sample consisted of 576 students, 189 males and 379 females, enrolled in classes in the fall semester of 2006. Participants were recruited via two methods. The first method consisted of a survey posted online available to undergraduate students, primarily enrolled in psychology courses, for modest extra credit. In addition, paper-based surveys were administered to random cluster samples of college students.

A random sample of classes during the fall semester of 2006 was obtained from the university. The professors in these classes were notified via email and the researcher requested to come to the class and recruit participants to complete the survey during class time. The in-class participants were told about the purpose of the survey and told that participation was strictly voluntary. Professors for 52 classes were sent email requests for recruitment during class time. Of these, 23 professors agreed to allow the researcher to come to the class and recruit participants for a response rate for classes of 44%. In the classes that allowed for recruitment, there were 754 students enrolled. Of these, 366 participated in the study for a response rate of 49%. This response rate may be an underestimation for numerous reasons. Although the sample was random, some potential participants were enrolled in several classes that were surveyed and they were instructed to only participate one time. In addition, some students were certainly absent on the day of recruitment. Finally, students enrolled in psychology courses with access to

the online version were instructed to only participate once and most chose the online version to get modest extra credit in their psychology class.

The reason for a two-fold method of participant recruitment was to access a more diverse sample. Rather than only having undergraduate psychology students as participants, the random sample of the student body resulted in a more diverse and representative sample of the student body. The breakdown by survey method was 210 (36.5%) online participants and 366 (63.5%) in-class paper based participants.

Measures

Demographics

The survey consisted of several measures. The first of these were demographic measures (see Appendix A). These questions assessed age, classification (freshman, sophomore, etc.), gender, race-ethnicity, marital and relationship status, length of relationship, income level, and living arrangements. Based on responses, some of the variables may be collapsed in order to produce meaningful analyses. Detailed demographic results are reported in the following chapter.

Conflict Tactics Scales (CTS and CTS2)

The Conflict Tactics Scale (CTS; Straus, 1979) was developed to measure interpersonal conflict resolution tactics. The CTS consists of three scales: reasoning, verbal aggression, and physical aggression. The CTS has been used to measure conflict resolution between both married and dating couples, parents, and siblings. In the current study, the CTS was used to measure how much interparental violence was witnessed by the participant (see Appendix B). The 15 items of the CTS corresponding to the verbal aggression and physical aggression subscales were the only ones included in the survey. Participants were asked to reflect on their childhood and indicate

how often they witnessed the acts of aggression, both mother-to-father and father-to-mother. The responses were on a six-point Likert scale with options ranging from never to more than once a month. Higher scores correspond to having witnessed more interparental violence. The physical violence subscale of the CTS has been found to be modestly to highly reliable with Cronbach's alpha ranging from .42-.96 (Straus & Gelles, 1990). In the current study, Cronbach's alpha for the CTS for mother-to-father violence was .91 and .95 for father-to-mother violence.

The Revised Conflict Tactics Scale (CTS2; Straus et al., 1996) was developed from the CTS (Straus, 1979). In addition to negotiation, physical assault, and psychological aggression, the CTS2 also measures sexual coercion and injury. While the focus of the current study was physical assault, the CTS2 was administered in its entirety (see Appendix C). The CTS2 consists of 78 questions, half of which assess the participants' own behavior while the other half assesses their partners' behavior towards them. The participants were instructed to think back over all of their relationships and indicate how many times each behavior occurred. The responses were on a six-point Likert scale ranging from never to more than 20 times over their lifetime. According to Straus et al., the subscales are reliable with Cronbach's alpha coefficients ranging from .79 to .95. For the current study, Cronbach's alpha was calculated for the physical assault and sexual coercion subscales for perpetration and victimization. Perpetration of physical assault was found to have a Cronbach's alpha of .87, while perpetration of sexual coercion had a Cronbach's alpha of .67. Victimization of physical assault had a Cronbach's alpha of .91, and victimization of sexual coercion had a Cronbach's alpha of .80.

Experiences in Close Relationships-Revised (ECR-R)

The Experiences in Close Relationships-Revised (ECR-R ; Fraley, Waller, & Brennan, 2000) is a self-report measure that assesses anxiety and avoidance in intimate relationships (see

Appendix D). The response option was a six-point Likert scale ranging from strongly disagree to strongly agree. Higher scores on the anxiety portion correspond to adult attachment that is more anxious while higher scores on the avoidance portion correspond to more avoidant adult attachment styles. The avoidance subscale has been found to be reliable, with a Cronbach's alpha coefficient of .94, while the anxiety subscale is also reliable with an alpha coefficient of .91. In the current study, the anxious adult attachment subscale had a Cronbach's alpha of .94, while the avoidance subscale had a Cronbach's alpha of .93.

Rosenberg Self-Esteem Scale

For the current research, self-esteem was measured via a scale developed by Rosenberg (1965). This scale is the most widely used measure of self-esteem (Whiteside-Mansell & Corwyn, 2003). In general, self-esteem refers to a person's overall perceptual assessment of his/her personal worth (Papps & O'Carroll, 1998). The scale consists of 10 straight-forward items (see Appendix E). The response category was a six-point Likert scale. The responses range from strongly agree to strongly disagree. Based on the scoring, higher scores correspond to higher self-esteem while lower scores indicate lower self-esteem. Based on Cronbach's alpha, Rosenberg's (1965) self-esteem scale has been found to have high reliability. Previous studies have found the reliability coefficient to range from .81-.83 (Whiteside-Mansell & Corwyn). In the current study, Cronbach's alpha was .87 for Rosenberg's self-esteem scale.

Variables

Dependent

The current study focused on one dependent variable. The dependent variable of interest was the perpetration of intimate violence. This variable was assessed via the physical assault subscale of the CTS2. The scale was measured on a seven-point Likert scale. The resultant

dependent variable was calculated from adding the individual items together. In addition, this variable was also collapsed into a dichotomous variable based on either the presence or absence of the perpetration of intimate violence. This was done in order to facilitate certain bivariate analyses. In addition, analyses were undertaken with perpetration of sexual coercion, victim of physical assault, and victim of sexual coercion as dependent variables.

Independent

The current study assessed several independent variables. The first group of independent variables of interest included demographics such as age, gender, and race.

Violence witnessed in the family of origin was another independent variable of interest in the current study. This variable was assessed via the CTS. Interparental violence was calculated based on the participants' responses to the CTS for both mother-to-father physical aggression and father-to-mother physical aggression. In addition, as with perpetration of intimate violence, the variable was collapsed into a dichotomous measure indicating the absence or presence of interparental violence.

Self-esteem was another of the independent variables in the current study. The responses to the self-esteem measure were added together to obtain a total score where higher scores indicated higher self-esteem. In addition, the variable was split equally into three categories of self-esteem: low, moderate, and high.

The final independent variable of interest was the participant's adult attachment style. The ECR-R included scales measuring both avoidant and anxious adult attachment styles. This variable was treated similar to the aforementioned interparental violence variable. There was a composite score of insecure adult attachment that resulted from addition of the items in the scale. The variable was coded such that higher scores indicated increased insecure attachment. In

addition, the variable was collapsed into either secure or insecure adult attachment, split at the 50th percentile.

Analyses

Univariate

For all analyses, the results were assessed based on a preset significance level of .05. Univariate analyses were undertaken in order to get a picture of the sample. These analyses included frequencies, descriptives, and measures of central tendency, the latter of which assessed the normalcy of the sample.

Bivariate

Three groups of *t*-tests were undertaken to assess mean differences. The first was to assess whether differences existed on the measure for the two assessment formats, namely in-person and online. In the second group of *t*-tests, the independent variable was gender and the dependent variables were self-esteem, adult attachment, perpetrating physical assault, perpetrating sexual coercion, victim of physical assault, and victim of sexual coercion. The third group of *t*-tests was assessed with the independent variable of perpetration of physical assault and the dependent variables of self-esteem and adult attachment. Correlations were conducted to examine the relationship between scales. Chi-square analyses and cross tabs were also used in order to test for independence of nominal level variables. The variables under consideration were gender and having witnessed interparental violence, perpetration of physical assault and sexual coercion, victimization of physical assault and sexual coercion, and adult attachment. These analyses used the collapsed categories for perpetration, victimization, and interparental violence separating participants based on the presence or absence of the variable under consideration.

Multivariate

A 2 x 2 x 3 x 2 multivariate analysis of variance (MANOVA) was used to assess the main effects and interactions of the variables of interest. For the MANOVA, four dependent variables of interest included: perpetration of physical assault, perpetration of sexual coercion, victimization of physical assault, and victimization of sexual coercion. The four independent variables were gender (male-female), witnessed interparental violence (yes-no), self-esteem (low-moderate-high), and adult attachment (secure-insecure). Univariate statistics were also examined to determine which main effects and interactions were significant for which dependent variable. Post-hoc Tukey's tests were used to determine which groups significantly different.

CHAPTER 3

RESULTS

Demographics

The total sample consisted of 576 college students enrolled at East Tennessee State University during the fall semester 2006. The sample consisted of 32.8% (189) males and 65.8% (379) females with 8 participants failing to report their gender. The sample was predominantly Caucasian (89.8%; 517), with 4.2% (24) African-American, 1% (6) Hispanic, 0.9% (5) Asian, and 3.6% (21) indicating other. For academic classification, 38.2% (220) were freshmen, 20.7% (119) were sophomores, 20.3% (117) were juniors, 18.9% (109) were seniors, and approximately 1.5% as either graduate or other. As expected with a college sample, 84.2% (485) of the participants were single, never married, while 9.5% (55) were currently married, 1.2% (7) indicated being in a domestic partnership, 3.6% (21) were divorced, and 0.3% (2) were separated. For relationship status, 24.1% (139) were single, not dating, with close to 60% indicating they were dating, either casually (19.4%; 112) or seriously (38.4%; 221), and 7.5% (43) engaged. For sexual orientation, 94.8% (546) reported being heterosexual with an equal percentage of 1.7% (10) each reporting being homosexual and bisexual (see Table 1).

Table 1

Demographic Frequencies

Variable	Frequency	Percent
Gender		
Male	189	32.8
Female	379	65.8
Race		
Caucasian	517	89.8
African-American	24	4.2
Asian	5	0.9
Hispanic	6	1.0
Other	21	3.6

Table 1 (continued)

Variable	Frequency	Percent
Classification		
Freshman	220	38.2
Sophomore	119	20.7
Junior	117	20.3
Senior	109	18.9
Graduate	3	0.5
Other	6	1.0
Marital Status		
Single, Never Married	485	84.2
Married	55	9.5
Domestic Partner	7	1.2
Separated	2	0.3
Divorced	21	3.6
Relationship Status		
Single, Not Dating	139	24.1
Casually Dating	112	19.4
Seriously Dating	221	38.4
Engaged	43	7.5
Married	54	9.4
Domestic Partner	5	0.9
Sexual Orientation		
Heterosexual	546	94.8
Homosexual	10	1.7
Bisexual	10	1.7
Other	1	0.2

In order to establish prevalence rates of intimate violence, the scales for perpetration and victimization of physical assault and sexual coercion were dichotomized into yes and no as was witnessing violence in the family of origin (see Table 2). For family violence, 36.6% (211) indicated they did witness violence between their parents and 62.2% (358) did not. For perpetration of physical assault, 44.8% (258) indicated they had perpetrated physical assault against a partner in their lifetime 54.5% (314) had never perpetrated physical assault against a partner. For perpetration of sexual coercion, 24.3% (140) admitted to sexually coercing a partner while 74.8% (431) indicated they had never sexually coerced a partner. For physical assault victimization, 47.4% (273) indicated they had been the victim of physical assault from a partner

at some point during their lifetime and 51.9% (299) had never been the victim of physical assault. Finally for sexual coercion by a partner, 36.8% (212) reported having been sexually coerced by a partner and 62.3% (359) had not.

Table 2

Violence Prevalence

Variable	Frequency	Percent
Interparental Violence		
Yes	211	36.6
No	358	62.2
Perpetrate Physical Assault		
Yes	258	44.8
No	314	54.5
Perpetrate Sexual Coercion		
Yes	140	24.3
No	431	74.8
Victim Physical Assault		
Yes	273	47.4
No	299	51.9
Victim Sexual Coercion		
Yes	212	36.8
No	359	62.3

Descriptive statistics were generated the variables of age, self-esteem, adult attachment, perpetration of physical assault and sexual coercion, victimization of physical assault and sexual coercion, and witnessing interparental violence (see Table 3). Measures of central tendency and variance were also calculated for each of the aforementioned variables of interest. The age range of participants was 18 to 51 with a mean of 21.29 years and a standard deviation of 5.353. For self-esteem, the range of scores was 6-73 with a mean of 47.4 and a standard deviation of 9.7. For adult attachment, the range of scores was 8-199 with a mean of 90.0 and a standard deviation of 34.1. Scores for perpetration, victimization, and witnessing interparental violence measured how often events occurred. For the perpetration of physical assault, the range of scores was 0-54,

with a mean of 3.2 and standard deviation of 6.8. The scores for perpetration of sexual coercion ranged from 0 to 28. The mean score of perpetration of sexual coercion was 1.4 with a standard deviation of 3.4. Victimization of physical assault ranged from 0 to 68, while the mean score was 4.2 with a standard deviation of 8.7. For victimization of sexual coercion, the range of scores was 0-42. The mean was 2.6 with a standard deviation of 5.5. Finally, for family violence, the scores ranged from 0 to 66. The mean score was 5.5 with a standard deviation of 11.7. As evidenced with the median and mode of 0 for all of the violence scores, these variables were positively skewed. However, this was expected in that violence is a low baseline behavior.

Table 3

Descriptives of CTS and Age

Variable	Min.	Max.	Mean	S.D.	Median	Mode
Age	18	51	21.3	5.4	20	18
Victim Physical Assault	0	68	4.2	8.5	0	0
Victim Sexual Coercion	0	42	2.6	5.5	0	0
Perpetrator Physical Assault	0	54	3.2	6.8	0	0
Perpetrator Sexual Coercion	0	28	1.4	3.4	0	0
Family Violence	0	66	5.5	11.7	0	0
Self-Esteem	6	73	47.4	9.7	49	60
Adult Attachment	8	199	90.0	34.1	88	94

Bivariate Statistics

Chi-Square

Chi-square tests of independence were conducted along with the construction of cross-tabs to examine the relationship between gender and perpetration of physical assault and sexual coercion, victimization of physical assault and sexual coercion, and secure/insecure adult attachment (see Table 4). Next, cross-tabs were constructed for witnessing interparental violence and the following variables: perpetration of physical assault and sexual coercion, victimization of physical assault and sexual coercion, and secure/insecure adult attachment. For each of these,

chi-square statistics were calculated to determine if a significant relationship existed while the cross-tabs can be consulted to determine the nature of the relationship.

Table 4

Gender, CTS, and Adult Attachment Cross-Tabs

		Gender	
		Male	Female
Perpetrate Physical Assault			
	No	124 (66.3%)	187 (49.5%)
	Yes	63 (33.7%)	191 (50.5%)
Perpetrate Sexual Coercion			
	No	114 (61.0%)	312 (82.8%)
	Yes	73 (39.0%)	65 (17.2%)
Victim Physical Assault			
	No	91 (48.7%)	204 (54.0%)
	Yes	96 (51.3%)	174 (46.0%)
Victim Sexual Coercion			
	No	106 (56.7%)	249 (66.0%)
	Yes	81 (43.3%)	128 (34.0%)
Adult Attachment			
	Secure	89 (47.8%)	192 (51.5%)
	Insecure	97 (52.2%)	181 (48.5%)

For gender, the variables of perpetration of physical assault and sexual coercion, victimization of physical assault and sexual coercion, and secure-insecure adult attachment were tested for significance (see Table 5). For gender and perpetration of physical assault, the variables were not independent of each other, $\chi^2(1, N = 565) = 14.3, p < .001$. As indicated in the cross-tabs, 33.7% of males and 50.5% of females reported physically assaulting a partner during their lifetime. For gender and perpetration of sexual coercion, the chi-square was again significant indicating the variables were not independent, $\chi^2(1, N = 564) = 32.1, p < .001$. As seen in the cross-tabs, 39.0% of males compared to 17.2% of females admitted to sexually coercing a partner. For gender and victimization of physical assault, chi-square was not significant, indicating the variables were independent of each other, $\chi^2(1, N = 565) = 1.4, p =$

.235. Gender and victimization of sexual coercion was significant indicating the variables were not independent of each other, $\chi^2(1, N = 564) = 4.7, p = .019$. The cross-tab reflects 43.3% of males and 34.0% of females reported being sexually coerced by a partner. Finally, for gender and adult attachment, the chi-square was not significant, indicating independence in the two variables, $\chi^2(1, N = 559) = 0.7, p = .419$.

Table 5

Gender, CTS, and Adult Attachment Chi-Square Tests for Independence

Variables	χ^2	df	sig.
Gender*Perpetration Physical Assault	14.3***	1	.000
Gender*Perpetration Sexual Coercion	32.1***	1	.000
Gender*Victim Physical Assault	1.4	1	.235
Gender*Victim Sexual Coercion	4.7*	1	.030
Gender*Adult Attachment	0.7	1	.419

Note: * $p < .05$; *** $p < .001$

For witnessing interparental violence, the variables of interest were perpetration of physical assault and sexual coercion, victimization of physical assault and sexual coercion, and insecure-secure adult attachment (see Table 6). For witnessing interparental violence and perpetrating physical assault, the chi-square statistic was significant suggesting the variables were not independent of each other, $\chi^2(1, N = 567) = 6.5, p = .007$ (see Table 7). As can be seen in the cross-tabs, 40.9% of those who had not witnessed interparental violence perpetrated physical assault against a partner compared to 51.9% who witnessed interparental violence than went on to perpetrate physical assault against a partner. The findings for witnessing interparental violence and perpetrating sexual coercion were similar, yet slightly weaker. The chi-square statistic was significant suggesting the variables were not independent, $\chi^2(1, N = 566) = 4.4, p = .023$. For those who did not witness interparental violence, 21.6% sexually coerced a partner while 29.5% of those who did witness interparental violence went on to sexually coerce a

partner. Together, these findings suggest witnessing interparental violence was significantly related to the perpetration of both physical assault and sexual coercion.

Table 6

Interparental Violence, CTS, and Adult Attachment Cross-Tabs

		Interparental Violence	
		No	Yes
Perpetrate Physical Assault			
	No	211 (59.1%)	101 (48.1%)
	Yes	146 (40.9%)	109 (51.9%)
Perpetrate Sexual Coercion			
	No	279 (78.4%)	148 (70.5%)
	Yes	77 (21.6%)	62 (29.5%)
Victim Physical Assault			
	No	201 (56.3%)	95 (45.2%)
	Yes	156 (43.7%)	115 (54.8%)
Victim Sexual Coercion			
	No	241 (67.7%)	115 (54.8%)
	Yes	115 (32.3%)	95 (45.2%)
Adult Attachment			
	Secure	197 (55.6%)	83 (39.9%)
	Insecure	157 (44.4%)	125 (60.1%)

For victimization, the findings were similar (see Table 7). For witnessing interparental violence and victimization of physical assault, the chi-square statistic was significant suggesting the variables were not independent of each other, $\chi^2(1, N = 567) = 6.5, p = .007$. The cross-tabs indicate 43.7% of those who did not witness interparental violence went on to be the victim of physical assault from a partner while 54.8% of those who did witness interparental violence were the victims of physical assault. The findings were even stronger for being the victim of sexual coercion and interparental violence. The chi-square was significant suggesting the variables were not independent, $\chi^2(1, N = 566) = 9.5, p = .001$. The cross-tabs reflect 32.3% of those who did not witness interparental violence were victims of sexual coercion while 45.2% of those who did witness interparental violence went on to become victims of sexual coercion. Finally, for

witnessing interparental violence and adult attachment, the chi-square was again significant suggesting the variables were not independent, $\chi^2(1, N= 562) = 13.0, p < .001$. The cross-tabs indicate 44.4% of those who did not witness interparental violence evidence an insecure adult attachment while 60.1% of those who did witness interparental violence indicate having an insecure adult attachment.

Table 7

Interparental Violence, CTS, and Adult Attachment Chi-Square Tests for Independence

Variables	χ^2	df	sig.
Interparental Violence*Perpetration Physical Assault	6.5*	1	.011
Interparental Violence *Perpetration Sexual Coercion	4.4*	1	.035
Interparental Violence *Victim Physical Assault	6.5*	1	.011
Interparental Violence *Victim Sexual Coercion	9.5**	1	.002
Interparental Violence *Adult Attachment	13.0***	1	.000

Note: *p<.05; ** p<.01; *** p<.001

Mean Comparisons

Three groups of *t*-tests were examined for significance. In the first, the dependent variables of interest were: self-esteem, adult attachment, interparental violence, perpetrating physical assault, perpetrating sexual coercion, victim of physical assault, and victim of sexual coercion. Higher scores on self-esteem corresponded to higher self-esteem; higher scores on attachment corresponded to more insecure attachment; and higher scores on the assault and coercion variables corresponded to a higher incidence of each. The independent variable of interest was mode of survey administration (see Table 8). This means that the mean score on each of the aforementioned dependent variables were compared for males and females in order to determine if there were any significant differences in the means. The only significant mean difference was found for victim of sexual coercion. Those mean for those who participated via

the online survey ($M = 3.2$, $SD = 6.4$) was significantly higher than the mean for those who participated via the paper survey in class ($M = 2.3$; $SD = 5.0$), $t(569) = 2.0$, $p = .045$.

Table 8

Survey Method t-Tests of CTS, Self-Esteem, and Adult Attachment

Variable	Mean		<i>t</i>	df	sig.
	Online	Paper			
Self-Esteem	46.6	47.9	1.5	570	.122
Adult Attachment	91.3	89.3	0.7	563	.512
Perpetration Physical Assault	3.7	3.0	1.2	570	.213
Perpetration Sexual Coercion	1.6	1.2	1.3	569	.178
Victim Physical Assault	4.2	4.2	0.0	570	.979
Victim Sexual Coercion	3.2	2.3	2.0*	569	.045

Note: * $p < .05$

In the second group of *t*-tests, the dependent variables of interest were: self-esteem, attachment, perpetrating physical assault, perpetrating sexual coercion, victim of physical assault, and victim of sexual coercion. The independent variable of interest was gender (see Table 9). Perpetrating both physical assault and sexual coercion have significantly different means. The mean of perpetrating physical assault for females ($M = 4.0$, $SD = 7.5$) was significantly higher than the mean for males ($M = 1.9$, $SD = 5.1$), $t(563) = -3.4$, $p = .001$. The mean of perpetrating sexual coercion for females ($M = 0.9$, $SD = 3.1$) was significantly lower than the mean for males ($M = 2.2$, $SD = 3.7$), $t(562) = 4.3$, $p < .001$. There were no significant mean differences between males and females for self-esteem, attachment, victimization of physical assault, or victimization of sexual coercion.

Table 9

Gender t-Tests of CTS, Self-Esteem, and Adult Attachment

Variable	Mean		<i>t</i>	df	sig.
	Male	Female			
Self-Esteem	47.6	47.3	0.4	563	.716
Adult Attachment	91.1	89.4	0.6	557	.572

Table 9 (continued)

Variable	Mean		<i>t</i>	df	sig.
	Male	Female			
Perpetration Physical Assault	1.9	4.0	3.4**	563	.001
Perpetration Sexual Coercion	2.2	1.0	4.3***	562	.000
Victim Physical Assault	4.0	4.4	0.5	563	.611
Victim Sexual Coercion	2.6	2.6	0.0	562	.992

Note: ** $p < .01$; *** $p < .001$

The third group of *t*-tests compared self-esteem and adult attachment by the grouping variable of perpetrating physical assault (see Table 10). For this purpose, perpetrating physical assault was collapsed into a dichotomous variable indicating either yes or no in regards to the perpetration of physical assault towards a partner. The mean self-esteem for those who had perpetrated physical assault ($M = 45.4$, $SD = 9.9$) was significantly lower than the mean self-esteem for those who had not ($M = 49.1$, $SD = 9.3$), $t(568) = 4.7$, $p < .001$. Again, higher scores of self-esteem correspond to higher self-esteem. Therefore, it appears that those who had perpetrated physical assault had significantly lower self-esteem than those who had not. For adult attachment, the mean adult attachment score for those who had perpetrated physical assault ($M = 96.7$, $SD = 34.0$) was significantly higher than the mean for those who had not ($M = 84.7$, $SD = 33.1$), $t(562) = 4.2$, $p < .001$. The scores for adult attachment were such that higher scores indicate insecure adult attachment. These findings suggest those who had perpetrated physical assault exhibited more insecure adult attachment than those who had not perpetrated physical assault.

Table 10

Perpetration of Physical Assault t-Tests of Self Esteem and Adult Attachment

Variable	Mean		<i>t</i>	df	sig.
	No	Yes			
Self-Esteem	49.1	45.4	4.7***	568	.000
Adult Attachment	84.7	96.7	4.2***	562	.000

Note: *** p<.001

Correlation

A correlation matrix was constructed with all scale level variables of interest in an attempt to assess if a significant relationship exists between two variables and the nature of the relationship, whether positive or negative. The variables of interest were: interparental violence, victimization of physical assault, victim of sexual coercion, perpetration of physical assault, perpetration of sexual coercion, adult attachment, and self-esteem (see Table 11). The Pearson correlation coefficient was examined for significance at an alpha level of .05 as well as the direction of the relationship, either positive or negative. A positive relationship suggests the variables either increase or decrease together. A negative relationship suggests that as one increases the other decreases.

Table 11

Pearson Correlation Matrix of CTS, Self-Esteem, and Adult Attachment

	1	2	3	4	5	6	7
1. Interparental Violence	---						
2. Vic. Physical Assault	.24***	---					
3. Vic. Sexual Coercion	.22***	.61***	---				
4. Perp. Sexual Coercion	.24***	.39***	.60***	---			
5. Perp. Physical Assault	.25***	.71***	.38***	.44***	---		
6. Adult Attachment	.17***	.24***	.21**	.14***	.20***	---	
7. Self-Esteem	-.20***	-.23***	-.22***	-.20***	-.21***	-.53***	---

Note: ** p<.01; *** p<.001

For interparental violence, several significant relationships emerged. A positive relationship emerged for victim of sexual coercion ($r = .22, p < .001$), victim of physical assault ($r = .24, p < .001$), perpetrating sexual coercion ($r = .24, p < .001$), and perpetrating physical assault ($r = .25, p < .001$). These results suggest participants reporting witnessing increased levels of interparental violence also report being both the victim and perpetrator of sexual coercion and physical assault at higher levels. The relationship was also positive and significant for adult attachment ($r = .18, p < .001$), suggesting witnessing increased interparental violence was related to more insecure adult attachment styles. Finally, the relationship for witnessing interparental violence and self-esteem was significant but negative in nature ($r = -.20, p < .001$). This suggests witnessing interparental violence was associated with lower levels of self-esteem.

Several significant relationships also emerged for being the victim of physical assault. Strong, positive relationships emerged for both being the victim of sexual coercion ($r = .61, p < .001$) and perpetrating physical assault ($r = .71, p < .001$). These findings suggest participants reporting higher levels of being the victim of physical assault also report higher levels of being sexually coerced by a partner as well as perpetrating physical assault against a partner. Moderately strong positive relationships emerged for victim of physical assault and perpetrating sexual coercion ($r = .40, p < .001$) and adult attachment ($r = .24, p < .001$). This suggests those who were victims of physical assault at higher levels also perpetrate sexual coercion at higher levels. The relationship with adult attachment suggests higher levels of physical assault victimization were associated with more insecure adult attachment. A moderately strong negative relationship emerged for self-esteem ($r = -.23, p < .001$). Higher levels of physical assault victimization were associated with lower self-esteem.

Being sexually coerced by a partner also has several significant relationships. Being the victim of sexual coercion has a strong positive relationship with sexually coercing a partner ($r = .60, p < .001$). These findings points to the reciprocal nature of sexual coercion. The results suggest the more participants were the victim of sexual coercion, the more they, in turn, engaged in sexual coercion. Victim of sexual coercion was also strongly correlated to perpetrating physical assault ($r = .38, p < .001$). This suggests that as being sexually coerced increases, so does perpetrating physical assault against a partner. Victim of sexual coercion was also positively correlated to adult attachment ($r = .21, p < .001$). This suggests as being the victim of sexual coercion increases, adult attachments were more insecure in nature. A negative significant relationship emerged for being the victim of sexual coercion and self-esteem ($r = -.22, p < .001$). This suggests higher levels of being sexually coerced were related to reported lower self-esteem.

For perpetration of sexual coercion, significant correlations emerged for perpetrating physical assault, adult attachment, and self-esteem. A strong, positive relationship emerged for perpetration of sexual coercion and perpetration of physical assault ($r = .44, p < .001$). This finding suggests different forms of intimate violence were related, such that increased perpetration of sexual coercion corresponds to increased perpetration of physical assault. The relationship between perpetration of sexual coercion and adult attachment was also significant and positive in nature ($r = .14, p = .001$). This indicates higher levels of perpetrating sexual coercion were associated with insecure adult attachment styles. Finally, perpetration of sexual coercion and self-esteem exhibit a significant, negative relationship ($r = -.20, p < .001$). This suggests increased perpetration of sexual coercion was associated with lower self-esteem.

For perpetration of physical assault, significant relationships emerged for adult attachment and self-esteem. The relationship was positive for perpetration of physical assault and

adult attachment ($r = .20, p < .001$). This indicates participants reporting higher levels of perpetrating physical assault against a partner report adult attachment which were insecure. For perpetration of physical assault and self-esteem, the relationship was significant and negative in nature ($r = -.21, p < .001$). This suggests those reporting higher levels of perpetration of physical assault report having lower self-esteem.

The final pair of variables was adult attachment and self-esteem. The relationship was significant and negative in nature ($r = -.53, p < .001$). This suggests participants reporting more insecure adult attachment styles also report having lower self-esteem.

Multivariate Statistics

Multivariate Analysis of Variance (MANOVA)

A 2 x 2 x 3 x 2 between-subjects multivariate analysis of variance (MANOVA) was conducted in order to determine the effect of four independent variables on four dependent variables. A MANOVA was used to examine main effects of the independent variables as well as interactions between the independent variables on the dependent variables. In addition to the MANOVA, univariate between-subjects effects were analyzed to determine which dependent variables were affected by the independent variables in terms of both main effects and interactions. Finally, in the case of significant interactions, post-hoc trend analyses were conducted in order to determine the exact significant differences.

The first independent variable was interparental violence measured at two levels: violence witnessed in the family of origin and violence not witnessed in the family of origin. The second independent variable was gender: male or female. The third independent variable was self-esteem at three levels: low, medium, and high. Self-esteem was a continuous variable that was collapsed into these three levels at the 33% and 66% cumulative percent. The fourth, and

final, independent variable was adult attachment at two levels: secure and insecure. Adult attachment was also a continuous variable and was divided at 50%. Higher scores indicated insecure adult attachment while lower scores correspond to more secure adult attachment styles. The dependent variables of interest were victim of physical assault, victim of sexual coercion, perpetrator of physical assault, and perpetrator of sexual coercion. Each of these variables was continuous and correlated (see Table 11).

Based on Wilks' λ , the combined dependent variables had significant main effects with adult attachment $F(4, 527) = 2.8, p = .025$; self-esteem $F(8, 1054) = 2.1, p = .035$; interparental violence $F(4, 527) = 2.8, p = .024$; and gender $F(4, 527) = 19.2, p < .001$ (see Table 12). In addition, there was one significant interaction for the combined dependent variables with interparental violence and gender $F(4, 527) = 2.1, p = .035$. The strongest association with the combined dependent variables was for gender, partial $\eta^2 = .127$, suggesting close to 13% explained variance. Associations for the remaining main effects of adult attachment (secure vs. insecure), partial $\eta^2 = .021$; self-esteem (low, medium, high), partial $\eta^2 = .016$; interparental violence (witnessed vs. not witnessed), partial $\eta^2 = .021$, with the combined dependent variables were all very similar and small in magnitude. For the interaction term of interparental violence by gender, the association was, again, small in magnitude, partial $\eta^2 = .019$.

Table 12

Multivariate Analysis of Variance for Perpetration of Physical Assault, Perpetration of Sexual Coercion, Victim of Physical Assault, and Victim of Sexual Coercion

Source	df	<i>F</i>	η^2	sig.
Interparental Violence	4	2.8*	.021	.024
Gender	4	19.2***	.127	.000
Self-Esteem	8	2.1*	.016	.035
Adult Attachment	4	2.8*	.021	.025
Adult Attachment*Self-Esteem	8	1.7	.013	.088

Table 12 (continued)

Source	df	<i>F</i>	η^2	sig.
Adult Attachment*Interparental Violence	4	1.4	.011	.226
Self-Esteem*Interparental Violence	8	0.7	.005	.723
Adult Attachment*Gender	4	0.7	.005	.603
Self-Esteem*Gender	8	0.6	.004	.814
Interparental Violence*Gender	4	2.6*	.019	.035
Adult Attachment*Self-Esteem*Interparental Violence	8	0.4	.003	.900
Adult Attachment*Self-Esteem*Gender	8	1.7	.013	.092
Adult Attachment*Interparental Violence*Gender	4	0.9	.007	.447
Self-Esteem*Interparental Violence*Gender	8	0.5	.004	.835
Adult Attachment*Self-Esteem*Interparental	8	1.0	.008	.428

Note: * $p < .05$; *** $p < .001$

Main Effects

Adult Attachment. The multivariate analyses indicated the main effect of adult attachment was significant for victim of physical assault, $F(1, 530) = 10.2, p = .001$, and victim of sexual coercion, $F(1, 530) = 4.3, p = .040$. No significant main effects emerged for adult attachment on perpetration of either physical assault or sexual coercion. See Table 13 for F values for all of the dependent variables on adult attachment.

Table 13

Univariate F s for the Main Effect of Adult Attachment

Source	Dependent Variable	df	Mean Square	<i>F</i>	sig.
Adult Attachment	Perp. Phys. Assault	1	104.6	2.6	.114
	Perp. Sexual Coercion	1	17.7	1.8	.175
	Vic. Phys. Assault	1	706.3	10.2**	.001
	Vic. Sexual Coercion	1	121.6	4.3*	.040
Error	Perp. Phys. Assault	530	41.8		
	Perp. Sexual Coercion	530	9.6		
	Vic. Phys. Assault	530	68.9		
	Vic. Sexual Coercion	530	28.6		

Note: * $p < .05$; ** $p < .01$

Comparison of means for each group indicated those exhibiting insecure adult attachment styles scored significantly higher on measures of both victim of physical assault and victim of

sexual coercion. Means and standard deviations on all of the dependent variables for secure and insecure adult attachment are provided in Table 14.

Table 14

Means and Standard Deviations for Adult Attachment on All Dependent Variables

	Secure		Insecure	
	M	SD	M	SD
Perpetrator Physical Assault	2.2	4.7	4.2	8.0
Perpetrator Sexual Coercion	0.9	2.6	1.7	3.8
Victim Physical Assault	2.4	5.3	5.9	10.6
Victim Sexual Coercion	1.7	4.0	3.5	6.5

Self-Esteem. Analyses revealed one significant main effect for self-esteem with perpetration of physical assault, $F(2, 530) = 3.5, p = .031$. There were no significant main effects between self-esteem and perpetration of sexual coercion or victimization of either physical assault or sexual coercion. See Table 15 for F values for all dependent variables and self-esteem.

Table 15

Univariate F s for the Main Effect of Self-Esteem

Source	Dependent Variable	df	Mean Square	F	sig.
Self-Esteem	Perp. Phys. Assault	2	146.3	3.5*	.031
	Perp. Sexual Coercion	2	21.5	2.2	.108
	Vic. Phys. Assault	2	135.0	2.0	.142
	Vic. Sexual Coercion	2	63.6	2.2	.109
Error	Perp. Phys. Assault	530	41.8		
	Perp. Sexual Coercion	530	9.6		
	Vic. Phys. Assault	530	68.9		
	Vic. Sexual Coercion	530	28.6		

Note: * $p < .05$

When the means of perpetration of physical assault were compared over the three levels of self-esteem, those individuals scoring low on self-esteem scored significantly higher on

perpetration of physical assault. See Table 16 for means on all dependent variables across the three levels of self-esteem.

Table 16

Means and Standard Deviations for Self-Esteem on All Dependent Variables

	Low		Moderate		High	
	M	SD	M	SD	M	SD
Perp. Phys. Assault	5.1	9.0	2.4	5.0	2.1	4.8
Perp. Sexual Coercion	2.0	3.9	1.3	3.5	0.8	2.2
Vic. Phys. Assault	3.9	8.7	2.2	4.5	2.0	4.3
Vic. Sexual Coercion	6.4	11.8	3.7	7.1	2.4	5.3

Interparental Violence. Interparental violence was dichotomized into yes for witnessing interparental violence and no for not witnessing interparental violence. Analyses revealed significant main effects of interparental violence for perpetration of sexual coercion, $F(1, 530) = 9.7, p = .002$, and victim of sexual coercion, $F(1, 530) = 5.3, p = .022$. No main effects emerged for interparental violence and either perpetration or victimization of physical assault. See Table 17 for F values for all dependent variables and interparental violence.

Table 17

Univariate F s for the Main Effect of Interparental Violence

Source	Dependent Variable	df	Mean Square	F	sig.
Interparental Violence	Perp. Phys. Assault	1	31.7	0.8	.384
	Perp. Sexual Coercion	1	93.2	9.7**	.002
	Vic. Phys. Assault	1	166.6	2.4	.121
	Vic. Sexual Coercion	1	150.7	5.3*	.022
Error	Perp. Phys. Assault	530	41.8		
	Perp. Sexual Coercion	530	9.6		
	Vic. Phys. Assault	530	68.9		
	Vic. Sexual Coercion	530	28.6		

Note: * $p < .05$; ** $p < .01$

As seen in Table 18, the means for those who witnessed interparental violence were

significantly higher for both perpetration and victim of sexual coercion. The means for perpetration and victimization of physical assault were not significantly different.

Table 18

Means and Standard Deviations for Interparental Violence on All Dependent Variables

	Interparental Violence			
	No		Yes	
	M	SD	M	SD
Perpetrator Physical Assault	2.7	5.8	4.1	7.8
Perpetrator Sexual Coercion	1.0	2.7	2.0	4.0
Victim Physical Assault	3.2	6.7	5.7	10.9
Victim Sexual Coercion	2.0	4.3	3.6	6.9

Gender. For gender, two main effects emerged. These were main effects between gender and perpetration of physical assault $F(1, 530) = 10.7, p = .001$, and perpetration of sexual coercion $F(1, 530) = 20.4, p < .001$. No main effects emerged between gender and victimization of either physical assault or sexual coercion. See Table 19 for F values for all dependent variables and gender.

Table 19

Univariate Fs for the Main Effect of Gender

Source	Dependent Variable	df	Mean Square	F	sig.
Gender	Perp. Phys. Assault	1	445.2	10.7**	.001
	Perp. Sexual Coercion	1	195.9	20.4***	.000
	Vic. Phys. Assault	1	49.5	0.7	.397
	Vic. Sexual Coercion	1	0.7	0.0	.872
Error	Perp. Phys. Assault	530	41.8		
	Perp. Sexual Coercion	530	9.6		
	Vic. Phys. Assault	530	68.9		
	Vic. Sexual Coercion	530	28.6		

Note: ** $p < .01$; *** $p < .001$

Comparison of the means indicates significant differences in both categories of perpetration: physical assault and sexual coercion. For perpetration of physical assault, females have a significantly higher mean than males. Conversely, for perpetration of sexual coercion,

males have a significantly higher mean than females. For both categories of victimization, there was not a significant difference for males and females, indicating both genders were victimized at similar rates. See Table 20 for means for males and females on all dependent variables.

Table 20

Means and Standard Deviations for Gender on All Dependent Variables

	Male		Female	
	M	SD	M	SD
Perpetrator Physical Assault	1.9	5.1	3.8	7.2
Perpetrator Sexual Coercion	2.2	3.7	09	2.9
Victim Physical Assault	3.9	8.7	4.2	8.6
Victim Sexual Coercion	2.6	4.9	2.6	5.7

Interactions

Two-Way. Two two-way interactions emerged with a significant effect. The first two way interaction was between interparental violence and gender on perpetration of sexual coercion, $F(1, 530) = 5.9, p = .015$. This interaction was significant only for perpetration of sexual coercion (see Table 21).

Table 21

Univariate Fs for Interparental Violence and Gender Interaction

Source	Dependent Variable	df	Mean Square	F	sig.
Interparental Violence*Gender	Perp. Phys. Assault	1	12.2	0.3	.589
	Perp. Sexual Coercion	1	57.2	5.9*	.015
	Vic. Phys. Assault	1	0.8	0.0	.913
	Vic. Sexual Coercion	1	10.2	0.4	.551
Error	Perp. Phys. Assault	530	41.8		
	Perp. Sexual Coercion	530	9.6		
	Vic. Phys. Assault	530	68.9		
	Vic. Sexual Coercion	530	28.6		

Note: * $p < .05$

Trend analyses were conducted post-hoc to detect where the differences occurred. See Table 22 for the means of perpetration of sexual coercion for each of the four groups in the 2 x 2

interaction. The post-hoc Tukey's revealed significant mean differences between males who witnessed interparental violence and males who did not witness interparental violence and females both who did and did not witness interparental violence, significant at the .05 level. Males who witnessed interparental violence scored higher than males who did not witness interparental violence (MD = 1.9, $p < .001$), females who witnessed interparental violence (MD = 2.4, $p < .001$), and females who did not witness interparental violence (MD = 2.7, $p < .001$). For a graphical representation of the interaction, see Figure 1.

Table 22

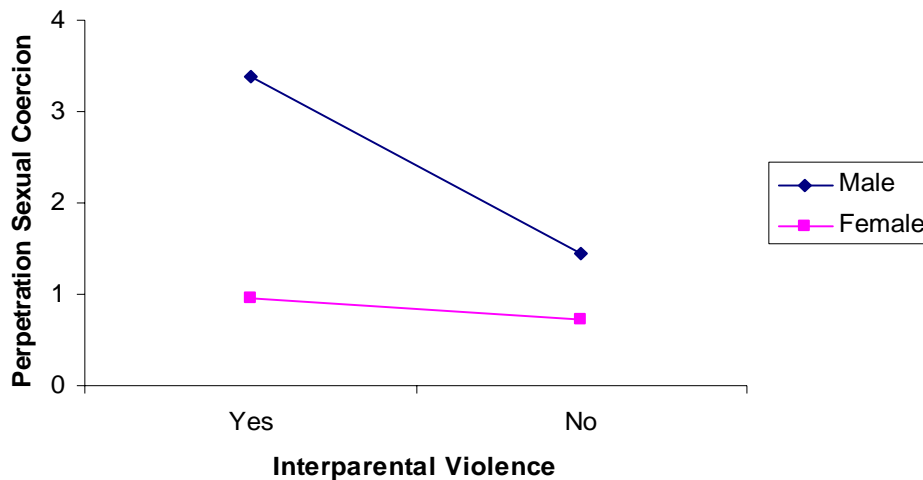
Mean of Perpetration of Sexual Coercion for Interparental Violence and Gender Interaction

		Interparental Violence	
		Yes	No
Gender	Male	3.4 (64)	1.5 (120)
	Female	1.0 (142)	0.7 (228)

Note: (N)

Figure 1

Gender and Interparental Violence Interaction for Perpetration of Sexual Coercion



The second two-way interaction was for adult attachment and self-esteem on perpetration of sexual coercion, $F(2, 530) = 3.7, p = .025$. As with the interaction between gender and interparental violence, perpetration of sexual coercion was the only dependent variable with this significant interaction (see Table 23).

Table 23

Univariate Fs for Adult Attachment and Self-Esteem Interaction

Source	Dependent Variable	df	Mean Square	F	sig.
Adult	Perp. Phys. Assault	2	14.0	0.3	.716
Attachment*Self-Esteem	Perp. Sexual Coercion	2	35.7	3.7*	.025
	Vic. Phys. Assault	2	61.1	0.9	.413
	Vic. Sexual Coercion	2	51.0	1.8	.169
Error	Perp. Phys. Assault	530	41.8		
	Perp. Sexual Coercion	530	9.6		
	Vic. Phys. Assault	530	68.9		
	Vic. Sexual Coercion	530	28.6		

Note: * $p < .05$

Again, a post-hoc Tukey's was conducted to determine specifically which groups had the mean differences. See Table 24 for the mean of perpetration of sexual coercion for each of the six groups in the 2 x 3 interaction. Trend analysis revealed three significant mean differences at the .05 level of significance. Those with secure adult attachment and moderate self-esteem were significantly higher than secure with high self-esteem ($MD = 1.4, p = .021$). Secure and high self-esteem was significantly lower than insecure with low self-esteem ($MD = -2.0, p < .001$). Insecure with low self-esteem was significantly higher than insecure with moderate self-esteem ($MD = 1.5, p = .009$). For a graphical representation, see Figure 2.

Table 24

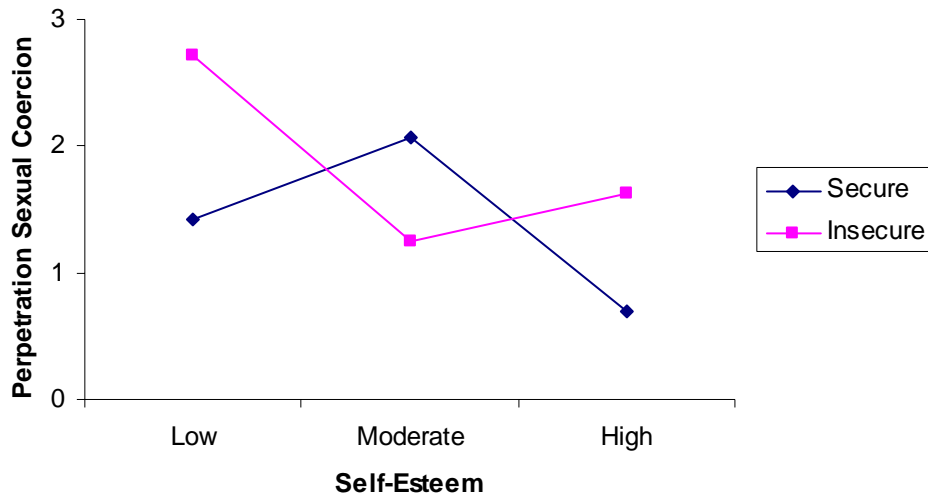
Mean of Perpetration of Sexual Coercion for Adult Attachment and Self-Esteem Interaction

		Self-Esteem		
		Low	Moderate	High
Adult Attachment	Secure	1.4 (47)	2.1 (75)	0.7 (154)
	Insecure	2.7 (137)	1.3 (84)	1.6 (57)

Note: (N)

Figure 2

Self-Esteem and Adult Attachment Interaction for Perpetration of Sexual Coercion



Three-Way. One three-way interaction between gender, adult attachment, and self-esteem emerged as significant. Again, this interaction was significant for perpetration of sexual coercion only, $F(2, 530) = 4.0, p = .020$. See Table 25 for all dependent variables.

Table 25

Univariate Fs for Gender, Adult Attachment, and Self-Esteem Interaction

Source	Dependent Variable	df	Mean Square	F	sig.
Gender*Adult Attachment	Perp. Phys. Assault	2	11.4	0.3	.762
	Perp. Sexual Coercion	2	38.0	4.0*	.020
*Self-Esteem	Vic. Phys. Assault	2	45.8	0.7	.515
	Vic. Sexual Coercion	2	24.0	0.8	.432

Table 25 (continued)

Source	Dependent Variable	df	Mean Square	F	sig.
Error	Perp. Phys. Assault	530	41.8		
	Perp. Sexual Coercion	530	9.6		
	Vic. Phys. Assault	530	68.9		
	Vic. Sexual Coercion	530	28.6		

Note: * $p < .05$

Post-hoc Tukey's revealed 11 differences significant at .05. See Table 26 for means of all 12 groups on perpetration of sexual coercion for the 2 x 2 x 3 interaction. Secure males with moderate self-esteem had a significantly higher mean than secure females with moderate self-esteem ($MD = 2.6, p = .029$), secure females with high self-esteem ($MD = 3.0, p = .001$), and insecure females with high self-esteem ($MD = 3.0, p = .011$). Insecure males with low self-esteem had a significantly higher mean than secure males with high self-esteem ($MD = 2.9, p = .001$) and all six groups of females: secure females with low self-esteem ($MD = 2.9, p = .003$), secure females with moderate self-esteem ($MD = 3.0, p < .001$), secure females with high self-esteem ($MD = 3.5, p < .001$), insecure females with low self-esteem ($MD = 2.2, p = .004$), insecure females with moderate self-esteem ($MD = 2.9, p < .001$), and insecure females with high self-esteem ($MD = 3.5, p < .001$). Finally, insecure males with high self-esteem had a significantly higher mean than secure females with high self-esteem ($MD = 2.6, p = .012$).

Table 26

Mean of Perpetration of Sexual Coercion for Gender, Adult Attachment, and Self-Esteem

Interaction

		Adult Attachment					
		Secure			Insecure		
		Self-Esteem					
		Low	Moderate	High	Low	Moderate	High
Gender	Male	1.9 (12)	3.4 (26)	1.0 (49)	3.8 (46)	1.5 (26)	2.9 (25)
	Female	1.0 (35)	0.8 (49)	0.4 (105)	1.6 (91)	1.0 (58)	0.3 (32)

Note: (N)

Four-Way. One four-way interaction approached significance between gender, adult attachment, interparental violence and self-esteem for victimization of physical assault. While the interaction did not reach significance at the .05 level, it did approach significance, $F(2, 530) = 2.9, p = .054$. See Table 27 for all dependent variables.

Table 27

Univariate Fs for Gender, Adult Attachment, Interparental Violence, and Self-Esteem Interaction

Source	Dependent Variable	df	Mean Square	F	sig.
Gender*Adult Attachment	Perp. Phys. Assault	2	47.0	1.1	.325
*Interparental Violence*Self-	Perp. Sexual Coercion	2	2.7	0.3	.756
	Vic. Phys. Assault	2	201.7	2.9	.054
	Vic. Sexual Coercion	2	6.2	0.2	.806
Error	Perp. Phys. Assault	530	41.8		
	Perp. Sexual Coercion	530	9.6		
	Vic. Phys. Assault	530	68.9		
	Vic. Sexual Coercion	530	28.6		

Tukey's post-hoc analysis revealed nine significant mean differences. See Table 28 for means of victimization of physical assault for all 24 groups in the 2 x 2 x 3 x 2 interaction. All but one of these significant differences appeared with insecure males with low self-esteem who witnessed interparental violence. This group scored significantly higher than secure males with moderate self-esteem who did not witness interparental violence ($MD = 11.4, p = .011$), secure males with high self-esteem who did not witness interparental violence ($MD = 10.6, p = .002$), insecure males with low self-esteem who did not witness interparental violence ($MD = 10.2, p = .009$), secure females with low self-esteem who did not witness interparental violence ($MD = 9.5, p = .036$), secure females with moderate self-esteem who did not witness interparental violence ($MD = 10.0, p = .004$), secure females with high self-esteem who did not witness interparental violence ($MD = 11.2, p < .001$), insecure females with moderate self-esteem who did not witness interparental violence ($MD = 8.8, p = .028$), and secure females with high self-

esteem who did witness interparental violence (MD = 10.3, $p = .004$). The remaining significant difference was insecure females with low self-esteem who witnessed interparental violence was higher than secure females with high self-esteem who did not witness interparental violence (MD = 6.1, $p = .012$).

Table 28

Mean of Victimization of Physical Assault for Gender, Adult Attachment, Interparental Violence, and Self-Esteem Interaction

Gender	Interparental Violence	Adult Attachment					
		Secure Self-Esteem			Insecure Self-Esteem		
		Low	Moderate	High	Low	Moderate	High
Male	No	1.0 (10)	1.3 (16)	2.1 (35)	2.5 (26)	6.4 (16)	4.0 (17)
	Yes	0.0 (2)	1.8 (10)	3.1 (14)	12.7 (20)	3.2 (10)	4.6 (8)
Female	No	3.2 (23)	2.7 (37)	1.6 (74)	7.3 (40)	3.9 (38)	2.9 (16)
	Yes	8.3 (12)	2.1 (12)	2.4 (31)	7.7 (51)	7.1 (20)	3.3 (16)

Note: (N)

Summary

Some of the aforementioned results lend support to the hypotheses under investigation. On the other hand, some of the results failed to support the hypotheses for the current study. To some degree, there does appear to be a relationship between interparental violence, self-esteem, adult attachment, and intimate violence. However, the relationship may not be as straightforward as one would think. In the following chapter, the results were more fully explored in terms of the hypotheses under investigation.

CHAPTER 4

DISCUSSION

The current study sought to investigate the use of violent tactics in the resolution of conflicts within intimate relationships. Specifically, this study explored the influence of self-esteem, adult attachment styles, and witnessing interparental violence on the use of violence in intimate relationships. The focus of the study was on the perpetration of physical aggression against an intimate partner.

Self-esteem refers to the overall perception of self-worth of an individual (Papps & O'Carroll, 1998). For purposes of this study, self-esteem was conceptualized as a relatively stable trait of an individual rather than a more fluid state. Research exploring the link between self-esteem and aggression is a mixed bag of sorts, reporting inconsistent findings of the relationship (Jezl, Molidor, & Wright, 1996; Salmivalli, 2001). Some research (Donnellan, et al., 2005) has found a negative relationship between aggression and self-esteem, suggesting low self-esteem is related to increased aggression. Other research (Bushman & Baumeister, 1998; Papps & O'Carroll) suggests high self-esteem, especially when coupled with high narcissism, is related to aggression. Still yet, other research (Sharpe & Taylor, 1999) report different associations based on gender with lower self-esteem tied to perpetration and victimization for females and higher self-esteem linked to victimization for males. The current study found low self-esteem to be linked to the perpetration of physical aggression in intimate relationships.

Attachment theory proposes children develop styles of attachment during childhood based on the relationship with their mother (Dutton, 2000; Dutton, Saunders, Starzomski, & Bartholomew, 1994; Follingstad, Bradley, Helff, & Laughlin, 2002; Karen, 1998). The three resultant attachment styles can be classified as either secure or insecure. The secure attachment

does not evidence significant problems in adult relationships as the experience with the primary caregiver in childhood was secure and the adult will not develop resultant anxieties or insecurities about relationships. Insecure attachments can be characterized as either anxious-ambivalent or avoidant. In general, insecure adult attachments are proposed to coincide with higher incidence of insecurity in adult love relationships and anxiety within these relationships. The relationships are often either roller coasters with extreme highs and lows marked by jealousy and a need for incessant reassurances or a seeming distance and dismissal of love and relationships in general (Mayseless, 1991). Research (Dutton et al.; Follingstad et al.; Mayseless) suggests insecure adult attachment styles may be related to increased use of violence in intimate relationships. Consistent with this research, the current study found insecure attachment to be associated with increased perpetration of physical assault.

Social learning theory (Bandura, 1973) proposes people learn not only through firsthand experience but also vicariously via observation. Social learning theory provides the foundation for an intergenerational transmission of violence (O'Keefe, 1998). Theoretically, social learning theory would posit children learn, via observation of their parents, how to engage in and interact within future romantic relationships. Specifically, the intergenerational transmission of violence suggests children who observe violence between their parents as a viable means of resolving conflicts will be more likely to later, when in similar situations, rely on those same tactics that were witnessed during childhood within their model of what constitutes an intimate relationship, their mother and father. Research has found substantial support for the intergenerational transmission of violence (e.g Cantrell, 1995; Carlson, 1987; Carr & VanDeusen, 2002; Chapple, 2003; Dutton, 2000; Foshee et al., 1999; Hendy et al., 2003; Holt, 2005; Lavoie et al., 2002;

O'Keefe). In addition, the current study found support for an intergenerational transmission of violence.

Prevalence of Intimate Violence

Perpetration

In the current study, 44.8% of the participants indicated they had perpetrated physical assault against a partner at sometime during their lifetime. This was on the high end of the range of 21%-45% that is typical in a college population but higher than the average of 30% (Lewis & Fremouw, 2001; Lewis, et al., 2002; Makepeace, 1981, 1986). However, this might be explained in that typically, the CTS is used with the previous year as the referent time period rather than over one's lifetime (Straus, 1979; Straus, et al., 1996). Therefore, higher rates would be expected. For perpetration of sexual coercion, the prevalence in the current study was lower. In the current study, 24.3% of participants reported perpetrating sexual coercion against a partner during their lifetime.

Gender and Perpetration. When thinking of intimate or domestic violence, the male is often assumed to be the aggressor and the female the victim. However, research suggests this is a misconception. In the current study, 50.5% of females reported perpetrating physical assault against a partner while 33.7% of males reported the same. This difference was statistically significant. While this finding might surprise some, it is consistent with previous research in the field (e.g. Chase, Treboux, O'Leary, & Strassberg, 1998; George, 1999; Hendy, et al., 2003; Morse, 1995; Straus, 1999; Swan & Snow, 2002). For perpetration of sexual coercion, the results were the opposite. In the current study, 39% of males reported sexually coercing a partner while 17.2% of females did the same.

Victimization

In the current study, 47.4% of participants indicated they had been the victim of physical assault by a partner at some point in their lives. Again, while this may seem high, it was a lifetime prevalence rate rather than over the previous year or the last relationship. In the current study, 36.8% of participants reported they had been the victim of sexual coercion from a partner.

Gender and Victimization. In the current study, 46% of females reported being the victim of physical assault by a partner while 51.3% of males reported the same. The difference between these was not statistically significant. While this finding might be surprising, it was also in line with previous research (e.g. Harned, 2002; Jenkins & Aube, 2002). This victimization was assessed via the participants' indication of what they had experienced from their partner, not their perception of themselves as a victim of intimate violence. Interestingly, for victim of sexual coercion, 34% of females reported being sexually coerced by a partner while 43.3% of males reported the same. This difference was statistically significant. Therefore, not only were males perpetrating sexual coercion more than females, they were also victims of sexual coercion more than females.

Hypotheses

Hypothesis 1

Hypothesis 1 investigated self-esteem and the perpetration of intimate violence. This hypothesis was tested via two analytical methods. An independent samples *t* test was conducted comparing the mean self-esteem of those who have and have not perpetrated physical assault against a partner. This method supported the hypothesis in that those who reported perpetrating physical assault against a partner did have significantly lower self-esteem than those who had not perpetrated violence against a partner. Secondly, this hypothesis was assessed via Pearson *r*

correlation to determine the nature of the relationship between perpetration of physical assault and self-esteem. These results also lend support to this hypothesis in that self-esteem and perpetration of physical assault were significantly negatively correlated. The variables were scored in such a way that higher scores on perpetration correspond to increased perpetration and lower levels of self-esteem correspond to lower self-esteem. Thus, as perpetration of physical assault increases, self-esteem decreases. Both of these findings lend support to hypothesis 1.

Hypothesis 2

Hypothesis 2 sought to investigate the relationship between perpetration of intimate violence and adult attachment styles. Specifically, it was hypothesized that participants who reported perpetrating physical assault against a partner would exhibit insecure adult attachment styles. This hypothesis was explored via two analytical strategies. Initially, mean comparisons were made using an independent samples *t* test. The mean of adult attachment was compared for those who had and had not perpetrated physical assault against a partner. Those participants who had perpetrated physical assault had a significantly higher mean score on adult attachment than those who had not perpetrated physical assault. Higher scores on adult attachment indicate a more insecure adult attachment style, thus those participants who perpetrated physical assault exhibited a more insecure adult attachment style than those who had not. Secondly, Pearson *r* correlation found a significant positive relationship between adult attachment and perpetration of physical assault. Again, the variables were scored in such a way that insecure adult attachment corresponds to higher scores on the adult attachment scale. Likewise, higher scores of perpetration of physical assault indicate more physical assault. Therefore, these findings suggest as adult attachment gets more insecure, perpetration of physical assault increase. Again, both of these findings lent support to hypothesis 2.

Hypothesis 3

Hypothesis 3 dealt with the relationship between witnessing interparental violence and perpetration of intimate violence. It was hypothesized that those who witnessed interparental violence would report perpetrating more physical assault against a partner. This relationship was assessed via two methods. Initially, cross-tabs were constructed and chi-square tests of independence were conducted for the dichotomous variables of witnessing interparental violence and perpetration of physical assault. The results support the hypothesis finding that the variables of witnessing interparental violence and perpetration of physical assault were not independent of each other. Secondly, Pearson *r* correlation was conducted with the interval-ratio variables of interparental violence and perpetration of physical assault. A significant positive relationship emerged for interparental violence and perpetration of physical assault. These variables were scored such that higher scores correspond to higher rates of each. Thus, as interparental violence increases, so does perpetration of physical assault. This also supports hypothesis 3.

Hypothesis 4

Finally, the 4th hypothesis was a combination of the previous three. The 4th hypothesis proposed the highest perpetration of physical assault would be seen for those participants who had witnessed interparental violence, with low self-esteem, and insecure adult attachment. In order to test this hypothesis, a 2 x 2 x 3 x 2 MANOVA was conducted with gender, adult attachment, self-esteem, and interparental violence as independent variables. Rather than conducting an ANOVA with only perpetration of physical assault as the dependent variable, a MANOVA was conducted with perpetration of both physical assault and sexual coercion and victimization of both physical assault and sexual coercion as the dependent variables. While the focus of the current study was on perpetration of physical assault, it must be acknowledged that

perpetration of physical assault does not take place in a vacuum. Research suggests there is a very strong reciprocal nature to intimate violence in that perpetration and victimization are interconnected (e.g. Harned, 2002; Jenkins & Aube, 2002; Lawson, 2003; Marshall & Rose, 1990; Straus, 1980). Likewise, intimate violence can take many forms, two of which are physical assault and sexual coercion. For these reasons, the decision was made to include all four variables as dependent variables in the MANOVA so as not to overestimate the effects by including only one variable or increase the error rate by conducting multiple ANOVAs. With the MANOVA, the univariate step down analyses hold each variable constant in order to determine the individual effects of each while accounting for the common variance in each dependent variable.

The results from the MANOVA failed to support hypothesis 4. While all four independent variables emerged with significant main effects for the combined dependent variables, only two main effects emerged as significant for perpetration of intimate violence. These two main effects were self-esteem and gender. The main effect for self-esteem suggests those with low self-esteem had higher perpetration as compared to those with moderate and high self-esteem. The main effect of gender suggests females report more perpetration of physical assault than males. There were neither further main effects for perpetration of physical assault nor any significant interactions for perpetration of physical assault. While these were the only significant results emerging for perpetration of physical assault, there were other interesting findings that will be further discussed in the conclusion.

Limitations

Certain limitations of the current study must be considered when interpreting the results. The first limitation addressed will focus on the use of the CTS and CTS2 for the measurement of

intimate violence. The CTS has come under considerable criticism as a measure of intimate violence (e.g. Flynn, 1990; Frieze, 2000; Dasgupta, 2002; Murphy, Stevens, McGrath, Wexler, & Reardon, 1998; Worcester, 2002). The primary criticism focuses on the fact that the CTS and CTS2 are strictly quantitative measures of interpersonal violence with no qualitative component to either the context of the situation or the motivation for the behavior. This being said and this criticism recognized, the CTS is still the most widely used measure of interpersonal violence (Archer, 2000a, 2000b; Lawson, 2003; Swan & Snow, 2002).

Also related to the CTS and CTS2 is the limitation of participant memory. Participants were asked to think back over all of their previous relationships and indicate the frequency of each behavior on a scale ranging from never to more than 20 times. For interparental violence, the participants were instructed to think back over their childhood and indicate the frequency on a scale ranging from never to more than once a month. Both of these measures are subject to error because of inaccurate memories. However, barring those aberrant cases in which violence is the norm, an incidence of violence is likely to stand out in one's memory. In addition, this is a limitation inherent to all self-report studies. Therefore, it should not invalidate the results.

Another limitation of the current study relates to attachment theory. There is some debate about the stability of attachment styles developing in childhood. The debate is whether attachment styles evidenced in childhood carry over into adulthood. The current study holds to the view of those who propose attachment styles developed during childhood are relatively stable and are expressed in adulthood (Dutton, 2000; Dutton, et al., 1994; Follingstad, et al., 2002; Karen, 1998; Mayseless, 1991).

The conceptualization of self-esteem as a relatively stable trait of an individual might also limit the current study. There is debate about whether self-esteem is a stable trait or a more

fluid state. If self-esteem is a state, it might be that rather than self-esteem leading to aggression, aggression might lead to changes in self-esteem. Also, the Rosenberg (1965) scale that was used for self-esteem asks very direct questions about self-esteem. It could be argued that instead of a global self-esteem, the measure is, instead, a measure of individuals' assessment of their self worth at that particular point in time.

In addition to the aforementioned limitations, the validity of the results may also be limited by certain liberties taken with regards to the scales used. During administration of the CTS2, the referent time period participants are usually asked to recall is the previous year. In the current study, participants were instructed to think back over all of their previous relationships. In terms of the CTS for interparental violence, the norm is to ask participants to recall the last year, if they still reside at home, or the last year they did reside at home. In the current study, participants were instructed to think back over their childhood. In addition, the scale was changed from a seven-point Likert scale ranging from never to more than 20 times to a more subjective scale ranging from never to more than once a month. Also, the Rosenberg self-esteem scale was changed from a four-point Likert scale to a six-point Likert scale. However, none of these changes are expected to have dramatically altered the findings or reliability of the scales as evidenced by the Cronbach's alphas reported in Chapter 2.

In the current study, there were two modes of data collection. One was online and the other was in person, albeit on a self-report anonymous, confidential survey. The data were all analyzed together even with different data collection methods. However, based on *t* tests, there did not appear to be a drastic difference between the variables of interest when the different modes of administration were compared. The only difference observed was for victim of sexual coercion with the online participants scoring significantly higher. However, this difference could

be accounted for by the greater concentration of female participants (72%) in the online version as opposed to the paper version (62%).

A final limitation of the study might be the actual questionnaire itself. The questionnaire was rather lengthy with over 200 questions. It took anywhere from 15 to 30 minutes to complete. Participants might have experienced fatigue that could negatively impact the results. The lengthiest part of the questionnaire was the CTS2, with 78 items. Because the focus of the current study was on perpetration of physical assault, theoretically, only the physical assault subscale could have been included. However, the decision was made to include the scale in its entirety for the aforementioned reasons of interconnectedness between perpetration and victimization and physical assault and sexual coercion.

Conclusions

In conclusion, the current study found some results consistent with previous research while others were not. There does appear to be a relationship of sorts between witnessing interparental violence and the perpetration of violence. However, when all of the dependent variables were taken into account, the significance emerged only for sexual coercion, both perpetration and victimization. However, based on other analyses in the current study, there does appear to be a relationship between witnessing interparental violence and physical assault as well. In general, these findings do lend support to the theory of an intergenerational transmission of violence. However, the relationship may not be as simple as observing physical violence between parents leads to perpetration of violence in later relationships. The finding of a significant main effect for sexual coercion, both as a perpetrator and victim, is interesting in light of the intergenerational transmission of violence. While the survey did not assess witnessing sexual coercions between parents, one would assume (or at least hope) children are not

witnessing sexual coercion between their parents. Therefore, there might be some mediating factor connecting physical assault and sexual coercion. It might be that normalizing physical violence within a relationship desensitizes an individual to other forms of aggression. The current study did find a significant positive relationship between physical assault and sexual coercion for both perpetration and victimization. The relationship between witnessing interparental violence and perpetration of sexual coercion does appear to be stronger for males as evidenced by the interaction between gender and interparental violence. The mean perpetration of sexual coercion did not significantly change for females relative to witnessing interparental violence. However, there was a significant change for males dependent upon whether or not they had witnessed interparental violence.

The relationship for self-esteem appears to lend more support to the argument that lower self-esteem is related to increased aggression, at least for aggression within an intimate relationship. Self-esteem and aggression may have a different relationship entirely when considering aggression not occurring within an intimate relationship. A significant main effect emerged with self-esteem for the perpetration of physical assault. This main effect found those with low self-esteem perpetrated more physical assault than both those with moderate and high self-esteem. While the remaining main effects were not significant, there were significant differences within the three remaining dependent variables between low and high self-esteem for perpetration of sexual coercion and victimization of physical assault and between low and moderate self-esteem for victimization of sexual coercion. In all of these instances, those with low self-esteem were significantly higher on the respective dependent variable. Thus, it appears low self-esteem is related to being involved in many aspects of intimate violence.

For adult attachment, two main effects emerged for victimization of both physical assault and sexual coercion. For both of these forms of victimization, insecure adult attachment was associated with increased victimization. This is interesting that the relationship was stronger for victimization than perpetration, which was the focus of the study. It could be that individuals with insecure adult attachment are more willing to accept victimization in intimate relationships out of fear of losing the relationship. However, it could also be that those with insecure adult attachments are more likely to be involved in relationships that are unhealthy in general. While there was not a significant main effect for perpetration of sexual coercion and adult attachment, there was a significant interaction between adult attachment and self-esteem for perpetration of sexual coercion. It appears self-esteem, specifically moderate self-esteem, moderated the relationship between adult attachment and perpetration of sexual coercion in the current study. In general, those with secure adult attachment reported lower perpetration of sexual coercion than those with insecure adult attachment. However, moderate self-esteem increased perpetration of sexual coercion for those with secure adult attachment and lowered perpetration of sexual coercion for those with insecure adult attachment. This finding is interesting and might point to instability in the self-esteem of those in the moderate group. If the self-esteem is moderate, it might be less stable than either high or low self-esteem. An unstable self perception may, in and of itself, lead to increased incidences of both perpetration and victimization.

One four-way interaction approached significance. This interaction was between gender, interparental violence, self-esteem, and adult attachment for victimization of physical assault. When examining the post-hoc analyses for significant differences, one group emerged as the source of the majority of differences. This was insecure males with low self-esteem who

witnessed interparental violence. The victimization of physical assault for this group of participants was significantly higher than that for many of the other groups.

When examining the results of the current study, there is one recurrent theme that must be addressed. While the significant findings for perpetration of physical assault were limited, several significant relationships emerged for perpetration of sexual coercion, both main effects and interactions. For instance, the only significant three-way interaction was between gender, self-esteem, and adult attachment for perpetration of sexual coercion. This interaction suggests males are more greatly impacted by adult attachment and self-esteem in terms of perpetration of sexual coercion. Those males with insecure adult attachment and low and high self-esteem evidenced the most striking differences as well as males with moderate self-esteem and secure adult attachment. This may be related to the social importance of sex for males. While females seem to be more socialized towards relationships, males tend to be more socialized towards being sexual and giving sex a high priority in their life. However, this is merely supposition. The focus of the current study was perpetration of physical assault. Analyses were undertaken with sexual coercion because it is connected to physical violence. However, sexual coercion, per se, was not intended to be a primary focus of this research.

Future Research

Based on the findings of the current study, future research should be undertaken to investigate further the relationship between sexual coercion and gender, self-esteem, adult attachment, and interparental violence. It would appear from the findings of the current study, the model proposed for perpetration of physical assault may, actually, better fit sexual coercion. Further, research should be undertaken to explore the relationship between sexual coercion and

physical assault. It may be these two should be combined to establish a comprehensive conception of physical violence in intimate relationships.

Self-esteem should be more fully explored, both in its conception and its relationship with gender. The current study did not find a gender difference in self-esteem. This was surprising as it is generally expected to see a significant difference between males and females, with males generally having higher self-esteem. The scale was found to be reliable in the current study. There was a deviation from the standard response scale, going from a four-point to six-point Likert scale. However, the scale was collapsed into a four-point scale two different ways for exploratory purposes to test for a significant gender difference and none appeared. In addition, research should explore the state versus trait argument regarding self-esteem to better understand the nature of self-esteem in general.

Finally, more research needs to be undertaken to further explore the relationship between being the abuser and the abused. Perpetration and victimization appear to be intricately interwoven and it may be inappropriate to attempt to study one without the other. Interventions should be undertaken to attempt to decrease the initiation of aggression in intimate relationships for both parties and the subsequent reactive aggression would probably decrease in response. Educational programs should reiterate the idea “violence begets violence”, both in terms of within a relationship and the witnessing of violence by children between parents.

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APPENDICES

APPENDIX A

Demographic Questionnaire

1. What is your age:	
2a. What is your classification in school: b. What is your major?	<input type="checkbox"/> Freshman <input type="checkbox"/> Sophomore <input type="checkbox"/> Junior <input type="checkbox"/> Senior <input type="checkbox"/> Graduate <input type="checkbox"/> Other _____ _____
3. Which best describes your race:	<input type="checkbox"/> Caucasian <input type="checkbox"/> African-American <input type="checkbox"/> Asian <input type="checkbox"/> Hispanic <input type="checkbox"/> Other _____
4. What is your gender:	<input type="checkbox"/> Male <input type="checkbox"/> Female
5a. What best describes your relationship status: b. How long have you been in your current relationship:	<input type="checkbox"/> Single (not dating) <input type="checkbox"/> Casually dating <input type="checkbox"/> Seriously Dating <input type="checkbox"/> Engaged <input type="checkbox"/> Married <input type="checkbox"/> Domestic Partnership _____ months or years (circle)
6. What is your marital status:	<input type="checkbox"/> Single (never married) <input type="checkbox"/> Married <input type="checkbox"/> Domestic Partner <input type="checkbox"/> Separated <input type="checkbox"/> Divorced <input type="checkbox"/> Widowed
7a. What best describes your current living arrangement: b. If you live off campus not with parents, who do you live with?	<input type="checkbox"/> On-campus <input type="checkbox"/> Off-campus (with family) <input type="checkbox"/> Off-campus (not with family) <input type="checkbox"/> Other _____ <input type="checkbox"/> Roommate(s) <input type="checkbox"/> Significant Other <input type="checkbox"/> Alone <input type="checkbox"/> Other _____
8. What is your sexual orientation?	<input type="checkbox"/> Heterosexual <input type="checkbox"/> Homosexual <input type="checkbox"/> Bisexual <input type="checkbox"/> Other
9a. Are you religious: b. What is your religious affiliation (e.g. Baptist):	<input type="checkbox"/> Yes <input type="checkbox"/> No _____
10. Do you consider yourself to be spiritual?	<input type="checkbox"/> Yes <input type="checkbox"/> No
11. What is your or your family's approximate annual income level:	<input type="checkbox"/> Less than \$10,000 <input type="checkbox"/> \$10,001-\$20,000 <input type="checkbox"/> \$20,001-\$30,000 <input type="checkbox"/> \$30,001-\$40,000 <input type="checkbox"/> \$40,001-\$50,000 <input type="checkbox"/> Over \$50,000
12a. Do you have children: b. If yes, how many? c. If yes, are you a single parent:	<input type="checkbox"/> Yes <input type="checkbox"/> No # of children: _____ <input type="checkbox"/> Yes <input type="checkbox"/> No

APPEENDIX B

Conflict Tactics Scale

The following questions regard the relationship that your parental figures had while you were growing up. Reference the people with whom you lived with the majority of the time growing up (Re. question 16). Again, as with your interpersonal relationships, the relationship between parental figures is oftentimes stressful and will always have some conflicts regardless of how well they get along. Following, you will see the same questions that you just answered about yourself and your partner. However, this time, the questions will be asked with your mother (or other adult) and your father (or other adult) in mind. If you are answering the questions based on other adults besides mother or father (e.g. stepmother, boyfriend, etc.), please specify whom this person is. Think back to when you were growing up and answer these questions as best your memory will allow. Answer these questions about tactics that you saw your parental figures employ with each other, not with you or your siblings. For example, question 18 relates to how many times your mother acted in the listed ways towards your father, while question 19 relates to how many times your father acted in the listed ways towards your mother.

	<u>Mother/Mother Figure to Father/Father Figure During Childhood</u>						<u>Father/Father Figure to Mother/Mother Figure During Childhood</u>					
	1—Once	2—Two or three times	3—Often but less than once a month	4—About once a month	5—More than once a month	0—Never	1—Once	2—Two or three times	3—Often but less than once a month	4—About once a month	5—More than once a month	0—Never
A. Insulted or swore at him/her.....	1	2	3	4	5	0	1	2	3	4	5	0
B. Sulked or refused to talk about an issue.....	1	2	3	4	5	0	1	2	3	4	5	0
C. Stomped out of the room or house or yard.....	1	2	3	4	5	0	1	2	3	4	5	0
D. Did or said something to spite him/her	1	2	3	4	5	0	1	2	3	4	5	0
E. Threatened to hit or throw something at him/her	1	2	3	4	5	0	1	2	3	4	5	0
F. Threw or smashed or hit or kicked something...	1	2	3	4	5	0	1	2	3	4	5	0
G. Threw something <u>at</u> him/her.....	1	2	3	4	5	0	1	2	3	4	5	0
H. Pushed, grabbed, or shoved him/her.....	1	2	3	4	5	0	1	2	3	4	5	0
I. Slapped him/her.....	1	2	3	4	5	0	1	2	3	4	5	0
J. Kicked, bit, or hit him/her.....	1	2	3	4	5	0	1	2	3	4	5	0
K. Hit or tried to hit him/her with something.....	1	2	3	4	5	0	1	2	3	4	5	0
L. Beat him/her up.....	1	2	3	4	5	0	1	2	3	4	5	0
M. Choked him/her.....	1	2	3	4	5	0	1	2	3	4	5	0

	<u>Mother/Mother Figure to Father/Father Figure During Childhood</u>						<u>Father/Father Figure to Mother/Mother Figure During Childhood</u>					
	1—Once	2—Two or three times	3—Often but less than once a month	4—About once a month	5—More than once a month	0—Never	1—Once	2—Two or three times	3—Often but less than once a month	4—About once a month	5—More than once a month	0—Never
N. <u>Threatened</u> him/her with a knife or gun.....	1	2	3	4	5	0	1	2	3	4	5	0
O. Used a knife or fired a gun.....	1	2	3	4	5	0	1	2	3	4	5	0

APPENDIX C

Revised Conflict Tactics Scale

The next series of questions is regarding conflicts that may have taken place in your interpersonal relationships during your lifetime. Regardless of how well a couple gets along, there will always be disagreements, spats, and fights for many different reasons. Different people also employ several different tactics in attempts to resolve the conflict. Please answer the following statements based on your experiences in relationships over your lifetime. Answer based on all of the relationships you have had. The response options are 1=once, 2=twice, 3=3-5 times, 4=6-10 times, 5= 11-20 times, 6=more than twenty times, and 0=never. Remember, these are how many times these things have happened in your lifetime.

	1—Once	2—Twice	3—3-5 Times	4—6-10 Times	5—11-20 Times	6—More than 20	0—Never
1. I showed my partner I cared even though we disagreed.....	1	2	3	4	5	6	0
2. My partner showed care for me even though we disagreed.....	1	2	3	4	5	6	0
3. I explained my side of a disagreement to my partner.....	1	2	3	4	5	6	0
4. My partner explained his/her side of a disagreement to me.....	1	2	3	4	5	6	0
5. I insulted or swore at my partner.....	1	2	3	4	5	6	0
6. My partner did this to me.....	1	2	3	4	5	6	0
7. I threw something at my partner that could hurt.....	1	2	3	4	5	6	0
8. My partner did this to me.....	1	2	3	4	5	6	0
9. I twisted my partner's arms or hair.....	1	2	3	4	5	6	0
10. My partner did this to me.....	1	2	3	4	5	6	0
11. I had a sprain, bruise, or small cut because of fight with my partner.....	1	2	3	4	5	6	0
12. My partner had a sprain, bruise, or small cut because of fight with me.....	1	2	3	4	5	6	0
13. I showed respect for my partner's feelings about an issue.....	1	2	3	4	5	6	0
14. My partner showed respect for my feelings about an issue.....	1	2	3	4	5	6	0
15. I made my partner have sex without a condom.....	1	2	3	4	5	6	0
16. My partner did this to me.....	1	2	3	4	5	6	0
17. I pushed or shoved my partner.....	1	2	3	4	5	6	0
18. My partner did this to me.....	1	2	3	4	5	6	0
19. I used force (e.g. hitting, holding down, weapon etc.) to make my partner have oral or anal sex.....	1	2	3	4	5	6	0
20. My partner did this to me.....	1	2	3	4	5	6	0
21. I used a knife or gun on my partner.....	1	2	3	4	5	6	0
22. My partner did this to me.....	1	2	3	4	5	6	0
23. I passed out from being hit on the head by my partner...	1	2	3	4	5	6	0
24. My partner passed out from being hit on the head by me...	1	2	3	4	5	6	0
25. I called my partner fat or ugly.....	1	2	3	4	5	6	0
26. My partner called me fat or ugly.....	1	2	3	4	5	6	0

	1—Once	2—Twice	3—3-5 Times	4—6-10 Times	5—11-20 Times	6—More than 20	0—Never
27. I punched or hit my partner with something that could hurt.....	1	2	3	4	5	6	0
28. My partner did this to me.....	1	2	3	4	5	6	0
29. I destroyed something belonging to my partner...	1	2	3	4	5	6	0
30. My partner did this to me.....	1	2	3	4	5	6	0
31. I went to the doctor because of a fight with my partner.....	1	2	3	4	5	6	0
32. My partner went to the doctor because of a fight with me.....	1	2	3	4	5	6	0
33. I choked my partner.....	1	2	3	4	5	6	0
34. My partner did this to me.....	1	2	3	4	5	6	0
35. I shouted or yelled at my partner.....	1	2	3	4	5	6	0
36. My partner did this to me.....	1	2	3	4	5	6	0
37. I slammed my partner against a wall.....	1	2	3	4	5	6	0
38. My partner did this to me.....	1	2	3	4	5	6	0
39. I said I was sure we could work out a problem....	1	2	3	4	5	6	0
40. My partner was sure we could work it out.....	1	2	3	4	5	6	0
41. I needed to see a doctor because of a fight with my partner, but didn't.....	1	2	3	4	5	6	0
42. My partner needed to see a doctor because of a fight with me, but didn't.....	1	2	3	4	5	6	0
43. I beat up my partner.....	1	2	3	4	5	6	0
44. My partner did this to me.....	1	2	3	4	5	6	0
45. I grabbed my partner.....	1	2	3	4	5	6	0
46. My partner did this to me.....	1	2	3	4	5	6	0
47. I used force (e.g. hitting, holding down, weapon, etc.) to make my partner have sex.....	1	2	3	4	5	6	0
48. My partner did this to me.....	1	2	3	4	5	6	0
49. I stomped out of house/yard/room during a disagreement.....	1	2	3	4	5	6	0
50. My partner did this to me.....	1	2	3	4	5	6	0
51. I insisted on sex when my partner did not want to (but did not use physical force).....	1	2	3	4	5	6	0
52. My partner did this to me.....	1	2	3	4	5	6	0
53. I slapped my partner.....	1	2	3	4	5	6	0
54. My partner did this to me.....	1	2	3	4	5	6	0
55. I had a broken bone from a fight with my partner.....	1	2	3	4	5	6	0
56. My partner had a broken bone from a fight with me.....	1	2	3	4	5	6	0
57. I used threats to make my partner have oral or anal sex.....	1	2	3	4	5	6	0
58. My partner did this to me.....	1	2	3	4	5	6	0
59. I suggested a compromise to a disagreement.....	1	2	3	4	5	6	0
60. My partner suggested a compromise to a disagreement.....	1	2	3	4	5	6	0
61. I burned or scalded my partner on purpose.....	1	2	3	4	5	6	0
62. My partner did this to me.....	1	2	3	4	5	6	0
63. I insisted my partner have oral or anal sex (did not use physical force).....	1	2	3	4	5	6	0
64. My partner did this to me.....	1	2	3	4	5	6	0

	1—Once	2—Twice	3—3-5 Times	4—6-10 Times	5—11-20 Times	6—More than 20	0—Never
65. I accused my partner of being a lousy lover.....	1	2	3	4	5	6	0
66. My partner accused me of being a lousy lover.....	1	2	3	4	5	6	0
67. I did something to spite my partner.....	1	2	3	4	5	6	0
68. My partner did this to me.....	1	2	3	4	5	6	0
69. I threatened to hit or throw something at my partner.....	1	2	3	4	5	6	0
70. My partner did this to me.....	1	2	3	4	5	6	0
71. I felt physical pain that still hurt the next day because of a fight with my partner.....	1	2	3	4	5	6	0
72. My partner felt physical pain that still hurt the next day because of a fight with me.....	1	2	3	4	5	6	0
73. I kicked my partner.....	1	2	3	4	5	6	0
74. My partner did this to me.....	1	2	3	4	5	6	0
75. I used threats to make my partner have sex.....	1	2	3	4	5	6	0
76. My partner did this to me.....	1	2	3	4	5	6	0
77. I agreed to try a solution to a disagreement my partner suggested.....	1	2	3	4	5	6	0
78. My partner agreed to try a solution to a disagreement I suggested.....	1	2	3	4	5	6	0

APPENDIX D

Experiences in Close Relationships-Revised

The following statements concern how you feel in intimate relationships with a romantic partner (i.e. boyfriend, girlfriend, spouse, etc.). We are interested in your general experience when involved in intimate relationships, not in any one specific relationship. Please indicate your agreement with the statements based on the scale provided.

1=Strongly Agree	2=Moderately Agree	3=Mildly Agree	4=Mildly Disagree	5=Moderately Disagree	6=Strongly Disagree
28. I often worry that my partner will not want to stay with me.	1	2	3	4	5 6
29. It's easy for me to be affectionate with my partner.	1	2	3	4	5 6
30. I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am.	1	2	3	4	5 6
31. When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.	1	2	3	4	5 6
32. I worry that I won't measure up to other people.	1	2	3	4	5 6
33. I am nervous when partners get too close to me.	1	2	3	4	5 6
34. I find it easy to depend on romantic partners.	1	2	3	4	5 6
35. I prefer not to show a partner how I feel deep down.	1	2	3	4	5 6
36. I'm afraid that I will lose my partner's love.	1	2	3	4	5 6
37. When my partner is out of sight, I worry that he or she might become interested in someone else.	1	2	3	4	5 6
38. My desire to be very close sometimes scares people away.	1	2	3	4	5 6
39. I rarely worry about my partner leaving me.	1	2	3	4	5 6
40. I feel comfortable sharing my private thoughts and feelings with my partner.	1	2	3	4	5 6
41. It makes me mad that I don't get the affection and support I need from my partner.	1	2	3	4	5 6
42. My romantic partner makes me doubt myself.	1	2	3	4	5 6
43. My partner really understands me and my needs.	1	2	3	4	5 6

1=Strongly Agree	2=Moderately Agree	3=Mildly Agree	4=Mildly Disagree	5=Moderately Disagree	6=Strongly Disagree	
44. I often wish that my partner's feelings for me were as strong as my feelings for him or her.	1	2	3	4	5	6
45. I find that my partner(s) don't want to get as close as I would like.	1	2	3	4	5	6
46. I don't feel comfortable opening up to romantic partners.	1	2	3	4	5	6
47. It helps to turn to my romantic partner in times of need.	1	2	3	4	5	6
48. I find it relatively easy to get close to my partner.	1	2	3	4	5	6
49. I get uncomfortable when a romantic partner wants to be very close.	1	2	3	4	5	6
50. My partner only seems to notice me when I'm angry.	1	2	3	4	5	6
51. I talk things over with my partner.	1	2	3	4	5	6
52. I find it difficult to allow myself to depend on romantic partners.	1	2	3	4	5	6
53. It's not difficult for me to get close to my partner.	1	2	3	4	5	6
54. I worry that romantic partners won't care about me as much as I care about them.	1	2	3	4	5	6
55. I do not often worry about being abandoned.	1	2	3	4	5	6
56. I tell my partner just about everything.	1	2	3	4	5	6
57. I often worry that my partner doesn't really love me.	1	2	3	4	5	6
58. I worry a lot about my relationships.	1	2	3	4	5	6
59. Sometimes romantic partners change their feelings about me for no apparent reason.	1	2	3	4	5	6
60. I am very comfortable being close to romantic partners.	1	2	3	4	5	6
61. I prefer not to be too close to romantic partners.	1	2	3	4	5	6
62. I usually discuss my problems and concerns with my partner.	1	2	3	4	5	6
63. I feel comfortable depending on romantic partners.	1	2	3	4	5	6

APPENDIX E

Rosenberg Self-Esteem Scale

Please answer the following questions using the scale provided.

1=Strongly Agree	2=Moderately Agree	3=Mildly Agree	4=Mildly Disagree	5=Moderately Disagree	6=Strongly Disagree				
18. On the whole, I am satisfied with myself.				1	2	3	4	5	6
19. At times, I think I am no good at all.				1	2	3	4	5	6
20. I feel that I have a number of good qualities.				1	2	3	4	5	6
21. I am able to do things as well as most other people.				1	2	3	4	5	6
22. I feel I do not have much to be proud of.				1	2	3	4	5	6
23. I certainly feel useless at times.				1	2	3	4	5	6
24. I feel that I am a person of worth, at least on an equal plane with others.				1	2	3	4	5	6
25. I wish that I could have more respect for myself.				1	2	3	4	5	6
26. All in all, I am inclined to feel that I am a failure.				1	2	3	4	5	6
27. I take a positive attitude toward myself.				1	2	3	4	5	6

VITA

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- Professional Experience: Graduate Assistant, Department of Criminal Justice, East
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- Publications: Gillespie, F. W., Holt, J. L., & Blackwell, R. L. (in press).
 Measuring outcomes of alcohol, marijuana, and cocaine use
 among college students: A preliminary test of the
 Shortened Inventory of Problems – Alcohol and Drugs
 (SIP-AD). Accepted for publication in *Journal of Drug
 Issues*.

Holt, J. L., & Gillespie, F. W. (submitted for publication). The effects of family, threatened egotism, and reciprocity on intimate violence. Submitted to *Violence and Victims*, January 2007.

Presentations:

Whitson, M. H. & Holt, J. L. (2004, November). *Growing trends of violence among female college students*. Paper presented at the Annual Conference of the American Society of Criminology, Nashville, Tennessee.

Holt, J. L. (2006, August). *Intimate violence: The effects of family, threatened egotism, and reciprocity*. Poster presented at the Annual Conference of the American Psychological Association, New Orleans, Louisiana.

Honors and Awards:

Dean's List

Outstanding Graduate Student in Criminal Justice/Criminology,
April 2005

Thesis nominated for outstanding graduate research in
Social Sciences/Education, Spring 2005