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Empathy and Threatened Egotism in Men's Use of Violence in Intimate Relationships

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A dissertation

presented to

the faculty of the Department of Psychology

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Doctor of Philosophy in Clinical Psychology

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by

Jessica Holt Turner

August 2013

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Peggy J. Cantrell, Ph.D., Chair

William T. Dalton, III, Ph.D.

Jon B. Ellis, Ph.D.

Stacey L. Williams, Ph.D.

Keywords: Empathy, Narcissism, Self-Esteem, Threatened Egotism, Intimate Partner Violence

## ABSTRACT

Empathy and Threatened Egotism in Men's Use of Violence in Intimate Relationships

by

Jessica Holt Turner

The current study was undertaken to explore the relationship between self-esteem, narcissism, and empathy with intimate partner violence perpetration among men in 2 samples: college students and inmates. The sample was analyzed both as an aggregate and separately. A negative relationship was hypothesized between intimate violence perpetration and both self-esteem and empathy. A positive relationship was expected between intimate violence perpetration and narcissism. A 2-way interaction was examined between self-esteem and narcissism as a test of threatened egotism, defined as high self-esteem coupled with high narcissism, which was not expected in the current study. Empathy was hypothesized to moderate the relationship between intimate violence perpetration and threatened egotism, such that low empathy coupled with high narcissism and high self-esteem was expected to result in increased intimate violence perpetration. Participants were 488 men (249 college students; 239 inmates). Surveys consisted of a demographic questionnaire, CTS2 for participants' relationships, CTS for their parents' relationship, Rosenberg Self-Esteem Scale, entitlement and exploitative subscales of the NPI, and the IRI. Independent samples *t*-tests were used to explore differences in the 2 samples. Hierarchical multiple regression was undertaken in the aggregate sample as well as the college sample and inmate sample separately. For the aggregate sample significant main effects emerged for family violence, self-esteem, narcissism, and cognitive and affective empathy, as well as the 2-way interaction between self-esteem and narcissism. Results were similar for the college sample with the exception that affective empathy was not significant. For the inmate sample

main effects emerged for family violence, narcissism, and affective empathy as well as the 2-way interaction between self-esteem and narcissism. The results appear to support the theory of threatened egotism, though further analysis indicates the findings are not so clear. Empathy did not moderate the 2-way interaction between self-esteem and narcissism.

## DEDICATION

This work is dedicated to my family for without their support and encouragement, I would never have had the courage or belief in myself necessary to have started. In particular, I would like to dedicate this to my husband who has always encouraged me to follow my dreams, whatever they might be. He believed in me when I did not believe in myself and reminded me that if it was easy, everyone would do it.

## ACKNOWLEDGEMENTS

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## CHAPTER 1

### INTRODUCTION

In 1975 the National Family Violence survey was undertaken in an attempt to examine rates of violence in American families (Straus & Gelles, 1990). This study, along with the resurvey in 1985, marked the first attempts at collecting national data beyond that collected by the criminal justice system and human service agencies. This study's reliance on the Conflict Tactics Scale (CTS; Straus, 1979) to measure conflict resolution tactics in interpersonal relationships changed the landscape of intimate partner violence research for the future allowing researchers to efficiently collect large amounts of rich data assessing specific behaviors. Tactics of interest included such acts as yelling, stomping off, throwing something at partner, hitting or slapping, and choking among others. Additionally, examples of tactics of negotiation included discussed issue calmly and brought in someone to help solve problem. The use of this quantitative measure allowed the researchers to gather a large amount of data in an expeditious manner. Based on these data, Straus and Gelles found rates of marital violence in 161 out of 1,000 couples. Population data were used to extrapolate an annual rate of marital violence of 8.7 million, which was much higher than the researchers expected. Also, contrary to thinking of the time, women and men endorsed perpetrating similar rates of violence within the marriage. The findings from these surveys continue to serve as a standard of measure, while the CTS is the most widely used measure of intimate partner violence (Archer, 1999; Straus, 1999; Straus & Gelles, 1990; Swan & Snow, 2002).

By contrast, in 2000 the National Institute of Justice released a full report from the National Violence against Women (NVAW) Survey based on interviews with 8,000 women and 8,000 men in the United States relating to their reported violence victimization (Tjaden &

Thoennes, 2000). While intimate violence was assessed, it was not the sole focus of the study. Based on a definition of rape to include forced vaginal, anal, or oral sex, almost 18% of women and 3% of men reported being the victim of rape in their lifetime (Tjaden & Thoennes, 2000). The survey used items modified from the Conflict Tactics Scale (CTS; Straus, 1979) to assess physical assault. Based on this, nearly 52% of women and 66% of men reported being physically assaulted at some time in their life, either as a child by a caretaker or as an adult by another adult.

The NVAW Survey also explored incidence rates of physical assault and rape within the parameters of an intimate relationship. When inquiring about rape using the definition above with the caveat that the perpetrator was an intimate partner, nearly 8% of women and 0.3% of men reported having been raped by an intimate partner at some time in their life (Tjaden & Thoennes, 2000). For physical assault approximately 22% of women compared to 7% of men reported having been the victim of physical assault at the hand of an intimate partner. Tjaden and Thoennes estimate 4.5 million acts of physical violence against women by an intimate partner and 2.9 million acts of physical violence against men by an intimate partner annually in the United States. It is interesting to note men report higher rates of physical assault victimization as a child from an adult and between two adults, not intimate partners, but much lower rates when the perpetrator is an intimate partner compared to women who have higher rates of victimization from an intimate partner.

When examining the risk of injury for victims of rape and physical assault based on NVAW, it was found that women were more likely to sustain injury if the perpetrator was an intimate partner, while men were less likely to sustain injury if the perpetrator was an intimate partner (Tjaden & Thoennes, 2000). In other words, women are more likely than men to be

victims of intimate partner violence and to be injured as a result of such. In fact, the great majority of violence perpetrated against women is intimate partner violence.

When looking at the two national studies, the first from Strauss and Gelles (1990) and the NVAW (Tjaden & Thoennes, 2000), the rates were greatly disparate with higher rates reported by the NVAW. One important difference was the NVAW explored violence experienced as children as well. The NVAW explored rates of violence experienced as a child from an adult in addition to that experienced as an adult from any person. Additionally, there was a 20-year difference between when data were collected, 1975 for Straus and Gelles study and 1995-1996 for the NVAW. Over the course of these 20 years, intimate violence has received much greater attention in the mainstream with probably one of the most highly publicized cases involving Nicole Brown-Simpson and O.J. Simpson occurring within 1-2 years of data collection. This likely contributed to a cultural shift with more open discussions and less stigma attached to being a victim of intimate violence.

Due to the epidemic rates of intimate partner violence, researchers have focused on examining many different correlates of intimate violence perpetration to help understand the phenomenon and guide interventions, including witnessing violence in the family of origin (O'Keefe, 1998), attachment styles (Godbout, Dutton, & Lussier, 2009), self-esteem (Whiting, Simmons, Havens, Smith, & Oka, 2009), substance abuse (Geffner & Rosenbaum, 1990), and personality characteristics (Hale, Duckworth, Zimostad, & Nicholas, 1988) among others. The negative impact of intimate violence goes beyond injury to include death. While women make up only 21% of stranger homicide victims, 76% of the victims of spousal homicide are women (Straus & Gelles, 1990). More recent statistics published by the Bureau of Justice Statistics from data collected 1980-2008 found 16.3% of murders were committed by an intimate (Cooper &

Smith, 2011). For women victims of homicide, two of five were killed by an intimate. Over the course of the 28-year study, the percentage of men homicide victims killed by an intimate decreased from 10.4% in 1980 to 4.9% in 2008. In comparison, the percentage of women victims killed by an intimate decreased from 43% in 1980 to 38% in 1995; however, the rate increased to 45% in 2008. In light of findings suggesting women are more likely to suffer injury as a result of assault by an intimate partner (e.g. Straus & Gelles, 1990; Tajaden & Thoennes, 2000), the importance of identifying characteristics of men who perpetrate intimate partner violence becomes increasingly important.

### Defining Intimate Partner Violence

When thinking of intimate partner violence many people, both researchers and the public, typically think of violence that occurs within the confines of a marital relationship. However, the common legal term for partner violence is domestic abuse and covers many situations and relationships other than simply marital. According to Tennessee Code Annotated (T.C.A. §36-3-601, 2011), abuse includes inflicting or attempting to inflict physical injury or placing another in fear of physical harm or restraint and extends to physical injury or fear of injury to animals owned or kept. Rape and sexual battery are also included in the T.C.A. legal definition of domestic abuse. When examining the specific relationships that fall under the legal definition of domestic abuse, these include former or current spouses, people who are currently or who have in the past lived in the same household, those who are currently or have in the past dated or engaged in a sexual relationship, and those related by blood, marriage, or adoption. As can be seen by this definition, for legal purposes domestic abuse encompasses much more than just a marital relationship. Consistent with this broad legal definition of domestic abuse, researchers have also taken a broad view of domestic abuse to include both marital and dating relationships



(e.g. Lewis & Fremouw, 2001; Lewis, Travea, & Fremouw, 2002; Straus & Gelles, 1990; Swan & Snow, 2002).

Once a phenomenon has been operationally defined, the next task becomes developing a strategy for assessment. Straus (1979) developed the Conflict Tactics Scale (CTS) based on behaviors exhibiting psychological aggression and physical assault. Only 11 years after publication, it was already the most widely used measure of conflict resolution tactics in interpersonal relationships (Straus & Gelles, 1990). Straus identified three modes of conflict resolution tactics: reasoning, verbal aggression, and physical aggression. The measure was later modified to include measures of injury to partner and sexual coercion (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996).

Reasoning tactics include such items as showing concern for the other's perspective, bringing in others to support one's position, and assuring the partner that through compromise the issue can be resolved. Verbal or psychological aggression includes acts that are not physically abusive but are meant to demean and control a partner. Examples include shouting or yelling at a partner, calling a partner fat or ugly, and insulting or swearing at a partner. Physical assault against a partner can range in severity from relatively minor forms of violence (i.e. slapping, grabbing, pushing, and shoving) to more severe and potentially lethal forms of violence (i.e. use of a knife or gun, beating up, choking). Injury to partner is a measure of the physical consequences of violence including having to go to a doctor because of an injury sustained in a fight, having a bruise, sprain, burn, etc. because of a fight, and having an injury that should have received medical attention though it did not. Sexual coercion includes such acts as forcing a partner to have sex without a condom, used threats to make a partner have sex, and used physical force to make a partner have sex. Consistent with the legal definition of domestic abuse, the

current study defines intimate partner violence perpetration to include both physical assaultive behaviors as well as acts of sexual coercion.

### Current Study

The purpose of the current study is to examine risk factors and predictors related to men's use of physical violence in intimate relationships. Previous research has examined many factors including, but not limited to, witnessing violence in the family of origin (O'Keefe, 1998), attachment styles (Godbout et al., 2009), self-esteem (Whiting et al., 2009), substance abuse (Geffner & Rosenbaum, 1990), and personality characteristics (Hale et al., 1988). While research has found both men and women report perpetrating violence against intimate partners (e.g. Cantrell, MacIntyre, Sharkey, & Thompson, 1995; Clements, Holtzworth-Munroe, Schweinle, & Ickes, 2007; Holt & Gillespie, 2008; Straus & Gelles, 1990; Swan & Snow, 2002; Thornton, Graham-Kevan, & Archer, 2010), women tend to suffer more injury and negative consequences of intimate partner violence (Howard, Trevillion, & Agnew-Davies, 2010; Romito & Grassi, 2007; Straus & Gelles, 1990; Taft & Hegarty, 2010; Tjaden & Thoennes, 2000; Umberson, Anderson, Glick, & Shapiro, 1998). Therefore, the current study is focused only on men's use of physically violent acts within intimate relationships, specifically physically assaultive and sexually coercive acts.

The specific factors under consideration in this examination of men's use of intimate partner violence are self-esteem, narcissism, and empathy. Self-esteem can be thought of a person's global assessment of self-worth (Rosenberg, 1965). In general, high self-esteem is considered to be positive. However, there is a body of research suggesting threatened egotism is related to the use of aggression (e.g. Baumeister, Bushman, & Campbell, 2000; Baumeister, Smart, & Boden, 1996; Bushman & Baumeister, 1998; Bushman et al., 2009; Konrath, Bushman,

& Campbell, 2006). Threatened egotism refers to high but unstable self-esteem, usually conceptualized as high self-esteem coupled with high narcissism, which results in a person having a fragile ego and sense of self. When people with this characteristic pattern of self-worth receive a threat to their fragile ego, they are likely to fight against that threat and hold tenaciously to their tenuous sense of self (Baumeister et al., 2000; Baumeister et al., 1996; Bushman & Baumeister, 1998; Bushman et al., 2009; Konrath et al., 2006). Contrary to this view, research in intimate partner violence suggests low self-esteem rather than high is related to perpetration in intimate relationships (e.g. Anderson, 2002; Goldstein, 1985; Murphy, Stosny, & Morrel, 2005; Prince & Arias, 1994; Schwartz, Waldo, & Daniel, 2005). While research is scant, the application of threatened egotism to intimate partner violence perpetration has not been supported (Holt & Gillespie, 2008; Murphy et al., 2005).

In the current study narcissism is examined in conjunction with self-esteem as a test of threatened egotism, and, is also examined as a characteristic on its own. This conceptualization of threatened egotism is consistent with previous research (e.g., Baumeister et al., 2000; Baumeister et al., 1996; Bushman & Baumeister, 1998; Bushman et al., 2009; Konrath et al., 2006). Narcissism is a multifaceted concept with both adaptive and maladaptive characteristics (Ackerman et al., 2011; Emmons, 1987). Research suggests persons high on some aspects of narcissism, such as entitlement, exploitativeness, and superiority, are more likely to engage in aggressive behavior in general (Costello & Dunaway, 2003; Reidy, Zeichner, Foster, & Martinez, 2008; Thornton et al., 2010).

Empathy is defined as a person's ability to experience another's feelings, either cognitively or affectively (Davis, 1980, 1983). Empathy has been associated with prosocial and altruistic behavior and has been identified as a protective factor against antisocial behavior such

as violence and criminal offending (Joliffe & Farrington, 2004). However, little research has explored the relationship between empathy and intimate partner violence perpetration (i.e. Clements et al., 2007; Covell, Huss, & Langhinrichsen-Roling, 2007).

The current study was undertaken to explore a relationship that has not yet been explored. While research has examined self-esteem, narcissism, and empathy in relation to intimate violence perpetration, no research has yet explored these three variables simultaneously. The current study was undertaken to explore how these three variables interact in intimate partner violence perpetration. While it is not expected that threatened egotism (interaction between high self-esteem and high narcissism) will be directly related to perpetration of intimate violence, it was hypothesized that empathy would interact with threatened egotism for a three-way interaction with low empathy, high narcissism, and high self-esteem increasing men's use of violence in intimate relationships. Thinking about this conceptually, men who think highly of themselves and also have narcissistic tendencies may not be inclined towards violence, rather being protected by a high self-concept. However, when high self-esteem and narcissism are coupled with low levels of empathy, being unable to see things from another's perspective or not having an emotional reaction to the pain of others, the same person may be inclined to react violently because he cannot see his partner's perspective and feels he has greater worth.

This researcher further sought to explore this relationship with two different samples of men. The first sample consisted of men currently incarcerated in local county jails. The second sample consisted of men currently enrolled in a 4-year university. By using these two sources, the variables were explored in both a "clinical" and "nonclinical" sample in order to see if the model fits one group better than the other. This distinction could be important in terms of

developing treatment protocols for community populations and incarcerated populations and what factors might be important to focus on for each.

### Self-Esteem

Self-esteem is one of those concepts so often used in both research and everyday life that it is often assumed a definition is unnecessary. Some define self-esteem as a fluid state changing from situation to situation and transient over time. Others define self-esteem as a more stable trait of an individual relatively constant over time and situation. Consistent with the definition set forth by Rosenberg (1965) self-esteem was conceptualized as a stable trait representative of a person's global view of self-worth. Research examining self-esteem in conjunction with both general violence and intimate partner violence have been inconsistent at best (e.g. Baumeister et al., 2000; Baumeister et al., 1996; Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Holt & Gillespie, 2008; Marshall, Marshall, Serran, & O'Brien, 2009; Ostrowsky, 2010; Papps & O'Carroll, 1998; Salmivalli, 2001; Sharpe & Taylor, 1999) with some finding relationships with low self-esteem while others have found significant relationship with high self-esteem.

For many years the predominant view was of low self-esteem leading to aggression (Bushman & Baumeister, 1998). Beginning in the mid 1990s, a group of researchers began questioning and testing this theory based in part on the incongruence of characteristics of people with low self-esteem and aggressive tendencies (Baumeister et al., 1996). People with low self-esteem tend to be uncertain, shy, lack confidence, and have a tendency to minimize risk (Baumeister & Bushman, 2000). These traits seem to run contrary to those expected of someone who acts aggressively. This theory came to be known as threatened egotism suggesting people with high unstable self-esteem are more likely to be aggressive as opposed to low self-esteem. However, there have been some questions of whether the threatened egotism hypothesis relates

to intimate partner violence (Holt & Gillespie, 2008; Murphy et al., 2005). First, research exploring the link between self-esteem and aggression was reviewed followed by further exploration of the threatened egotism hypothesis.

### Self-Esteem and Intimate Partner Violence

Anderson (2002) examined intimate partner violence in both men and women and the relationship with various measures of well-being. Data for the study came from a national sample of over 7,000 married or cohabiting couples in the United States who were surveyed as part of the National Survey of Families and Households. Violence in the relationship was dichotomized to yes or no. Participants were further categorized to indicate who in the relationship engaged in violence. Participants also answered questions to assess depression, self-esteem, and drug and alcohol use as well as demographic measures.

Anderson (2002) found roughly 8% of both men and women reported having perpetrated acts of intimate violence against a partner in the previous year. Slightly more men (9%) reported being a victim than women (7%). The vast majority of the violence occurred in mutually violent relationships, meaning both partners were violent. Slightly more women than men indicated being perpetrator only (2% vs. 1%). Using logistic regression with intimate violence perpetration as the outcome variable, Anderson found self-esteem to negatively predict intimate violence perpetration for women only, suggesting low self-esteem is a risk factor for women's use of intimate partner violence. When self-esteem was assessed as an outcome variable, mutual violence emerged as a significant negative predictor for both men and women. This suggests engaging in mutual violence in relationships is associated with lower self-esteem. In addition, Anderson found significantly greater negative effects of intimate partner violence in terms of depression and substance abuse for women as opposed to men.

Schwartz et al. (2005) were also interested in the effects of gender role conflict and self-esteem on perpetration of intimate partner violence. Schwartz et al. suggest hypermasculinity plays a role in men's use of intimate partner violence. Participants were men enrolled in a group treatment program for domestic violence. The majority (90%) were court-mandated to attend with the remaining 10% attending voluntarily. During intake, the men completed measures of gender role conflict, the Rosenberg Self-Esteem Scale, the Conflict Tactics Scale, and a measure of controlling behavior. Schwartz et al. hypothesized self-esteem and gender role conflict were significantly associated with men's self-report abusive and controlling behavior. Findings suggest both self-esteem and gender role conflict were related to abusive behaviors. Specifically, gender role conflict in terms of success, power, and control was significantly related to abusive behavior by men. In men with low self-esteem who reported expression of emotions reported using more threats and intimidation.

In an early study Goldstein and Rosenbaum (1985) conducted research to assess the self-esteem of men who were violent in the marital relationship. The men were divided into three groups: abusive, satisfied, and discordant. The abusive men were referred to a university clinic specifically for treatment related to marital violence and all had histories of severe marital violence. Men in the satisfied group scored within the normal range on a measure of marital satisfaction and did not have a history of marital violence. The discordant group consisted of men who did not have a history of marital violence but scored within the dissatisfied range on the marital adjustment measure. Participants also completed the Rosenberg Self-Esteem Scale (Rosenberg, 1965), a measure of social desirability, and a measure designed to assess participants' reaction to vignettes portraying hypothetical situations of conflict between a husband and wife as if the interaction was between the participant and his wife. Goldstein and

Rosenbaum hypothesized abusive men would have lower self-esteem than both discordant and satisfied men. Additionally, the researchers hypothesized the abusive men would perceive more situations as being threatening to their self-esteem than either of their nonabusive counterparts.

Goldstein and Rosenbaum (1985) found support for both of their hypotheses. In comparing self-esteem across the three groups, the abusive group of men had significantly lower self-esteem in comparison to both the discordant and satisfied groups of men. No significant difference in self-esteem emerged between the two nonviolent groups of discordant and satisfied men. In terms of how the men perceived the hypothetical interactions, the abusive men indicated significantly more of the situations were potentially damaging to their self-esteem than both did the discordant and the satisfied men. On this measure, a difference did emerge between the discordant and satisfied men as well with the discordant indicating more were potentially damaging to self-esteem. In sum, the abusive men were highest followed by the discordant men, and the satisfied men were the lowest on this measure. Goldstein and Rosenbaum conclude abusive men in the current sample had lower self-esteem than nonviolent men and were more likely to perceive their wives' behavior as more damaging to their self-esteem.

Prince and Arias (1994) examined the role of both self-esteem and different facets of control, including perceived control and self-efficacy, in men's use of violence in intimate relationships. The men were divided into two groups, either abusive or nonabusive. The abusive men were either in therapy mandated by court or responded to advertisements. The men in the abusive group endorsed having perpetrated at least one act of violence against a partner in the previous 12 months. The nonabusive group had not perpetrated violence against a partner based on self-report. All men had been married at least 2 years. The participants completed the Rosenberg Self-Esteem Scale (1965), a measure of perceived control, a measure to assess a



person's control in different areas of life including personal and interpersonal, as well as the CTS. The perceived interpersonal control taps social competence, while the perceived personal control relates to an individual's sense of mastery and responsibility for outcomes. Prince and Arias hypothesized that abusive men would be characterized by low self-esteem, a high desirability for control, and low perceived control in both personal and interpersonal areas.

To test their hypothesis, Prince and Arias (1994) conducted two logistic regressions with the outcome variable of abusive or nonabusive. Due to differences in age between the two groups, this variable was controlled in both analyses. In the first model, age was entered in the first step followed by self-esteem, desirability for control, perceived interpersonal control, and their interactions. This equation did not significantly predict group membership. The second logistic regression was conducted similar to the first but included perceived personal control rather than interpersonal control. This equation was significant with significant main effects for self-esteem, desirability for control, and personal control. Two-way interactions were significant for desirability of control and personal control, self-esteem and desirability of control, and self-esteem and personal control. The three-way interaction between these three variables was also significant. To decompose this three-way interaction, the continuous variables of self-esteem, desirability of control, and personal control were all dichotomized using a median split. In so doing, two different patterns emerged. The first pattern was a greater percentage of abusers who had low self-esteem, low desirability of control, and low personal control. The second pattern was high self-esteem, high desirability of control, and low personal control. Both these were significant at .001, but the strongest was for low self-esteem, low desirability of control, and low personal control. Prince and Arias describe this group as being prone to feelings of helplessness

and dependence. While violence in the high self-esteem group may be an attempt to exert control, violence in the low self-esteem group is likely to be expressive.

Murphy et al. (2005) designed a study to test the role of low versus high self-esteem in men who perpetrate intimate partner violence. While empirical research implicates low self-esteem in perpetration of intimate partner violence, some researchers argue high self-esteem is more likely to result in aggression (e.g Baumeister et al., 1996). Participants were drawn from men who had completed two different treatment programs. One treatment program was based on cognitive-behavioral therapy and did not directly target self-esteem enhancement. The second treatment program was based on an attachment theory of abuse and worked to increase both self and other compassion. This second treatment targeted self-esteem quite directly with the goals of increasing compassion and acceptance of self and genuine pride. Both samples completed the Rosenberg Self-Esteem Scale and a version of the Conflict Tactics Scale both pre- and posttreatment. The authors sought to evaluate the competing theories of low versus high self-esteem in intimate partner violence. If high self-esteem is related to aggression, intimate partner violence should increase posttreatment if self-esteem increases. On the other hand, if low self-esteem is predictive of intimate partner violence, the opposite should be found.

Murphy et al. (2005) compared pre- and posttreatment self-esteem for both groups. Both treatments were found to significantly increase self-esteem with the treatment specifically targeting self-esteem resulting in a slightly greater increase. Next, the researchers examine pre- and posttreatment rates of intimate violence perpetration. Again, both treatments resulted in a significant reduction in acts of intimate partner violence. Change in self-esteem was significantly correlated with change in intimate partner violence for both treatment groups such that increases in self-esteem were associated with decreased intimate partner violence. Murphy et al. also

separated the men based on whether their use of intimate partner violence increased or decreased from pre- to posttreatment and compared the change in self-esteem for these two groups. Men who decreased in monthly rate of intimate violence perpetration increased in self-esteem. On the other hand, men who increased in monthly rate of intimate violence perpetration decreased self-esteem. This finding seems to refute the theory that intimate partner violence is associated with high self-esteem and, rather, is more likely associated with low self-esteem. On the other hand, the quality of self-esteem might be another consideration. The treatment targeting self-esteem was designed to foster a genuine sense of pride. Therefore, this might be different from high, unrealistic self-esteem that could be related to the concept of threatened egotism.

The current study was undertaken to expand further on this body of research and could have an impact on treatment protocols for men referred for intimate partner violence. Further support for the relationship between low self-esteem and intimate violence perpetration could inform treatment strategies to focus on increasing self-esteem in a positive, realistic, and stable manner. With mixed research findings of low self-esteem and high self-esteem being predictive of aggression, treatment providers may be hesitant to have a goal of increasing self-esteem for fear of resulting in increased levels of aggression. On the other hand, if low self-esteem was a factor, an important opportunity to effect change could be missed.

### Narcissism

Narcissism is considered a multidimensional construct. Simply put, narcissism refers to a grandiose sense of self. Freud is credited with coining the term narcissism for this intense self-love reminiscent of the Greek character Narcissus who is said to have fallen in love with his own image reflected in water and drowned (Bushman & Baumeister, 1998). While the American Psychiatric Association (APA) sets forth diagnostic criteria for Narcissistic Personality Disorder

(NPD) in the Diagnostic and Statistical Manual (DSM-IV-TR; APA, 2000), narcissism also exists on a nonclinical level as a personality trait (Samuel & Widiger, 2008). While the level of symptoms would be to a lesser degree than would be seen by someone diagnosed with NPD, it is generally accepted to consider these diagnostic criteria as descriptive of narcissism as a personality trait. Diagnostic criteria of NPD include grandiose sense of self-importance; preoccupation with fantasies of success, brilliance, beauty, or love; belief in special status or uniqueness and can only be understood by similar others; requires excessive admiration; sense of entitlement; interpersonally exploitative; lacks empathy; envious of others or believes others to be envious; and evidence of arrogance and haughty behaviors or attitudes (APA, 2000). Even while the narcissistic person might display some of these traits to varying degrees, the APA suggests these symptoms mask an extreme vulnerability in self-esteem. This vulnerability is thought to make people who are narcissistic to be prone to reactions characterized by rage or disdain when faced with criticism that threatens their tenuous self-image.

Measures have been developed based on the criteria for NPD to assess narcissism as a trait. The Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979, 1981) is one such measure that has become the most widely used measure of narcissism in social psychological research (Reidy et al., 2008). Raskin and Terry (1988) subjected the NPI to factor analysis to arrive at the final measure consisting of 40 forced-choice dyads. Raskin and Terry found the 40 items loaded onto seven subscales as follows: authority, exhibitionism, superiority, entitlement, exploitativeness, self-sufficiency, and vanity.

Other researchers have subjected the 40-item NPI to further factor analysis in attempts to provide support for the validity or test the seven-factor solution found by Raskin and Terry (Ackerman et al., 2011; Emmons, 1984, 1987; Samuel & Widiger, 2008). Emmons (1984)

performed factor analysis with the 40-items of the NPI and found a four-factor solution. These four factors were termed exploitativeness and entitlement, leadership and authority, superiority and arrogance, and self-absorption and self-admiration. Emmons (1984) found the entitlement and exploitativeness factor was not correlated with self-esteem but was correlated with suspiciousness, tension, anxiety, tough pose, and neuroticism. Emmons (1984) suggests this as evidence for this factor tapping into the maladaptive aspects of narcissism.

Emmons (1987) sought to replicate this four-factor solution as well as examine the NPI in relation to various measures of pathological narcissism, egocentricity, and selfism. In this latter study, Emmons (1987) did replicate the four-factor solution as in the earlier study. In addition, Emmons (1987) found further support for the proposition of entitlement and exploitativeness factor as corresponding to the most maladaptive aspects of narcissism while leadership and authority appeared to measure more adaptive, healthy aspects. The entitlement and exploitativeness subscale was the only of the four that was significantly correlated with two other measures of pathological narcissism as well as being positively associated with mood variability and being the only subscale significantly correlated with emotional intensity.

Ackerman et al. (2011) found 25 of the 40 items loaded onto a three-factor solution: leadership and authority, grandiose exhibitionism, and entitlement and exploitativeness. Of these, Ackerman et al. suggest the leadership and authority subscale is indicative of adaptive facets of narcissism while the entitlement and exploitativeness subscale evidenced a consistent and strong association with related maladaptive outcomes. Due to the presence of both adaptive and maladaptive features, Ackerman et al. advise against drawing conclusions based on a total score from the NPI.

## Narcissism and Aggression

Many theorists point to the instable, exaggerated inflated self-concept of narcissistic people as a risk factor for engaging in aggressive and violent behavior (e.g. Bushman & Baumeister, 1998; Costello & Dunaway, 2003; Reidy et al., 2008; Thornton et al., 2010). Costello and Dunaway hypothesized adolescents with higher narcissism would be more likely to engage in both violent and nonviolent delinquency. Narcissism in this study was measured with seven items assesses four facets of narcissism: superiority, authority, exhibitionism, and entitlement. Costello and Dunaway also measured self-esteem as well as violence and nonviolent delinquency. Narcissism was positively related to overall delinquency as well as the separate factors of both violent and nonviolent delinquency. In predicting offending, Costello and Dunaway found narcissism to be a significant predictor of general, violent, and nonviolent delinquency. Of these, the relationship was the strongest for violent delinquency and weakest for nonviolent delinquency.

Thornton et al. (2010) sought to examine personality characteristics serving as protective and risk factors for violent and nonviolent offending behaviors in both men and women. The researchers point to consistent findings evidencing differences in general violence and antisocial behavior for men and women as a need to examine factors separately by gender. A specific type of violent offending behavior, intimate partner violence, tends to show rates similar for men and women and some find women report more intimate partner violence. For this reason, Thornton et al. examined intimate partner violence separate from other violent behavior. Thornton et al. surveyed university students and administered a composite measure of offending behavior that included measures of intimate partner violence perpetration and victimization, violent offending behavior, and nonviolent offending behavior. In addition, the researchers used a measure of the

“Big Five” personality traits (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) as well as a measure to screen for personality disorders. The screening tool assesses the following personality disorders: Paranoid, Schizoid, Schizotypal, Histrionic, Antisocial, Narcissistic, Borderline, Compulsive, Dependent, and Avoidant.

When comparing men and women on offending behavior controlling for age, Thornton et al. (2010) found men were both more violent outside of the home and committed more nonviolent offenses as compared to women. However, women perpetrated more acts of intimate partner violence than did men. When looking at the effect of intimate partner violence on other behavior, there was a significant effect for women on nonviolent offending but not for men. Violence in general was associated with both intimate partner violence and nonviolent offending for both men and women. Traits of paranoid, schizoid, and schizotypal personality disorders were related to both intimate partner violence and nonviolent offending for men. Traits associated with the personality disorders of histrionic, antisocial, narcissistic, and borderline were associated with higher rates of all three offense categories (violent and nonviolent offending and intimate violence perpetration). On the other hand, compulsive, dependent, and avoidant characteristics were not associated with any of the offense types for men or women.

Next, Thornton et al. (2010) conducted separate hierarchical regressions for each offense type for men and women predicted by age, personality disorder traits, and Big Five personality traits. General violence in men was predicted by age and cluster B personality traits (histrionic, antisocial, narcissistic, and borderline). For women, general violence was predicted by age, cluster B personality traits and agreeableness had a negative relationship indicating this trait is acting as a protective factor. For intimate partner violence by men, the only significant predictor was cluster A personality traits (paranoid, schizoid, and schizotypal). For intimate partner

violence by women, cluster B personality traits was the only significant predictor. Men and women showed a similar pattern for nonviolent offending with cluster B personality traits as significant though conscientiousness acted as a protective factor for men and not women.

While Thornton et al. (2010) investigated personality characteristics in general, including narcissism, Reidy et al. (2008) focused specifically on narcissism and the relationship with physical aggression. Reidy et al. were even more focused and looked at the narcissistic facets of entitlement and exploitativeness. The researchers undertook a laboratory experiment to examine if narcissism would increase a person's use of aggression against a competitor. Participants were undergraduate men who were told they would be competing in a reaction time task against another man. The participants were told they could choose to administer a shock to their competitor if the competitor lost a trial. If the decision was made to deliver a shock, the participant would determine the level of the shock from 1-10. Three measures of aggression were extrapolated from the participant's use of the shock: general aggression, initial aggression, and extreme aggression. The NPI was used to measure narcissism.

Reidy et al. (2008) examined correlations and regression analyses with all the subscales of the NPI and the three aggression measures. In the bivariate correlations, the strongest and most consistent relationships were between the exploitativeness and entitlement subscales with all three of the aggression measures. Exhibitionism and authority had significant positive, yet weaker, correlations with all three aggression measures as well. Consistent findings emerged for all three measures of aggression in the multiple regression analyses. Exploitativeness and entitlement were the only significant predictors for general aggression, initial aggression, and extreme aggression. This study highlights the importance of entitlement and exploitativeness in the study of aggressive behavior.



### Threatened Egotism

As mentioned previously, the opposite side of the self-esteem coin suggests aggression occurs when people with high self-esteem receive an ego threat. Baumeister et al. (1996) suggest when people with low self-esteem receive negative feedback from others, this information is relatively consistent with their own views of self. On the other hand, if people with high self-esteem receive negative feedback, this is contrary to what they believe about self and increases the chances of an aggressive reaction against the source of the feedback. Bushman and Baumeister (1998) contend it is not high self-esteem in and of itself that increases aggression. Rather it is the stability or lack thereof that increases aggression. In this view, if a person has high, stable self-esteem, an ego threat is unlikely to result in aggression. On the other hand, someone with more fragile high self-esteem is more likely to fight to preserve this view of self. Many researchers have conceptualized high but unstable self-esteem as either high self-esteem coupled with high narcissism or simply as high narcissism (Baumeister et al., 2000; Bushman & Baumeister, 1998; Bushman et al., 2009; Cale & Lilienfeld, 2006; Konrath et al., 2006; Papps & O'Carroll, 1998). Baumeister et al. (2000) suggest the view of low self-esteem as causing violence is incorrect but simply viewing the opposite as true is too simplistic and also incorrect.

Much of the research on threatened egotism is conducted via laboratory experiments. Bushman and Baumeister (1998) conducted one of the earlier studies and predicted that participants with high narcissism who received an ego threat would display higher rates of aggressive behavior. The researchers conducted two studies to test their hypotheses. In both studies, participants completed questionnaires including a measure of self-esteem and narcissism and were then told to write a one paragraph essay on abortion either pro or con. The participants were then advised that a study partner would provide feedback on their essay. Participants were

randomly assigned to receive either negative (ego threat) or positive feedback. Following the feedback, participants were told they would compete against their study partner on a reaction time task and would choose the level of a loud blast of noise their partner would receive upon losing a trial. In the second study, participants were given the opportunity to aggress against an innocent third party who did not provide feedback to assess direct versus displaced aggression. Bushman and Baumeister expected to see high rates of aggression when high narcissism was coupled with an ego threat in the form of negative feedback.

Bushman and Baumeister (1998) used the full scale of the NPI to assess narcissism in both studies. In study one main effects emerged for presence of an ego threat, high narcissism, and gender with men expressing more aggression. A two-way interaction emerged between ego threat and narcissism, while the main effect for narcissism remained significant. Therefore, participants who scored high on narcissism were more aggressive regardless of the nature of the feedback. However, when the feedback was negative, participants who scored high on narcissism were exceptionally aggressive. Bushman and Baumeister failed to find any significant effects for self-esteem, either alone or in conjunction with other study variables. Study two was undertaken to replicate these results with a different measure of self-esteem and the addition of a nonevaluative third-party to see if aggression would be displaced. In this study narcissism was not associated with displaced aggression regardless of whether the feedback was negative or positive. In general, participants who received a bad evaluation were more likely to react aggressively when the evaluator was the study partner but not when the partner was a third party. Again, there were no significant effects for self-esteem. Bushman and Baumeister concluded ego threats to narcissists result in extreme levels of aggression.

Cale and Lilienfeld (2005) conducted an examination of the threatened egotism hypothesis in incarcerated men. The researchers wanted to assess whether narcissism or psychopathy fit better in the explanation of aggression. Two different measures of psychopathy were included as was the Narcissistic Personality Inventory, Rosenberg Self-Esteem Scale, a measure of anger expression, and a questionnaire designed to measure perceived ego threat. The researchers obtained reports of aggressive behaviors from the correctional officers and counselors at the prison. The researchers hypothesize psychopathy will be related to ego threat and psychopathy will be related to aggression. The researchers did not propose self-esteem would be related to aggression but expected to replicate findings of threatened egotism. The researchers found similar associations with aggression for both psychopathy and narcissism. However, the relationship was greater in magnitude for psychopathy as compared to narcissism. The researchers were not able to replicate threatened egotism from Bushman and Baumeister (1998). Cale and Lilienfeld suggest narcissism may not be applicable to inmates as it is to nonclinical populations. Additionally, the researchers were examining aggression in a prison setting which is a controlled environment that likely lessens the opportunities for aggressive acts.

Konrath et al. (2006) sought to further explore the link between aggression and threatened egotism. Specifically, the researchers designed a study to test the concept of unit relation as moderating the link between ego threat and narcissism. Konrath et al. propose unit relation, meaning fostering a similarity between the participant and the evaluator, will reduce the effects of threatened egotism. Two studies were conducted similar in design to that of Bushman and Baumeister (1998) with the addition of a unit relation manipulation. In study one some participants were told they shared a birthday with the evaluator and also included an opportunity for displaced aggression. In study two participants were told they and the evaluators either

shared the same rare fingerprint type, the same common fingerprint type, or were given no feedback about their fingerprint type. Both studies used the Rosenberg Self-Esteem Scale and the entitlement subscale of the NPI.

In study one Konrath et al. (2005) found significant main effects for aggression type (direct greater than displaced), a two-way interaction between aggression type and narcissism, and a three-way interaction between birthdate status, aggression type, and narcissism. In decomposing this interaction, the researchers found when participants did not think they shared a birthday with the evaluator, higher levels of narcissism were related to higher levels of aggression. If the participant thought the birthday was shared, narcissism was not related to aggression. In the second study Konrath et al. found when any fingerprint type was shared, narcissism and aggression were no longer related when negative feedback was received. Across both studies self-esteem was not related to aggression either via a main effect or in conjunction with other variables. Konrath et al. indeed found support that sharing common characteristics with the evaluator reduced the association between narcissism, negative feedback, and aggression. This might explain why threatened egotism has not been supported in research with intimate partner violence (Holt & Gillespie, 2008; Murphy et al., 2005).

Bushman et al. (2009) conducted a study to reevaluate the findings from the second study of Bushman and Baumeister (1998) as well as conducting a new study to replicate this and another designed to study a more real world application of aggression. The reanalysis of the earlier study included a gradient of the ego threat as either low or high. The second study followed the same procedure as the earlier study with the elimination of the no threat and displaced aggression conditions. The third study included aggression occurring naturally in the

form of evaluative feedback participants were told would influence the others' grade. Ego threat was not manipulated in this study and confederates were not used.

The reexamination of Bushman and Baumeister's (1998) earlier study discovered a heretofore hidden relationship between self-esteem and narcissism (Bushman et al., 2009). When the analyses included a variable for high versus low ego threat, Bushman et al. found under the high ego threat condition, self-esteem interacted with narcissism such that participants scoring high on both self-esteem and narcissism scored significantly higher than the study mean on aggression, while participants scoring low on self-esteem and high on narcissism were not significantly different from the overall mean. In the second study these results were replicated with a positive relationship between narcissism and aggression for participants high on self-esteem. This relationship was not significant for participants low on self-esteem. The third study again replicated these results with a significant two-way interaction between self-esteem and narcissism such that those with both high self-esteem and narcissism responded most aggressively. Thus, via both reexamination of and earlier study as well as new studies, Bushman et al. (2009) found the highest levels of aggression among those participants who were high on both self-esteem and narcissism.

#### Threatened Egotism and Intimate Partner Violence

Holt and Gillespie (2008) examined threatened egotism in relation to intimate partner violence. This study conceptualized threatened egotism as the interaction between narcissism and self-esteem. Participants were undergraduate college students who completed the Conflict Tactics Scale for both their own and their parents' relationships, the Narcissistic Personality Inventory, Rosenberg Self-Esteem Scale, as well as demographic measures. The researchers examined the predictive power of victimization, violence in the family of origin, self-esteem,

narcissism, and threatened egotism for intimate violence perpetration via multiple regression analyses. The equation was tested in both the entire sample and also separately for men and women. Though the equation was significant for the overall sample, victimization and family of origin violence were the only significant predictors. For women, victimization was significant as well as self-esteem indicating lower self-esteem was more related to intimate partner violence perpetration. For men, only victimization and family of origin violence were significant. In none of the results was the interaction between narcissism and self-esteem a significant predictor of intimate violence perpetration. However, this is only one study with a college student sample that may have limited generalizability. In short, the concept of threatened egotism and the applicability to intimate partner violence perpetration warrants further attention.

The current study served to further investigate the concept of threatened egotism as applied to intimate partner violence. There were some serious limitations with the study by Holt and Gillespie (2008) including failure to employ hierarchical regression and not centering the variables included in the interaction. The current researcher corrected for these shortcomings and went a step further to examine whether the addition of empathy would change this relationship.

### Empathy

Research in empathy has evolved over the years from conceptualizing empathy as unidimensional to multidimensional (Davis, 1980, 1983; Joliffe & Farrington, 2004; Miller & Eisenberg, 1988; Pulos, Elison, & Lennon, 2004). The most accepted conceptualization of empathy is as a multidimensional construct consisting of both cognitive and affective components (Davis, 1980). Davis (1980) is credited with recognizing the multidimensionality of empathy and developing the Interpersonal Reactivity Index (IRI), one of the most-widely used measures to assess these differing aspects of empathy (Joliffe & Farrington, 2004). Davis (1980)

divided empathy into cognitive and affective responses to the experiences of another. The IRI is divided into cognitive and affective empathy with two subscales measuring different facets of each. Cognitive empathy is characterized as perspective-taking that involves mentally taking others point of view and fantasy that is the tendency to imaginatively place self in the experiences and feelings of fictional characters such as in books and movies (Davis, 1983).

Affective empathy, on the other hand, relates to a person's emotional state. Davis developed two subscales of the IRI to measure affective empathy. Empathic concern assesses feelings of sympathy and concern directed towards unfortunate others (Davis, 1983). The other measure of affective empathy, personal distress, relates to a person's own feelings of anxiety and unease in certain interpersonal situations (Davis, 1983). The measures are such that a very empathic person would have high scores on perspective-taking, fantasy, and empathic concern and a low score on personal distress, a self-focused rather than other-focused measure. There is some evidence (Pulos et al., 2004) to suggest personal distress should be considered a separate construct and a higher order measure of empathy might best be obtained by examining scores on perspective-taking, fantasy, and empathic concern. Many studies have used perspective-taking as a representative measure of cognitive empathy and empathic concern as a representative measure of affective empathy.

Research on the relationship between empathy and maladaptive behavior has been broad. For purposes of the current study, literature falling into three broad categories was reviewed. First research examining the link between empathy and general antisocial behavior, including offending, was reviewed. Second, research exploring empathy in relation to sexual offending behavior was examined for both juveniles and adults. This is an area of study that has been examined more extensively than some others, including domestic violence. Finally, the third

category focused on that research examining the relationship between empathy and intimate partner violence perpetration. One of the reasons empathy research with offender populations is of such importance is treatment persons receive during incarceration. A great number of treatment programs for sexual and violent offending for both juvenile and adult populations have increasing empathy as the goal (Burke, 2001; Day, Casey, & Gerace, 2010; Joliffe & Farrington, 2004). If, however, low empathy is not contributing to aggression or offending behavior, this practice would be called into question.

### Empathy and Antisocial Behavior

The study of empathy has evolved over the years and analyses have focused on numerous aspects of behavior. High empathy is thought to be related to prosocial and altruistic behavior (e.g. Hunter, Figueredo, Becker, & Malamuth, 2007). While the presence of empathy is viewed as a protective feature, a lack of empathy is often seen as a risk factor for antisocial behavior (e.g. Smallbone, Wheaton, & Hourigan, 2003). Antisocial behavior can be defined in many ways and ranges from relatively mild forms (i.e. lying) to extreme (i.e. murder). Violation of social and legal norms represents a general form of antisocial behavior, and researchers have found offenders to have lower levels of empathy when compared with nonoffenders (Joliffe & Farrington, 2004; McPhedran, 2009). In an early meta-analysis Miller and Eisenberg (1988) found empathy to be negatively related to aggression, externalizing and antisocial behavior, and both the perpetration and victimization of physical abuse with effect sizes ranging from low to moderate.

Mullins-Nelson, Salekin, and Leistico (2006) examined the interrelationships of psychopathy, empathy, and perspective-taking in a sample of undergraduate college students. Participants completed a personality measure of psychopathy assessing participation in antisocial



behavior such as academic dishonesty, trouble with law enforcement, and incarceration with affirmative responses providing offense details, and three measures of empathy, including the perspective-taking and empathic concern subscales of the IRI. The cognitive aspect of empathy measured by perspective-taking was not related to psychopathy. Affective empathy, as measured by empathic concern, however, was negatively related to psychopathy. Mullins-Nelson et al. used a measure of recognition of facial expressions as a measure of empathy and found those scoring high on psychopathy were able to accurately read facial expressions. This could be evidence that reading of facial expressions as a form of empathy is related to the cognitive facet of empathy rather than the affective component.

Flight and Forth (2007) undertook a similar study to examine psychopathic traits, empathy, and attachment in incarcerated juvenile males. Along with other measures of interest, the IRI was used to assess empathy. Flight and Forth hypothesized youth who engaged in instrumental violence would show deficits in empathy and psychopathy would be associated with levels of both empathy and attachment. Based on answers to the motivations for violence, Flight and Forth classified the juveniles into groups based on their use of instrumental or reactive violence. For both categories there were groups who never used that type of violence, used it once or twice, and frequently used that type of violence. Rather than examining empathy separately by each subscale or cognitive and affective empathy, Flight and Forth used the total score from the IRI and found a negative relationship between psychopathy and empathy. When comparing empathy and attachment across the three instrumentally violent groups, the group reporting frequent use of instrumental violence was significantly lower on empathy than both the once or twice and never instrumentally violent group.

Research on empathy in incarcerated populations has not been restricted to juveniles. Lauterbach and Hosser (2007) assessed empathy in incarcerated adult men in part to test a shortened version of the IRI. The research took place in Northern Germany including several interviews over the course of their sentence and completion of a modified, shortened version of the IRI. The researchers modified the IRI to translate it into German as well as dropping some items that did not translate well. Lauterbach and Hosser sought to determine if this modified version of the IRI could differentiate between violent and nonviolent offenders. Frequently violent offenders showed significantly lower empathy overall and on three of four subscales of empathy, specifically perspective-taking, empathic concern, and fantasy. Personal distress was the only measure that was not significantly different for the frequently violent group. Even in light of the findings of this modified IRI, the researchers recommend against using the shortened version developed as part of this study.

At the time of Miller and Eisenberg's (1988) meta-analysis no research had yet examined the relationship of aggression with the different aspects of empathy (cognitive and affective). In a more recent meta-analysis examining empathy and offending behavior, Joliffe and Farrington (2004) were able to examine studies that did, in fact, examine cognitive and affective empathy separately. Joliffe and Farrington identified 42 studies that met their criteria for inclusion in the meta-analysis but subsequently excluded seven for either not including the information needed to calculate the effect sizes or failure to include a nonoffending comparison group. Of the remaining studies, which spanned 32 years, 21 used measures of cognitive empathy while 14 used affective empathy measures. Joliffe and Farrington made the decision to only include the perspective-taking (cognitive) and empathic concern (affective) measures of the IRI due to

infrequent use of the fantasy subscale and evidence of personal distress measuring a separate construct.

The findings of the meta-analysis were mixed. Of the studies of cognitive empathy, Joliffe and Farrington (2004) identified 10 that found offenders had significantly lower cognitive empathy than nonoffenders, while the remaining 11 found no significant differences. For affective empathy four studies found offenders with lower empathy than nonoffenders; nine found no significant difference, while one study found offenders had higher affective empathy than non-offenders. Joliffe and Farrington conclude there was stronger evidence for cognitive empathy compared to affective empathy. For cognitive empathy all the effects were in the expected direction and nine were large, six were medium, and six were small. The findings for affective empathy were more inconsistent with five effect sizes classified as medium and in the expected direction, two medium and in the opposite direction as expected, and the remaining seven were small. Taken together, the overall mean effect size for empathy, both in general and cognitive, was negative and medium while the effect size for affective empathy was small, albeit significant, and negative. In general, Joliffe and Farrington concluded in terms of cognitive versus affective empathy, cognitive empathy evidences a significantly stronger negative relationship with offending behavior compared to that with affective empathy.

### Empathy and Sexual Offending

A particular area of interest in the examination of empathy and offending behavior has been the study of empathy in sexual offenders (e.g. Burke, 2001; Curwen, 2003; Day et al., 2010; Hunter et al., 2007; Lindsey, Carlozzi, & Eells, 2001; Nussbaum et al., 2002; Smallbone et al., 2003; Varker & Devilly, 2007). Research into this area has cut across two broad populations: juveniles and adults.

Juvenile Offenders. Burke (2001) conducted a study to compare general empathy in male juvenile sexual offenders in comparison to nonoffending male controls. Burke highlights the importance of such research by pointing out the predominance of treatment programs for juvenile sexual offenders are geared towards increasing empathy. However, if there are not deficits in empathy, this practice is called into question. Burke administered the IRI as a measure of general empathy to 46 participants, half of whom were from an outpatient treatment program and half nonoffending controls. Burke found the offending group was significantly lower on two subscales of the IRI, one cognitive and one affective. The offending group reported significantly lower levels of both perspective-taking and empathic concern as compared to nonoffending controls. These findings do lend some support to the trend of treatment programs designed to target empathy.

Varker and Devilly (2007) extended the earlier research of Burke (2001). Specifically, different types of empathy were explored in addition to the traditional general conception of cognitive and affective empathy. Varker and Devilly wanted to explore, in addition to general empathy, empathy to victims, both the offender's victim as well as victims of sexual violence in general. Measures included the IRI for general empathy as well as a measure for victim empathy including forms specific to the offenders own victim and victims in general, and social desirability. Varker and Devilly hypothesized adolescent sexual offenders would have lower general empathy than nonoffending controls and no difference between the levels of general victim empathy compared to empathy for their own victim.

Varker and Devilly (2007) found mixed results when comparing mean scores of general empathy for their sample of 16 offenders and 16 age-matched controls. Significant differences were found on the mean scores of the IRI subscales of both perspective-taking and fantasy.

While the difference for perspective-taking was as expected (lower for sexual offenders), the difference for fantasy was opposite of the expected direction (higher for sexual offenders). No significant differences emerged for either IRI subscale of affective empathy, specifically empathic concern and personal distress. In terms of victim empathy, Varker and Devilly failed to find support for their second hypothesis. Rather than no difference, the researchers found the juvenile sexual offenders in their sample evidenced significantly greater empathy for general victims of sexual violence compared with their own victims. However, the results must be interpreted cautiously due to the small sample size.

Lindsey et al. (2001) took this research a step farther. Rather than just comparing empathy between sex offending and nonoffender juvenile males, Lindsey et al. compared empathy across three groups. All the groups were made up of male juveniles but had different offender histories. The participants were classified as follows: sex offenders, nonsex offender delinquent, and nondelinquent. The authors attempted to match the groups based on age and race. They hypothesized that the groups would express differing levels of empathy as measured by the subscales of the IRI. Lindsey et al. did not make specific predictions about which subscales would differ and in what way.

Lindsey et al. (2001) recruited 81 male delinquents from a juvenile treatment facility. Of these, 27 were sex offenders and 54 were delinquent nonsexual offenders. The nondelinquent sample (N = 74) was recruited from a university research setting. A one-way MANOVA was used to test for group differences with the subscale scores as the dependent variables and group membership as the independent variable. Lindsey et al. found significant differences between the three groups on the subscale measures of empathy. Group differences were found between all groups. The comparison then switched to determine where these differences lay. When

comparing sex-offending juveniles with nonsex offending delinquent juveniles, only the empathic concern subscale was significant with the sex offenders significantly lower than the delinquent nonsex offenders. For the sex offender group compared with the nondelinquent group, only the personal distress subscale was significant with sex offenders reporting significantly greater personal distress. The same pattern emerged for the nonsexual offender delinquent group when compared with the nondelinquent group in the delinquent group reported significantly more personal distress than the nondelinquent group. This finding suggests the delinquent juveniles experienced significantly more “self-oriented” distressing emotions when involved in tense interpersonal situations as compared to the nondelinquent group.

Hunter et al. (2007) took a somewhat different approach to examine the relationship between empathy and juvenile offending behavior. Rather than comparing levels of empathy across different groups, the researchers attempted to explain nonsexual delinquency in juvenile sexual offenders by examining relationships with numerous psychosocial variables. In addition to demographic variables Hunter et al. examined exposure to violence against women, child maltreatment, exposure to antisocial males, positive fathering, parental attachment, hostile masculinity, egotistical masculinity, psychosocial deficits, nonsexual delinquent behaviors, and emotional empathy in a sample of 184 male juvenile sexual offenders.

Hunter et al. (2007) took a comprehensive statistical approach to the data, running a series of five hierarchical multiple regression analyses with the dependent variables of psychosocial deficits, empathy, hostile masculinity, nonsexual delinquency, and egotistical and antagonistic masculinity. Pertinent to the current review are the results for both empathy and nonsexual delinquency. Emotional empathy, as measured by the empathic concern subscale of the IRI, had four significant predictors for almost 17% explained variance. Hostile masculinity

and exposure to violence against women had negative relationships with empathy, while positive fathering and parental attachment both evidenced positive relationships with emotional empathy. Thus, juvenile male sex offenders who expressed hostile masculinity, witnessed violence against women, had few positive fathering experiences, and reported low parental attachment expressed lower levels of emotional empathy. In predicting nonsexual delinquency in this group, 37% of the variance was explained by seven variables. Empathy, an interaction between empathy and hostile masculinity, and psychosocial deficits had negative relationships with nonsexual delinquency, while hostile masculinity, egotistical and antagonistic masculinity, and exposure to both violence against women and antisocial males showed positive relationships with nonsexual delinquency. While Hunter et al. discussed the support found for empathy as a moderator, they unfortunately did not decompose the interaction to further explore this relationship.

Adult Offenders. While a significant body of research exists examining empathic deficits in juvenile sexual offenders, research has also been conducted with adult sexual offenders (e.g. Day et al., 2010; Nussbaum et al., 2002; Smallbone et al., 2003). Nussbaum et al. examined personality characteristics in specific crimes as well as nonviolent, violent, and sexual offenders. Rather than using the IRI as most studies have to assess empathy, Nussbaum et al. used Cloninger's Temperament and Character Inventory (TCI; Cloninger, Przybeck, Svrakic, & Wetzel, 1994 as cited in Nussbaum et al., 2002) as the single measure to assess personality variables. While the measure included many different variables, Nussbaum et al. focused on impulsivity, empathy, and attachment. The researchers hypothesized violent offenders would score higher on impulsivity and lower on both empathy and attachment as compared to nonviolent offenders.

Nussbaum et al. (2002) found empathy and impulsiveness showed highly significant between group differences. Empathy was the only variable that differentiated the sexual assault group from both the sexual assault plus violent and violent groups. Interestingly, empathy did not differentiate between the sexual assault and nonviolent offender groups. When comparing the groups of sexual assault, sexual assault plus violence, violent offenders, and nonviolent offenders, most of the differences found were for the sexual assault group. In sum, the sexual assault group was less impulsive, more empathic, and more attached as compared to the other three groups of offenders, while violent offenders were more impulsive and less empathic than nonviolent offenders.

Smallbone et al. (2003) examined empathy in adult sexual offenders and their commission of other varying crimes. The researchers expected to find greater deficits in empathy among those offenders with involvement in numerous types of offenses compared with those whose criminal behavior was strictly of a sexual nature. Participants were men incarcerated in an Australian prison who were taking part in a treatment program for sexual offenders. Records for 88 men were examined including criminal history and the IRI. To compare across different groups of sexual offenders, Smallbone et al. classified the participants based on their sexual offense resulting in the following categories: intrafamilial child molesters, extrafamilial child molesters, acquaintance rapists, and stranger rapists. Due to a small number of acquaintance rapists, these were combined with the stranger rapists to form a group for rapists.

In the comparison of empathy across these groups, only the subscale for empathic concern was significantly different with rapists scoring lower than intrafamilial child molesters (Smallbone et al., 2003). There were no other differences on the empathy measure across groups. Next, Smallbone et al. sought to explain rates of criminal versatility in sexual offenders with the



subscales of the IRI. The groups were pooled for the remaining analyses. Empathy was a significant predictor for nonsexual offending with the subscale of empathic concern being the only subscale that was significant. Next, regressions were conducted for the different categories of nonsexual offenses: violent, property, and miscellaneous. Empathy has the greatest explanatory power for violent offending adding 16% explained variance beyond that accounted for by age. Specifically, empathic concern and fantasy were negatively and positively related to violent nonsexual offending, respectively. Empathy was fairly equal in explanatory power for property and miscellaneous offenses with 11% and 12% variance explained above age, respectively. However, none of the specific subscales were significant at the .05 level for property offenses though fantasy (positive) and personal distress (negative) approached significance. Finally, only empathic concern evidenced a significant negative relationship in the prediction of miscellaneous nonsexual offenses. It is interesting to note while many studies report using the perspective-taking subscale as the primary measure of cognitive empathy (Joliffe & Farrington, 2004), this subscale did not emerge as a significant predictor in any of the analyses. Likewise, the fantasy scale did have some predictive qualities though Joliffe and Farrington report personal communication from Davis, the author of the IRI, indicating this subscale is rarely used.

### Empathy and Intimate Partner Violence

While empathy has been studied rather extensively in general offending and sexual assault behaviors, far fewer research has been concentrated on the relationship of empathy to the use of violence within intimate relationships. Here, two research articles were reviewed that examine the role of empathy in intimate partner violence perpetration.

Clements et al. (2007) approached their research through a social information processing model. Based on this theoretical model, the researchers proposed intimate partner violence stems from perpetrator deficits in accurate interpretation of the partner's thoughts and feelings. Rather than using a self-report questionnaire such as the IRI, Clements et al. used a laboratory setting and a complex system of viewing video segments of opposite sex strangers and their own partners and were asked to infer the thoughts and feelings of the person in the video segment, either a stranger or their own partner. The main hypotheses were both violent men and violent women would show significantly greater deficits in empathic accuracy for their own partner as compared to nonviolent men and women and objective observers.

Clements et al. (2007) recruited 71 heterosexual couples to participate in their research. Based on answers provided on measures of intimate partner violence and marital satisfaction, the couples were divided into three groups: violent, nonviolent distressed, and nonviolent-nondistressed. Clements et al. found when men were rating their own partners, violent men had significantly less empathic accuracy compared with nonviolent-nondistressed men. Interestingly, the groups did not differ on empathic accuracy for female strangers. There was a trend towards significance for the violent men to show greater empathic accuracy for strangers as opposed to their own partner. Conversely, the nonviolent-nondistressed men showed the opposite pattern with significantly more empathic accuracy when rating their own partner rather than a stranger. Interestingly, when the same analyses were run examining women's empathic accuracy, no significant differences emerged. Though no hypotheses were put forth regarding empathic accuracy differences between men and women in the relationships, Clements et al. conducted exploratory analyses to examine this. Women in violent relationships showed significantly greater empathic accuracy for their partner than vice versa.

Covell et al. (2007), on the other hand, used the IRI to assess the different dimensions of empathy and compare these across a group of men who had perpetrated intimate partner violence. In this study domestic abuse was defined to include psychological aggression, physical assault, and sexual coercion. Participants completed the IRI and the CTS2. Covell et al. hypothesized all the subscales of empathy would be correlated with each measure of domestic abuse. The researchers also anticipated varied patterns would emerge for the different types of domestic abuse as well as significant interactions among the empathy subscales.

Covell et al. (2007) recruited 107 men in a treatment program for domestic violence, some self-referred and others court-ordered. Contrary to the researchers' expectations, not all empathy subscale scores were significantly correlated with the measures of domestic abuse defined as psychological abuse, physical abuse, and sexual abuse. Neither the empathic concern nor fantasy subscales were significantly correlated with any violence measure. Perspective-taking had a significant negative relationship with both psychological aggression and total violence such that lower ability to take others' perspective was associated with increased levels of psychological aggression and total violence. Personal distress had a significant positive relationship with both total violence and physical assault meaning men who felt greater distress in intense interpersonal situations reported higher levels of perpetration of total violence and physical violence.

Covell et al. (2007) then undertook a series of hierarchical multiple regression analyses to predict each of the domestic violence measures (psychological aggression, physical assault, sexual coercion, and total violence). The main effects for all the empathy subscales were entered in the first step followed by the two-way interactions, three-way interactions, and four-way interactions in each of the subsequent steps. Overall, main effects emerged for different

combinations of all four empathy subscales across the four measures of domestic violence. Only one two-way interaction emerged as significant for the equation predicting sexual coercion. For sexual coercion, the two-way interaction between personal distress and perspective-taking was significant. Decomposing the interaction revealed a bimodal relationship with higher rates associated with two combinations: higher scores on both and lower scores on both. One three-way interaction emerged as significant for each of the three remaining measures. For both total violence and psychological aggression, the three-way interaction involved personal distress, fantasy, and perspective-taking. For total violence, two combinations were revealed: high personal distress and perspective-taking coupled with low fantasy and low personal distress, perspective-taking, and fantasy. For psychological aggression, the relationship that emerged was low fantasy and perspective-taking coupled with high personal distress. Finally, for physical assault, the significant three-way interaction was high empathic concern and personal distress coupled with low perspective-taking. None of the four-way interactions were significant.

The current study was similar in many ways to the Covell et al. (2007) study in the use of the CTS2 and IRI examining the relationship between empathy and violence in intimate relationships and examining moderating relationships via hierarchical multiple regression. However, in the current study additional factors of self-esteem and narcissism and empathy as a moderating variable in the theory of threatened egotism defined as an interaction between self-esteem and narcissism were included.

### Empathy and Narcissism

Few studies have been undertaken to examine combinations of these aforementioned traits. No studies have examined the combination of self-esteem, narcissism, and empathy in the perpetration of intimate partner violence. Wiehe (2003) examined the combination of narcissism

and empathy in a sample of abusive parents and foster parents, suggesting research supports empathy as a mediator in the expression of aggression. The Interpersonal Reactivity Index, the Narcissistic Personality Inventory, and another measure of narcissism were used to examine this relationship. The goals of the study were to compare the two groups on the measures and the relationship between the variables for abusive and nonabusive parents.

When comparing the abusive and nonabusive parents on the IRI, Weihe (2003) found the groups were significantly different on three of the four subscales. Specifically, the abusive parents endorsed less perspective-taking ability, lower empathic concern, and greater personal distress in intense emotional situations as compared to the nonabusive parents. Significant differences were found for the subscales of entitlement, exhibitionism, authority, and superiority of the NPI. The abusive parents scored higher on exhibitionism and entitlement but lower on authority and superiority as compared to the nonabusive parents. Authority and superiority are generally considered to correspond to more adaptive aspects of narcissism, while entitlement and exhibitionism are more maladaptive in nature.

The current researcher sought to explore intimate partner violence by consolidating findings across three broad areas of self-esteem, narcissism, and empathy. The implications could impact the development of treatment programs. As jurisdictions move towards mandatory arrest and prosecution statutes, the demand for treatment programs is also likely to see an increase. If people are going to be ordered to complete a treatment program, it is best to have a clearer understanding of what is driving the behavior in order to effectively intervene and change the behavior. Hopefully, the current study increases the understanding of men's use of violence in intimate relationships.

## Hypotheses

The current study was undertaken to explore the relationship between self-esteem, narcissism, and empathy with intimate partner violence perpetration among men. These relationships were examined in an aggregate sample of men including both incarcerated men and men obtained from the undergraduate population of a southeastern university. Additionally, the sample was divided and analyzed based on groups comparing incarcerated and nonincarcerated men. For bivariate relationships, a negative relationship between intimate violence perpetration and self-esteem and between intimate violence perpetration and empathy was hypothesized. A positive relationship was expected between intimate violence perpetration and narcissism. A two-way interaction was examined specifically between self-esteem and narcissism as a test of threatened egotism in predicting intimate partner violence. In the current study threatened egotism was defined as high self-esteem coupled with high narcissism. A significant interaction between self-esteem and narcissism was not expected in the current study. However, it was hypothesized that empathy would moderate the relationship between intimate violence perpetration and threatened egotism. Specifically, low empathy coupled with high narcissism and high self-esteem was expected to result in increased use of violence in interpersonal relationships.

## CHAPTER 2

### METHODS

#### Participants

The current study was undertaken to examine predictors of intimate violence perpetration among men. While research has made clear intimate violence perpetration is not only perpetrated by men (i.e. Cantrell et al., 1995; Holt & Gillespie, 2008; Straus & Gelles, 1990; Swan & Snow, 2002; Thornton et al., 2010), it has been repeatedly documented that women tend to suffer more injuries, both minor and serious, as well as more negative consequences as a result of intimate violence victimization (Howard et al., 2010; Romito & Grassi, 2007; Straus & Gelles, 1990; Taft & Hegarty, 2010; Tjaden & Thoennes, 2000; Umberson et al., 1998). Therefore, the focus of the current study was on men in an attempt to identify predictors of men's use of violence in intimate relationships. Prior to any data being collected, the research study received approval from the Institutional Review Board at East Tennessee State University.

Participants were drawn from two different pools of potential participants: inmate and college samples. A priori analyses were conducted to determine sample size needed for adequate power using G\*Power. With an assumed medium effect size of 0.15 and power of 0.95 and 12 predictors (i.e., control variables, four main effects, one two-way interaction, and two three-way interactions), the minimum sample was 184. The current sample consisted of 488 men, 239 inmates and 249 college students. The inmate pool was recruited from inmates in local county jails, including the counties of Washington, Sullivan, and Carter in Tennessee. Washington and Sullivan County facilities house approximately 500 male inmates on average while Carter County houses approximately 250. The sheriffs in each jurisdiction were approached and gave permission for the surveys to be administered in their facility. As inmates are a protected

population, all inmate participants were fully briefed and informed consent was obtained prior to survey administration. A waiver of written informed consent was obtained from the IRB as the inmates' signatures on the consent form would have provided the only link between them and their participation.

While the plan was to obtain a total of 80 participants at each facility, other factors interfered such as limited access to inmate population, difficulty scheduling, and difficulty getting volunteers from the inmate populations. In order to get adequate numbers, three trips were made to the Washington County jail over a period of 6 months while one trip each was made to Carter and Sullivan counties. The Washington County jail was the most accommodating in terms of having flexibility of when surveys could be administered. Inmates were verbally instructed not to participate if they had already done so and the administration felt the turnover was such that adequate numbers of new participants were available. Surveys were administered in small groups based on arrangements made with each jail and recommendations of jail staff in order to maintain anonymity and safety for inmates, jail staff, and researchers.

The second participant pool was from the undergraduate student population at East Tennessee State University. These participants were recruited via the psychology department's participant pool, SONA. Using SONA, students access and complete anonymous online surveys for modest course credit in undergraduate psychology classes. Participation was limited to men age 18 and over. As the data were to be obtained via anonymous online surveys, participants were not required to sign informed consents but were informed of the purpose of the study and that participation was voluntary. Both pools of participants were administered the same surveys with the exception of offense specific information gathered from the incarcerated population and students were asked about arrest their history.



## Measures

### Demographics

The anonymous survey consisted of several different measures (see Appendix A). The first measure was a demographic measure. Demographics to be collected included: age, race or ethnicity, relationship status, sexual orientation, highest level of education, family income, and if the participant had children, how many. In order to assess criminality in the student population, these participants were asked if they have ever been convicted of a criminal offense and, if so, to list the offense. Inmate participants were asked if they had prior convictions, what their current offense was, and their current status (i.e. awaiting trial, serving sentence, etc.).

### Family Violence

Research has consistently found a strong relationship between witnessing violence in the family of origin and later intimate violence perpetration (i.e. Cantrell et al., 1995; Carr & VanDeusen, 2002; Franklin & Kercher, 2012; Godbout et al., 2009; Holt, 2007; Holt & Gillespie, 2008; Mbilinyi et al., 2012; O’Keefe, 1998). This relationship was statistically controlled in the current study by including family violence witnessed during childhood in the analyses.

Witnessing violence in the family of origin was measured via the Conflict Tactics Scale (CTS; Straus, 1979; see Appendix B). Straus developed the CTS as a measure of conflict resolution tactics employed in intimate relationships. The CTS consists of three subscales: negotiation, verbal aggression, and physical aggression. Examples of negotiation include: “Discussed an issue calmly” and “Got information to back up his/her side of things”. Examples of verbal aggression include: “Sulked or refused to talk about an issue” and “Insulted or swore

at him/her”. Examples of physical aggression include: “Threw or smashed or hit or kicked something” and “Slapped him/her”.

The CTS has been used to measure conflict resolution tactics in many different relationships including intimate couples, parents, and siblings. In the current study the CTS was used to measure violence witnessed in the family of origin. Because the focus of the current study was on maladaptive resolution tactics, only the verbal and physical aggression subscales were administered. The CTS has face validity and has been found to be moderately to highly reliable with alpha coefficients ranging from .42 to .96 (Straus & Gelles, 1990). All subscales of the CTS in the current study were found to be reliable as follows: father physical aggression  $\alpha = .98$ , father verbal aggression  $\alpha = .90$ , mother physical aggression  $\alpha = .97$ , and mother verbal aggression  $\alpha = .90$ .

Participants were asked to reflect on their childhood and indicate how often they witnessed the items of verbal and physical aggression between their parents, both mother to father and father to mother. Asking participants to reflect over their childhood in general was a deviation from the original format of the CTS that typically instructs participants to think back over the previous 12 months (Straus, 1979). The rationale behind this decision was that many participants may have been living away from home for many years and it would be difficult to isolate the last year living at home. Additionally, if conflict was occurring, the relationships might have dissolved prior to the participants’ last year at home thus inaccurately reflecting what they witnessed.

Participants answered based on a six-point Likert scale ranging from 0 (never) to 5 (more than once a month). This, again, was a deviation from the original format of never to more than 20 times, also a six-point scale. However, deviations in response categories and the referent time

period are not uncommon and did not impact the reliability of the measure (e.g. Cantrell et al., 1995; Fass, Benson, & Leggett, 2008; Kessler, Molnar, Feurer, & Appelbaum, 2001; Stein, Tran, & Fisher, 2009; Tashkandi & Rasheed, 2009; Unger, Sussman, & Dent, 2003). Consistent with the focus on physical behaviors, the subscales reflecting physical aggression for mother and father were added together to reflect a composite score of family violence with higher scores indicating witnessing increasing levels of violence in the family of origin.

### Intimate Partner Violence Perpetration

The Revised Conflict Tactics Scale (CTS2; Straus et al., 1996) was developed from the original CTS (See Appendix C). While the original CTS consisted of three subscales, the CTS2 added not only individual items to those three subscales but also added two additional subscales. The CTS2 consists of five subscales: negotiation, psychological aggression, physical assault, injury to partner, and sexual coercion. Examples of items assessing negotiation include: “I showed my partner I cared even though we disagreed” and “I explained my side of a disagreement to my partner”. Examples of psychological aggression items include: “I insulted or swore at my partner” and “I called my partner fat or ugly”. Examples of items assessing physical assault include: “I used a knife or gun on my partner” and “I twisted my partner’s arms or hair”. Examples of injury to partner items include: “My partner had a sprain, bruise, or small cut because of a fight with me” and “My partner passed out from being hit on the head by me”. Examples of items assessing sexual coercion include: “I used force (e.g. hitting, holding down, weapon, etc.) to make my partner have oral or anal sex” and “I insisted on sex when my partner did not want to (but did not use physical force)”.

The CTS2 consists of 78 items, half of which assess the participants’ own actions towards their partners and the other half address the actions of the participants’ partners.

In typical administration of the CTS2, participants are asked to think back over the previous year and answer how often each action has occurred on a 7-point scale ranging from 0 (never) to 6 (more than 20 times). As with the CTS, the current study deviated from this administration to open the time period to experiences across the participant's lifetime. One of the primary reasons for this is the target population. The target population consists of men who are currently in custody in county jails. If the time period were maintained at occurrences over the previous 12 months, there is a chance this time period would not overlap with time the man was not in custody. Therefore, in order to get a more accurate picture of the participant's true experiences with intimate partner violence perpetration, participants were asked to reflect over their experiences in all intimate relationships throughout their lives. The response options were retained on a 7-point scale ranging from 0 (never) to 6 (more than 20 times).

As with the CTS, modifications to the measure were not expected to negatively impact the reliability of the measures and have been employed previously without impacting the reliability of the measure (Holt, 2007). Straus et al. (1996) report alpha coefficients of .79 to .95 for the individual subscales. As with the CTS, the CTS2 has strong face validity. While the measure was administered in its entirety, the focus on the study was perpetration and, therefore, reliability statistics were calculated for those subscales only. In the current study, all subscales were found to be reliable as follows: negotiation  $\alpha = .86$ , psychological aggression  $\alpha = .86$ , physical assault  $\alpha = .93$ , injury to partner  $\alpha = .88$ , and sexual coercion  $\alpha = .77$ .

### Self-Esteem

In general, self-esteem is defined as a person's overall assessment of self-worth (Papps & O'Carroll, 1998). The Rosenberg Self-Esteem Scale (1965) was used to assess self-esteem (see Appendix D). Some researchers have suggested this scale to be the most widely used measure of

self-esteem (Whiteside-Mansell & Corwyn, 2003). Rosenberg's scale consists of 10 items, half of which are reverse scored to reduce response item bias.

Example items include: "On the whole, I am satisfied with myself" and "I certainly feel useless at times". The responses were on a five-point Likert scale ranging from 0 (does not describe me at all) to 4 (describes me very well). Negatively worded items were reversed and responses added together to calculate a total self-esteem score. Higher scores indicate higher self-esteem. Rosenberg's scale has been found to be reliable with reported alphas ranging from .81-.83 based on reported statistics in published literature (Whiteside-Mansell & Corwyn, 2003) and .87-.90 (Holt, 2007; Holt & Gillespie, 2008). The current study was consistent with previous research with a calculated alpha of .87.

### Narcissism

Narcissism was measured via the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979; see Appendix E). The NPI is a widely-used measure to assess narcissism in research settings and includes scales measuring both adaptive and maladaptive aspects of trait narcissism. In the development of the NPI, Raskin and Hall created a measure with 54-items in dyads resulting in a forced-choice format. The items were developed based on the DSM criteria at the time for Narcissistic Personality Disorder.

Since the development of the NPI, Emmons (1984, 1987) has subjected the items to factor analysis to identify the factor structure. Emmons (1984, 1987) has found and replicated a four-factor solution for the NPI. These four-factors have been identified as:

Superiority/Arrogance, Self-Admiration/Self-Absorption, Leadership/Authority, and Exploitativeness/Entitlement. Emmons (1987) identified the Exploitativeness/Entitlement

subscale to be the scale tapping the most maladaptive aspects of narcissism while Leadership/Authority corresponded to healthier aspects of narcissism.

In assessing the validity of the NPI subscales, Emmons (1987) correlated the different subscales with other measures of narcissism. Only the Exploitativeness and Entitlement subscale significantly correlated with two measures of pathological narcissism. Ackerman et al. (2011) suggest it is inappropriate to simply sum the NPI for a total score due to the inclusion of both adaptive and maladaptive characteristics. Due to the aspects of this subscale as measuring maladaptive characteristics and the relationship to emotional intensity (Ackerman et al., 2011; Emmons, 1987), only the eight items loading on this subscale with a factor loading of .35 or higher were administered in the present study. Examples of these items include: “I expect a great deal from people” and “I find it easy to manipulate people”. To be consistent with other Likert-scales used in the survey, a five-point scale was used from 0 (does not describe me at all) to 4 (describes me very well). Emmons (1987) reports good reliability of this subscale with an alpha of .68. The subscale was found to be reliable in the current study with an alpha of .75.

### Empathy

Many measures have emerged to assess empathy. One of the most often cited is the Interpersonal Reactivity Index (IRI; Davis, 1980; see Appendix F). The IRI emerged as a measure of what has come to be known as the multidimensional aspects of empathy. The IRI consists of 28 items responded to on a 5-point scale ranging from 0 (does not describe me well at all) to 4 (describes me very well). These 28 items load onto four factors with seven items each. The factors are such that two subscales each load onto larger factors representing aspects of cognitive empathy and affective empathy.

Cognitive empathy is comprised of the perspective-taking and fantasy subscales. Affective empathy consists of subscales of empathic concern and personal distress. Perspective-taking (PT) refers to the ability to see experiences from another's perspective and includes such items as "I sometimes find it difficult to see things from the other guy's point of view" and "I try to look at everybody's side of a disagreement before I make a decision". Fantasy (FS) subscale measures the ability of the respondent to identify imaginatively with fictitious characters and includes such items as "Becoming extremely involved in a good book or movie is somewhat rare for me" and "I am usually objective when I watch a movie or play, and I don't often get completely caught up in it". Personal distress (PD) assesses "self-oriented" feelings relative to personal anxiety in tense interpersonal situations and includes such items as "I sometimes feel helpless when I am in the middle of a very emotional situation" and "When I see someone get hurt, I tend to remain calm". On the other hand, empathic concern (EC) measures "other-oriented" feelings including sympathy and concern directed towards less fortunate other. EC includes such items as "Other people's misfortunes do not usually disturb me a great deal" and "When I see someone being taken advantage of, I feel kind of protective toward them". Davis (1980) reports the reliability of the subscales to be acceptable, ranging from .68 to .79. The current study found acceptable reliabilities as follows: PT  $\alpha = .74$ , FS  $\alpha = .70$ , PD  $\alpha = .67$ , and EC  $\alpha = .76$ .

## Variables

### Dependent

The focus of the current study was intimate partner violence perpetration. For this reason, the dependent variable was extracted from the CTS2. The study focused on the two subscales of the CTS2 that correspond to physical violence: physical assault and sexual coercion were

summed to create a composite score of intimate violence perpetration. While the injury to partner subscale is also indicative of physical violence, there is expected to be great overlap between the physical assault and injury to partner subscales thus minimizing the importance of including this latter subscale. This method of exclusion was consistent with previous research (e.g. Afifi, Henriksen, Asmundson, & Sareen, 2012; Mbilinyi et al., 2012; Milletich, Kelley, Doane, & Pearson, 2010).

### Independent

The current study was an investigation of the relationship of three independent variables with intimate partner violence perpetration. These three variables were self-esteem, narcissism, and empathy as measured by the aforementioned scales. The analyses included both main effects and interaction effects. In order to reduce multicollinearity, each of these independent variables was centered prior to constructing the interaction term, meaning the statistical mean for each scale was subtracted from each participants' score. These centered scores were used to determine both main effects and to calculate interaction terms consistent with suggestions from Baron and Kenny (1986) to test moderation.

While the IRI was administered in its entirety, only one scale from each of the facets of cognitive and affective empathy was retained for analyses. For cognitive empathy, the perspective-taking subscale was retained while the empathic concern subscale was used to represent affective empathy. This was consistent with findings from Joliffe and Farrington (2004) who conducted a meta-analysis and systematic review of empathy in offender populations. In reviewing the different subscales of the IRI and comparing to other measures of empathy, the PT subscale correlated highest with a purely cognitive measure of empathy while the EC subscale correlated highest with a purely affective measure of empathy. These measures



were retained and analyzed separately. Joliffe and Farrington found evidence for a consistent relationship between cognitive empathy and offending but the relationship between affective empathy and offending was less clear. Therefore, analyses were conducted with both cognitive and affective empathy as measured by the PT and EC subscales of the IRI, respectively.

Several control variables were also included in analyses. Age, race, education, and income were included as controls. Additionally, witnessing violence in the family of origin was included as a control variable as measured by the CTS. While the focus of the current study is not specifically on the relationship between witnessing violence in the family of origin and later intimate partner violence perpetration, research has consistently found a strong relationship between these two experiences (i.e. Cantrell et al., 1995; Carr & VanDeusen, 2002; Godbout et al., 2009; Holt, 2007; Holt & Gillespie, 2008; O’Keefe, 1998). Therefore, it was important to control for this relationship in the current study.

### Statistical Analyses

#### Univariate

Univariate statistics were examined for all variables of interest including age, race, education, income, family violence, self-esteem, narcissism, empathy, and intimate partner violence perpetration. Frequencies were run on nominal level data such as race. Measures of central tendency, including mean, median, mode, standard deviation, skew, and kurtosis were calculated for all other variables measured on a continuous scale. For those items centered for the multivariate analyses (i.e. self-esteem, narcissism, and empathy), these measures of central tendency were calculated on the raw scores. Variables were examined for normality and the assumptions needed for the multivariate statistics. Appropriate measures were taken to avoid violation of the assumptions of multiple regression as described in the following chapter.

## Bivariate

Bivariate statistics were calculated to examine relationships between the variables. Cross-tabs were constructed and chi-square tests of independence were calculated for dichotomized variables of interest. The first examined inmate versus college samples across dichotomized variables of intimate violence, family violence, income (under or over \$30,000), and race (White, Non-White). The second examined those who did witness family violence versus those who did not across the variables of intimate violence, income, and race. The next cross-tabs compared White versus Non-White across income and intimate violence. The final cross-tabs compared those with a family income of \$30,000 and under to those with a family income over \$30,000 across intimate violence.

Independent samples *t*-tests were conducted to compare the mean scores for age, self-esteem, narcissism, cognitive empathy, affective empathy, family violence, and intimate violence perpetration for inmates versus college students. While the focus of the study was not on family violence, this variable was dichotomized into yes and no across the entire sample to compare the means on age, self-esteem, narcissism, cognitive empathy, affective empathy, and intimate violence for those who have and have not witnessed family violence. Additionally, a dichotomous variable for intimate violence perpetration was calculated. Again, *t*-tests were used to compare the means of age, self-esteem, narcissism, family violence, cognitive empathy, and affective empathy for those who have and have not perpetrated intimate partner violence.

Finally, a correlation matrix was constructed including the following variables: age, self-esteem, narcissism, affective empathy, cognitive empathy, intimate violence, and family violence. The continuous forms of these variables were included in this analysis.

## Multivariate

The current study consisted of three hierarchical multiple regressions. The first included analysis of the entire sample as a whole. The dependent variable was intimate violence perpetration as measured by the combined sum of the physical assault and sexual coercion subscales of the CTS2. The first step included control variables of age, race, education, income, source (i.e. inmate vs. college), and witnessing family violence. During the second step the centered variables of self-esteem, narcissism, cognitive empathy, and affective empathy were entered. The two-way interaction term was added in the third step calculated by multiplication of the centered variables of self-esteem and narcissism. Two three-way interactions were added in the fourth step. These interactions were again calculated by multiplying the centered variables as follows: self-esteem x narcissism x cognitive empathy, self-esteem x narcissism x affective empathy. If an interaction was significant at the .05 level, it was decomposed to determine where the interaction occurs.

The second and third regression equations were calculated using the same framework with the exception of one used only the inmate sample and the other used only the college sample. The only differences lie in the control variables as group status was no longer appropriate and education for the college sample was not appropriate.

## Summary

In summary, the current study was an examination of the effects of self-esteem, narcissism, and empathy on the perpetration of intimate partner violence. The study employed a multivariate analytic strategy to examine the effects of the variables for the combined sample of both inmate and college men and again to compare the effects of the variables across the two groups. A purpose of the current study was to advance this field of research as this specific

relationship between self-esteem, narcissism, and empathy has not yet been explored while further exploring the relationship between self-esteem and intimate violence. The findings could help guide treatment strategies and identify appropriate targets for treatment based on perpetrator characteristics.

## CHAPTER 3

### RESULTS

#### Demographics

The total sample consisted of 488 men, 239 (49%) of whom were men currently incarcerated in one of three local county jails, Washington, Sullivan, or Carter County, Tennessee, who were volunteers recruited from the general populations of each facility and given no incentives for participation. Of those incarcerated, 171 (71%) were housed at Washington County, 27 (11.3%) were housed at Sullivan County, and 41 (17.2%) were housed at Carter County (see Table 1). The remaining 249 (51%) were college students enrolled at a regional university in northeast Tennessee. The survey was posted online via the psychology department's survey system (SONA). Students were afforded modest extra credit in undergraduate psychology classes for participation.

The sample was predominantly Caucasian with 400 (82.6%), followed by African American 48 (9.9%), Asian 9 (1.9%), and Hispanic 7 (1.4%) while 20 (4.1%) indicated "other". The majority of participants (449; 93.9%) indicated their sexual orientation as heterosexual, 14 (2.9%) homosexual, 9 (1.9%) bisexual, and 6 (1.3%) indicating "other". See Table 1 for full demographic frequencies. In order to facilitate the use of categorical variables in multivariate analyses, the variables of race, income, and education were dichotomized into White or non-White; \$30,000 and under or Over \$30,000; and Less than high school graduate or High school graduate and higher.

Table 1

*Demographic Frequencies*

Variable	Frequency	Valid Percent
Source		
Sona	249	51.0
Inmate	239	49.0
Facility (Inmate Sample)		
Washington County	171	71.5
Sullivan County	27	11.3
Carter County	41	17.2
Race or Ethnicity		
Caucasian	400	82.6
African American	48	9.9
Asian	9	1.9
Hispanic	7	1.4
Other	20	4.1
Sexual Orientation		
Heterosexual	449	93.9
Homosexual	14	2.9
Bisexual	9	1.9
Other	6	1.3
Relationship Status		
Single, not dating	171	35.4
Casually dating	71	14.7
Seriously dating	99	20.5
Engaged	44	9.1
Married	90	18.6
Domestic Partnership	8	1.7
Marital Status		
Single, never married	302	62.8
Married	84	17.5
Domestic Partner	10	2.1
Separated	23	4.8
Divorced	60	12.5
Widowed	2	0.4
Family Income		
Less than \$10,000	81	17.5
\$10,001-\$20,000	70	15.1
\$20,001-\$30,000	86	18.5
\$30,001-\$40,000	57	12.3
\$40,001-\$50,000	48	10.3
Over \$50,000	122	26.3

Table 1 (continued)

Variable	Frequency	Valid Percent
Highest Education		
Less than High School	86	17.7
GED	28	5.8
High School Graduate	80	16.5
Some College/Tech School	284	58.4
College Graduate	7	1.4
Post-Graduate/Professional	1	0.2
Crime Conviction (College)		
No	222	92.1
Yes	19	7.9
Prior Conviction (Inmate Sample)		
No	63	26.4
Yes	176	73.6
Legal Status (Inmate Sample)		
Awaiting Trial	119	49.8
Post-conviction	120	50.2

In order to establish prevalence rates of violence, the scales of perpetration of physical assault and sexual coercion on the CTS-2 as well as reported history of witnessing family violence were dichotomized into yes and no based on scores greater than zero on the respective measures (see Table 2). Of the overall sample, 275 (58.3%) admitted to at least one act of physical assault against a partner while 197 (41.7%) denied any such physically assaultive acts. Slightly fewer (220; 47.2%) admitted to sexually coercing their partner at least once, while 246 (52.8%) denied this. When these variables were combined to create a composite score of intimate violence to include both physical assault and sexual coercion, 328 (70.8%) men admitted to at least one act of intimate violence against a partner while 135 (29.2%) denied this. In terms of witnessing family violence, 184 (42.6%) indicated they witnessed violence between their parents on at least one occasion while 248 (57.4%) reportedly had not witnessed such acts during childhood.

Table 2

*Violence Prevalence*

Variable	Frequency	Valid Percent
Physical Assault		
Yes	275	58.3
No	197	41.7
Sexual Coercion		
Yes	220	47.2
No	246	52.8
Intimate Violence		
Yes	328	70.8
No	135	29.2
Family Violence		
Yes	184	42.6
No	248	57.4

Descriptive statistics were generated for the following variables: age, self-esteem, narcissism, cognitive empathy, affective empathy, intimate violence, and family violence (see Table 3). The average age of the sample was 28.03 (SD 10.07) with a minimum age of 18 and maximum age of 67 years. For self-esteem, the possible range of scores is 0-40 with higher scores corresponding to higher self-esteem. The mean self-esteem of the sample was 28.47 (SD 7.99) with a minimum score of 2 and a maximum score of 40. In terms of narcissism, the possible range of scores was 0-32 with higher scores indicative of greater degrees of narcissism. The mean of the current sample was 14.07 (SD 6.04) with a minimum score of 0 and a maximum score of 32. Both cognitive and affective empathy had a possible range of scores of 0-28. For cognitive empathy, the mean was 16.48 (SD 5.12) with a minimum score of 0 and a maximum score of 28. For affective empathy, the mean was 18.85 (SD 5.08) with a minimum score of 3 and a maximum score of 28. For the composite score of intimate violence, the possible range of scores was 0-114. In the current sample, the mean score was 10.66 (SD 17.13) with a minimum score of 0 and maximum of 114. On family violence, the possible range of scores was 0-84. In



the current sample, the mean for family violence was 8.97 (SD 16.63) with a minimum of 0 and maximum of 70. While these last two variables are both low baseline behaviors and expected to be positively skewed, this violates the assumptions of parametric tests. Therefore, the data were subjected to square-root transformations. Additionally, the intimate violence variable had six extreme outliers. These values were replaced with the mean plus three times the standard deviation. These methods of transforming data to avoid violating assumptions are consistent with accepted methods (Field, 2009). The descriptives of the transformed variables are provided in Table 3. Henceforth, these transformed variables will be used in analyses.

Table 3

*Descriptives*

Variable	Min.	Max.	Mean	S.D.	Skew	Kurtosis
Age	18	67	28.03	10.07	1.13	.60
Self-Esteem	2	40	28.47	7.99	-.429	-.38
Narcissism	0	32	14.07	6.04	.143	-.03
Cognitive Empathy	0	28	16.48	5.12	-.184	.19
Affective Empathy	3	28	18.85	5.08	-.206	-.33
Intimate Violence	0	114	10.66	17.13	3.09	11.47
Family Violence	0	70	8.97	16.63	2.10	3.71
Sq. Rt. Intimate Violence	0	10	2.38	2.20	.923	.695
Sq. Rt. Family Violence	0	8.37	1.72	2.46	1.23	.231

Bivariate Statistics

Chi-Square

Cross-tabs were constructed and chi-square tests of independence were calculated to examine the relationship between source (college vs. inmate) and intimate violence, family violence, income, and race. Next, cross-tabs were constructed for family violence with intimate violence, education, income, and race. Cross-tabs were constructed for race with intimate violence and income. Finally, cross-tabs were constructed for income and intimate violence. For

each of these, chi-square statistics were calculated to determine if the variables occur independently while the cross-tabs can be consulted to assess the nature of the relationship.

For source the variables of intimate violence, family violence, income, and race were tested for significance (see Table 4). For source and intimate violence, the variables were not independent of each other,  $\chi^2 (1, N = 463) = 44.99, p < .001$ . As seen in the cross-tabs, 85.3% of the inmate sample admitted to perpetrating intimate violence compared to 57.1% of the college sample. For family violence the variables again were not independent of each other,  $\chi^2 (1, N = 432) = 12.38, p < .001$ . The cross-tabs indicate 52.1% of the inmate sample witnessed family violence while 35.2% of the college sample witnessed family violence. Likewise for income, the variables were not independent of each other,  $\chi^2 (1, N = 464) = 48.46, p < .001$ . The breakdown was almost reciprocal with 67.1% of the inmate sample and 34.8% of the college sample under \$30,000 with 32.9% of the inmate sample and 65.2% of the college sample over \$30,000. For source and race the chi-square was not significant indicating these variables were independent of each other,  $\chi^2 (1, N = 488) = .045, p = .832$ .

Table 4

*Source, Violence, and Demographics Cross-Tabs and Chi-Square*

		College	Inmate	$\chi^2$
Intimate Violence				44.99***
	No	102 (42.9%)	33 (14.7%)	
	Yes	136 (57.1%)	192 (85.3%)	
Family Violence				12.38***
	No	158 (64.8%)	90 (47.9%)	
	Yes	86 (35.2%)	98 (52.1%)	
Income				48.46***
	\$30,000 and under	80 (34.8%)	157 (67.1%)	
	More than \$30,000	150 (65.2%)	77 (32.9%)	
Race				.05
	White	205 (82.3%)	195 (81.6%)	
	Non-White	44 (17.7%)	44 (18.4%)	

Note: \*\*\*  $p < .001$

For witnessing family violence the variables of interest were intimate violence, income, and race (see Table 5). For family violence and intimate violence the variables were not independent,  $\chi^2 (1, N = 417) = 39.93, p < .001$ . Referring to the cross-tabs 85.3% of those who witnessed family violence went on to perpetrate intimate violence compared to 56.2% who perpetrated intimate violence and did not witness family violence. For family violence and income the variables again were not independent,  $\chi^2 (1, N = 410) = 8.77, p < .01$ . As with source, the percentages are almost reciprocal with 43.0% of those who did not witness family violence reporting incomes of \$30,000 and under and 57.0% reporting incomes over \$30,000, while 57.8% of those who did witness family violence reported incomes of \$30,000 and under and 42.2% of those who did not reporting incomes over \$30,000. As with source, the variables of family violence, and race were independent,  $\chi^2 (1, N = 432) = .411, p = .522$ .

Table 5

*Family Violence, Intimate Violence, Demographics Cross-Tabs and Chi-Square*

	Family Violence		$\chi^2$
	No	Yes	
Intimate Violence			39.93***
No	105 (43.8%)	26 (14.7%)	
Yes	135 (56.2%)	151 (85.3%)	
Income			8.77**
\$30,000 and under	99 (43%)	104 (57.8%)	
More than \$30,000	131 (57%)	76 (42.2%)	
Race			.41
White	208 (83.9%)	150 (81.5%)	
Non-White	40 (16.1%)	34 (18.5%)	

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

For race the variables under examination were income and intimate violence (see Table 6). For race and income the chi-square was not significant indicating the variables were independent of each other,  $\chi^2 (1, N = 464) = 2.28, p = .131$ . Likewise, for race and intimate

violence the chi-square was not significant suggesting these variables were independent,  $\chi^2 (1, N = 463) = .73, p = .393$ .

Table 6

*Race, Income, and Intimate Violence Cross-Tabs and Chi-Square*

	Race		$\chi^2$
	White	Non-White	
Income			2.28
\$30,000 and under	190 (49.5%)	47 (58.8%)	
More than \$30,000	190 (49.5%)	33 (41.2%)	
Intimate Violence			.73
No	114 (30.0%)	21 (25.3%)	
Yes	266 (70.0%)	62 (74.7%)	

Finally, income and intimate violence were examined (see Table 7). For income and intimate violence the variables were not independent of each other,  $\chi^2 (1, N = 443) = 9.05, p < .01$ . Of those with an income of \$30,000 or less, 77.9% admitted to intimate violence compared to 65.0% of those reporting an income over \$30,000.

Table 7

*Intimate Violence and Income Cross-Tabs and Chi-Square*

	Income		$\chi^2$
	\$30,000 and under	Over \$30,000	
Intimate Violence			9.05**
No	50 (22.1%)	76 (35.0%)	
Yes	176 (77.9%)	141 (65.0%)	

Note: \*\*  $p < .01$

Mean Comparisons

Three groups of *t*-tests were examined to compare means for significant differences. The first group compared the sample sources of college and inmate across the following dependent variables: age, self-esteem, narcissism, cognitive empathy, affective empathy, family violence, and intimate violence (see Table 8). For each of these variables high scores correspond to “more”

of each. Of the seven variables the samples were significantly different on five. On age the inmate sample (M = 33.8; SD = 9.40) was significantly older than the college sample (M = 22.43; SD = 7.11),  $t(475) = -14.87, p < .001$ . The college sample had significantly higher self-esteem (M = 29.17, SD = 7.94) than did the inmate sample (M = 27.71, SD = 7.99),  $t(473) = 1.99, p < .05$ . The inmate sample had significantly higher scores on affective empathy (M = 19.45, SD = 5.13) compared to the college sample (M = 18.27, SD = 4.97),  $t(470) = -2.54, p < .05$ . This suggests the inmate sample had greater affective empathy compared to the college sample. In terms of family violence the inmate sample (M = 2.32, SD = 2.74) witnessed significantly more family violence compared to the college sample (M = 1.25, SD = 2.11),  $t(430) = -4.47, p < .001$ . Finally, for intimate violence again the inmate sample (M = 2.93, SD = 1.97) reported engaging in significantly more intimate violence compared to the college sample (M = 1.86, SD = 2.28),  $t(461) = -5.37, p < .001$ . The only variables that were not significantly different for the two samples were narcissism and cognitive empathy.

Table 8

*Source t-Tests of Age, Self-Esteem, Narcissism, Empathy, and Violence*

Variable	Mean		<i>t</i>	df	sig.
	College	Inmate			
Age	22.43	33.80	-14.87***	475	.000
Self-Esteem	29.17	27.71	1.99*	473	.047
Narcissism	14.51	13.61	1.62	473	.106
Affective Empathy	18.27	19.45	-2.54*	470	.011
Cognitive Empathy	16.80	16.14	1.41	473	.160
Family Violence	1.25	2.32	-4.47***	430	.000
Intimate Violence	1.86	2.93	-5.37***	461	.000

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

The second group of mean comparisons was undertaken to compare those who had witnessed family violence to those who had not across the following variables: age, self-esteem, narcissism, affective empathy, cognitive empathy, and intimate violence (see Table 9). Of these

variables two of the six had significantly different means. Those who witnessed family violence (M = 28.72, SD = 9.95) were significantly older than those who did not witness family violence (M = 25.82, SD = 9.19),  $t(423) = -3.09, p < .01$ . The only other variable that was significantly different was intimate violence with those who witnessed family violence (M = 3.00, SD = 2.19) reporting significantly higher rates of intimate violence compared with those who did not witness family violence (M = 1.66, SD = 1.95),  $t(415) = -6.57, p < .001$ . The scores of self-esteem, narcissism, and empathy were not significantly different for those who had or had not witnessed family violence.

Table 9

*Family Violence t-Tests of Age, Self-Esteem, Narcissism, Empathy, and Intimate Violence*

Variable	Mean		<i>t</i>	df	sig.
	Family Violence				
	No	Yes			
Age	25.82	28.72	-3.09**	423	.002
Self-Esteem	29.05	28.52	.69	421	.492
Narcissism	13.93	14.27	-.55	421	.583
Affective Empathy	19.08	18.75	.66	418	.516
Cognitive Empathy	16.63	16.69	-.14	421	.891
Intimate Violence	1.66	3.00	-6.57***	415	.000

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

The final group of *t*-tests compared those who did report intimate violence with those who did not report intimate violence across age, self-esteem, narcissism, affective empathy, cognitive empathy, and family violence (see Table 10). Of the six variables under consideration all except for narcissism were significantly different. The participants who reported intimate violence (M = 29.86, SD = 10.22) were significantly older than those who did not report intimate violence (M = 25.51, SD = 9.43),  $t(462) = -4.74, p < .001$ . For self-esteem, those who did not report intimate violence (M = 30.52, SD = 7.79) had significantly higher self-esteem than those who did report intimate violence (M = 27.14, SD = 7.92),  $t(459) = 4.56, p < .001$ . On affective

empathy those who did not report intimate violence ( $M = 19.67$ ,  $SD = 5.03$ ) reported greater affective empathy compared to those who did report intimate violence ( $M = 18.32$ ,  $SD = 5.00$ ),  $t(460) = 2.86$ ,  $p < .01$ . Likewise, those who did not report intimate violence ( $M = 17.77$ ,  $SD = 5.18$ ) reported greater cognitive empathy compared with those who did report intimate violence ( $M = 15.54$ ,  $SD = 4.82$ ),  $t(460) = 4.77$ ,  $p < .001$ . Finally, those who reported intimate violence ( $M = 12.79$ ,  $SD = 19.11$ ) reported witnessing significantly more family violence compared to those who did not report intimate violence ( $M = 4.19$ ,  $SD = 11.50$ ),  $t(421) = -5.71$ ,  $p < .001$ .

Table 10

*Intimate Violence t-Tests of Age, Self-Esteem, Narcissism, Empathy, and Family Violence*

Variable	Mean		<i>t</i>	df	sig.
	No	Yes			
Age	25.51	29.86	-4.74***	462	.000
Self-Esteem	30.52	27.14	4.56***	459	.000
Narcissism	13.45	14.43	-1.76	459	.079
Affective Empathy	19.67	18.32	2.86**	460	.004
Cognitive Empathy	17.77	15.54	4.77***	460	.000
Family Violence	4.19	12.79	-5.71***	421	.000

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

Correlation

A correlation matrix was constructed with scale level variables of interest to assess the variables for bivariate relationships and the nature of the relationship, i.e. positive or negative. The variables of interest were: age, self-esteem, narcissism, affective empathy, cognitive empathy, intimate violence, and family violence (see Table 11). The Pearson correlation coefficient was examined for significance at the .05 level and, if the relationship was significant, whether the relationship was positive or negative indicating whether the variables were directly or inversely related.

Table 11

*Pearson Correlation Matrix of Age, Self-Esteem, Narcissism, Empathy, and Violence*

	1	2	3	4	5	6	7
1. Age	---						
2. Self-Esteem	-.066	---					
3. Narcissism	-.082	.022	---				
4. Affective Empathy	.173 <sup>***</sup>	.100 <sup>*</sup>	-.178 <sup>***</sup>	---			
5. Cognitive Empathy	.115 <sup>*</sup>	.145 <sup>**</sup>	-.176 <sup>***</sup>	.578 <sup>***</sup>	---		
6. Intimate Violence	.163 <sup>***</sup>	-.269 <sup>***</sup>	.196 <sup>***</sup>	-.245 <sup>***</sup>	-.291 <sup>***</sup>	---	
7. Family Violence	.161 <sup>***</sup>	-.094	.065	-.038	-.041	.375 <sup>***</sup>	---

Note: <sup>\*</sup>  $p < .05$ ; <sup>\*\*</sup>  $p < .01$ ; <sup>\*\*\*</sup>  $p < .001$

For age, several significant relationships emerged. Age had significant positive correlations with both affective ( $r = .173, p < .001$ ) and cognitive ( $r = .115, p < .05$ ) empathy. This suggests as the age of participants increased, both their affective and cognitive empathy increased. Likewise, significant relationships emerged for age with both intimate violence ( $r = .164, p < .001$ ) and family violence ( $r = .161; p < .001$ ). This suggests that as the age of participants increased, their report of both perpetrating intimate violence and witnessing family violence increased.

For self-esteem, several significant relationships emerged. Self-esteem had positive relationships with both affective ( $r = .100, p < .05$ ) and cognitive ( $r = .145, p < .01$ ) empathy. This suggests that higher self-esteem was associated with both higher affective and cognitive empathy. A significant relationship emerged with intimate violence ( $r = -.269, p < .001$ ). The relationship was negative in nature suggesting as self-esteem decreased, intimate violence increased.

For narcissism, significant relationships emerged with both affective ( $r = -.178, p < .001$ ) and cognitive ( $r = -.176, p < .001$ ) empathy. Both the relationships were negative in nature suggesting that as narcissism increased, both affective and cognitive empathy decreased. A significant relationship also emerged for intimate violence ( $r = .196, p < .001$ ). This relationship



was positive in nature suggesting higher narcissism was associated with increased rates of intimate violence perpetration.

For affective empathy, a significant relationship emerged with cognitive empathy ( $r = .578, p < .001$ ). This relationship was positive and expected that as affective empathy increases, so does cognitive empathy. A significant negative relationship emerged with intimate violence ( $r = -.245, p < .001$ ). This suggests as affective empathy decreased, report of intimate violence perpetration increased. Likewise, cognitive empathy had a significant negative relationship with intimate violence ( $r = -.291, p < .001$ ). This suggests as cognitive empathy decreased, report of intimate violence perpetration increased. Finally, family violence had a significant positive relationship with intimate violence ( $r = .375, p < .001$ ). This suggests as participants reported witnessing increased levels of family violence, they also reported perpetrating more intimate violence.

#### Multivariate Statistics

Three separate hierarchical multiple regressions were run with intimate violence as the dependent variable. In the first multiple regression, the complete sample was used. Additional multiple regressions were constructed for the different sources separately, i.e. college sample and inmate sample, to assess the fit of the model based on the source of the data. In order to facilitate including categorical variables in the analyses, race, education, and income were dichotomized as indicated in the demographics section. The referent groups coded as 1 for each of the categorical variables were Inmate, White, High School or higher, and Over \$30,000. For the main effects variables each was centered by subtracting the overall mean from each value to reduce multicollinearity with the interaction terms.

## Complete Sample

The first multiple regression was run using the combined sample of 488 participants composed of college students and inmates (see Table 12). Of these, the 368 representing complete cases were retained for analyses. Due to the numerous significant differences between the two samples, it would have been inappropriate to not include the source as a control variable. The hierarchical multiple regression included four steps for control variables, main effects, 2-way interaction, and 3-way interactions. The control variables included source, age, race, income, education, and family violence. The main effects variables included self-esteem, narcissism, affective empathy, and cognitive empathy. The 2-way interaction was a test of threatened egotism with an interaction between self-esteem and narcissism. Finally, the 3-way interactions were a test of the effect of empathy with threatened egotism with an interaction with affective empathy, self-esteem, and narcissism and also cognitive empathy, self-esteem, and narcissism.

Table 12

### *Hierarchical Multiple Regression for Entire Sample*

Variable	B	SE B	$\beta$
<b>Step 1</b>			
Constant	2.16	0.51	
Group	0.44	0.28	.11
Age	-0.01	0.01	-.02
Race	-0.16	0.28	-.03
Education	-0.45	0.31	-.09
Income	0.01	0.21	.00
Family Violence	0.26	0.04	.29***
<b>Step 2</b>			
Constant	1.71	0.48	
Group	0.54	0.27	.13*
Age	0.01	0.01	.04
Race	-0.17	0.26	-.03
Education	-0.27	0.29	-.05
Income	0.04	0.20	.01

Table 12 (continued)

Variable	B	SE B	$\beta$
Family Violence	0.23	.04	.26***
Self-Esteem	-0.04	0.01	-.17***
Narcissism	0.06	0.02	.17***
Affective Empathy	-0.06	0.02	-.16**
Cognitive Empathy	-0.04	0.02	-.11*
Step 3			
Constant	1.63	0.48	
Group	0.54	0.26	.13*
Age	0.01	0.01	.04
Race	-0.13	0.26	-.02
Education	-0.27	0.28	-.05
Income	0.11	0.20	.03
Family Violence	0.22	0.04	.26***
Self-Esteem	-0.05	0.01	-.20***
Narcissism	0.06	0.02	.17***
Affective Empathy	-0.06	0.02	-.15**
Cognitive Empathy	-0.05	0.02	-.12*
SE x Narc	-0.01	0.00	-.17***
Step 4			
Constant	1.63	0.48	
Group	0.57	0.26	.14*
Age	0.01	0.01	.04
Race	-0.14	0.26	-.03
Education	-0.26	0.28	-.05
Income	0.11	0.20	.03
Family Violence	0.22	0.04	.26***
Self-Esteem	-0.06	0.01	-.22***
Narcissism	0.06	0.02	.18***
Affective Empathy	-0.06	0.02	-.15**
Cognitive Empathy	-0.04	0.02	-.11*
SE X Narc.	-0.01	0.00	-.17***
SE X Narc X AE	8.68E-005	0.00	.01
SE X Narc X CE	0.00	0.00	-.07

Note: Adjusted  $R^2 = .12$  for Step 1,  $\Delta R^2 = .13$  for Step 2 ( $p < .001$ ),  $\Delta R^2 = .03$  for Step 3 ( $p < .001$ ),  $\Delta R^2 = .00$  for Step 4 ( $p = .40$ ). \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

Step 1 of the regression equation was significant ( $F(6,362) = 9.68, p < .001$ ) and explained approximately 12% of the variance in intimate violence. Witnessing violence in the family of origin was the only significant predictor ( $\beta = .29, p < .001$ ). The relationship was

positive suggesting higher levels of intimate violence were predicted by witnessing family violence.

Step 2 of the regression equation was also significant ( $F(10, 358) = 41.23, p < .001$ ). The addition of the main effects increased  $R^2$  by .13 ( $p < .001$ ), effectively doubling the explained variance to 25%. Several variables emerged with significant main effects. Group became significant ( $\beta = .13, p < .05$ ). Because the inmate group was the referent group, being an inmate was predictive of intimate violence. The strongest predictor, family violence, was again significant ( $\beta = .26, p < .001$ ) and positive suggesting witnessing family violence was predictive of intimate violence in a direct manner. Self-esteem ( $\beta = -.17, p < .001$ ) and narcissism ( $\beta = .17, p < .001$ ) were both significant predictors and of the same magnitude though in opposite directions. The relationship with self-esteem was negative suggesting low self-esteem was predictive of intimate violence while narcissism was positive suggesting high narcissism was predictive of intimate violence. Both affective empathy ( $\beta = -.16, p < .01$ ) and cognitive empathy ( $\beta = -.11, p < .05$ ) were significant predictors in the same direction though of differing strengths. Low empathy, both affective and cognitive, was predictive of intimate violence though affective empathy was a strong predictor.

Step 3 added the two-way interaction between self-esteem and narcissism as a measure of threatened egotism. This step was significant ( $F(11, 357) = 13.73, p < .001$ ). The addition of the interaction term increased  $R^2$  by .03 ( $p < .001$ ), increasing the explained variance to 28%. The coefficients for group, family violence, and narcissism were unchanged by the addition of the interaction. However, the strength of self-esteem ( $\beta = -.20, p < .001$ ) and cognitive empathy ( $\beta = -.12, p < .05$ ) increased slightly and that for affective empathy ( $\beta = -.15, p < .01$ ) decreased

slightly. The interaction term between self-esteem and narcissism was significant ( $\beta = -.17, p < .001$ ).

Before decomposing the two-way interaction, step 4 was examined. This step added two three-way interactions with affective empathy, narcissism, and self-esteem as well as cognitive empathy, narcissism, and self-esteem. While the equation was significant ( $F(13, 355) = 11.75, p < .001$ ), the F value was lower than in step 3 and the adjusted  $R^2$  was not significantly increased. In fact, the  $R^2$  was reduced slightly by the addition of the two three-way interactions.

In order to explore the two-way interaction between self-esteem and narcissism, the moderating variable, in this case narcissism, was divided into categories of low, moderate, and high (Aiken & West, 1991; Holmbeck, 1997). This split was done based on quartiles with the lower approximately 25% categorized as low, the middle 50% as moderate, and the highest 25% as high. Next, simple regression was conducted for each level with self-esteem as the predictor of intimate violence. For each level, the resulting regression equation was used to calculate values for the dependent variable at high and low levels of self-esteem ( $\pm 1$  SD). The resulting slopes were graphed to visually depict the interaction (see Figure 1).

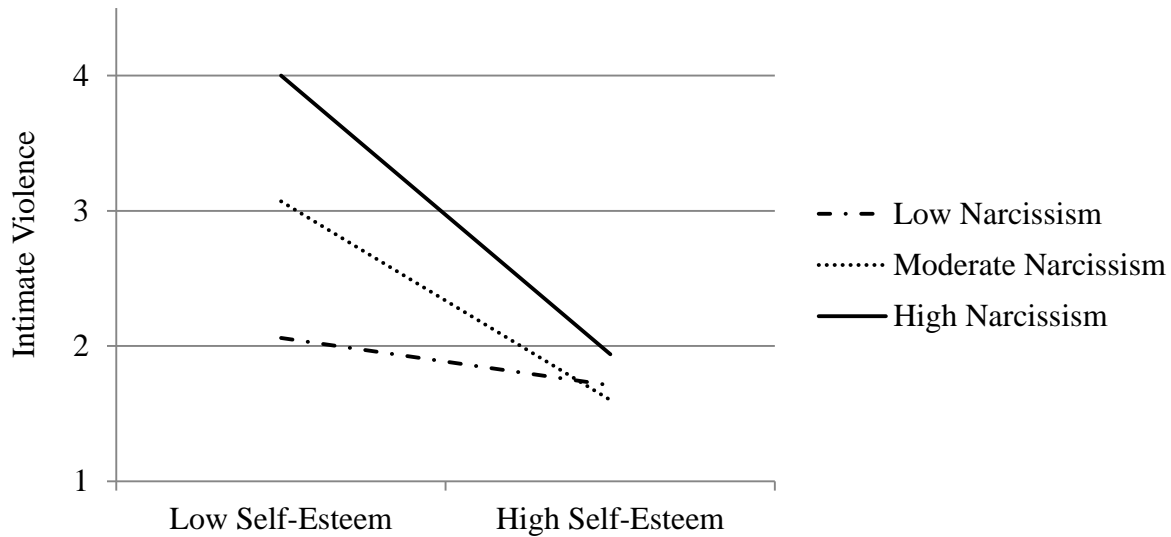


Figure 1. Simple Slopes of Two-Way Interaction for Entire Sample

As can be seen, at high levels of self-esteem, the value of the dependent variable (intimate violence) was roughly equal across the three levels of narcissism. However, intimate violence varied quite considerably at low levels of self-esteem based on the degree of narcissism. The simple slope of each line was assessed to determine if the slope was significantly different from zero (Aiken & West, 1991; Preacher, Curran, & Bauer, 2006). The simple slope of self-esteem at low levels of narcissism was not significant,  $b = -0.02$ ,  $t(138) = -1.22$ ,  $p = .11$ . The simple slope of self-esteem at moderate levels of narcissism was significant,  $b = -0.09$ ,  $t(179) = -4.38$ ,  $p < .001$ . Likewise, the simple slope of self-esteem at high levels of narcissism was significant,  $b = -0.13$ ,  $t(123) = -4.96$ ,  $p < .001$ .

#### College Sample

As with the entire sample, hierarchical multiple regression was undertaken with the 249 participants in the college sample. Of these, 206 represented complete cases and analyses were undertaken with these complete cases. The same method as outlined above was followed with this sample including control variables (with the exception of group and education), main effects,

two-way interaction, and three ways interactions in respective steps (see Table 13). Centered variables were created based on the means for the college sample for self-esteem, narcissism, affective and cognitive empathy.

Table 13

*Hierarchical Multiple Regression for College Sample*

Variable	B	SE B	$\beta$
<b>Step 1</b>			
Constant	1.33	0.61	
Age	-0.01	0.02	-.04
Race	0.09	0.42	.01
Income	0.20	0.30	.05
Family Violence	0.42	0.07	.39***
<b>Step 2</b>			
Constant	0.79	0.58	
Age	0.01	0.02	.04
Race	0.14	0.39	.02
Income	0.31	0.28	.07
Family Violence	0.35	0.07	.33***
Self-Esteem	-0.07	0.02	-.26***
Narcissism	0.06	0.02	.17**
Affective Empathy	-0.03	0.03	-.08
Cognitive Empathy	-0.05	0.03	-.12
<b>Step 3</b>			
Constant	0.64	0.56	
Age	0.02	0.02	.06
Race	0.14	0.38	.02
Income	0.37	0.28	.08
Family Violence	0.36	0.07	.34***
Self-Esteem	-0.08	0.02	-.31***
Narcissism	0.06	0.02	.15*
Affective Empathy	-0.03	0.03	-.07
Cognitive Empathy	-0.06	0.03	-.15*
SE x Narc	-0.01	0.00	.21***
<b>Step 4</b>			
Constant	0.63	0.57	
Age	0.02	0.02	.06
Race	0.15	0.38	.02
Income	0.36	0.28	.08
Family Violence	0.36	0.07	.34***

Table 13 (continued)

Variable	B	SE B	$\beta$
Self-Esteem	-0.09	0.02	-.30***
Narcissism	0.06	0.02	.17**
Affective Empathy	-0.03	0.03	-.08
Cognitive Empathy	-0.05	0.03	-.13
SE X Narc.	-0.01	0.00	-.19**
SE X Narc X AE	4.34E-005	0.00	.01
SE X Narc X CE	0.00	0.00	-.06

Note:  $R^2 = .14$  for Step 1,  $\Delta R^2 = .14$  for Step 2 ( $p < .001$ ),  $\Delta R^2 = .04$  for Step 3 ( $p \leq .001$ ),  $\Delta R^2 = .00$  for Step 4 ( $p = .63$ ). \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p \leq .001$

Step 1 of the regression equation was significant ( $F(4, 202) = 8.36, p < .001$ ) and accounted for 14% of the variance in intimate violence. While the equation was significant, the only significant predictor was family violence ( $\beta = .39, p < .001$ ). Thus, witnessing family violence predicted higher rates of intimate violence.

Step 2 of the regression equation added the main effects of self-esteem, narcissism, and affective and cognitive empathy. Again, the overall equation was significant ( $F(8, 198) = 9.85, p < .001$ ) and resulted in a significant  $R^2$  increase of 0.14 ( $p < .001$ ). For this step again family violence was significant ( $\beta = .33, p < .001$ ) and the strongest predictor at this step. This was followed by self-esteem ( $\beta = -.26, p < .001$ ) that was negative indicating low self-esteem predicted higher rates of intimate violence. The final significant predictor in step 2 was narcissism ( $\beta = .17, p < .01$ ). This relationship was positive indicating high narcissism was predictive of higher rates of intimate violence.

Step 3 added the two-way interaction between self-esteem and narcissism to test threatened egotism. Again, this equation was significant ( $F(9, 197) = 10.53, p < .001$ ) with a significant change in  $R^2$  of 0.04 ( $p \leq .001$ ). Again, family violence was the strongest predictor ( $\beta = .34, p < .001$ ). This was again followed by self-esteem ( $\beta = -.31, p < .001$ ). The interaction term of self-esteem x narcissism surpassed narcissism alone in strength ( $\beta = .21, p < .001$ ). This



was followed by narcissism ( $\beta = .15, p < .05$ ) and cognitive empathy ( $\beta = -.15, p < .05$ ), of equal magnitude but opposite directions. The relationship with cognitive empathy was negative indicating low cognitive empathy predicted higher rates of intimate violence.

Prior to breaking down the two-way interaction, step 4 was examined. As with the whole sample, the addition of the two three-way interactions did not improve the predictive power of the equation. Though the equation was again significant ( $F(11, 195) = 8.66, p < .001$ ), the  $F$  statistics decreased and the  $R^2$  statistic was unchanged.

The two-way interaction was examined in the same manner as previously described. Narcissism was split based on the upper and lower 25% and middle 50% based on the quartiles specific for the college sample. Additionally, low and high self-esteem calculations based on regression equations were calculated using the plus and minus one standard deviation of self-esteem for the college sample. Again, the regression lines were graphed (see Figure 2) and slopes were tested for significance.

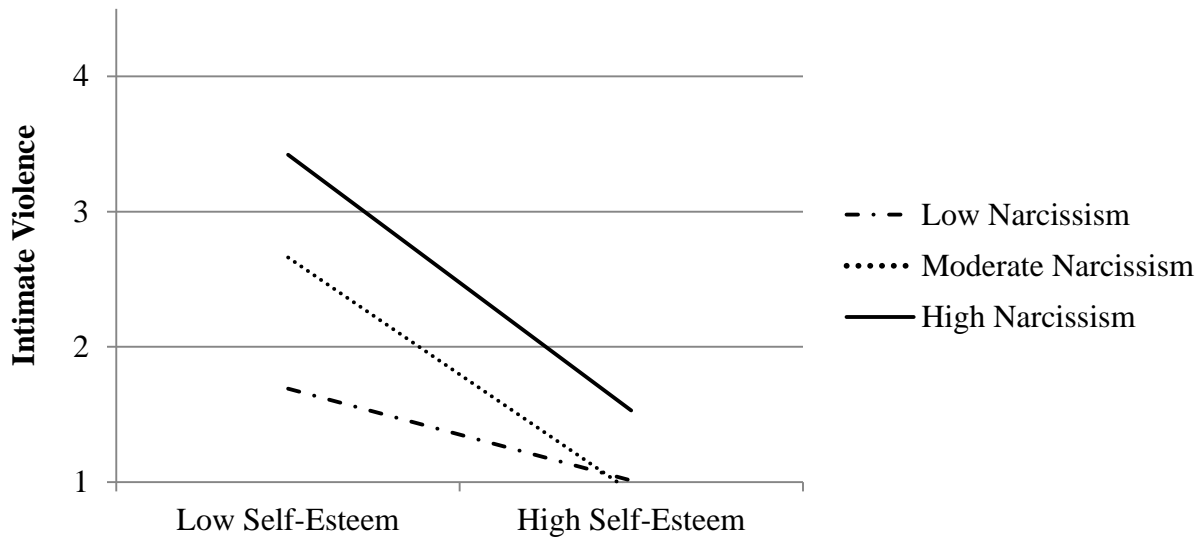


Figure 2. Simple Slopes of Two-Way Interaction for College Sample

As can be seen in the figure, the rate of intimate violence predicted when self-esteem was high was fairly similar across the three levels of narcissism. However, at low self-esteem, the predicted rates were quite varied based on level of narcissism. In testing the significance of the slopes, the simple slope of self-esteem at low levels of narcissism was significant,  $b = -0.04$ ,  $t(73) = -1.95$ ,  $p < .05$ . The simple slope of self-esteem at moderate levels of narcissism was also significant,  $b = -0.11$ ,  $t(90) = -3.52$ ,  $p < .001$ . Finally, the simple slope of self-esteem at high levels of narcissism was also significant,  $b = -0.12$ ,  $t(52) = -2.59$ ,  $p < .01$ .

### Inmate Sample

The final regression analysis was conducted with the inmate sample. As outlined previously, a hierarchical regression with four steps was conducted. The steps were the same as outlined previously with control variables (including education), main effects, two-way interaction, and two three-way interactions (see Table 14).

Table 14

### *Hierarchical Multiple Regression for Inmate Sample*

Variable	B	SE B	$\beta$
<b>Step 1</b>			
Constant	3.22	0.63	
Age	-0.01	0.02	-.04
Race	-0.35	0.38	-.07
Education	-0.57	0.29	-.16
Income	-0.13	0.30	-.04
Family Violence	0.14	0.05	.21**
<b>Step 2</b>			
Constant	2.87	0.60	
Age	0.00	0.02	.02
Race	-0.38	0.35	-.08
Education	-0.40	0.28	-.11
Income	-0.15	0.29	-.04
Family Violence	0.14	0.05	.20**
Self-Esteem	-0.02	0.02	-.09
Narcissism	0.05	0.02	.16*
Affective Empathy	-0.07	0.03	-.20*

Table 14 (continued)

Variable	B	SE B	$\beta$
Cognitive Empathy	-0.05	0.03	-.14
Step 3			
Constant	2.89	0.59	
Age	0.00	0.02	.01
Race	-0.32	0.35	-.07
Education	-0.41	0.28	-.11
Income	-0.06	0.29	-.02
Family Violence	0.13	0.05	.19*
Self-Esteem	-0.03	0.02	-.12
Narcissism	0.05	0.02	.17*
Affective Empathy	-0.07	0.03	-.19*
Cognitive Empathy	-0.05	0.03	-.14
SE x Narc	-0.01	0.00	-.15*
Step 4			
Constant	2.98	0.60	
Age	0.00	0.02	-.00
Race	-0.36	0.35	-.07
Education	-0.42	0.28	-.11
Income	-0.07	0.29	-.02
Family Violence	0.13	0.05	.19*
Self-Esteem	-0.03	0.02	-.14
Narcissism	0.05	0.02	.17*
Affective Empathy	-0.06	0.03	-.18*
Cognitive Empathy	-0.05	0.03	-.14
SE X Narc.	-0.01	0.00	-.17*
SE X Narc X AE	0.00	0.00	-.05
SE X Narc X CE	0.00	0.00	-.04

Note:  $R^2 = .09$  for Step 1,  $\Delta R^2 = .14$  for Step 2 ( $p < .001$ ),  $\Delta R^2 = .02$  for Step 3 ( $p < .05$ ),  $\Delta R^2 = .01$  for Step 4 ( $p = .60$ ). \*  $p < .05$ ; \*\*  $p < .01$

The regression equation in step 1 was significant ( $F(5, 156) = 3.19, p < .01$ ). The  $R^2$  was .09 indicating the equation explained 9% of the variance in intimate violence perpetration. The only significant predictor was family violence ( $\beta = .21, p < .01$ ). The relationship was positive indicating a direct relationship between family violence and perpetration of intimate violence.

The equation in step 2 was also significant ( $F(9, 152) = 5.01, p < .001$ ), increasing  $R^2$  by .14 ( $p < .001$ ). For main effects family violence remained significant ( $\beta = .20, p < .01$ ). In addition, affective empathy was also significant ( $\beta = -.20, p < .01$ ) and of the same magnitude,

though opposite direction, of family violence. This suggests lower affective empathy predicted higher rates of intimate violence perpetration. Narcissism was also significant ( $\beta = .16, p < .05$ ) and positive suggesting higher narcissism predicted higher intimate violence.

The equation at step 3 was also significant ( $F(10, 151) = 5.02, p < .001$ ) and saw an increase in  $R^2$  of .02 which was also significant ( $p < .05$ ). The aforementioned significant predictors remained significant including family violence ( $\beta = .19, p < .05$ ), affective empathy ( $\beta = -.19, p < .05$ ), and narcissism ( $\beta = .17, p < .05$ ). Additionally, the two-way interaction between self-esteem and narcissism was also significant ( $\beta = -.15, p < .05$ ).

Though the equation at step 4 was also significant ( $F(12, 149) = 4.25, p < .001$ ), the F statistic decreased. Though the  $R^2$  increased by .01, this was not significant, nor were the three-way interactions significant.

In order to explore the significant two-way interaction, the same method employed for the earlier analyses were repeated for the jail sample. Low, moderate, and high narcissism were calculated based on the upper and lower 25% and middle 50% of the inmate sample. Values for high and low self-esteem was based on the mean plus and minus one standard deviation calculated for the inmate sample, respectively. The regression slopes were graphed to visually depict the interaction (see Figure 3).

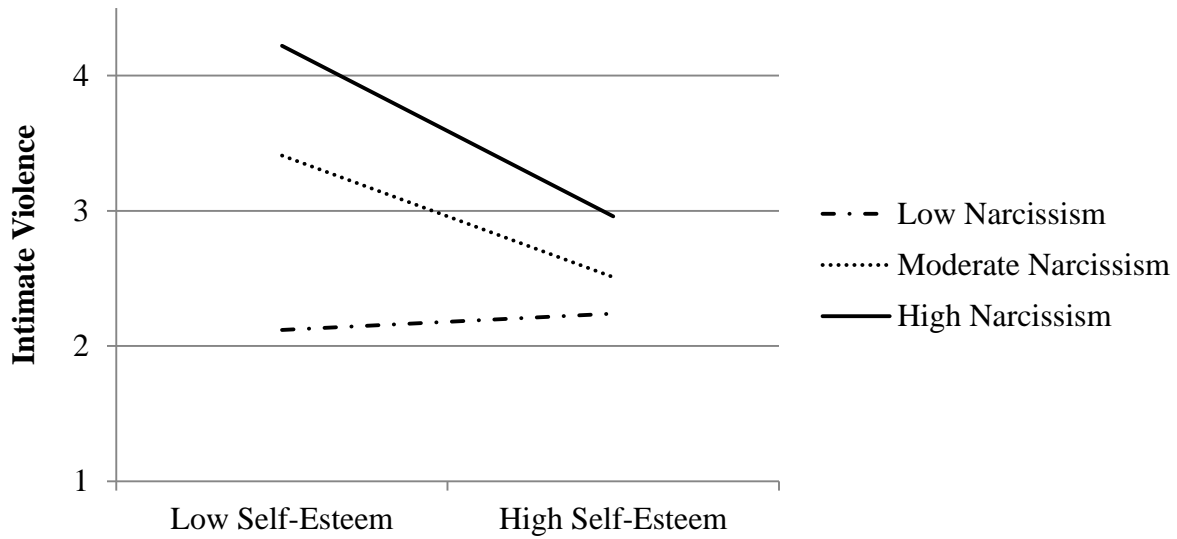


Figure 3. Simple Slopes of Two-Way Interaction for Inmate Sample

As seen in Figure 3, the rates across the three levels of narcissism at low levels of self-esteem were varied and moved to a more similar rate at high levels of self-esteem. In testing the significance of the simple slopes, the slope of self-esteem at low levels of narcissism was not significantly different from zero,  $b = 0.01$ ,  $t(54) = 0.31$ ,  $p = .62$ . On the other hand, the slope of self-esteem at moderate levels of narcissism was significant,  $b = -0.06$ ,  $t(98) = -2.24$ ,  $p < .05$ . Likewise, the slope of self-esteem at high levels of narcissism was also significant,  $b = -0.08$ ,  $t(55) = -2.25$ ,  $p < .05$ .

## CHAPTER 4

### DISCUSSION

The current study was an investigation into how narcissism and self-esteem interact as threatened egotism and whether empathy moderates this relationship in explaining men's use of violence in intimate relationships. We examined the use of violence in intimate relationships via two samples of men; one from a college population and the other from inmates housed in local county jails.

For the current study self-esteem was defined as a relatively stable trait of an individual, being fairly constant over time. This definition is consistent with that of Rosenberg (1965) whose measure of self-esteem has been cited as the most widely used measure of self-esteem (Whiteside-Mansell & Corwyn, 2003). Overall, self-esteem refers a person's overall view and opinion of self. In general, research into self-esteem and both general and intimate violence has been inconsistent (e.g. Baumeister et al., 2000; Baumeister et al., 1996; Donnellan et al., 2005; Holt & Gillespie, 2008; Marshall et al., 2009; Ostrowsky, 2010; Papps & O'Carroll, 1998; Salmivalli, 2001; Sharpe & Taylor, 1999). Persons with low self-esteem are often thought to be shy, indecisive, lacking in self-confidence, and with a tendency to minimize risks (Baumeister & Bushman, 2000). Some treatment programs for male perpetrators of domestic violence aim to increase self-esteem (Murphy et al., 2005) which would be contrary to findings of high self-esteem being related to violence.

On the other hand, the theory of threatened egotism posited by Bushman and Baumeister (1998; Baumeister et al., 2000; Baumesister et al., 1996) suggests aggression is more likely when a person has high but unstable self-esteem. When an ego threat is introduced in such a situation, the researchers suggest aggression is more likely to occur compared to persons with stable low or

stable high self-esteem. High, unstable self-esteem has been operationalized by high self-esteem coupled with high narcissism or as high narcissism alone (Baumeister et al., 2000; Bushman & Baumeister, 1998; Bushman et al., 2009; Cale & Lilienfeld, 2006; Konrath et al., 2006; Papps & O'Carroll, 1998). One previous study examining threatened egotism with intimate violence did not find support for this theory (Holt & Gillespie, 2008).

Narcissism refers to a grandiose sense of self and is multi-faceted with some aspects being protective and healthy while others are maladaptive. One specific aspect of narcissism that is thought to be a measure of the maladaptive characteristics of narcissism is exploitativeness/entitlement (Emmons, 1984; Reidy et al., 2008). Narcissistic traits have been found to be associated with criminal behavior, both violent and nonviolent (Thornton et al., 2010).

The view of empathy has evolved over time from conceptualization as a unidimensional to a multidimensional construct (Davis, 1980), such as that used in this study which identifies both cognitive and affective aspects of empathy. Cognitive empathy is characterized as perspective taking, putting oneself cognitively into another's shoes. Affective empathy, on the other hand, is concerned with one's emotional state, feelings of sympathy, and concern towards others. Limited research has been undertaken to examine the impact of empathy on the perpetration of intimate partner violence. Covell et al. (2007) found significant relationships between intimate partner violence and measures of both cognitive and affective empathy.

#### Prevalence of Intimate Violence

The overall prevalence rate of intimate violence perpetration for the combined sample was 70.8%. When examining prevalence rates for the two different samples, the college sample prevalence rate was 57.1% while that for the inmate sample was 85.3%, with the inmate sample

reporting a significantly higher prevalence. Research at the same university collected six years prior found lifetime prevalence rates of 34% for physical assault and 39% for sexual coercion among men (Holt, 2007). Desmarais, Reeves, Nicholls, Telford, & Fiebert (2012) reviewed existing research published from 2000-2010 to identify prevalence rates of intimate violence perpetration. The average lifetime prevalence rate for men was 24.2%, with a wide range from 3.5% to 49%. Fass et al. (2008) found perpetration rates for male college students of 33.8% for physical violence and 23.0% for sexual violence during their time at the university. The findings from the current study are rather markedly higher. When rates were re-examined based on group status, 74.1% of inmates admitted to physical assault and 51.0% admitted to sexual coercion. On the other hand, 39.4% of college students admitted to physical assault and 39.4% also admitted to sexual coercion, consist with previous findings (Fass et al., 2008; Holt, 2007). Therefore, it appears to the inclusion of the inmate sample inflated the overall prevalence rate for the current study.

### Hypotheses

#### Hypothesis 1

Hypothesis 1 was an examination of the bivariate relationship between self-esteem and intimate violence perpetration and predicted a significant negative relationship between self-esteem and intimate violence perpetration. In other words, low self-esteem would be associated with increased rates of intimate partner violence based on previous research (Donnellan et al., 2005; Holt & Gillespie, 2008; Marshall et al., 2009; Ostrowsky, 2010; Papps & O'Carroll, 1998; Salmivalli, 2001; Sharpe & Taylor, 1999). This relationship was examined using two analytical methods. An independent samples *t* test was conducted comparing the mean self-esteem of those who have and have not perpetrated intimate violence. This method supported the hypothesis



finding that those who reported perpetration of intimate violence had significantly lower self-esteem than those who had not perpetrated intimate violence. The second way this hypothesis was tested was via Pearson  $r$  correlation using the continuous forms of the variables of self-esteem and intimate violence perpetration. The correlation was significant and negative, as predicted. The negative correlation indicates as self-esteem decreased, intimate violence increased. Both of these findings support hypothesis one that intimate violence perpetration was related to low self-esteem.

### Hypothesis 2

The second hypothesis was focused on the bivariate relationship between intimate violence perpetration and empathy suggesting a negative relationship would emerge. This relationship was examined using two analytic strategies for the two aspects of empathy, cognitive and affective. Independent samples  $t$  tests were used to compare mean scores of both affective and cognitive empathy for those who did and did not perpetrate intimate violence. For both affective and cognitive empathy, the mean score was lower for those who had perpetrated intimate violence. Mean differences were significant for both affective and cognitive empathy, but the difference was significantly greater for cognitive empathy. The relationship was also examined using Pearson  $r$  correlation. For these analyses, the continuous variables of both empathy variables and intimate violence were used. In both instances, a significant negative relationship emerged between intimate violence and both affective empathy and cognitive empathy. The relationships were similar in magnitude,  $-.25$  and  $-.29$  respectively. These findings suggest as intimate violence perpetration increases, both affective empathy and cognitive empathy decrease, supporting hypothesis 2.

### Hypothesis 3

Hypothesis 3 was focused on the bivariate relationship between intimate violence perpetration and narcissism. It was hypothesized that higher levels of narcissism would be related to intimate violence perpetration. As with the prior two hypotheses, the relationship was examined using two analytic strategies. Narcissism was coded such that higher values correspond to greater narcissism. An independent samples *t* test was used to compare the mean score on narcissism for those who did and did not perpetrate intimate violence. The results did not find a significant difference based on perpetration of intimate violence. The second method of analysis was the Pearson *r* correlation. This found a significant positive relationship suggesting as intimate violence perpetration increased so did narcissism. Therefore, there was partial support for hypothesis three.

### Hypothesis 4

Hypothesis 4 was focused on the concept of threatened egotism set forth by Bushman and Baumeister conceptualized as high self-esteem coupled with high narcissism (Baumeister et al., 2000; Bushman & Baumeister, 1998; Bushman et al., 2009; Cale & Lilienfeld, 2006; Konrath et al., 2006; Papps & O'Carroll, 1998). This theoretical model posits high, unstable self-esteem is more likely to be related to aggression as compared to low self-esteem. First looking at the main effects of self-esteem and narcissism, both were significant in the combined and college samples in the expected directions with low self-esteem and higher narcissism being predictive of intimate violence perpetration. For the inmate sample, only narcissism was significant for a main effect with higher narcissism predicting higher rates of intimate violence perpetration.

In examining the two-way interaction, the findings of the study were interesting as the interaction term between self-esteem and narcissism was, in fact, significant for the complete

sample, college sample, and inmate sample. The relationship was slightly stronger for the college sample and had the same magnitude for the entire sample and the inmate sample. When the interaction was decomposed, the variables interacted similarly in all three cases. When examining the graphic representations of the interactions, it is seen that rather than high self-esteem and high narcissism resulting in the highest rates, it was low self-esteem coupled with moderate to high narcissism associated with the highest rates of perpetration. At high levels of self-esteem, the rates for those with moderate and high narcissism approach that of persons with low narcissism. For both the complete sample and the inmate sample, the simple slope of the line at low levels of narcissism was not significant suggesting low levels of narcissism were not significant in predicting intimate violence perpetration regardless of self-esteem. For the college sample, the slope at low narcissism was significant though less marked than at moderate or high levels of narcissism. In terms of the hypothesis set forth, there was support in that threatened egotism was not supported though the interaction was significant. Not only was threatened egotism not supported, high self-esteem appeared to be protective at moderate and high levels of narcissism.

#### Hypothesis 5

The final hypothesis was focused on the three-way interaction among self-esteem, narcissism, and empathy. It was hypothesized that low empathy would moderate the relationship between self-esteem and narcissism in predicting intimate violence. Specifically, it was hypothesized that high self-esteem and high narcissism coupled with low empathy would be predictive of intimate violence perpetration. This was tested via two three-way interactions, one with cognitive empathy and one with affective empathy. Across all three samples including the

complete sample, college sample, and inmate sample, none of the three-way interactions was significant. Therefore, the fifth hypothesis was not supported.

Looking at the main effects of empathy in terms of predicting intimate violence, all three samples had different results. For the complete sample both cognitive empathy and affective empathy were significant in the expected direction with affective empathy being a stronger predictor than cognitive empathy. For the college sample cognitive empathy was a significant predictor while affective empathy was not. For the inmate sample the opposite was true with affective empathy being a significant predictor while cognitive empathy was not significant. In each case the direction was as expected with lower empathy predicting intimate violence perpetration.

#### Multivariate Results

Three multiple regressions were undertaken to examine the totality of self-esteem, narcissism, and empathy while controlling for demographic variables in predicting intimate violence perpetration. The equation was examined in the entire sample, college sample, and inmate sample. First, for the entire sample the equation accounted for 28% of the variance in intimate violence perpetration. Witnessing violence in the family of origin was the strongest predictor followed by self-esteem, narcissism, and the two-way interaction with the same magnitude, affective empathy, then group status and cognitive empathy. With the exception of the three-way interactions, the results were consistent with what was expected.

Examining the difference between the fit of the equation for the college sample versus the inmate sample provides arguably the richest information. The fit for the college sample was higher (32% explained variance) compared to the fit for the overall sample (28% explained variance) and the inmate sample (25% explained variance). The entire sample and college

sample were more similar in terms of magnitude and what variables were significant. The exception is that affective empathy was significant in the overall sample while it was not in the college sample. When examining the magnitude of significant variables for the college sample, family violence and self-esteem were the strongest with a magnitude more than twice that of narcissism and cognitive empathy. The interaction term between self-esteem and narcissism was between these.

When examining the equation for the inmate sample, family violence and affective empathy were equally the strongest predictors. These predictors were followed in magnitude by narcissism and the two-way interaction between self-esteem and narcissism. For the inmate sample none of the predictors were significant above the .05 level. It is interesting that self-esteem was not significant for this sample, while it was significant in both the entire and college samples. Likewise, cognitive empathy was not significant, while affective empathy was and of an equal magnitude of family violence. If thinking stereotypically about the different samples, the difference in the significance of cognitive and affective empathy for the two samples seems to be consistent with stereotypes of a college sample being expected to be cerebral while the inmate sample might be expected to be more emotionally driven. In terms of self-esteem and the lack of significance for the inmate sample, this sample had a significantly lower self-esteem as compared with the college sample. The lack of significance could be due to an overall lower self-esteem for the inmate sample independent of intimate violence perpetration. This lower self-esteem could be influenced by their current circumstance of being imprisoned. Additionally, given the poorer fit of the model for this sample, it would appear that there are other factors that were not examined in the current study. These are addressed in limitations.

## Implications

The results of the current study could have implications in terms of treatment programs designed to intervene in intimate violence perpetration. First and foremost, the current study continues to highlight the importance of early detection and intervention. Across all samples, witnessing family violence was the strongest predictor of intimate violence perpetration. Thus, screening and a plan for intervention in the event of positive screening should be implemented whenever possible. Singh (2009) presented a case study of a man who presented in primary care reporting concerns that he would become violent with his partner though he had not engaged in violence. Singh reviewed screening methods to identify perpetrators and those at risk of perpetration of intimate violence though the case presented could be seen as an aberration due to seeking help prior to the occurrence of violence rather than intervention postincident by an outside agency.

A recent study to evaluate screening in a mental health facility found that only 44% (55% of women and 27% of men) recalled being asked by a mental health provider about intimate violence (Chang et al., 2011). Research by Jaeger, Spielman, Chronholm, Applebaum, and Holmes (2008) suggests a tendency for men to underreport intimate violence perpetration in face-to-face screening by primary care providers with 2% of men reporting current perpetration and 18% reporting past perpetration. These rates are compared to those based on CTS2 questionnaires that were taken and mailed back to researchers indicating 21% had physically assaulted a partner in the past year. Therefore, providers may need to explore various methods of screening including written questionnaires, computer-based screening, or combining questions with other screening instruments to assess depression and substance abuse.

Intervention efforts have historically consisted of court-mandated groups focused on feminist psychoeducation, changing behavior, and targeting norms of violence and male stereotypes of dominance though recidivism rates have not supported the efficacy of such programs (Barner & Carney, 2011). Recent research has proposed new interventions integrating cognitive-behavioral therapy and psychodynamic psychotherapies (Lawson, Kellam, Quinn, & Malnar, 2012) and skills-based programs with components of motivational interviewing, cognitive-behavioral therapy, and relapse prevention (Connors, Mills, & Gray, 2011). However, neither study indicated measures of recidivism as an outcome measure. In order to assess the efficacy of a program, whether or not motivation or knowledge increased and distorted thoughts decrease is moot if the behavior continues.

Recent reviews of existing treatment programs for intimate partner violence indicate negligible efficacy in changing patterns of violence (Babcock, Green, & Robie, 2004; Barner & Carney, 2011; Lawson et al., 2012). A meta-analysis by Babcock et al. found effect sizes of treatment based on police report of recidivism ranged from 0.09 for CBT and other treatments methods and 0.25 for Duluth (i.e. feminist psychoeducation approach). Effects sizes based on partner reports were better but still small from 0.04 for other methods, 0.20 for CBT groups, and 0.24 for Duluth groups. Overall, effect sizes were consistently small across all treatment modalities though Babcock et al. suggest rather than merely looking at the magnitude of the effect, this information should be viewed in the context of treatment programs. While the overall effect was small compared to psychotherapy in general, the effect size was consistent with those reported for rehabilitation programs that may be a more realistic comparison given that most clients in batterer intervention programs were not there because of a want for treatment or personal perception of problematic behavior (Babcock et al., 2004).

Based on results of the current study, it would appear self-esteem, narcissism, and empathy could be important components to include in treatment efforts. One of the inherent difficulties in developing treatment programs is not only making them efficacious but also cost-effective. It would be unrealistic to customize a treatment program to best serve the needs of each client. A more realistic approach would involve identifying components that are consistently found to be related to perpetration and developing a treatment program based on these. Given the myriad research identifying witnessing violence in the family of origin as a risk factor in intimate violence (e.g. Cantrell et al., 1995; Carr & VanDeusen, 2002; Franklin & Kercher, 2012; Godbout et al., 2009; Holt & Gillespie, 2008; Milletich et al., 2010; O’Keefe, 1998; Whiting et al., 2009), the importance of finding a way to target the impact of this in men cannot be overstated. Murphy et al. (2005) found decreased partner aggression during treatment associated with increases in self-esteem, while those who increased partner aggression experienced decreases in self-esteem. Treatment programs have not necessarily focused on narcissism and empathy but it would appear these factors would be worthy of further exploration in terms of targeted intervention strategies.

While self-esteem could be addressed through traditional methods of CBT, other strategies could be incorporated to address increasing empathy and decreasing narcissism. Narcissism could also be targeted using component of CBT such as challenging core beliefs and dysfunctional thoughts. Finding ways to increase the man’s identification with his partner and with the other’s feelings represent methods of directly targeting empathy. Increasing the man’s knowledge of the effects of intimate violence while increasing empathy could be an effective component of treatment.



### Strengths

The use of a diverse sample in the current study to include both college students and inmates represents a strength and adds a level of richness to the data. The inclusion of an inmate sample allows for comparison between community and clinical samples. The vast majority of previous research has been undertaken with convenience college samples or community samples. The current study represents a more comprehensive approach in terms of examining predictors in a diverse sample.

Additionally, the current study was an examination of a combination of variables that, to this point, was unexplored. Each of the variables separately and some combinations had been previously examined but had the specific combination of self-esteem, narcissism, and empathy represented a void in the research. Not only were main effects of these variables examined, but also interactions with self-esteem, narcissism, and empathy. This represents a more advanced statistical method, addressing limitations of previous research in threatened egotism with intimate violence.

### Limitations

As with all research, the current study does have some limitations that should be noted. The use of the CTS and CTS2 as a measure of intimate violence perpetration can be seen as a limitation. This is strictly a quantitative measure of violence with no information about context. For this reason the CTS and CTS2 have come under some criticism (e.g. Dasgupta, 2002; Flynn, 1990; Frieze, 2000; Murphy, Stevens, McGrath, Wexler, & Reardon, 1998; Worcester, 2002). Even given this criticism, the CTS continues to be the most widely used measure of interpersonal violence (Singh, 2009).

Another limitation related to the use of the CTS and CTS2 concerns retrospective reporting of events and the inherent unreliability of human memory. Participants were asked to think back over all of their relationships and respond accordingly. For witnessing violence, participants were asked to think back to their childhood. Acts of violence, however, are likely to stand out in a person's mind and be more salient except in those cases where violence is the norm. Perhaps an alternative method would be to examine arrest reports to determine rates of violence. However, domestic violence is greatly underreported and results would likely be an underrepresentation.

In this study self-esteem was conceptualized as a stable trait of an individual. However, some identify self-esteem as being more a fluid state, changing from moment to moment. The Rosenberg (1965) self-esteem scale has strong face validity. This could support an argument that the measure is actually assessing how a person feels about himself in the present moment with little regard to global worth.

With narcissism, the current study chose to focus on two maladaptive aspects of narcissism, namely exploitativeness and entitlement. While this decision was based on research identifying these factors as being related to the more maladaptive aspects of narcissism (e.g. Ackerman et al., 2011; Emmons, 1987; Reidy et al., 2008), there could be other aspects of narcissism related to intimate violence perpetration that were not included in the current study.

The current study included both affective and cognitive empathy as potential predictors of intimate violence perpetration. The measure used for empathy was the IRI (Davis, 1980, 1983) that includes four subscales, two identified as affective and two as cognitive. However, only one subscale of each was retained in the current study to represent affective and cognitive empathy. The subscales not used in the current study were personal distress and fantasy. These

measures were not included as research has been inconsistent in finding significant effects related to measures of violence (Burke, 2001; Covell et al., 2007; Joliffe & Farrington, 2004; Mullins-Nelson et al., 2006). Additionally, there is some evidence that personal distress could represent a different construct than empathy per se (Pulos et al., 2004). A meta-analysis and review by Joliffe and Farrington (2004) supports the use of empathic concern and perspective taking as measures of affective and cognitive empathy, respectively, consistent with the approach used in the current study.

When examining the covariate of family violence in the current study, the decision was made to focus on the intergenerational transmission of violence via witnessing violence in the family of origin. However, some research has suggested being a victim of abuse as a child may also increase risk for later intimate violence perpetration (e.g. Milletich et al., 2010; Sunday et al., 2011). The omission of childhood abuse could be a limitation of the current study in terms of fully examining the covariates of intimate violence perpetration.

Another limitation of the current study may have been the actual questionnaire and test fatigue. The questionnaire took 20-30 minutes to complete and required participants to think back over long periods of time and recall negative events. There were a number of surveys that were not completed in their entirety resulting in missing data. This could have been due to the sheer number of questions included in the survey and frustration with having to recall information over a long period of time.

Finally, what may arguably be the greatest limitation of the current study is the omission of substance abuse as a covariate, especially in the inmate population. When examining the responses participants gave as to their current charges, the vast majority were drug-related offenses. Substances lower inhibitions that could, by extension, lower one's inhibitions against

becoming violent. Afifi et al. (2012) found strong support for the relationship between intimate violence perpetration and substance use disorders. The omission of this factor may have played a part in the poorer fit of the model for the inmate sample.

### Conclusions

In conclusion, the results of the current study in part supported the hypotheses set forth. Some results provided straightforward support while others either failed to support or were not straightforward as with threatened egotism. When the time came to examine the two samples, college and inmate, it became clear the samples differed from each other in many of the variables of interest in the present study such as self-esteem, affective empathy, family violence, and intimate violence perpetration. Both violence variables were higher for the inmate sample as compared to the college sample. Self-esteem was lower for the inmate sample while affective empathy was higher. Narcissism and cognitive empathy were not significantly different for the two samples.

The theory of threatened egotism was examined in the current sample with a two-way interaction between self-esteem and narcissism. Baumeister and Bushman (1998; Baumeister et al., 2000; Baumesister et al., 1996) suggest threatened egotism results from high unstable self-esteem conceptualized as high self-esteem coupled with high narcissism (Baumeister et al., 2000; Bushman & Baumeister, 1998; Bushman et al., 2009; Cale & Lilienfeld, 2006; Konrath et al., 2006; Papps & O'Carroll, 1998). While the interaction was significant in the current study, it was not consistent with what would be expected based on threatened egotism. Rather than finding the highest rates of intimate violence perpetration with high self-esteem and high narcissism, the highest rates of intimate violence perpetration were found when self-esteem was low and narcissism was high. This finding was consistent across the entire sample, college sample, and

inmate sample. Perhaps, this suggests the highest rates of intimate violence occur with men who, at their core, have low self-esteem though they feel entitled and have a tendency to exploit others. When these men who already have low self-esteem are slighted and not given what they feel they deserve in their relationships, they may react violently in a show of power in an attempt to gain respect or dominance. High self-esteem, on the other hand, appeared to be protective as when a person had high self-esteem, even with high levels of narcissism, the rates of intimate violence perpetration were low.

The findings related to empathy were not quite as expected. It was thought that empathy, or lack thereof, would play a more prominent role in intimate violence perpetration. While there were main effects of empathy in each sample, empathy emerged as one of the weaker predictors in each sample. Based on bivariate statistics, there were mean differences in both empathy measures based on intimate violence perpetration as well as significant correlations for each empathy measure with intimate violence perpetration. It would appear that while empathy was associated with intimate violence perpetration, the association was accounted for, at least partially, by other variables included in the model such as self-esteem, narcissism, and family violence.

#### Future Research

In terms of directions for future research with an inmate sample in particular, substance use and abuse should be included. As noted earlier, many of the inmates reported drug offenses as being the reason for their current incarceration. This should be included to assess the role of substances in intimate violence perpetration as well as potentially impacting programs of treatment. If substance use is found to have a significant impact on intimate violence

perpetration, it would be important to address this as part of a multi-faceted treatment program that could be implemented with inmate populations.

The study should be replicated to examine the interaction of self-esteem and narcissism further. The only previous study found assessing threatened egotism related to intimate violence perpetration (Holt & Gillespie, 2008) did not find support for an interaction. However, there were limitations in that study and statistical concerns such as not using a hierarchical multiple regression, not centering variables, and not including the individual variables in addition to the interaction term. While the findings of the current study did not support threatened egotism per se, the findings are consistent with literature indicating a relationship between low self-esteem and intimate violence perpetration (e.g. Goldstein & Rosenbaum, 1985; Murphy et al., 2005; Prince & Arias, 1994; Schwartz et al., 2005).

The current study did not assess contextual factors of intimate violence perpetration. It would be interesting to assess whether the violence was unidirectional or bidirectional, the circumstances of the interaction, the primary aggressor, etc. This information, while it might be difficult to obtain and analyze, would provide a certain depth to the understanding of the dynamics of these violent interactions.

Development of a treatment program incorporating components of the Duluth model (i.e. feminist psychoeducation) and cognitive-behavioral therapy along with targeting self-esteem, narcissism, and empathy could be an area of future research. Research comparing recidivism rates for men participating in such a program compared to treatment-as-usual programs would be a worthwhile endeavor.

Finally, another interesting area for future research would be further exploration of the role of empathy in intimate violence perpetration. As mentioned earlier, it was interesting that

empathy played such a small role in the multivariate model while bivariate statistics indicated empathy was an important factor. Perhaps the relationship between empathy and intimate violence perpetration was mediated by either self-esteem, narcissism, or both. Future research could explore this relationship and explore which factor might give the greatest return in terms of reducing the risk for intimate violence perpetration.

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## APPENDICES

### Appendix A

#### Demographics Questionnaire

1. What is your age:	
2. What is the highest grade you have completed?	
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 _____
4a. 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)
5. 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
6. What is your sexual orientation?	<input type="checkbox"/> Heterosexual <input type="checkbox"/> Homosexual <input type="checkbox"/> Bisexual <input type="checkbox"/> Other _____
7. 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
8a. 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
9. What is your current legal status?	<input type="checkbox"/> Awaiting trial <input type="checkbox"/> Serving sentence for conviction
10. Briefly, what are your current charges or convictions?	
11. Do you have any prior convictions other than your current charges/convictions?	<input type="checkbox"/> Yes <input type="checkbox"/> No

## Appendix 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. 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 some of 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. 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, the first column relates to how many times your mother acted in the listed ways towards your father, while the second column 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

## Appendix C

### Revised Conflict Tactics Scale (CTS-2)

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 across all of your intimate relationships.

<b>1—Once; 2—Twice; 3—3-5 Times; 4—6-10 Times; 5—11-20 Times; 6—More than 20 Times; 0—Never</b>							
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

1—Once; 2—Twice; 3—3-5 Times; 4—6-10 Times; 5—11-20 Times; 6—More than 20 Times; 0—Never							
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
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



1—Once; 2—Twice; 3—3-5 Times; 4—6-10 Times; 5—11-20 Times; 6—More than 20 Times; 0—Never							
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
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

1—Once; 2—Twice; 3—3-5 Times; 4—6-10 Times; 5—11-20 Times; 6—More than 20 Times; 0—Never							
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

### Rosenberg Self-Esteem Scale

Please answer the following questions using the scale provided.

0	1	2	3	4
Does not describe me at all				Describes me very well

1. On the whole, I am satisfied with myself.	0	1	2	3	4
2. At times, I think I am no good at all.	0	1	2	3	4
3. I feel that I have a number of good qualities.	0	1	2	3	4
4. I am able to do things as well as most other people.	0	1	2	3	4
5. I feel I do not have much to be proud of.	0	1	2	3	4
6. I certainly feel useless at times.	0	1	2	3	4
7. I feel that I am a person of worth, at least on an equal plane with others.	0	1	2	3	4
8. I wish that I could have more respect for myself.	0	1	2	3	4
9. All in all, I am inclined to feel that I am a failure.	0	1	2	3	4
10. I take a positive attitude toward myself.	0	1	2	3	4

## Appendix E

### Narcissistic Personality Inventory

	0	1	2	3	4
	Does not describe me at all			Describes me very well	

1. I expect a great deal from other people.	0	1	2	3	4
2. I am envious of other people's good fortune.	0	1	2	3	4
3. I insist upon getting the respect that is due to me.	0	1	2	3	4
4. I will never be satisfied until I get all that I deserve.	0	1	2	3	4
5. I have a strong will to power.	0	1	2	3	4
6. I get upset when people don't notice how I look when I go out in public.	0	1	2	3	4
7. I find it easy to manipulate people.	0	1	2	3	4
8. I am more capable than other people.	0	1	2	3	4

## Appendix F

### Interpersonal Reactivity Index

	0	1	2	3	4
Does not describe me at all					Describes me very well
1. I daydream and fantasize, with some regularity, about things that might happen to me.	0	1	2	3	4
2. I often have tender, concerned feelings for people less fortunate than me.	0	1	2	3	4
3. I sometimes find it difficult to see things from the "other guy's" point of view.	0	1	2	3	4
4. Sometimes I don't feel sorry for other people when they are having problems.	0	1	2	3	4
5. I really get involved with the feelings of the characters in a novel.	0	1	2	3	4
6. In emergency situations, I feel apprehensive and ill-at-ease.	0	1	2	3	4
7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.	0	1	2	3	4
8. I try to look at everybody's side of a disagreement before I make a decision.	0	1	2	3	4
9. When I see someone being taken advantage of, I feel kind of protective toward them.	0	1	2	3	4
10. I sometimes feel helpless when I am in the middle of a very emotional situation.	0	1	2	3	4
11. I sometimes try to understand my friends better by imagining how things look from their perspective.	0	1	2	3	4
12. Becoming extremely involved in a good book or movie is somewhat rare for me.	0	1	2	3	4
13. When I see someone get hurt, I tend to remain calm.	0	1	2	3	4
14. Other people's misfortunes do not usually disturb me a great deal.	0	1	2	3	4
15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.	0	1	2	3	4
16. After seeing a play or movie, I have felt as though I were one of the characters.	0	1	2	3	4
17. Being in a tense emotional situation scares me.	0	1	2	3	4
18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.	0	1	2	3	4

	0	1	2	3	4
	Does not describe me at all			Describes me very well	
19. I am usually pretty effective in dealing with emergencies.	0	1	2	3	4
20. I am often quite touched by things that I see happen.	0	1	2	3	4
21. I believe that there are two sides to every question and try to look at them both.	0	1	2	3	4
22. I would describe myself as a pretty soft-hearted person.	0	1	2	3	4
23. When I watch a good movie, I can very easily put myself in the place of a leading character.	0	1	2	3	4
24. I tend to lose control during emergencies.	0	1	2	3	4
25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.	0	1	2	3	4
26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.	0	1	2	3	4
27. When I see someone who badly needs help in an emergency, I go to pieces.	0	1	2	3	4
28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.	0	1	2	3	4

VITA

JESSICA HOLT TURNER

Personal Data:                   Date of Birth: May 4, 1976  
                                          Place of Birth: Morristown, Tennessee  
                                          Marital Status: Married

Education:                        Public Schools, Morristown, Tennessee  
                                          B.S. Criminal Justice & Psychology, East Tennessee State  
                                                                  University, Johnson City, Tennessee May 2003  
                                          M.A. Criminal Justice/Criminology, East Tennessee State  
                                                                  University, Johnson City, Tennessee May 2005  
                                          M.A. Psychology, Clinical Concentration, East Tennessee State  
                                                                  University, Johnson City, Tennessee May 2007  
                                          Ph.D. Psychology, Clinical Concentration, East Tennessee State  
                                                                  University, Johnson City, Tennessee August 2013

Teaching experience:           Principles of Psychological Research Lab, East Tennessee State  
                                                                  University, Johnson City, Tennessee Spring 2007  
                                          Writing in Abnormal Psychology Lab, East Tennessee State  
                                                                  University, Johnson City, Tennessee Fall 2010-Spring 2011

Clinical Experience:            Clinical Extern, Holston Children and Youth, Frontier Health  
                                                                  Kingsport, Tennessee, May 2010-July 2011  
                                          Clinical Extern, Cherokee Health Systems, 5<sup>th</sup> Street Office  
                                                                  Morristown, Tennessee, August 2011-July 2012  
                                          Predoctoral Internship, Cherokee Health Systems  
                                                                  Knoxville, Tennessee, July 2012-July 2013

Research Experience:           Research Assistant I/Study Coordinator, Department of Psychiatry

Quillen College of Medicine, Johnson City, Tennessee  
November 2007-July 2009

Research Assistant, Department of Psychology

East Tennessee State University, Johnson City, Tennessee  
January 2011-May 2012

Publications:

Gillespie, F. W., Holt, J. L., & Blackwell, R. L. (2007).

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). *Journal of Drug Issues, 37*(3), 549-568.

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Turner, J. H., Correll, J. A., Carlosh, K., Bailey, B., & Dalton, W. T. (March 2011). *Psychosocial risk factors for smoking in pregnant women in rural Appalachia*. Poster presented at the Appalachian Student Research Forum, Johnson City, TN.

Gill, T., Turner, J., Wallace, S., Derrick, M., Dengler, E., Vyas, U., Boutros, N., & Moore, N. C. (September 2009). *A pilot study investigating temporal lobe epilepsy as a possible etiology of panic attacks*. Poster presented at the sixth annual joint meeting of the EEG and Clinical Neuroscience Society (ECNS) and the International Society for Neuro-Imaging in Psychiatry (ISNIP), Atlanta, GA, USA.