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SOCIAL SKILL DEFICITS AND MALE-PERPETRATED DATING VIOLENCE

By
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B.Sc. (Hon.) Queen's University, 2007

A Thesis
Submitted to the Faculty of Graduate Studies
Through Psychology
In Partial Fulfillment of the Requirements for the
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University of Windsor

Windsor, Ontario, Canada

2009

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Social Skill Deficits and Male-Perpetrated Dating Violence

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ABSTRACT

The objective of the present study was to identify social skill deficits associated with male-perpetrated physical, psychological, and sexual dating violence. Male university students between the ages of 17 and 25 years completed an online survey ($N = 230$). Logistic regression analyses suggested that self-reported perpetration of physical assault was associated with the use of more dominating conflict resolution strategies, a greater tendency to attribute negative intentions to partner behaviors, and less perspective taking ability. In addition, psychological aggression was associated with the use of more escalating anger management strategies and compromising conflict resolution strategies after controlling for social desirability. Finally, sexual coercion was associated with the use of more dominating and escalating strategies after controlling for social desirability. Social problem-solving did not significantly predict any type of dating violence. Overall, these findings suggest a need for prevention and intervention programs that include conflict resolution, anger management, and empathy-building components.

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CHAPTER I

Introduction

Over the past three decades, dating violence has become an issue of increasing concern to both practitioners and researchers. Although not as well researched as child and spousal abuse, recent investigations have uncovered many factors associated with the perpetration and victimization of dating violence, and have expanded our knowledge of the frequency with which it occurs. Dating violence among adolescents and young adults is important to study because it may be a precursor to marital aggression (Carlson, 1987; O’Leary et al., 1989; Roscoe & Benaske, 1985). Furthermore, research has shown that less severe aggression among adolescents and young adults may lead to more severe aggression in subsequent marital relationships (Murphy & O’Leary, 1989; O’Leary, Malone, & Tyree, 1994).

The purpose of the present study was to identify social skill deficits that may be associated with the perpetration of dating violence against women. Many prevention and intervention programs for dating violence incorporate skill-building components that are based on the assumption that men who are aggressive towards their romantic partners have deficiencies in various social skills. Some of the key social skills targeted by violence prevention programs include conflict resolution, anger management, empathy, and social problem-solving (e.g., Cornelius & Resseguie, 2007; Whitaker et al., 2006). Despite the inclusion of skill-building components in dating violence programs, there is a lack of empirical support demonstrating that perpetrators of dating violence are in fact deficient in the social skills that these programs typically target. Although some researchers have suggested that social skill deficits may be a proximal risk factor for

partner violence (Holtzworth-Munroe, 1992; O’Leary & Curley, 1986), studies have not yet uncovered which social skill deficiencies assume the most important role in dating violence. The aim of the present study was to fill several notable gaps in the literature on social skills and dating violence. Social skills in the areas of conflict resolution, anger management, empathy, and social problem-solving were examined in relation to male-perpetrated physical, psychological, and sexual dating violence in a sample of male university students. By identifying social skill deficiencies, programs may be developed to target these skills for prevention or intervention purposes. Skills-based programs for perpetrators of dating violence may help individuals build more positive relationships with their partners and offer alternative prosocial skills to replace violent behavior.

CHAPTER II

Literature Review

Definitions of Dating Violence

The terms *dating* and *violence* have been operationalized differently across studies resulting in a complex and sometimes inconsistent investigation of dating violence. Within the literature, the term *violence* has been used interchangeably with similarly vague terms such as *aggression* and *abuse*, creating uncertainties about the precise nature of violence studied (Emery, 1989). To clarify such definitional uncertainties, Archer (1994) argued that aggression refers to the act itself (e.g., hitting, yelling) whereas violence refers to the resulting consequences as well as the act (e.g., injury). Based on this distinction, much of the available research has examined dating aggression, not violence. It is important to note, however, that other researchers believe the difference between these terms to be simply semantic in nature (Jackson, 1999), a perspective adopted in the present study. Although consensus on a conceptual definition of dating violence does not exist, the most widely used definition in the literature suggests that it involves “the use or threat of physical force or restraint carried out with the intent of causing pain or injury to another” within a dating relationship (Sugarman & Hotaling, 1989, p. 51). Although many researchers have used this definition in their studies, dating violence may also include a wider range of behaviors including threatening communication, psychological or verbal aggression, and sexual coercion. There is evidence suggesting that these different types of dating violence are interrelated and that they often co-occur within dating relationships (Follingstad, Rutledge, Berg, Hause, & Polek, 1990; Hyden, 1995; Ryan, 1995; Stets & Henderson, 1991).

Furthermore, verbal and psychological aggression may be equally, if not more devastating to the victim as physical violence (Murphy & Hoover, 1999; O’Leary & Maiuro, 2001). The present study examined how various social skill deficits related to the perpetration of physical assault, psychological aggression, and sexual coercion in dating relationships. Examining all three major types of dating violence should also be informative when considering prevention and intervention efforts.

The term *dating* or *courtship* has also been conceptualized differently across studies. Some definitions explicitly state whether only heterosexual couples were examined (e.g., Muehlenhard & Linton, 1987) whereas others have made no such distinction (e.g., Carlson, 1987). In addition to clarifying whether a study includes same-sex couples, a clear definition of dating should also acknowledge the level of relationship commitment and explicitly state whether it encompasses cohabiting, engaged, or married couples. There is fairly concrete evidence suggesting that dating violence is more likely to occur in committed relationships than in more casual relationships (Arias, Samios, & O’Leary, 1987; Hanley & O’Neill, 1997; Laner, 1983; Laner & Thompson, 1982; Pederson & Thomas, 1992) as well as when partners cohabit than when they live separately (Lane & Gwartney-Gibbs, 1985; Magdol, Moffitt, Caspi, & Silva, 1998; Stets & Straus, 1989). For the purposes of the present study, dating violence was defined as “any intentional sexual, physical, or psychological attack on one partner by the other in a dating relationship” (Health Canada, 1995). This definition of a dating relationship includes (1) a range of relationship commitment from casual dating to cohabitation (2) is applicable to heterosexual relationships only, and (3) excludes engaged and married individuals.

Rates of Dating Violence

Variations in how dating relationships and dating violence are defined have led to a rather inconsistent investigation of how frequently it occurs among college and university students. Lewis and Fremouw (2001) identified numerous other methodological issues that affect our ability to make meaningful comparisons of violence rates across studies. For instance, some studies have investigated acts of aggression occurring in the previous year (e.g., Bookwala, Frieze, Smith, & Ryan, 1992); while others have investigated aggressive acts occurring over the life span (e.g., Tontodonato & Crew, 1992). Most studies did not distinguish between aggressive acts that occurred in a single relationship and acts that occurred across many relationships (see Lewis & Fremouw, 2001). Another problem that undoubtedly impacts dating violence rates is the finding that some researchers have blended perpetration and victimization data (Jackson, 1999).

A number of methodological issues, such as self-report measures and the impact of social desirability biases on self-reports, may also impact dating violence rates. Most studies rely on self-report measures of partner violence which may lead to an underreporting of violent experiences (Davis & Taylor, 1999). Underreporting may result from purposeful distortion strategies aimed at presenting oneself in a more socially favorable manner to avoid real-life retribution or future harm. It may also result from cognitive minimization strategies or from ones post-hoc rationalizing for their aggressive acts. There are widely documented gender differences in socially desirable responding, such that men tend to report lower rates of perpetration than do woman (Jackson, 1999). This finding may be attributed to the low social acceptance and societal intolerance of

violence against women. Clearly, self-report issues impact dating violence rates. As such, researchers should attempt to reduce the effects of socially desirable responding, particularly for male respondents.

Despite some of the definitional and methodological problems that impact the accuracy of violence rates, dating violence remains a significant and widespread social problem for many adolescents and young adults. As previously noted, aggression between romantic partners may take many forms, including physical violence, psychological or verbal abuse, and sexual coercion. Physical violence in dating relationships often includes pushing, slapping, and throwing objects (Riggs, O'Leary, & Breslin, 1990). Psychologically or verbally abusive behaviors occur most frequently and often involve name-calling, insulting, and yelling (Stets, 1991). Sexual coercion often includes non-consensual or forced kissing, touching and petting, and sometimes even forced intercourse or rape (Abbey, McAuslan, & Ross, 1998). Although there is some debate with regards to gender differences in the perpetration and victimization of dating violence, physical and psychological forms of aggression are often bidirectional, meaning that both partners mutually perpetrate the aggressive acts, though often for different reasons (Riggs et al., 1990; Stets, 1991).

A large number of studies have been conducted to examine the role of gender in dating violence. A major assumption of spousal abuse literature is that males are most often the perpetrators while females are most often the victims (Louis & Fremouw, 2001). Although violence against women is a widely studied phenomenon in the dating violence literature, there are mixed findings regarding who perpetrates dating violence and who is victimized. There are over 200 hundred studies suggesting gender symmetry

in the perpetration of partner violence, concluding that females perpetrate as often as males (Straus, 2004a; 2006; 2008). Although sometimes controversial, a number of other studies have found that women initiate partner violence more often than males (see Louis & Fremouw, 2001). Many researchers have argued that that these findings reflect methodological limitations, such that the consequences, motivation, and meaning behind the aggressive acts have been ignored (Jackson, 1999). Feminist theory considers the social context in which dating violence occurs to be imperative in understanding gender differences. Although domination and control appear to be significant factors in both females and males perpetration of partner violence (e.g., Follingstad, Wright, Lloyd, & Sebastian, 1991; Straus, 2008), females often report using physical violence in self-defense and in retribution for past experiences of being abused (Dobash, Dobash, Wilson, & Daly, 1992; Makepeace, 1986). Studies examining victimization rates have shown that females may also become victims of partner violence more often than men (see Jackson, 1999). The consequences of violence tend to be quite devastating for females, often resulting in fear, anxiety, and emotional trauma (Follingstad et al., 1991; Makepeace, 1986). Females also tend to experience higher levels of severe dating violence and injury, given their male partners' greater size and strength (Arias & Johnson, 1989; Makepeace, 1988; Molidor & Tolman, 1998). It is important to note that many studies on gender differences have narrowed their investigation to physical violence without acknowledging that females tend to be victims of sexual coercion more often than males (see Jackson, 1999). In an effort to be consistent with much of the adolescent and adult partner violence literature, the present study will examine male-to-female aggression

only. Although exclusive female-to-male aggression also warrants further investigation, it will not be within the scope of the present study.

Gender differences aside, dating violence occurs among both high school and college populations, with an increasing trend as longer and more committed relationships develop during young adulthood. Rates of physical and sexual aggression range between 10 to 25% among high school students and increase on average to 20 to 30% among college students (see Wekerle & Wolfe, 1999). Carlson's (1987) review revealed that approximately 12% of high school students and 36% of college students reported physical violence in their romantic relationships. Straus (2004a) conducted a study at 31 universities in 16 different countries to examine the prevalence of dating violence. Results revealed high rates of dating violence among university students across the world, with 29% of students admitting to physically assaulting their partner in the past year. Similarly, a review of 17 separate studies on lifetime prevalence estimates suggested that one third of college students were involved in a violent dating relationship (Sugarman & Hotaling, 1989). It is important to note that estimates of dating violence appear much higher when psychological aggression is considered. Numerous studies have shown that at least 90% of high school and college students have experienced psychological abuse at some point in their dating history (Jezl, Molidor, & Wright, 1996; Neufeld, McNamara, & Ertl, 1999; White & Koss, 1991). It has been suggested that psychological abuse may even be considered normative given its high prevalence in dating relationships (Harned, 2002). The alarmingly high rates of dating violence are cause to be concerned given that the experience of dating violence can lead to a number of negative consequences including school failure, substance abuse, disordered eating,

suicidal ideation, sexual risk behaviors, and the perpetration of violent behavior in subsequent relationships (Ackard & Neumark-Sztainer, 2002; Silverman, Raj, Mucci, & Hathaway, 2001). Prevalence data and research on the potential range of negative outcomes suggest that all forms of dating violence warrant attention within prevention and intervention efforts.

Skills-Based Dating Violence Prevention and Intervention Programs

The alarmingly high rate of dating violence among college and university students highlights the importance of prevention and intervention programs designed to promote healthy relationships and reduce aggressive behaviors between romantic partners. Most dating violence prevention programs target middle- or high-school aged students and college students, although programs designed for young adolescents are most common (Whitaker et al., 2006). In fact, relatively few empirical studies have evaluated programs for dating violence among young adults (O’Leary, Woodin, & Fritz, 2006). It appears as though only one controlled outcome study involving unmarried adult couples has been published. The Prevention and Relationship Enhancement Program (PREP) teaches young couples effective communication and conflict management skills (Markham, Renick, Floyd, Stanley, & Clements, 1993). With the exception of PREP, prevention programs focused solely on college and university students tend to be campus-based campaigns aimed at reducing interpersonal violence among students in general. Sexual assault and rape prevention programs are also popular at many colleges and universities. They rely on a number of approaches such as self-defense workshops and campus safety initiatives to protect potential victims as well as lectures designed to modify attitudes and

increase empathy in potential perpetrators (Fisher, Daigle, & Cullen, 2008; Schewe & O'Donohue, 1993).

Many programs are rooted in social-learning and cognitive-behavioral theories, which emphasize the importance of skill acquisition for behavioral change. Such programs operate under the assumption that individuals who engage in violent behaviors towards their partners lack various skills thought necessary to interact with their partner in a non-aggressive manner. In a comprehensive review of the literature on primary and secondary prevention programs for dating violence among middle school and high school students, Cornelius and Resseguie (2007) emphasized the importance of including specific skill-building components to ensure lasting and pervasive behavior change, noting that prevention programs aimed solely at increasing knowledge and modifying attitudinal correlates of violence substantially reduce the likelihood of changing behaviors. Following their review, the authors concluded that “future researchers should consider designing programs that include a significant skill-building component, in addition to addressing possible misconceptions of the causes and contributory factors related to dating aggression” (Cornelius & Resseguie, 2007, p. 373). Developing violence prevention and intervention programs with significant skill-building components appears promising, especially when one considers the great success of cognitive-behavioral and skills training programs in other areas, such as youth substance abuse and delinquency (Garrett, 1985). The lack of research on dating violence programs for young adults and the fact that most colleges and universities do not offer skills-based programs for male perpetrators of dating violence highlights the importance of the present study.

Although most programs are focused on young adolescent populations, a number of primary and secondary prevention programs for dating violence include some form of skill-building component aimed at improving perpetrators' social skills. The skill-building components are often only a small part of these programs, as many of them were primarily designed to modify attitudes, beliefs, and knowledge about partner violence. Nonetheless, numerous programs include skill-building components that target conflict resolution skills (Avery-Leaf, Cascardi, O'Leary, & Cano, 1997; Foshee et al., 1998; Krajewski, Rybarik, Dosch, & Gilmore, 1996; Wolfe et al., 2003), anger management strategies (Foshee et al., 1998), and social problem-solving skills (Hammond & Yung, 1991; MacGowan, 1997; Wolfe et al., 2003). Cognitive-behavioral programs designed for marital violence often teach a variety of social skills, including assertiveness, communication, and anger management (Babcock, Green, & Robie, 2004). Empathy training has also been a common feature of batterer intervention programs, and is considered to be effective at reducing future incidence of partner violence (Dobash, Dobash, Cavanagh, & Lewis, 2000).

Despite their rising popularity for the prevention and intervention of dating violence, programs that incorporate social skills training are currently employed in a theoretical vacuum because many of their underlying assumptions have not been empirically tested. For example, there is a lack of basic research demonstrating social skill deficits in young perpetrators of dating violence. Similar issues exist in the literature on maritally violent men (Holtzworth-Munroe, 1992). This lack of basic research poses a significant problem when considering treatment-oriented research because it is essential to demonstrate the existence of social skill deficits before skills-based programs are

applied to a specific clinical population (Freedman, Rosenthal, Donahoe, Schlundt, & McFall, 1978). The present study is a first step towards implementing skills-based programs by identifying specific social skill deficits associated with male-perpetrated dating violence so that future programs may target these skills for prevention and intervention purposes.

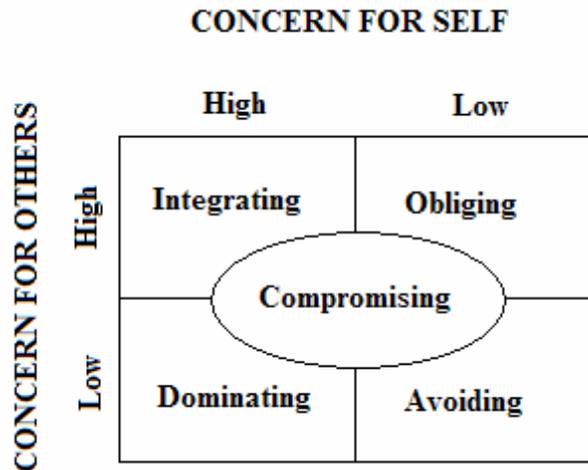
Social Skill Deficits and Dating Violence

Conflict resolution. The ability to resolve conflict in a peaceful and prosocial manner is an important skill for the development of healthy romantic relationships. As such, many programs for partner violence target conflict resolution skills suggesting that skill deficits in this area may characterize violent romantic relationships. The term *conflict* refers to any “dyadic, interpersonal behavioral event involving opposition” (Laursen & Collins, 1994, p. 198). Conflict resolution tactics refer to the specific behaviors that are enacted to end that opposition while conflict resolution strategies refer to the broad, overarching objectives that individuals use to resolve conflict (Newton & Burgoon, 1990). Such strategies are often categorized as either constructive or deconstructive ways of managing conflict and are often defined in terms of their benefits and costs to the opposing individuals (Rahim & Bonoma, 1979; Rusbult & Zembrodt, 1983).

The dual concern model of conflict resolution is a well known theoretical model that was originally proposed by Blake and Mouton (1964) and later refined by Rahim and Bonoma (1979). This model proposes that there are two dimensions that influence the way an individual handles conflict in their interpersonal relationships: a concern for one’s self and a concern for others (Figure 1).

Figure 1

Dual Concern Model of Conflict Resolution



The concern for self dimension reflects the extent to which an individual attempts to fulfill or satisfy their own needs. In contrast, the concern for other dimension reflects the extent to which an individual attempts to fulfill or satisfy the needs of another person. Based on a crossing of these two dimensions, five distinct conflict resolution strategies were proposed and may be assessed directly using the Rahim Organizational Conflict Inventory II (ROCI II; Rahim, 1983): integrating, compromising, avoiding, obliging, and dominating strategies. Constructive strategies often involve negotiating and making mutual concessions (compromising strategies) as well as collaborating with one's partner (integrating strategies). Both constructive strategies typically result in satisfying solutions for both partners. In contrast, deconstructive strategies often involve withdrawing from the conflict completely (avoiding strategies), making constant concessions to the wishes of one's partner (obliging strategies), and pursuing one's desires despite their partner's thoughts and feelings (dominating strategies). With the exception of avoiding strategies,

deconstructive conflict resolution strategies may lead to an escalation of conflict, creating a situation that may be more amenable to partner violence. It is important to note, however, that although most aggression involves conflict, not all conflict involves aggression (Shantz, 1987). As evidenced by Rahim and Bonoma's (1979) dual concern model of conflict resolution, there are a number of alternative (i.e., nonviolent) strategies for resolving conflict such as discussion, agreement, compromise, negotiation, and reasoning. Thus, aggression should be viewed as only one of the many potential strategies for resolving romantic conflict.

Given that violence and conflict often go hand in hand, the relationships among romance, conflict, and violence has been a topic of interest for numerous researchers. It has been well established that violent relationships are often characterized by frequent conflict between romantic partners (Straus, 1991). In fact, one study found that couples who experienced high levels of conflict had a violence rate that was 16 times higher than couples who experienced lower levels of conflict (Straus, Gelles, & Steinmetz, 1980).

Although the frequency with which romantic conflict occurs in violent relationships is widely documented, there is much less research on specific nonviolent conflict resolution strategies, especially those defined by the dual concern model. Hammock and O'Hearn (2002) examined the relationships among dominating, obliging, avoiding, and problem-solving (a composite of both compromising and integrating) strategies and the perpetration of psychological aggression in a sample of undergraduates. A negative relationship emerged between problem-solving strategies and psychological aggression suggesting that those who work at making mutual concessions with their romantic partners are less likely to use psychologically aggressive tactics. The sex of the

participant moderated the relationships between obliging and avoiding conflict resolution strategies and psychological aggression. A positive relationship between obliging strategies and psychological aggression and a negative relationship between avoiding strategies and psychological aggression were only significant for female participants. Contrary to the authors' hypotheses, the relationship between dominating strategies and psychological aggression was not significant. Although these findings are quite interesting, it is important to note that more severe forms of dating violence, such as physical assault and sexual coercion were not considered. Furthermore, this appears to be the first and only study that has examined specific conflict resolution styles in relation to the perpetration of dating violence. As such, these findings should be considered preliminary and await replication.

With the exception of the aforementioned study (Hammock & O'Hearn, 2002), most of the remaining studies have studied conflict resolution by examining the relationship between witnessing family-of-origin violence and conflict resolution strategies in subsequent violent dating relationships. Burnett and Daniels (1985) examined the relationship between exposure to family violence and conflict resolution strategies in a sample of young adult males using self-report measures and videotaped vignettes of couples in conflict. Results indicated that men who had not witnessed interparental violence while growing up were able to successfully resolve significantly more conflicts through use of prosocial strategies than men who were exposed to family violence. Using self-report measures, Styron and Janoff-Bulman (1997) examined the relationship between experiencing abuse in the family of origin and conflict resolution skills in a sample of undergraduate students. Results indicated that individuals with a

history of familial abuse were not only more likely to engage in physical violence with their own romantic partners, but were also more likely to use destructive conflict resolution behaviors, such as insulting and hitting their partner.

The literature on conflict resolution styles and partner violence is not only lacking, but also appears rather inconsistent. Many studies did not provide an operational definition of conflict resolution and used the term interchangeably with other similar, but clearly distinct terms such as communication and problem-solving (e.g., Ronan, Dreer Dollard, & Ronan, 2004). Furthermore, many studies have measured physical and verbal aggression as indicators of conflict resolution behaviors (e.g., Styron & Janoff-Bulman, 1997). It is important to understand nonviolent conflict resolution styles in the context of violent romantic relationships for two major reasons. First, identifying the deconstructive strategies violent men use to resolve conflicts with their partners will inform us about the types of behaviors that may lead to an escalation of conflict and ultimately to violence. Second, identifying the constructive conflict resolution strategies nonviolent men use to resolve conflicts with their partners may help inform prevention and intervention efforts. The present study extended Hammock and O'Hearn's (2002) work and used the dual concern model of conflict resolution by investigating the relations among various types of conflict resolution strategies and male-perpetrated dating violence.

Anger management. Programs for partner violence that incorporate anger management components help individuals regulate the intensity, duration, frequency, and mode of expressing their anger. Sonkin and Durphy (1985) were among the first to develop anger management programs, all of which assumed that violent individuals tend to dwell on anger, escalate easily during conflictual situations, and spend much time in an

angry frame of mind. Anger management programs work by helping individuals recognize their anger levels, monitor their thoughts and feelings towards their partner's actions to reduce anger arousal, and use coping strategies that reduce the likelihood that anger will lead to violent behaviors (Stith & Hamby, 2002). Teaching anger management skills is a common component in many cognitive-behavioral treatment programs for aggressive individuals.

Given the popularity of anger management programs, it is not surprising that the relationships among anger, hostility, and aggression have been studied by many researchers in the areas of general interpersonal aggression (e.g., Berkowitz, 1993) and husband-to-wife partner violence (for reviews, see Eckhardt, Barbour, & Davison, 1998; Norlander & Eckhardt, 2005; Schumacher, Feldbau-Kohn, Smith-Slep, & Heyman, 2001). Research in the area of partner violence has shown that a high level of anger or hostility is considered an individual risk factor for male-perpetrated spousal abuse (Barbour, Eckhardt, Davison, & Kassinove, 1998; Boyle & Vivian, 1996; Feldbau-Kohn, Heyman, & O'Leary, 1998; Hanson, Cadsky, Harris, & Lalonde, 1997; Jacobson et al., 1994; Margolin, John, & Foo, 1998).

There is comparatively less research examining the role of anger in the perpetration of dating violence among young adults. Studies that have investigated the role of anger in the perpetration of dating violence have produced inconsistent results when compared to the literature on marital violence. For example, Dye and Eckhardt (2000) reported that college students who were violent toward their romantic partner reported expressing more externally directed anger-related behaviors and had more difficulties calming and controlling their angry feelings than nonviolent students.

However, they did not find any group differences on a measure of dispositional anger which is inconsistent with the findings in the literature on maritally violent men. That is, Eckhardt, Jamison, and Watts (2002) found that partner-violent men had a trait-like tendency toward anger hyperarousal when compared to their nonviolent counterparts.

Despite these inconsistencies, there is still good reason to believe that poor anger management skills play an important role in the perpetration of dating violence.

Lundeberg, Stith, Penn, and Ward (2004) used the Anger Management Scale (AMS; Stith & Hamby, 2002) to distinguish among college men who were physically abusive, psychologically abusive, and those who were nonviolent towards their romantic partner. The AMS consists of four subscales that measure specific cognitions and behaviors that can increase or decrease anger levels: Escalating Strategies (behaviors that tend to increase anger levels), Negative Attributions (attributing negative intentions or blame to one's partner), Self-Awareness (level of awareness and subsequent responses to rising anger), and Calming Strategies (using time-out and relaxation techniques to reduce anger levels). Results from this study indicated a continuum with those who had better anger management skills being nonviolent, those with moderate levels of anger management skills being psychologically violent, and those with the poorest anger management skills being physically violent. The key distinguishing anger management skills were the respondents' tendency to use strategies that escalate their own angry feelings and their tendency to make negative attributions with regards to their partner's behaviors.

Although the role of anger and anger management skills has been well established in the literature on adult partner violence, there is much less information on its role in dating violence among adolescents and young adults. The present study aimed to not only

replicate previous findings on anger management and partner violence, but to also determine which specific facets of anger management are related to the perpetration of dating violence.

Empathy. Despite the inclusion of empathy-building components for treatment of aggressive behavior in general, there is limited evidence to suggest that men who are aggressive towards their romantic partners have difficulties empathizing. The relationships between empathy and general aggression levels have been well researched and the consensus in this literature is that the presence of one generally inhibits the other. More specifically, research has shown that empathy is negatively related to aggressive, externalizing, and antisocial behaviors (see Miller & Eisenberg, 1988 for a review). Based on these findings, one might expect individuals who exhibit aggressive behavior to respond less empathically towards others than individuals who exhibit more positive prosocial behaviors. Such empathic deficits may also play a critical role in the quality of ones interpersonal relationships and as such, may be an important contributing factor to social dysfunction that attains clinically significant levels (Gibbs, 1987).

Davis (1983) broadly defines empathy as “the reactions of one individual to the observed experiences of another” (p. 113). In the psychological literature, empathy has long been defined as consisting of both cognitive and affective components. Centuries ago, Smith (1759) distinguished between a cognitive, intellectual reaction (an ability to take another person’s perspective) and a more vicarious emotional response to another person’s affective state. Throughout the years, many researchers have maintained this distinction and focused on empathy as either an “intellectual” process (e.g., Dymond, 1949; Kerr & Speroff, 1954) or an “emotional” process (e.g., Mehrabian & Epstein,

1972; Stotland, 1969). Many contemporary empathy theorists and researchers suggest that both facets of empathy should be studied together as to improve our understanding of empathy as a multidimensional construct (see Davis, 1983). In accordance with this perspective of empathy, Davis (1980) developed an individual difference measure of dispositional empathy called the Interpersonal Reactivity Index (IRI). This measure is based on the theoretical perspective that empathy is multifaceted, consisting of four interrelated abilities, measured by the IRI's four subscales: Perspective Taking (tendency to take others' perspectives), Empathic Concern (feelings of concern and sympathy for unfortunate others), Personal Distress (feelings of discomfort and unease in response to the emotions of others), and Fantasy (imaginative tendency to transpose oneself into the thoughts, feelings, and behaviors of fictitious characters in books, movies, and plays). The IRI has been used to study empathic deficits in many aggressive populations, such as adolescent bullies (Gini, Albiero, Benelli, & Altoé, 2007), adolescent sexual offenders (Burke, 2001; Curwen, 2003; Varker & Devilly, 2007), offenders in prison (Ireland, 1999; Lauterbach & Hosser, 2007), and child abuse perpetrators (Wiehe, 2003).

Research examining the relationship between empathy and partner violence has been primarily focused on male batterers in marital relations. For example, research has shown that maritally violent men exhibit poor empathic accuracy when attempting to understand their partner's thoughts and feelings (Clements, Holtzworth-Munroe, Schweinle, & Ickes, 2007; Schweinle, Ickes, & Bernstein, 2002). To date however, only one study has examined empathy as a multidimensional construct in relation to the frequency of male-perpetrated partner violence. This study used a sample of self-referred and court-referred men participating in a hospital program for domestic violence (Covell,

Huss, & Langhinrichsen-Rohling, 2007). Results indicated that both singular and multiplicative patterns of empathic deficits were related to different types of domestic violence (i.e., physical, psychological, and sexual). Male batterers who reported perpetrating physical violence also reported low perspective taking ability, high personal distress, and high empathic concern. Similarly, batterers who reported perpetrating psychological aggression also reported low perspective taking ability and high personal distress. Finally, men who reported using sexual coercion against their partners not only reported high personal distress, but they also reported high perspective taking abilities. The authors of this study acknowledged that the aforementioned findings were preliminary and should therefore be replicated before drawing any conclusions.

Much of the remaining research in the area of empathy and partner violence is often theoretical and speculative, rather than empirical (Covell et al., 2007). For example, Zillmann's (1988) cognitive-excitation model has been used as a theoretical framework for understanding how the cognitive processes associated with perspective taking may be related to the inhibition of aggressive behavior. This model suggests that individuals experience a cognitive incapacitation when they are under high levels of arousal. This cognitive disruption (or an inability to "think straight") increases the probability that one will act impulsively and decreases the probability that one will be capable of inhibiting aggression. As it relates to empathy, one study concluded that individuals who have good perspective taking ability may be capable of maintaining high levels of cognitive functioning in threatening situations, thereby making it easier for them to control aggressive impulses (Richardson, Hammock, Smith, Gardner, & Signo, 1994).

Another area of research is focused on distinguishing among subtypes of violent men based on the empathic characteristics they possess. In a comprehensive review of the batterer typology literature, Holtzworth-Munroe and Stuart (1994) suggested that there are three types of male batterers: family-only, generally violent/antisocial, and dysphoric/borderline abusers. The authors speculated that the family-only abusers should exhibit the greatest empathic response for their victims in contrast to the generally violent/antisocial abuser who should exhibit the least. Similarly, Tweed and Dutton (1998) suggested that there are two distinct types of batterers: instrumental and impulsive. They suggested that the instrumental batterer was characterized by low dispositional empathy. A number of other studies have also indirectly examined empathy in relation to batterer typology. Features such as tendency to blame the victim, forgive or apologize to the victim, or feel regret and remorse following an episode of domestic violence have been shown to differentiate among batterer subtypes (Gondolf, 1988; Shields, McCall, & Hanneke, 1988). The absence of research in the area of empathy and dating violence among young adults highlights the importance of the present study. Building on the existing adult literature, the present study was designed to further our understanding of the role of empathic deficits in male-perpetrated dating violence.

Social problem-solving. The clinical application of problem-solving training has been a critical component to many programs aimed at reducing aggression in children (e.g., Ooi & Ang, 2004; Sukhodolsky, Golub, Stone, & Orban, 2005) and partner violence (Hammond & Yung, 1991; MacGowan, 1997; Wolfe et al., 2003). Such programs operate under the assumption that these aggressive populations have underlying deficits in their ability to solve everyday problems. Furthermore, it has been suggested

that aggressive behavior can be understood as a maladaptive or self-defeating attempt at solving a problem, which implies that dysfunctional problem solving may increase the potential for aggressive behaviors (D’Zurilla, Chang, & Sanna, 2003). Although a number of empirical studies have examined social problem-solving skill deficits in aggressive children and adolescents (e.g., Lochman & Dodge, 1994; Lochman, Wayland, & White, 1993), sex offenders (Grier, 1988), and violent offenders (Crick & Dodge, 1994, 1996), there is a lack of research in the area of social problem-solving and dating violence.

Much of the research on social problem-solving and problem-solving therapies has been based on the well-developed model proposed by D’Zurilla and his colleagues (D’Zurilla, 1986; D’Zurilla & Nezu, 1982). According to D’Zurilla and Nezu (1990), “social problem-solving refers to the cognitive-affective-behavioral process by which a person attempts to identify, discover, or invent effective or adaptive coping responses for specific problematic situations encountered in everyday living” (p. 156). Everyday problems might include problems with the self, relationships with others, or the environment that do not have immediate or obvious solutions.

According to D’Zurilla’s model, social problem-solving is viewed as both a social learning process and a social skill that takes place in the real-life social environment (D’Zurilla, 1986). Social problem-solving is also considered an effortful process, rather than an automatic response, that consists of (a) a general motivational component named problem orientation and (b) a set of four specific problem-solving skills. The problem orientation component of this model has been described as a motivational process that reflects an individual’s level of awareness of real-life problems and their perceptions of

their abilities to solve these problems. The problem-solving skills components consist of four goal-directed tasks: (a) problem definition and formulation, (b) generation of alternative solutions, (c) decision making, and (d) solution implementation and verification. These problem orientations and problem-solving skills are typically measured using the Social Problem-Solving Inventory-Revised (SPSI-R; D’Zurilla, Nezu, & Maydeu-Olivares, 2002), a self-report measure of the problem-solving process that has received strong support in terms of test design and development, convergent and discriminant validity, and theoretical background (D’Zurilla & Maydeu-Olivares, 1995). The SPSI-R measures five underlying problem solving dimensions: positive problem orientation (constructive problem-solving cognitive set), negative problem orientation (dysfunctional or inhibitive problem solving cognitive-emotional set), rational problem solving (knowledge and use of effective problem-solving skills), impulsivity/carelessness style (dysfunctional problem-solving pattern characterized by ineffective attempts to apply problem-solving skills), and avoidance style (dysfunctional problem-solving pattern characterized by procrastination, passivity, and dependency). An individual may have deficits with any one or more of these processes, all of which could lead to ineffective problem-solving. Similar to deficits in other social skills, social problem-solving skill deficits have been associated with various forms of maladjustments and psychopathology, ranging from minor (e.g., Richards & Perri, 1978) to more severe forms (e.g., Nezu, 1986).

Despite the inclusion of problem-solving components in many dating violence prevention and intervention programs, few studies have related deficiencies in everyday problem-solving skills to the perpetration of dating violence. Rather, researchers have

examined social problem-solving in relation to general aggression levels and marital violence. D’Zurilla et al. (2003) examined the relations among self-esteem, social problem-solving ability, and general aggression in a sample of college students. Results indicated that poor problem-solving ability was significantly related to aggression, even after controlling for self-esteem levels. Specifically, more dysfunctional problem-solving (negative problem orientation, impulsivity/carelessness style, and avoidance style) was associated with more hostility and anger while the impulsivity/carelessness style was also associated with more physical aggression.

A number of studies in the area of marital violence have examined how competently men respond to problematic marital situations. For example, Holtzworth-Munroe and Anglin (1991) presented audiotapes of problematic marital situation vignettes and asked their male participants how they would respond. Maritally-violent husbands demonstrated less competent responses than nonviolent husbands, particularly in situations involving rejection, jealousy, and marital challenges. In an extension of their work, Anglin and Holtzworth-Munroe (1997) found that violent husbands had not only marital skill deficits, but also more global deficits when dealing with problematic situations with individuals other than their romantic partner. In another study, Else et al. (1993) found that male batterers were deficient in problem-solving skills compared to nonviolent men. Given that poor problem-solving ability has been related to aggressive behavior in marital relationships and in general, it seems reasonable to suggest that dysfunctional social problem-solving may also be related to the perpetration of dating violence. This possibility was examined in the present study.

The Present Study

The purpose of the present study was to examine how social skills in the areas of conflict resolution, anger management, empathy, and social problem-solving are associated with the perpetration of physical assault, psychological aggression, and sexual coercion in a sample of male university students. The specific research questions that were addressed included the following:

- 1) Which nonviolent conflict resolution strategies best predict the perpetration of physical, psychological, and sexual dating violence?
- 2) Which facets of anger management best predict the perpetration of physical, psychological, and sexual dating violence?
- 3) Which dimensions of empathy best predict the perpetration of physical, psychological, and sexual dating violence?
- 4) Which components of social problem solving best predict the perpetration of physical, psychological, and sexual dating violence?

Based on the literature review presented above, the following hypotheses were tested to better understand how social skills relate to male-perpetrated dating violence. Separate hypotheses for physical, psychological, and sexual dating violence were not specified because the causes of each type of violence are thought to be varied and the relationships between those causes are complex (Jewkes, 2002). Furthermore, previous research has shown that the various types of dating violence tend to co-occur within a single romantic relationship (Follingstad et al., 1990; Hyden, 1995; Ryan, 1995; Stets & Henderson, 1991). Overall, the current state of literature made it difficult to specify hypotheses for each type of dating violence.

Hypothesis 1: Conflict resolution strategies that involve an uneven distribution of the benefits and rewards in the relationship (obliging and dominating) will be associated with increased odds of perpetrating physical, psychological, and sexual dating violence. Conflict resolution strategies that involve an even distribution of benefits and rewards (integrating, compromising, and avoiding) will be associated with decreased odds of perpetrating all three types of dating violence.

Hypothesis 2: Poor anger management (escalating strategies and negative attributions) will be associated with increased odds of perpetrating physical, psychological, and sexual dating violence. Effective anger management (self-awareness and calming strategies) will be associated with decreased odds of perpetrating all three types of dating violence.

Hypothesis 3: Perspective taking and empathic concern dimensions of empathy will be associated with decreased odds of perpetrating physical, psychological, and sexual dating violence. No specific hypothesis was made for the personal distress dimension as both inductive and inhibitory effects of aggression are possible (Lauterbach & Hosser, 2007).

Hypothesis 4: Dysfunctional social problem-solving (negative problem orientation, impulsivity/carelessness style, and avoidance style) will be associated with increased odds of perpetrating physical, psychological, and sexual dating violence. Constructive social problem-solving (positive problem orientation and rational problem-solving) will be associated with decreased odds of perpetrating all three types of dating violence.

CHAPTER III

Method

Participants

A total of 295 participants from the University of Windsor volunteered for the present study. Fifty participants who did not meet the eligibility requirements were excluded because they were female (0.6%), more than 25 years old (9.8%), did not have a current or former relationship on which to report (2.4%), were involved in a same-sex relationship (1.0%), or were engaged or married (7.1%). Six male participants (2.0%) who identified as being bisexual were included in the present study because they were currently involved in a romantic relationship with a female. An additional 12 participants were excluded because a substantial portion of their data was missing. Finally, three participants were excluded because they responded true to the validity questions and their response patterns indicated that they may have randomly endorsed survey items. As such, the final sample was comprised of 230 male participants between the ages of 17 and 25 years old. The mean age was 20.44 ($SD = 1.82$) years. The majority of the sample was Caucasian (64.8%) and came from homes with family incomes over \$70,000 per year (56.2%). Most participants had at least one parent who completed a college, university, or graduate degree (76.6%). Participants reported on a current romantic relationship (52.6%) or on a former relationship that ended in the preceding year (47.4%). Most participants reported living with parents (57.5%), with roommates (25.9%) or alone (9.6%), with a small number of participants reporting that they lived with their partner (5.7%). Approximately 72% reported that sex was a part of their relationship. For more details regarding demographic and relationship background see Table 1.

Table 1

Demographic Information

Variable	Number	(%)
Ethnicity (<i>N</i> = 230)		
Caucasian	149	(64.8)
Asian	42	(18.3)
African American	7	(3.0)
Other	32	(13.9)
Current Year of Education (<i>N</i> = 229)		
1	76	(33.2)
2	52	(22.7)
3	55	(24.0)
4	36	(15.7)
5 or more	10	(4.4)
Family Income (<i>N</i> = 224)		
Under \$9,999	7	(3.1)
\$10,000 to \$39,999	37	(16.5)
\$40,000 to \$69,999	54	(24.1)
\$70,000 or more	126	(56.2)
Parent Marital Status (<i>N</i> = 228)		
Married	172	(75.6)
Separated	14	(6.1)
Divorced	26	(11.3)
Other	16	(7.0)
Participant Relationship Status (<i>N</i> = 230)		
Current	121	(52.6)
Past	109	(47.4)
Relationship Length (<i>N</i> = 230)		
Less than 6 months	87	(37.8)
6 months to 1 year	53	(23.0)
More than 1 year but less than 2 years	25	(10.9)
About 2 years	17	(7.4)
More than 2 years but less than 4 years	31	(13.5)
4 years or more	17	(7.4)

Measures

Demographics questionnaire (Appendix A). Participants completed a 19-item demographics questionnaire designed for the present study. Items included questions about the participants' sex, age, ethnicity, sexual orientation, education level, living situation, parental education level and marital status, and yearly family income. In addition, several questions about participants' current or former romantic relationship were included such as their current relationship status, commitment level, length of relationship, and whether sex was a part of the relationship.

Revised Conflict Tactic Scales. The Revised Conflict Tactic Scales (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) is one of the most widely used measures of partner violence. The CTS2 measures the extent to which partners in dating, cohabiting, or marital relationships engage in physically, psychologically, and sexually aggressive behaviors against one another. The original CTS2 has five subscales: Negotiation, Physical Assault, Psychological Aggression, Sexual Coercion, and Injury. The items are asked in the form of paired questions: participants' use of aggression (perpetration items) and their partners' use of aggression (victimization items). As such, data is obtained on the behavior of both partners, even when only one of the partners serves as the respondent. Although there are limitations to this form of data collection, many studies have found a substantial correlation between the violence reports of partners (see Straus et al., 1996). The present study focused exclusively on the perpetration items.

Given that Straus et al. (1996) suggested that the CTS2 may be shortened by selecting the scales that are most crucial for the purpose at hand, only the Physical Assault (12 items), Psychological Aggression (8 items), and Sexual Coercion (7 items)

subscales were administered in the present study. The Physical Assault subscale includes items that ask about general assaultive behavior that may occur in relationships, such as pushing, grabbing, shoving, punching, kicking, choking, burning, and using a weapon. The Psychological Aggression subscale includes items that ask about verbal and symbolic acts that are intended to cause psychological pain or fear, such as insulting, swearing, yelling, using name-calling, destroying property, and making threats. Lastly, the Sexual Coercion subscale includes items that ask about sexual coercion focused on imposing nonconsensual sexual acts, including unprotected oral and anal sex.

Participants reported their use of aggression towards their current or former partner in the past year. They indicated the frequency with which they had committed a particular act by choosing one of the following response options: *never, 1 time, 2 times, 3-5 times, 6-10 times, 11-20 times, more than 20 times, or not in the past year but has happened in the past*. Numerous scores can be computed using CTS2 data (see Straus, 2004b). Prevalence scores are dichotomous and indicate whether or not the respondent used one or more of the acts in a particular subscale in the past year. Although prevalence scores do not differentiate on the basis of how many acts were used or how often each act was used, they are the most preferred and frequently used scores in research with non-clinical populations. Straus (1990) identified numerous studies that provided empirical support for the CTS' factor structure, reliability, and validity. The CTS2 had alpha coefficients of reliability that ranged from .79 to .95 in a college student sample (Straus et al., 1996). The alpha coefficients for the perpetration items in the present sample were .69 for the Psychological Aggression subscale, .66 for the Physical Assault subscale, and only .37 for the Sexual Coercion subscale.

Given the comparatively low internal consistency of the CTS2 subscales in the present study, item analysis was conducted to determine whether the scale reliabilities could be improved. The item “*have you made your partner have sex without a condom?*” had a low item-total correlation of .16 and if deleted, would have improved the alpha coefficient of the Sexual Coercion scale from .37 to .52. Although this item has been considered problematic in past research (Jones, Ji, Beck, & Beck, 2002; O’Leary & Williams, 2006; Vega & O’Leary, 2007), it was not dropped from the scale in the present study given the modest increase in reliability its exclusion would provide. Inspection of the CTS2 perpetration items revealed that many items, particularly those addressing more severe aggressive acts, had extremely low prevalence rates (e.g., 3% or less). According to Straus (2004a) low alpha coefficients may result from items with extremely low prevalence rates because they are positively skewed and therefore have low correlations with other items on the scale. As such, the reported alpha coefficients for the CTS2 in the present study should be interpreted with caution because some of the violent acts being measured were absent or nearly absent.

Although the CTS2 has made significant contributions to the field of partner violence in many hundreds of studies, it has been criticized for its reliance on self-report, potentially over-simplified categories of violent behavior, and lack of contextual information. To address the latter issue, the participants were asked to respond to three contextual questions after completing the CTS2. These questions were adapted from work by DeKeseredy (1995) and asked the participant to indicate the percentage of times they used aggression in self-defense, to fight back, or because their partner initiated the aggression first. These questions were designed to help researchers understand the

context of situations in which an individual may become aggressive towards their romantic partner. Despite criticisms of the CTS2, it remains one of the most widely used and cited measures of partner violence in the field.

Marlowe-Crowne Social Desirability Scale. The Marlowe-Crowne Social Desirability Scale Short-Form C (MCSDS Form C; Reynolds, 1982) is a widely used shortened version of the Marlowe-Crowne measure of socially desirable responding. The MCSDS Form C consists of 13 true or false items. The items are either very socially desirable but untrue of most people or very socially undesirable but very common. Negatively keyed items were reversed and the number of true responses was added and divided by the number of items completed to create a mean social desirability score ranging from 0 to 1. High scores indicate that the participant was likely trying to present themselves in a more favorable manner. This measure was included in the present study because research has shown that men tend to underreport their perpetration of partner violence in relation to their scores on social desirability response measures (Dutton & Hemphill, 1992; Tolman, 1989). Leite and Beretvas (2005) reported an alpha coefficient of reliability of .90 for the MCSDS. The alpha coefficient in the present sample was .68.

Rahim Organizational Conflict Inventory. The Rahim Organizational Conflict Inventory II (ROCI-II; Rahim, 1983) is a 28-item self-report questionnaire that was originally designed to measure conflict management strategies in organizational settings. Since its original development, the ROCI-II has been shown to be an effective measure for assessing conflict responses within the context of social relationships (Hammock, Richardson, Pilkington, & Utley, 1990). The ROCI-II is based on the dual concern model of conflict resolution (Rahim & Bonoma, 1979). The concern for self and concern for

other dimensions are crossed to reflect five primary methods of managing interpersonal conflict which are measured by five subscales on the ROCI-II: Integrating (7 items), Dominating (5 items), Obliging (6 items), Avoiding (6 items), and Compromising (4 items). Each item was rated on a scale from 1 (*strongly agree*) to 5 (*strongly disagree*). The sum of the item ratings for each subscale was divided by the number of items on that particular subscale (or the number of items responded to by the participant if lower) resulting in a score ranging from 1 to 5 for each subscale. A high score represents a greater preference for that particular style of conflict resolution.

The Integrating subscale includes items that reflect a high concern for self as well as a high concern for the partner during conflict. Individuals who score high on this subscale have an integrating style and like to collaborate and work together to formulate an acceptable solution which will satisfy both themselves and their partner. The Dominating subscale includes items that reflect a high concern for the self and a low concern for the partner. Individuals who score high on this subscale have a dominating style consisting of a win-lose orientation and desire to get their own way regardless of the wishes and feelings of their partner. The Obliging subscale includes items that reflect a low concern for the self and a high concern for the partner. Individuals who score high on this subscale have an obliging style and tend to give in to the demands and wishes of their partner in order to satisfy them. The Avoiding subscale includes items that reflect a low concern for the self as well for the partner. Individuals who score high on this subscale have an avoiding style and will typically withdraw from situations involving conflict. Finally, the Compromising subscale includes items that reflect a moderate concern for the self as well as for the partner. Individuals who score high on this subscale have a

compromising style which consists of negotiating and making mutual concessions with their partner which ultimately results in a give-and-take resolution style. The ROCI-II has demonstrated convergent and discriminant validity (Rahim & Magner, 1994) and alpha coefficients of reliability exceeding .70 for each of the subscales in an organizational setting (Rahim, 1983) and nonorganizational settings (Hammock, et al., 1990). The alpha coefficients in the present sample were .86 for the Integrating scale, .79 for the Obliging scale, .81 for the Dominating scale, .78 for the Avoiding scale, and .67 for the Compromising scale.

Anger Management Scale. The Anger Management Scale Short-Form (AMS-SF; Stith & Hamby, 2002) is a 20-item self-report questionnaire that measures an individual's ability to control and manage their anger in romantic relationships. It was designed to measure specific cognitions and behaviors that can increase or decrease anger towards a romantic partner and therefore influences the degree of partner violence that may occur. The AMS-SF consists of four 5-item subscales: Escalating Strategies, Negative Attributions, Self-Awareness, and Calming Strategies. Two subscales (Escalating Strategies and Negative Attributions) measure cognitions and behaviors associated with increased levels of anger and subsequently an increase in the likelihood that partner violence will occur. In contrast, the two other subscales (Self-Awareness and Calming Strategies) measure cognitions and behaviors associated with reduced levels of anger and subsequently a reduction in the likelihood that partner violence will occur. Each item was rated on a scale from 1 (*strongly disagree*) to 4 (*strongly agree*). The sum of the item ratings for each subscale was divided by the number of items on that particular subscale

(or by the number of items responded to by the participant if lower) resulting in a score ranging from 1 to 4 for each subscale.

The Escalating Strategies subscale includes items that ask about behaviors that increase the level of anger directed towards the partner such as yelling during an argument, thinking about anger-related thoughts, and fighting back. High scores on this subscale suggest that the respondent uses anger management strategies that increase their level of anger and the likelihood that they will become violent towards their partner. The Negative Attributions subscale includes items that ask about cognitions such as negative intentions or blame attributed to one's partner. High scores on this subscale suggest that respondents are likely to make negative attributions to their partners' behaviors. The Self-Awareness subscale includes items that measure level of awareness of, and subsequent responses to rising anger, as indicated by physiological changes. High scores on this subscale indicate that the respondent recognizes when they are starting to get angry. Finally, the Calming Strategies subscale includes anger management strategies that are often included as part of anger management programs such as taking breaks or time outs, self-talk, and removing oneself from the situation. High scores on this subscale indicate the respondent's greater use of calming strategies when angry. There is good evidence for the construct validity of the AMS (Stith & Hamby, 2002). The AMS-SF has alpha coefficients of reliability ranging from .61 to .77 on individual subscales and a mean alpha coefficient of reliability of .70 (Stith & Hamby, 2002). The alpha coefficients in the present sample were .72 for the Escalating Strategies scale, .81 for the Negative Attributions scale, .63 for the Self Awareness scale, and .69 for the Calming Strategies scale.

Interpersonal Reactivity Inventory. The Interpersonal Reactivity Inventory (IRI; Davis, 1980) is a 28-item self-report questionnaire that measures dispositional empathy as a multidimensional construct. It was designed to measure both cognitive and affective components of empathy. The IRI consists of four 7-item subscales: Perspective Taking, Empathic Concern, Personal Distress, and Fantasy. Each item was rated on a scale from 1 (*does not describe me well*) to 5 (*describes me very well*). The sum of the item ratings for each subscale was divided by the number of items on that particular subscale (or the number of items responded to by the participant if lower) resulting in a score ranging from 1 to 5 for each subscale.

The Perspective Taking scale measures the tendency to take others' perspectives and is highly correlated with other measures of cognitive empathy. The Empathic Concern scale measures feelings of concern and sympathy for unfortunate others and is highly correlated with other measures of emotional empathy. The Personal Distress scale measures feelings of discomfort and unease in response to the emotions of others. Lastly, the Fantasy Scale measures the imaginative tendency to transpose oneself into the thoughts, feelings, and behaviors of fictitious characters in books, movies, and plays. For pragmatic purposes, many researchers who study aggression only focus on the Perspective Taking and Empathic Concern subscales because they represent the cognitive and affective components of empathy respectively. The Fantasy Scale may purport to measure a form of empathy that is of limited practical importance to interpersonal conflict and offending behaviors (Lauterbach & Hosser, 2007). As such, Davis (1996) suggested that potential precursors of aggression and antisocial behavior would likely only relate to the perspective taking, empathic concern, and personal distress dimensions

of the IRI. In accordance with Davis' suggestion, the present study did not include the Fantasy scale in its analysis. There is good evidence for the convergent and discriminant validity of the IRI (Davis, 1983). The individual subscales have alpha coefficients of reliability ranging from .71 to .77 and test-retest reliabilities ranging from .62 to .71 (Davis, 1980). The alpha coefficients in the present sample were .77 for the Perspective Taking subscale, .82 for the Empathic Concern subscale, and .71 for the Personal Distress subscale.

Social Problem-Solving Inventory. The Social Problem-Solving Inventory-Revised Short-Form (SPSI-R-SF; D'Zurilla, Nezu, & Maydeu-Olivares, 2002) is a 25-item self-report questionnaire that measures social problem-solving ability. The SPSI-R-SF consists of five subscales based on a number of factor-analytic studies (Maydeu-Olivares & D'Zurilla, 1995, 1996). The five subscales reflect five different, but related, problem-solving dimensions: Positive Problem Orientation (5 items), Negative Problem Orientation (5 items), Rational Problem Solving (5 items), Avoiding Style (5 items), and Impulsivity/Carelessness Style (5 items). Participants rated items on a 5-point likert scale ranging from 0 (*not at all true of me*) to 4 (*extremely true of me*) based on how they deal with problems in everyday life circumstances. Individual subscale scores were computed by summing the item ratings for each subscale, resulting in scores ranging from 0 to 20. Subject-wise mean substitution was used to replace missing values on each subscale as suggested by D'Zurilla et al. (2002).

The Positive Problem Orientation (PPO) scale measures a constructive problem-solving cognitive set. Individuals who score high on the PPO scale are more likely to judge a problem as a challenge rather than a threat. These individuals believe that

problems are solvable and that successful problem solving takes time and effort. They also believe in their own personal ability to solve problems successfully and are willing to commit themselves when solving problems. The Negative Problem Orientation (NPO) scale measures a dysfunctional or inhibitive cognitive-emotional set. Individuals who score high on the NPO scale tend to view problems as threatening. They typically become frustrated or upset when faced with problems and often doubt their own personal ability to solve problems successfully. The Rational Problem Solving (RPS) scale measures knowledge and use of constructive problem-solving skills. Individuals who score high on the RPS scale are careful and systematic when gathering information about a problem. They are able to successfully navigate their way through basic problem-solving steps such as setting realistic goals, generating alternative solutions, anticipating consequences, and choosing and implementing effective solutions. The Avoidance Style (AS) scale measures a dysfunctional problem-solving pattern characterized by procrastination, passivity, and dependency. Individuals who score high on the AS scale tend to avoid problems and wait for problems to resolve themselves. These individuals may also try to shift the responsibility for solving their own problems onto others. Lastly, the Impulsivity/Carelessness Style (ICS) scale measures a dysfunctional problem-solving pattern characterized by ineffective attempts to apply problem-solving skills. Individuals who score high on this scale often have difficulty generating solutions. More specifically, they may choose the solution that first comes to mind, consider alternative solutions quickly and carelessly, and may fail to evaluate solution outcomes effectively. The SPSI-R has demonstrated predictive, convergent, and discriminant validity (D'Zurilla et al., 1998). The SPSI-R-SF has alpha coefficients of reliability that range between .76 and .95

and test-retest correlations ranging between .72 and .88 in a sample of college students (D’Zurilla et al., 1998). The alpha coefficients in the present sample were .71 for the PPO subscale, .80 for the NPO subscale, .75 for the RPS subscale, .80 for the ICS subscale, and .81 for the AS subscale.

Validity questions. The following three true-or-false items were included following the MCSDS to check whether participants were reading the survey questions carefully: *I was on the cover of several magazines last year, I flew across the Atlantic 30 times last year, and I have not seen a car in the last 10 years.* The questions were adapted from the validity scale of the Millon Clinical Multiaxial Inventory-III and are considered highly sensitive to randomly endorsed questionnaires (MCMI-III; Millon, Davis, & Millon, 1996).

Procedure

Following institutional ethics approval, participants were recruited from the psychology participant pool and were directed to complete an online survey. Participants were asked to read the consent form (Appendix B) and provide consent by clicking on the “I agree to participate” button. The online survey presented the above measures in a randomized order, except for the demographic questionnaire which was always presented at the beginning. Upon exiting the survey, participants were provided a research summary form that contained a list of available resources and services should they wish to speak to someone about past or current experiences, as well as information about internet security measures (Appendix C). Participants were compensated with bonus credit points for their participation.

CHAPTER IV

Results

Examination of Data

Prior to analyses, data were screened for missing values, outliers, and multicollinearity. As previously noted, 12 cases were deleted because participants failed to complete a substantial portion of the survey (i.e., two or more complete measures). Of the remaining cases, a total of nine participants were excluded listwise from relevant analyses because they failed to complete a substantial portion of a single measure and subscale total scores could not be computed. Two different methods were used to handle incomplete data that resulted from omitting an item (or several items) on a measure. First, subject-wise mean substitution was used to replace missing values on the SPSI-R-SF as recommended by D'Zurilla and colleagues (2002). Second, subscale scores on the remaining measures were computed by averaging the items that were completed by participants.¹ There were no influential observations or outliers above or below the cut-off range of 2.5 standard deviations. Examination of tolerance statistics indicated no violations of multicollinearity (i.e., tolerance was less than 1.0 and the Variance Inflation Factor did not exceed 10 for all variables).

Descriptive Statistics

Perpetration of dating violence. Participants completed the CTS2 which generated both annual prevalence scores and chronicity scores. Table 2 presents a summary of the annual prevalence scores on the CTS2 subscales, namely the percentage

¹ This method of handling missing data was recommended for use in the manuals for the CTS2 (Straus, 1995) and ROCI-II (Rahim, 2004) and by the authors of the AMS (S. Stith, Personal Communication, April 22, 2009) and IRI (M. Davis, Personal Communication, April 23, 2009). This method was used for cases with a small amount of missing data (i.e., 6% or less).

of cases who did not commit any aggressive acts in the past year and the percentage of cases who committed at least one aggressive act in the past year. These dichotomous prevalence scores were used as the primary measure of perpetration in the present study.

Table 2

Summary of CTS2 Prevalence Scores

Variable	Percentage of Cases (%)	
	0 (No acts in past year)	1 (At least one act in past year)
Physical Assault	64.3	35.7
Psychological Aggression	20.0	80.0
Sexual Coercion	53.9	46.1

Note. *N* = 230.

To provide a more detailed description of the self-reported perpetrated acts, descriptive statistics for the annual chronicity scores on the CTS2 subscales are presented in Table 3. Chronicity scores measure the number of times each act in a subscale was used by those respondents who reported using at least one of the acts in a subscale in the past year.

Table 3

Descriptive Statistics for CTS2 Annual Chronicity Scores

CTS2 Subscale	<i>N</i>	<i>M</i>	<i>SD</i>	Min.	Max
Physical Assault	82	11.35	17.92	1	106
Psychological Aggression	184	18.86	20.86	1	125
Sexual Coercion	105	10.25	11.94	1	57

Participants responded to three contextual questions after completing the CTS2, indicating the percentage of times they used aggression in self-defense, to fight back, or because their partner initiated the aggression first. Of the participants who reported using at least one aggressive act, approximately 15% indicated that they were acting in self-defense more than half of the time they were aggressive towards their partner.

Approximately 13% indicated that they were trying to fight back more than half of the time. Finally, approximately 12% indicated that they initiated these actions towards their partner more than half of the time.

Social skills. Participants completed measures pertaining to social skills in the areas of conflict resolution, anger management, empathy, and social problem-solving. Table 4 displays descriptive statistics for the ROCI-II, AMS-SF, IRI, and SPSI-R-SF by group membership (i.e., no acts or at least one act) for physical assault, psychological aggression, and sexual coercion.

Table 4

Descriptive Statistics for Social Skill Measures by Group Membership

Variables	Physical Assault					
	0 (No acts)			1 (At least one act)		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
ROCI-II						
Integrating	148	4.07	0.59	81	3.95	0.57
Obliging	148	3.88	0.56	81	3.77	0.61
Dominating	148	2.84	0.78	81	3.27	0.76
Avoiding	148	3.19	0.75	81	3.10	0.78
Compromising	148	3.88	0.55	81	3.73	0.62
AMS-SF						
Escalating Strategies	148	2.47	0.69	82	2.62	0.64
Negative Attributions	148	1.45	0.52	82	1.71	0.65
Self-Awareness	148	3.07	0.53	82	2.98	0.51
Calming Strategies	148	2.49	0.60	82	2.44	0.65
IRI						
Perspective Taking	146	3.52	0.64	82	3.25	0.68
Empathic Concern	146	3.69	0.66	82	3.50	0.67
Personal Distress	146	2.41	0.61	82	2.42	0.62
SPSI-R-SF						
Pos. Prob. Orientation	147	13.14	3.35	82	13.78	3.39
Neg. Prob. Orientation	147	6.37	3.77	82	6.56	4.00
Rational Prob. Solving	147	11.46	3.66	81	11.60	3.62
Impulsivity/Carelessness	147	5.41	3.85	82	5.96	3.87
Avoidance	147	5.84	3.90	81	6.15	4.31
Variables	Psychological Aggression					
	0 (No acts)			1 (At least one act)		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
ROCI-II						
Integrating	46	4.15	0.67	183	3.99	0.56
Obliging	46	3.96	0.66	183	3.81	0.56
Dominating	46	2.75	0.85	183	3.05	0.77
Avoiding	46	3.18	0.91	183	3.16	0.72
Compromising	46	3.78	0.63	183	3.84	0.56
AMS-SF						
Escalating Strategies	46	2.16	0.61	184	2.62	0.66
Negative Attributions	46	1.48	0.63	184	1.56	0.57
Self-Awareness	46	3.06	0.67	184	3.03	0.49
Calming Strategies	46	2.37	0.68	184	2.50	0.60
IRI						
Perspective Taking	46	3.64	0.64	182	3.37	0.66
Empathic Concern	46	3.73	0.70	182	3.60	0.66
Personal Distress	46	2.42	0.63	182	2.41	0.61

Table 4 (continued)

Descriptive Statistics for Social Skill Measures by Group Membership

Variables	Psychological Aggression					
	0 (No acts)			1 (At least one act)		
	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>
SPSI-R-SF						
Pos. Prob. Orientation	45	13.47	3.34	184	13.35	3.39
Neg. Prob. Orientation	45	5.89	3.88	184	6.58	3.84
Rational Prob. Solving	45	11.80	3.91	183	11.44	3.58
Impulsivity/Carelessness	45	5.18	3.88	184	5.71	3.86
Avoidance	45	5.36	3.66	183	6.09	4.13
Variables	Sexual Coercion					
	0 (No acts)			1 (At least one act)		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
ROCI-II						
Integrating	124	4.06	0.63	105	3.98	0.52
Obliging	124	3.87	0.60	105	3.81	0.55
Dominating	124	2.89	0.79	105	3.11	0.79
Avoiding	124	3.19	0.75	105	3.13	0.78
Compromising	124	3.86	0.56	105	3.78	0.59
AMS-SF						
Escalating Strategies	124	2.39	0.65	106	2.68	0.68
Negative Attributions	124	1.49	0.58	106	1.61	0.58
Self-Awareness	124	3.04	0.56	106	3.03	0.49
Calming Strategies	124	2.44	0.63	106	2.51	0.60
IRI						
Perspective Taking	123	3.52	0.63	105	3.32	0.68
Empathic Concern	123	3.66	0.66	105	3.58	0.68
Personal Distress	123	2.38	0.62	105	2.45	0.60
SPSI-R-SF						
Pos. Prob. Orientation	123	13.46	3.33	106	13.26	3.43
Neg. Prob. Orientation	123	6.33	3.81	106	6.58	3.90
Rational Prob. Solving	123	11.54	3.57	105	11.47	3.74
Impulsivity/Carelessness	123	5.20	3.64	106	6.08	4.06
Avoidance	123	5.93	4.01	105	5.96	4.10

Preliminary Analyses

Research has shown that men tend to underreport their perpetration of partner violence (Dutton & Hemphill, 1992; Tolman, 1989). As such, a measure of social desirability was included in the present study. Social desirability scores from the MCSDS in the present sample ranged from 0 to 1 ($M = 0.43$, $SD = 0.22$). Table 5 presents bivariate correlations between social desirability and the perpetration of physical assault, psychological aggression, and sexual coercion. Social desirability was significantly negatively correlated with the perpetration of psychological aggression, $r(224) = -.16$, $p < .05$, and sexual coercion, $r(224) = -.15$, $p < .05$. These results suggest that participants who reported no acts of psychological aggression or sexual coercion in the preceding year tended to present themselves in a more favorable manner than participants who reported committing at least one acts of psychological aggression or sexual coercion in the preceding year respectively. As such, social desirability was controlled for in the main logistic regression analyses where psychological aggression and sexual coercion were the criterion variables.²

² Given the nonsignificant correlation between social desirability and physical assault, social desirability was not controlled for in the main analyses where physical assault was the criterion variable.

Table 5

Correlations between CTS2 Prevalence Scores and Mean MCSDS Scores

Variables	1	2	3	4
1. Social Desirability	-			
2. Physical Assault	-.11	-		
3. Psychological Aggression	-.16*	.28**	-	
4. Sexual Coercion	-.15*	.31**	.31**	-

Note. $N = 226$ due to missing data on the MCSDS.

* $p < .05$. ** $p < .01$.

Main Analyses

The main analyses were originally conducted using standard multiple regressions with continuous CTS2 annual frequency scores as the criterion variables. These continuous scores, which represent the total number of perpetrated acts in the preceding year, produced strong positively skewed distributions that were non-normal and non-transformable. As such, a series of multiple logistic regressions were used to model participants' self-reported acts of physical assault, psychological aggression, and sexual coercion to overcome the issue of non-normality. The criterion variables were dichotomous CTS2 prevalence scores and were coded as 0 (no acts in the past year) and 1 (at least one act in the past year). The reference category used for each logistic regression was no acts in the past year. The main predictor variables were divided into four social skill categories and analyzed separately: conflict resolution strategies, anger management, empathy, and social problem-solving. Traditional logistic regression analyses with forced entry were used to predict physical assault. To control for social desirability, two-step hierarchical logistic regression analyses with forced entry were used to predict psychological aggression and sexual coercion. Mean social desirability scores from the MCSDS were entered in the first block and the main predictor variables were entered in the second block.

Conflict resolution. Table 6 presents bivariate correlations between CTS2 prevalence scores and conflict resolution variables. Dominating strategies was significantly positively correlated with the perpetration of physical assault, $r(227) = .26$, $p < .01$, psychological aggression, $r(222) = .13$, $p < .05$, and sexual coercion, $r(222) = .15$, $p < .05$. Participants who reported committing at least one act of physical assault,

psychological aggression, or sexual coercion in the preceding year tended to report using more dominating strategies than participants who reported no acts of partner aggression in the preceding year.

Table 6

Correlations among CTS2 Prevalence Scores and Conflict Resolution Variables

Variables	1	2	3	4	5	6	7	8
1. Physical Assault	-							
2. Psych. Aggression	.28**	-						
3. Sexual Coercion	.31**	.31**	-					
4. Integrating	-.10	-.06	-.05	-				
5. Obliging	-.09	-.08	-.04	.06	-			
6. Dominating	.26**	.13*	.15*	-.20**	-.11	-		
7. Avoiding	-.06	-.00	-.02	.07	-.22**	.12	-	
8. Compromising	-.12	.09	-.08	.06	.60**	.37**	-.00	-

Note. Partial correlations were computed for psychological aggression and sexual coercion to control for social desirability.

* $p < .05$. ** $p < .01$.

Multiple logistic regressions were performed on the dichotomized CTS2 prevalence scores with subscale scores from the ROCI-II as the main predictor variables to determine which conflict resolution strategies best predicted the perpetration of physical assault, psychological aggression, and sexual coercion. Table 7 presents a summary of the results. Conflict resolution significantly predicted group membership for physical assault, Block $\chi^2(5, N = 229) = 21.28, p < .001$, correctly predicting 68.1% of participants' group membership. The model accounted for about 14% of the variation in self-reported perpetration of physical assault (Nagelkerke $R^2 = 0.14$). Dominating conflict resolution strategies was the only significant predictor of physical assault ($B = 0.77$, Wald = 14.77, $p < .001$). Participants who reported using more dominating strategies to resolve conflict with their partners were about two times more likely to report committing at least one act of physical assault in the preceding year than participants who reported using less dominating strategies (odds ratio = 2.16; 95% CI = 1.46 to 3.20). To control for social desirability, two-step hierarchical logistic regression analyses with forced entry were used to predict psychological aggression and sexual coercion. Social desirability was a significant predictor of psychological aggression ($B = -1.89$, Wald = 5.71, $p < .05$) and sexual coercion ($B = -1.43$, Wald = 5.09, $p < .05$). After controlling for social desirability, the omnibus test associated with the conflict resolution model was not significant for psychological aggression, Block $\chi^2(5, N = 225) = 8.96, p > .05$, or sexual coercion, Block $\chi^2(5, N = 225) = 6.57, p > .05$. However, the predictive models were still consulted as a result of a priori hypotheses. Results indicated that for psychological aggression, compromising conflict resolution strategies significantly predicted psychological aggression ($B = 0.81$, Wald = 4.56, $p < .05$). Specifically, participants who

reported using more compromising strategies to resolve conflict with their partners were about two times more likely to report committing at least one act of psychological aggression in the preceding year than participants who reported using less compromising strategies (odds ratio = 2.25; 95% CI = 1.07 to 4.73). Similar to physical aggression, dominating strategies significantly predicted sexual coercion ($B = 0.38$, Wald = 4.20, $p < .05$), such that participants who reported using more dominating strategies were about 1.5 times more likely to report committing at least one act of physical assault in the preceding year than participants who reported using less dominating strategies (odds ratio = 1.47; 95% CI = 1.02 to 2.11).

Table 7

Logistic Regressions Predicting CTS2 Scores from Conflict Resolution Variables

Step	Variables Entered	95% CI for Exp(B)					
		B	SE	Wald's χ^2	e ^B	Lower	Upper
Physical Assault							
1	Integrating	-0.10	0.33	0.10	0.90	0.48	1.71
	Obliging	0.14	0.29	0.22	1.15	0.65	2.03
	Dominating	0.77	0.20	14.77***	2.16	1.46	3.20
	Avoiding	-0.22	0.21	1.18	0.80	0.53	1.20
	Compromising	-0.50	0.33	2.30	0.61	0.32	1.16
Psychological Aggression							
1	Social Desirability	-1.89	0.79	5.71*	0.15	0.03	0.71
2	Integrating	-0.71	0.40	3.24	0.49	0.23	1.07
	Obliging	-0.38	0.34	1.30	0.68	0.35	1.32
	Dominating	0.20	0.23	0.77	1.22	0.78	1.92
	Avoiding	-0.10	0.24	0.19	0.90	0.57	1.43
	Compromising	0.81	0.38	4.56*	2.25	1.07	4.73
Sexual Coercion							
1	Social Desirability	-1.44	0.64	5.09*	0.24	0.07	0.83
2	Integrating	-0.09	0.31	0.08	0.92	0.50	1.68
	Obliging	0.11	0.27	0.17	1.12	0.65	1.91
	Dominating	0.38	0.19	4.20*	1.47	1.02	2.11
	Avoiding	-0.13	0.19	0.47	0.88	0.60	1.28
	Compromising	-0.35	0.31	1.24	0.71	0.38	1.31

* $p < .05$. ** $p < .01$. *** $p < .001$.

Anger management. Table 8 presents bivariate correlations among CTS2 prevalence scores and anger management variables. Negative attributions was significantly positively correlated with the perpetration of physical assault, $r(228) = .21$, $p < .01$. Participants who reported committing at least one act of physical assault in the preceding year had a greater tendency to attribute negative intentions or blame to their partner than participants who reported committing no acts of physical assault in the preceding year. In addition, escalating strategies was significantly positively correlated with the perpetration of psychological aggression, $r(223) = .26$, $p < .001$, and sexual coercion $r(223) = .18$, $p < .01$. Participants who reported committing at least one act of psychological aggression or sexual coercion in the preceding year tended to report using more escalating strategies than participants who reported no acts of psychological aggression or sexual coercion in the preceding year, respectively.

Table 8

Correlations among CTS2 Prevalence Scores and Anger Management Variables

Variables	1	2	3	4	5	6	7
1. Physical Assault	-						
2. Psych. Aggression	.28**	-					
3. Sexual Coercion	.31**	.31**	-				
4. Escalating	.10	.26**	.18**	-			
5. Neg. Attributions	.21**	.07	.13	.21**	-		
6. Self-Awareness	-.08	-.01	-.01	.01	-.05	-	
7. Calming Strategies	-.05	.08	.06	.25**	.28**	.34**	-

Note. Partial correlations were computed for psychological aggression and sexual coercion to control for social desirability.

* $p < .05$. ** $p < .01$.

Multiple logistic regressions were performed on the dichotomized CTS2 prevalence scores with subscale scores from the AMS-SF as the main predictor variables to determine which facets of anger management best predicted the perpetration of physical assault, psychological aggression, and sexual coercion. Table 9 presents a summary of the results. Anger management significantly predicted group membership for physical assault, Block $\chi^2(4, N = 230) = 15.03, p < .01$, correctly predicting 64.8% of participants' group membership. However, the model accounted for only 9% of the variation in self-reported perpetration of physical assault (Nagelkerke $R^2 = 0.09$). Negative attributions was the only significant predictor of physical assault ($B = 0.82$, Wald = 10.08, $p < .01$). Participants who reported making more negative attributions to their partner's behaviors were more than two times more likely to report committing at least one act of physical assault in the preceding year than participants who reported making fewer negative attributions (odds ratio = 2.28; 95% CI = 1.37 to 3.78). To control for social desirability, two-step hierarchical logistic regression analyses with forced entry were used to predict psychological aggression and sexual coercion. Social desirability significantly predicted psychological aggression ($B = -1.91$, Wald = 5.81, $p < .05$) and sexual coercion ($B = -1.46$, Wald = 5.26, $p < .05$). After controlling for social desirability, anger management significantly predicted group membership for psychological aggression, Block $\chi^2(4, N = 226) = 14.55, p < .01$, correctly predicting 80.5% of participants' group membership. The model accounted for about 14% of the variation in self-reported perpetration of psychological aggression (Nagelkerke $R^2 = 0.14$). Escalating strategies was the only significant predictor of psychological aggression ($B = 1.11$, Wald = 11.51, $p < .001$). Participants who reported using more escalating strategies

were approximately three times more likely to report committing at least one act of psychological aggression in the preceding year than participants who reported using less escalating strategies (odds ratio = 3.02; 95% CI = 1.60 to 5.73). After controlling for social desirability, the omnibus test associated with the anger management model was not significant for sexual coercion, Block $\chi^2(4, N = 226) = 8.87, p > .05$; nevertheless, similar to psychological aggression, escalating strategies significantly predicted sexual coercion ($B = 0.50, Wald, = 4.69, p < .05$). Participants who reported using more escalating strategies were approximately 1.5 times more likely to report committing at least one act of sexual coercion in the preceding year than participants who reported using less escalating strategies (odds ratio = 1.66, 95% CI = 1.05 to 2.61).

Table 9

Logistic Regressions Predicting CTS2 Scores from Anger Management Variables

Step	Variables Entered	95% CI for Exp(B)					
		B	SE	Wald's χ^2	e ^B	Lower	Upper
Physical Assault							
1	Escalating	0.28	0.22	1.63	1.33	0.86	2.05
	Negative Attributions	0.82	0.26	10.08**	2.28	1.37	3.78
	Self-Awareness	-0.15	0.29	0.25	2.56	0.49	1.52
	Calming Strategies	-0.43	0.27	2.56	0.65	0.38	1.10
Psychological Aggression							
1	Social Desirability	-1.91	0.79	5.81*	0.15	0.03	0.70
2	Escalating	1.11	0.33	11.51***	3.02	1.60	5.73
	Negative Attributions	-0.09	0.33	0.07	0.91	0.48	1.75
	Self-Awareness	-0.10	0.34	0.09	0.91	0.47	1.75
	Calming Strategies	0.01	0.33	0.00	1.00	0.53	1.93
Sexual Coercion							
1	Social Desirability	-1.46	0.64	5.26*	0.23	0.07	0.81
2	Escalating	0.50	0.23	4.69*	1.66	1.05	2.61
	Negative Attributions	0.34	0.26	1.78	1.41	0.85	2.34
	Self-Awareness	-0.09	0.28	0.09	0.92	0.53	1.60
	Calming Strategies	-0.06	0.26	0.05	0.94	0.56	1.57

* $p < .05$. ** $p < .01$. *** $p < .001$.

Empathy. Table 10 presents bivariate correlations between the CTS2 prevalence scores and empathy variables. Perspective taking was significantly negatively correlated with the perpetration of physical assault, $r(226) = -.19, p < .01$. Participants who reported committing at least one act of physical assault, psychological aggression, or sexual coercion in the preceding year tended to report less perspective taking ability than participants who reported committing no aggressive acts in the preceding year. In addition, empathic concern was significantly negatively correlated with the perpetration of physical assault, $r(226) = -.14, p < .05$. Participants who reported committing at least one act of physical assault in the preceding year tended to report less empathic concern than participants who reported committing no acts of physical assault in the preceding year.

Table 10

Correlations among CTS2 Prevalence Scores and Empathy Variables

Variables	1	2	3	4	5	6
1. Physical Assault	-					
2. Psych. Aggression	.28**	-				
3. Sexual Coercion	.31**	.31**	-			
4. Perspective Taking	-.19**	-.10	-.12	-		
5. Empathic Concern	-.14*	-.03	-.03	.54**	-	
6. Personal Distress	.01	-.05	.04	-.17*	-.03	-

Note. Partial correlations were computed for psychological aggression and sexual coercion to control for social desirability.

* $p < .05$. ** $p < .01$.

Multiple logistic regressions were performed on the dichotomized CTS2 prevalence scores with subscale scores from the IRI as the main predictor variables to determine which dimensions of empathy best predicted the perpetration of physical assault, psychological aggression, and sexual coercion. Table 11 presents a summary of the results. Overall, empathy significantly predicted group membership for physical assault, Block $\chi^2(3, N = 228) = 9.27, p < .05$, correctly predicting 67.1% of participants' group membership. The model accounted for only 6% of the variation in self-reported perpetration of physical assault (Nagelkerke $R^2 = 0.06$). Perspective taking was the only significant predictor of physical assault ($B = -.56, Wald = 4.59, p < .05$). Participants who reported more perspective taking ability were about half as likely to report committing at least one act of physical assault in the preceding year than participants who reported less perspective taking ability (odds ratio = 0.57; 95% CI = 0.34 to 0.95). To control for social desirability, two-step hierarchical logistic regression analyses with forced entry were used to predict psychological aggression and sexual coercion. Social desirability significantly predicted psychological aggression ($B = -1.86, Wald = 5.50, p < .05$) and sexual coercion ($B = -1.49, Wald = 5.37, p < .05$). After controlling for social desirability, the omnibus tests associated with the empathy model were not significant for psychological aggression, Block $\chi^2(3, N = 224) = 3.32, p > .05$, or sexual coercion, Block $\chi^2(3, N = 224) = 3.39, p > .05$.

Table 11

Logistic Regressions Predicting CTS2 Scores from Empathy Variables

Step	Variables Entered	95% CI for Exp(B)					
		B	SE	Wald's χ^2	e ^B	Lower	Upper
Physical Assault							
1	Perspective Taking	-0.56	0.26	4.59*	0.57	0.34	0.95
	Empathic Concern	-0.16	0.25	0.52	0.85	0.52	1.39
	Personal Distress	-0.05	0.24	0.05	0.95	0.60	1.51
Psychological Aggression							
1	Social Desirability	-1.86	0.79	5.50*	0.16	0.03	0.74
2	Perspective Taking	-0.49	0.33	2.18	0.62	0.32	1.17
	Empathic Concern	0.07	0.31	0.05	1.07	0.59	1.94
	Personal Distress	-0.31	0.29	1.14	0.74	0.42	1.29
Sexual Coercion							
1	Social Desirability	1.49	0.64	5.37*	0.23	0.07	0.80
2	Perspective Taking	-0.44	0.26	2.80	0.64	0.38	1.08
	Empathic Concern	0.09	0.24	0.13	1.09	0.68	1.77
	Personal Distress	0.07	0.23	0.09	1.07	0.68	1.69

* $p < .05$.

Social problem-solving. Table 12 presents bivariate correlations between the CTS2 prevalence scores and social problem-solving variables. Contrary to hypotheses, none of the social problem-solving dimensions were significantly correlated with physical assault, psychological aggression, or sexual coercion.

Table 12

Correlations among CTS2 Prevalence Scores and Social Problem-Solving Variables

Variables	1	2	3	4	5	6	7	8
1. Physical Assault	-							
2. Psych. Aggression	.28**	-						
3. Sexual Coercion	.31**	.31**	-					
4. PPO	.09	.07	.03	-				
5. NPO	.02	.01	.00	-.44**	-			
6. RPS	.02	.04	.04	.54**	-.13	-		
7. ICS	.07	.02	.09	-.22**	.36**	-.31**	-	
8. AS	.04	.03	-.02	-.39**	.49**	-.18**	.48**	-

Note. Partial correlations were computed for psychological aggression and sexual coercion to control for social desirability. PPO = Positive Problem Orientation; NPO = Negative Problem Orientation; RPS = Rational Problem Solving; ICS = Impulsivity/Carelessness Style; AS = Avoidance Style.

* $p < .05$. ** $p < .01$.

Although bivariate correlations failed to demonstrate significant relations between the five dimensions of social problem-solving and dating violence, multiple logistic regressions were performed on the dichotomized CTS2 prevalence scores with subscale scores from the SPSI-R as the main predictor variables to determine which components of social problem-solving best predicted the perpetration of physical assault, psychological aggression, and sexual coercion because of specific a priori hypotheses. Table 13 presents a summary of the results. Overall, the omnibus test associated with the social problem-solving model was not significant for physical assault, Block $\chi^2(5, N = 228) = 4.25, p > .05$. To control for social desirability, two-step hierarchical logistic regression analyses with forced entry were used to predict psychological aggression and sexual coercion. Social desirability significantly predicted psychological aggression ($B = -2.02, Wald = 6.36, p < .05$) and sexual coercion ($B = -1.52, Wald = 5.67, p < .05$). After controlling for social desirability, the omnibus tests associated with the social problem-solving model was not significant for psychological aggression, Block $\chi^2(5, N = 224) = 1.72, p > .05$, or sexual coercion, Block $\chi^2(5, N = 224) = 3.76, p > .05$. Consistent with nonsignificant bivariate correlations, these results suggest that social problem-solving did not distinguish between participants who reported committing at least one act of aggression and those who reported committing no acts of aggression in the preceding year.

Table 13

Logistic Regressions Predicting CTS2 Scores from Social Problem-Solving Variables

Step	Variables Entered	95% CI for Exp(B)					
		B	SE	Wald's χ^2	e ^B	Lower	Upper
Physical Assault							
1	Pos. Prob. Orientation	0.09	0.06	2.49	1.10	0.98	1.23
	Neg. Prob. Orientation	0.02	0.05	0.23	1.02	0.94	1.12
	Rational Prob. Solving	-0.02	0.05	0.09	0.99	0.90	1.08
	Impulsivity/Carelessness	0.04	0.04	0.66	1.04	0.95	1.13
	Avoidance	0.02	0.04	0.19	1.02	0.94	1.11
Psychological Aggression							
1	Social Desirability	-2.02	0.80	6.36*	0.13	0.03	0.64
2	Pos. Prob. Orientation	0.07	0.07	1.01	1.07	0.93	1.24
	Neg. Prob. Orientation	0.01	0.06	0.05	1.01	0.90	1.14
	Rational Prob. Solving	0.01	0.06	0.02	1.00	0.89	1.14
	Impulsivity/Carelessness	0.01	0.06	0.03	1.01	0.90	1.13
	Avoidance	0.03	0.06	0.26	1.03	0.92	1.15
Sexual Coercion							
1	Social Desirability	-1.52	0.64	5.67*	0.22	0.06	0.76
2	Pos. Prob. Orientation	-0.02	0.06	0.10	0.98	0.88	1.10
	Neg. Prob. Orientation	-0.02	0.06	0.04	0.99	0.91	1.09
	Rational Prob. Solving	0.05	0.05	0.95	1.05	0.95	1.15
	Impulsivity/Carelessness	0.08	0.04	3.19	1.08	0.99	1.18
	Avoidance	-0.05	0.04	1.07	0.96	0.88	1.04

* $p < .05$.

Summary of Results

A summary of significant and nonsignificant findings from the logistic regression analyses are presented in Table 14. Although many hypotheses were not supported by the study findings, a considerable number were at least partially supported.

Table 14

Results Summary

Social Skills	Type of Dating Violence		
	Physical	Psychological	Sexual
Conflict Resolution ^a	Dominating strategies significantly predicted increased physical assault.	Compromising strategies significantly predicted psychological aggression.	Dominating strategies significantly predicted sexual coercion.
Anger Management ^b	Negative attributions significantly predicted increased physical assault.	Escalating strategies significantly predicted increased psychological aggression.	Escalating strategies significantly predicted sexual coercion.
Empathy	Perspective taking significantly predicted decreased physical assault.	-	-
Social Problem-Solving	-	-	-

Note. Dashes indicate that no significant findings were found.

^aThe omnibus tests associated with the conflict resolution model was not significant for psychological aggression or sexual coercion. ^bThe omnibus test for the anger management model was not significant for sexual coercion.

CHAPTER V

Discussion

The purpose of the present study was to identify social skill deficits associated with male-perpetrated dating violence. Social skills in the areas of conflict resolution, anger management, empathy, and social problem-solving were examined in relation to self-reported perpetration of physical assault, psychological aggression, and sexual coercion in dating relationships.

Review of Hypotheses

Conflict resolution. It was hypothesized that conflict resolution strategies that involve an uneven distribution of the benefits and rewards in the relationship (obliging and dominating) would be associated with increased odds of perpetrating physical, psychological, and sexual dating violence, whereas those that involve an even distribution of benefits and rewards (integrating, compromising, and avoiding) would be associated with decreased odds of perpetrating dating violence. This hypothesis was partially supported such that dominating strategies significantly predicted increased self-report of perpetrating physical assault and sexual coercion (although the overall model for sexual coercion was not significant). Although dominating strategies did not predict psychological aggression, significant positive bivariate correlations between dominating strategies and the perpetration of all three types of dating violence were reported. Overall, these findings are consistent with past research suggesting that dominance, power, and control are significant factors in the perpetration of partner violence (e.g., Follingstad et al., 1991; Straus, 2008). In fact, there are hundreds of publications suggesting that men use violence against their partners as a means of maintaining dominance in their romantic

relationships (e.g., Hamberger & Guse, 2002; Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002; Straus, 1976). In addition, there are several intervention programs for partner violence that are based on the perspective that men use violence against women as a strategy to assert their dominance (Adams, Bancroft, German, & Sousa, 1992; Common Purpose, 1996; Pence & Paymare, 1993). For example, the Duluth Domestic Abuse Intervention Program (DAIP) is based on the view that men are taught power and control tactics in both their families of origin and through their upbringing in a culture that teaches men to dominate. As such, the present study's finding that dominating strategies significantly predicted increased physical assault and sexual coercion is consistent with past research and programs for partner violence.

In contrast to the present study's hypotheses, conflict resolution strategies that involve an even distribution of benefits and rewards (integrating, compromising, and avoiding) were not associated with decreased perpetration of any type of dating violence. This finding is inconsistent with Hammock and O'Hearn (2002)'s report that individuals who use more integrating and avoiding strategies were less likely to report using psychological aggression. More research is clearly needed to clarify the role of constructive conflict resolution strategies in the development and maintenance of violence-free relationships. Contrary to hypotheses, compromising strategies significantly predicted increased self-reported perpetration of psychological aggression (although the overall predictive model for psychological aggression was not significant). Although this finding may seem counterintuitive, it is possible that a give-and-take conflict resolution style is more difficult for romantic partners to attain. It is therefore reasonable to hypothesize that the negotiation process may involve some bickering, arguing, or yelling

before favorable outcomes are achieved for both partners. In addition, negotiation involves both verbal and nonverbal behaviors. As such, verbal skills may be a common denominator for psychological aggression and negotiation capacities. Given that this finding is not consistent with the present study's hypotheses or past research, it should be given careful consideration before drawing any firm conclusions.

Anger management. It was hypothesized that poor anger management (escalating strategies and negative attributions) would be associated with increased odds of perpetrating physical, psychological, and sexual dating violence, whereas effective anger management (self-awareness and calming strategies) would be associated with decreased odds of perpetrating dating violence. This hypothesis was partially supported such that negative attributions significantly predicted increased self-reported perpetration of physical assault. In addition, escalating strategies significantly predicted increased self-reported perpetration of psychological aggression and sexual coercion while controlling for social desirability (although the overall predictive model for sexual coercion was not significant). Overall, these findings are consistent with Lundeberg et al. (2004)'s report that escalating strategies and negative attributions were key anger management skills that distinguished men who were physically violent, psychologically violent, and nonviolent.

First, a greater tendency to attribute negative intentions to partner behaviors was associated with increased odds of perpetrating physical assault. Men who are physically violent may view their partner's negative behaviors as purposeful attempts to provoke anger and other negative emotions (e.g., "my partner likes to make me mad" or "my partner does things just to annoy me"). This negative attribution style may strengthen negative events within the romantic relationship and minimize positive ones, leading to

more conflict and violence (Wallach & Sela, 2008). Physically violent men may also misconstrue or downplay their partner's positive behaviors. For example, Langhinrichsen-Rohling, Smutzler, and Vivian (1994) reported that men who were violent in their marital relationships underestimated the quality and number of caring gestures received from their wives, and saw themselves as "doing more and getting less" in their relationships. As such, these findings suggest that men who are physically violent towards their partners may have a negative attribution style that may lead to the escalation of conflict and subsequent violence in dating relationships.

Second, using more escalating strategies was associated with increased odds of perpetrating psychological aggression and sexual coercion. Escalating strategies include behaviors that increase one's level of anger directed at their partner, such as yelling or fighting back. As such, escalating behaviors may actually encompass verbal aggression. Research has shown that violent couples have a strong tendency to reciprocate each other's verbal aggression, behaving in such a way as to prompt further verbal aggression from each other (Burman, John, & Margolin, 1992; Sabourin, 1996). Unfortunately, in many circumstances this verbal aggression leads to an escalation toward physical violence. According to the catalyst hypothesis (Roloff, 1996), psychological aggression can act as a catalyst to physical violence by increasing the arousal of the individuals who are verbally attacked. When arousal escalates beyond a certain threshold, verbal aggression may shift to other forms of violence. As such, escalating behaviors, including verbal aggression, may lead to more serious relationship pathology, such as physical and sexual dating violence.

In contrast to the present study's hypotheses, effective anger management skills (self-awareness and calming strategies) were not associated with decreased perpetration of any type of dating violence. Although there continues to be a debate in the field as to whether teaching anger management skills is an effective means of reducing partner violence (Rosenthal & McDonald, 2003), the present study found that poor anger management skills were associated with the perpetration of all three types of dating violence.

Empathy. It was hypothesized that the perspective taking and empathic concern dimensions of empathy would be associated with decreased odds of perpetrating physical, psychological, and sexual dating violence. This hypothesis was partially supported such that a lack of perspective taking significantly predicted increased self-reported perpetration of physical assault, but not psychological aggression or sexual coercion. Overall, these findings are consistent with research suggesting that maritally violent men exhibit poor empathic accuracy when attempting to understand their partner's thoughts and feelings (Clements et al., 2007; Schweinle et al., 2002). They are also consistent in part with Covell et al.'s (2007) finding that adult male batterers who reported perpetrating physical violence against their spouses tended to report poor perspective taking ability. Men who are physically violent may not have the cognitive abilities associated with perspective taking to fully understand the negative impact that their violent behavior has on their partners' physical and emotional well-being. Without a complete understanding of how their behaviors affect others, the likelihood that they will be capable of inhibiting aggressive impulses may be substantially reduced.

The present study's findings are also consistent with Zillmann's (1988) cognitive-excitation model, such that the cognitive processing required to take another person's perspective and to understand one's partner's experience may be related to the inhibition of aggressive behavior. For example, a young man who is capable of taking his partner's perspective in the middle of an argument may be less likely to resort to physical violence. Although this explanation is compelling, it is possible that any factor that enhances cognitive processing might decrease aggression (Richardson et al., 1994). For example, simply counting to ten or training an individual to respond more slowly in response to conflict with their partner may provide an opportunity for inhibitory cognitions to take action. As such, more research is needed to clarify the inhibitory role of perspective taking in the perpetration of partner violence.

In contrast to the present study's hypotheses, the empathic concern and personal distress dimensions of empathy did not significantly predict decreased perpetration of any type of dating violence; however, there was a significant negative bivariate correlation between empathic concern and physical assault. Men who use physical violence against their partners may not readily identify with or have concern for their partner's emotional experiences. It is possible that this lack of emotional empathy reduces the potential for aggression inhibition as well. Although there is limited research on the role of empathy in the perpetration of dating violence, the present study found that a lack of perspective taking ability and empathic concern were associated with increased self-reported perpetration of physical.

Social problem-solving. It was hypothesized that dysfunctional social problem-solving (negative problem orientation, impulsivity/ carelessness style, and avoidance

style) would be associated with increased odds of perpetrating physical, psychological, and sexual dating violence, whereas constructive social problem-solving (positive problem orientation and rational problem-solving) would be associated with decreased odds of all three types of dating violence. These hypotheses were not supported as results indicated that social problem-solving ability did not successfully distinguish between participants who reported committing at least one act of aggression and those who reported no acts of aggression in the preceding year. These findings are inconsistent with several studies reporting that men who are violent towards their romantic partners tend to be poor problem solvers when compared to their nonviolent counterparts (e.g., Anglin & Holtzworth-Munroe, 1997; D’Zurilla et al., 2003; Else et al., 1993; Holtzworth-Munroe & Anglin, 1991). Social problem-solving is a frequently taught skill in many cognitive behavioral programs designed to address aggressive behavior. Although it seems reasonable to assume that men who are violent towards their dating partners would have deficits in this area, the present study’s findings suggested otherwise. As such, these findings imply that social problem-solving therapy may not be the most effective intervention for reducing men’s violent behavior in dating relationships. Skills training focused on deficits that are specifically related to dysfunctional problem-solving behavior in dating relationships may be more effective. Given the lack of research in this area to date, it remains unclear whether social problem-solving is related to the perpetration of male-to-female partner violence.

Limitations of the Present Study

Overall, the present study’s findings contribute to an understudied area and assist in further understanding the role of various social skill deficits in predicting male-

perpetrated dating violence. There are a few limitations that must be acknowledged. The main study limitation is the use of self-report measures. Despite their convenience and wide applicability, self-report measures have several disadvantages. First, most self-report measures use forced-choice categories which may simplify responses and distort the information obtained along particular choice sets. Second, the study was retrospective in nature, asking respondents to indicate whether any of the violent acts occurred during the preceding 12 months. Participants may have found it difficult to accurately recall the nature and number of their experiences over the past year. Lastly, a major threat to the validity of all self-report data is the influence of social desirability response sets. Dating violence is an intensely personal, private, and often shameful experience for many individuals. Jackson (2000) suggested that up to 55% of individuals do not self-disclose their involvement in a violent relationship to anyone. As such, the accuracy of self-report data in this area of research is largely dependent upon the respondent's ability to be open, honest, and insightful about the problems that exist in their romantic relationships. Given the low social acceptance and societal intolerance of dating violence against women, it is reasonable to question the accuracy of the self-report data, and the prevalence of dating violence may be much higher than our measure suggested.

In addition, there were several limitations associated with using the CTS2 as the primary measure of partner violence. First, the internal consistencies of all three CTS2 subscales were unacceptably low. Although Straus (2004a) suggested that low alpha coefficients may result from items with extremely low prevalence rates, a more reliable measure of partner violence may have allowed for greater statistical power. Second, the present study used dichotomous CTS2 prevalence scores as criterion variables to

overcome the issue of non-normality. Research has shown that dichotomizing variables may result in lost information, reduced power of statistical tests, and increased probability of Type II error (Streiner, 2002). Although the CTS2 is one of the most widely used measures of partner violence, it is important to acknowledge its limitations and the constraints it places on researchers in this field of study.

Finally, the present study was also limited in terms of its generalizability. Participants consisted primarily of middle-class Caucasian university men. Thus, the results cannot necessarily be generalized to lower socio-economic status and more ethnically diverse populations. The issue of class selection and participation bias is also of concern given that the sample consisted of young adult males who volunteered to participate in the study to gain credits toward a psychology course. It is possible that the results may not be generalizable to other young adult males who chose not to participate. Caution must be taken when applying these findings to other populations.

Strengths of the Present Study

Despite these limitations, the present study addressed several shortcomings in the literature examining dating violence. First, one of the most frequently made criticisms of the CTS2 is that it counts acts of violence without considering the circumstances under which those acts occur (Straus, 1995). As such, several contextual questions adapted from DeKeseredy (1995) were included alongside the CTS2 to address more fully the circumstances surrounding the violent incidents. Future research in this field would benefit from developing and including more comprehensive contextual measures of partner violence. Second, Jackson (1999) suggested that a major problem with the research literature to date is the narrowness of its scope. A preoccupation with physical

violence in the literature has limited our knowledge and prevented an integrated understanding of the types of violence that occur in dating relationships. To address this shortcoming, the present study examined social skill deficits in relation to all three types of dating violence: physical assault, psychological aggression, and sexual coercion. Third, given the influence of social desirability response sets on self-reports of violent behavior, a measure of social desirability was used in the present study and included as a control variable in relevant regression analyses. Finally, participants completed the self-report measures online. Research has shown that web-based administrations provide higher levels of confidentiality and anonymity than face-to-face procedures or mail-in procedures (Gosling, Vazire, Srivastava, & John, 2004; Kraut, et al., 2004). Overall, the present study appears to be one of the first and only studies to examine a variety of social skills in relation to the perpetration of all three types of dating violence. As such, it represents a first step towards informing and implementing skills-based programs for the prevention and intervention of dating violence.

Implications and Future Study

Overall, the present study's findings suggest that men who perpetrate dating violence tend to have social skill deficits in various domains; however, the type of deficit depended at least in part on the type of aggressive act used. Across all three types of dating violence, social skill deficits were most predictive of physical assault, although they did not account for a large proportion of the variance in any case³. Indeed the majority of past research has examined social skill deficits in relation to the perpetration

³ Although several significant predictors emerged for psychological aggression and sexual coercion, the overall predictive models associated with these findings were mostly nonsignificant. As such, it seems reasonable to suggest that social skill deficits may have greater associations with physical violence than psychological aggression and sexual coercion.

of physical violence whereas very few studies have examined deficits in relation to psychological and sexual partner violence. There are several plausible explanations for these findings. First, 80% of men in the present study reported using at least one act of psychological aggression in the preceding year and past research has shown that at least 90% of high school and college students have experienced psychological abuse at some point in their dating history (Jezl et al., 1996; Neufeld et al., 1999; White & Koss, 1991). Given that psychological aggression occurs at such a high rate among dating couples, it may be difficult to distinguish among individuals who engage in such behaviors and those who do not. As such, future researchers may wish to consider examining the severity of the psychological abuse involved to determine whether young men who commit more serious acts have more pronounced skill deficits. Second, social skill deficits did not distinguish among men who reported perpetrating at least one act of sexual coercion in the preceding year and those who did not. Explanations of sexual coercion over the last two decades have emphasized sociocultural factors over social skill deficits (Burt, 1991; Holmstrom & Burgess, 1983; Mahoney, Shively, & Traw, 1986; Schwendinger & Schwendinger, 1983). As such, it may be important for future studies examining sexual dating violence to consider the influence of social learning and culture in addition to social skill deficits.

Another important future direction for research in this field is the advancement toward multi-modal assessment of dating violence. Although self-report measures are a source of valuable information, they cannot be solely relied upon for empirical research given their aforementioned limitations. Collecting information from multiple sources including behavioral observations, self-report, reports from others, as well as other

assessment methods conducted in the lab, will be a necessary step forward in this field. Given that the present study assessed dating violence and social skill constructs using single measures, replication of this study using multimodal assessment would provide more information about the constructs and the relationships between them.

Research in this field would also benefit from the further development of a theoretical framework to examine social skill deficits in association with romantic relationship behavior. Several studies have used a social informational processing model to examine social skill deficits in maritally violent men (Holtzworth-Munroe, 1992) and to explore the intergenerational link in relationship aggression (Fite et al., 2008). Evaluating social skill deficits in men who perpetrate dating violence by measuring the encoding, attributions, response generation, and response evaluation stages of social information processing would provide a better understanding of the social cognitive processes that may be associated with violent dating behavior.

Although social skill deficits were examined in relation to male-perpetrated dating violence using a non-clinical population, it may be informative to outline some tentative treatment implications from the present study. With regards to conflict resolution, the present study's findings suggest a need for conflict resolution training, with a specific aim towards reducing dominating strategies. Such programs may teach young men to use more constructive strategies that promote equity in dating relationships. Specific strategies include the following: teaching them how to resolve conflict collaboratively by working through responses and solutions with their romantic partners, helping them accept differences and recognize mutual interests, improving their listening skills, building their confidence in recognizing win-win solutions, as well as assisting them in

recognizing, admitting to, and processing anger and other negative emotions that may interfere with the conflict resolution process (Deutsch, Coleman, & Marcus, 2006).

Prevention and intervention programs may also consider including an additional sociocultural component aimed at reeducation, changing male socialization and gender-stereotyped roles, and transforming basic conceptions of masculinity so that men may begin to learn that women do not have to be subordinate to them.

With regards to anger management, the present study's findings suggest a need for skills training focused on reducing negative attributions and escalating behaviors. Currently, a wide range of treatment strategies are included in anger management programs (e.g., relaxation training, cognitive-based therapies, and skills training). More research is needed to determine which treatment components are responsible for the positive outcomes that have been cited in the literature (Del Vecchio & O'Leary, 2004). Nonetheless, programs may consider including an anger management component that teach young men how to recognize their anger levels, monitor their thoughts and feelings towards their partner's actions to reduce anger arousal, respectfully disengage from anger-provoking situations, and use coping strategies such as relaxation training to reduce the likelihood that anger will lead to violent behaviors.

Finally, with regards to empathy, the present study's findings suggest a need for prevention and intervention programs that include an empathy-building component. Empathy training may involve teaching young men how to respond empathically to their partners, assisting them in taking their partner's perspective or point of view, helping them become more aware and attuned to other people, and finally teaching them empathic listening and communication skills.

To summarize, the present study's findings suggest that prevention and intervention programs for dating violence that include conflict resolution, anger management, and empathy-building components may be effective for reducing violent dating behavior. It is important to note that these social skill deficits may be most evident in situations that are perceived as threatening, such as interactions that involve character attacks, curses and threats, potential public embarrassment, perceived rejection or abandonment, jealousy, and violation of the man's need for control (Bookwala & Zdaniuk, 1998; Holtzworth-Munroe & Hutchinson, 1993; Lloyd & Emery, 2000; Sabourin, 1995). As such, intervention efforts must consider the context in which these skill deficits manifest and the situations that typically lead to partner violence. In addition, future research is also needed to determine the relationship characteristics of men who are most likely to participate in such prevention and intervention programs as well as those of men who are most and least likely to improve their skills during such programs.

Conclusions

Overall, findings from the present study suggested that self-reported perpetration of physical assault was associated with the use of more dominating conflict resolution strategies, a greater tendency to attribute negative intentions to partner behaviors, and less perspective taking ability. In addition, self-reported perpetration of psychological aggression was associated with the use of more escalating anger management and compromising conflict resolution strategies after controlling for social desirability. Finally, self-reported perpetration of sexual coercion was associated with the use of more dominating conflict resolution strategies after controlling for social desirability. Overall,

these findings suggest a need for skills-based intervention programs for young perpetrators of dating violence that incorporate conflict resolution, anger management, and empathy-building components.

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Appendix A

Demographics Questionnaire

1. What is your gender?
Male
Female
2. What is your age? _____
3. What is your year of education at the University of Windsor?
1
2
3
4
5 or more
4. Which faculty/program are you currently enrolled in at the University of Windsor?
Arts and Social Sciences
Education
Engineering
Human Kinetics
Law
Nursing
Business
Science
Other
5. What is your racial or ethnic identity?
Asian
African American (Black)
Caucasian (White)
Native American (American Indian, Samoan, or Hawaiian)
Hispanic (Latino)
Other
6. What is your sexual orientation?
Heterosexual
Bisexual
Gay

7. What is your religious affiliation?
- Protestant Christian
 - Roman Catholic
 - Evangelical Christian
 - Jewish
 - Muslim
 - Hindu
 - Buddhist
 - Atheist
 - Other
8. Who are you living with?
- With my partner (or was living with her before the relationship ended)
 - In a room or apartment on my own.
 - With a roommate(s) who is not my partner.
 - With my parent(s)
 - Other
9. What is parent 1's highest level of education?
- Less than high school
 - High school graduate
 - Vocational/technical school
 - College
 - Bachelor's degree
 - Master's degree
 - Doctoral degree
 - Professional degree (e.g., MD)
 - Other
10. What is parent 2's highest level of education?
- Less than high school
 - High school graduate
 - Vocational/technical school
 - College
 - Bachelor's degree
 - Master's degree
 - Doctoral degree
 - Professional degree (e.g., MD)
 - Other

11. What is your parents' current marital status?
- Married to each other
 - Separated
 - Divorced
 - Never married to each other and not living together
 - Never married to each other and living together
 - One of both parents have died
12. What is your family's household income? (Make your best estimate)
- Under \$9,999
 - \$10,000 to \$19,999
 - \$20,000 to \$29,999
 - \$30,000 to \$39,999
 - \$40,000 to \$49,999
 - \$50,000 to \$59,999
 - \$60,000 to \$69,999
 - \$70,000 to \$79,999
 - \$80,000 or more

13. Indicate which of the following applies to you.
- I am currently in a relationship
 - I have been in a relationship in the past year, but I am not in one now
 - I have not been in a relationship in the past year

The words "partner" and "your partner" refer to the person in the relationship you will describe in the next questions. Answer every question for your current partner or most recent partner in the past year (and always answer about the same person).

14. What is your relationship with your partner (or what was it while you were together)?
- Dating
 - Engaged
 - Married
15. How long have you been in this relationship (or how long did the most recent relationship last)?
- Less than one month
 - About 1 month
 - About 2 months
 - Three to five months
 - Six months to eleven months
 - About a year
 - More than a year, but less than 2 years
 - About 2 years
 - More than 2 years, but less than 4 years
 - Four years or more

16. How long ago did this relationship end?

It has not ended

Less than one month ago

About 1 month ago

About 2 months ago

Three to five months ago

Six months to eleven months ago

About a year ago

More than one year ago

17. What is (was) your partner's gender?

Male

Female

18. Is (was) sex a part of your relationship?

No

Yes

19. Where did you access the computer you used to fill out this survey?

Home

Work

Public access (e.g., library, school)

Other

Appendix B

Consent to Participate in Research

Title of Study: **Understanding Dating Conflict**

You are asked to participate in a research study conducted by Sarah Setchell, a graduate student from the Department of Psychology at the University of Windsor. Information gathered from this study will be used as part of Sarah's Master's thesis. This research will be supervised by Dr. Patti Fritz, a professor from the Department of Psychology.

If you have any questions or concerns about this research, please feel to contact:

Sarah Setchell
E-mail: setchel@uwindsor.ca

Dr. Patti Fritz
E-mail: pfritz@uwindsor.ca
Phone: 519-253-3000 ext. 3707

PURPOSE OF THE STUDY

This purpose of this study is to understand some of the factors that might be related to the ways that people deal with conflict in their romantic relationships.

PROCEDURES

If you volunteer to participate in this study, we would ask you to complete an online survey that will take approximately 35-45 minutes to answer. Please answer the questions as openly and honestly as possible. If you wish, you can stop the survey half way through, save your responses, and return to it at a later time. Following completion of the survey, or once you exit the survey, you will be provided with a research summary and a list of local resources and services.

POTENTIAL RISKS AND DISCOMFORTS

There are limited potential risks or discomforts expected to come from your participation in this study. Due to the sensitive and personal nature of this study's research topic, you may experience negative thoughts or emotions related to some of your past or current experiences. Please note that you do not have to answer any questions in the survey that you do not want to answer, and that you can stop participating in the study at any time without penalty. Should you experience any form of distress following your participation in this study, please either contact someone from the community resource list that will be provided to you upon exiting the study or contact Sarah Setchell or Dr. Patti Fritz.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

By participating in this study, you may help increase our knowledge about factors related to conflict in young adult romantic relationships. Knowledge of these factors may ultimately help to improve therapeutic interventions aimed at improving relationship quality.

COMPENSATION FOR PARTICIPATION

You will receive 1 bonus credit point for completing this online survey. Bonus points will be assigned through the psychology participant pool. Once you are done with the survey, you must enter your first and last name on the research summary form page in order to receive bonus credit points. Your name will not be linked to your survey responses in any way, as your name will be stored in a password protected file separate from the survey responses.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential. Your responses to the questionnaires will be released only as summaries grouped with other people's responses. In addition, your responses will be identified using a code number, not names. Information obtained from the psychology participant pool (e.g., name, student number) will not be linked to your survey responses in any way.

PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions that make you feel uncomfortable and still remain in the study. You can withdraw your data at any time prior to the end of the survey by clicking on the "withdraw data" button at the bottom of each webpage. The investigator also has the right to withdraw your data if there are circumstances in which this would be necessary.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE SUBJECTS

It is expected that the results of this study will be available on the University of Windsor REB website (<http://www.uwindsor.ca/reb>) in the fall of 2009.

SUBSEQUENT USE OF DATA

This data may be used in subsequent studies.

RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. If you have questions regarding your rights as a research subject, contact:

Research Ethics Coordinator, University of Windsor, Windsor, Ontario N9B 3P4;
Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.

Signature of Investigator

By clicking on the button labeled “I AGREE TO PARTICIPATE IN THIS STUDY”, I understand the information provided for the study Understanding Dating Conflict as described herein. By clicking this button, I am providing my consent to participate. My questions have been answered to my satisfaction, and I agree to participate in this study.

Please print out a copy of this form for your future records.

If you are returning to an existing survey, please [click here](#).

I AGREE TO PARTICIPATE IN THIS STUDY

Appendix C

Research Summary Form

Thank you for participating. We are interested in studying factors that are related to conflict and violence in romantic relationships. In particular we are focusing on conflict resolution styles, solving real-world problems, coping with angry emotions, and understanding another person's thoughts and feelings. Ultimately, we are interested in how these factors contribute to conflict in romantic relationships.

By participating in this study, you have made a significant contribution to research in this area. Your responses may also be used to inform prevention and treatment efforts which will aid in the building of healthy and conflict-free relationships.

Please take a look at the list of resources that is provided to you. This list contains contact information for various community services in case you wish to contact someone to talk about some of your past or current experiences.

Thank you for your participation!

List of Community Resources and Services

The following resources are agencies within the community designed to help:

Student Counseling Centre, University of Windsor

The Student Counseling Centre (SCC) provides assessment, crisis, and short term counseling. If longer term therapy is indicated, the SCC will provide a referral to the Psychological Services Centre. All services are confidential and offered free to students. The SCC is open 8:30 am – 4:30 pm, Monday – Friday. Located in Room 293, CAW Centre.

519-253-3000, ext. 4616.

scc@uwindsor.ca

Psychological Services Centre, University of Windsor

The Psychological Services Centre offers assistance to University students in immediate distress and to those whose difficulties are of longer standing. They also seek to promote individual growth and personal enrichment.

519-973-7012

519-253-3000, ext. 7012

Teen Health Centre

The Teen Health Centre is dedicated to helping Essex County's young people achieve physical and emotional health and well-being through education, counseling, and support.

519-253-8481

www.teenhealthcentre.com

Sexual Assault / Domestic Violence & Safekids Care Center

This care center is located in the Windsor Regional Hospital and provides assessment, counseling, and treatment for domestic violence, sexual assault, and child abuse. It is open 8 am to 4 pm, Monday – Friday or 24 hours, 7 days a week through the hospital emergency services.

519-255-2234

Distress Centre Line Windsor / Essex

The Distress Centre of Windsor-Essex County exists to provide emergency crisis intervention, suicide prevention, emotional support and referrals to community resources by telephone, to people in Windsor and the surrounding area.

The Distress Centre of Windsor-Essex County provides an anonymous, confidential telephone services from 12 pm to 12 am, seven days a week.

519-256-5000

Community Crisis Centre of Windsor-Essex County

A partnership of hospital and social agencies committed to providing crisis response services to residents of Windsor and Essex counties.

Crisis center is open from 9 am to 5 pm, Monday – Friday, at Hotel-Dieu Grace Hospital in Windsor, ON.

519-973-4411 ext. 3277

24 Hour Crisis Line

24 Hour crisis telephone line provides an anonymous, confidential service from 12 pm to 12 am seven days a week. The 24 Hour Crisis Line serves Windsor and Leamington areas.

519-973-4435

Here are Internet security steps that can be taken if you wish to prevent others who have access to your computer from seeing that you viewed this study's website. These instructions were taken directly from The Broken Spirits Network, which can be accessed at: http://www.brokenspirits.com/security/web_security.asp

Internet Security Measures

Clearing the Internet cache

Risk: Low

Possible Repercussions: Any other user shouldn't notice a difference. However if they check the temporary internet files folder it will be empty, which might seem unusual. The probability that anyone would look in this folder is very small. Less than 1% of internet users even know where this folder is.

The Internet cache is designed to help pages load faster by storing images and web pages locally on your machine. This can result in a security risk if an unwanted viewer decides to poke through the cache folder. To prevent unwanted security risks please follow the following directions to clear your internet cache.

1. From the menu bar select "Tools"
2. Select the option "Internet Options"
3. Under the "General" Tab look for "Temporary Internet Files"
4. Click on the "Delete Files" button
5. Select the "Delete All Offline Content" checkbox and click "Ok"
6. Click "Ok" once more to return to your browser.

Removing sites from your browser history

Risk: Moderate

Possible Repercussions: If this is done properly there will be no obvious sign that anything has been changed. However if you delete the entire history there is a large possibility that other users may notice that their history has been cleared.

The browser history is designed to store previous visits in an area that is easily accessible at the click of a button. This is useful when you forget to bookmark a site and remember visiting it last week and wish to return. Unfortunately, in the case that you are researching

sensitive material that you do not wish others to see, this can be a security risk. To prevent unwanted security risks please follow the following directions to remove particular sites from your browsers history.

1. From the menu bar select "View"
2. Highlight "Explorer Bar"
3. Select "History"
4. A bar will show up on the left of your browser. Select the item you wish to delete.
5. Right Click on the selected Folder and select "Delete".

Removing cookies from your hard drive

Risk: High

Possible Repercussions: If this is done properly there will be no sign that anything has been changed. However if you delete ALL of the cookie files there is a very large possibility that other users may notice the change.

Cookies are small pieces of code left behind by web pages to store information frequently requested. For example if I clicked on a checkbox to say "save my login information" it would then write a cookie onto my hard drive that I can call next time you visit the site, preventing you from having to login again. This is why it can be very dangerous to delete all of the cookie files. If you delete all of them, all of the stored passwords, user information, and preferences from various sites will be forgotten and you will have to re-enter this information. This will be an obvious change. However, if you follow the directions below, we will instruct you how to delete only the cookies from sites which are high risk. In addition not all browsers will allow you to delete a single item.

1. From the menu bar select "Tools"
2. Select the option "Internet Options"
3. Under the "General" Tab look for "Temporary Internet Files"
4. Click on the "Settings" button
5. Click on the "View Files" button
6. A list of cookies will appear. Most of the filenames will be in this format. `username@domain` [i.e., `user@cnet`]

7. Select the cookie you wish to delete

8. Right mouse click & Select "Delete"

VITA AUCTORIS

Sarah Setchell was born in 1985 in North Bay, Ontario. She graduated from Chippewa Secondary School in 2003. She obtained her B.Sc. (Honours) in psychology with distinction from Queen's University in 2007. In 2009 she completed her M.A. in Child Clinical Psychology at the University of Windsor, Ontario. She is presently enrolled in the Child Clinical Psychology Ph.D. program at the University of Windsor.