

Day-to-Day Moderators of the link between Attachment Insecurity and Intimate Partner
Violence in Emerging Adulthood: A Daily Diary Study

by

Lisa Haijing Gou

B.Sc., Queen's University, 2012

M.Sc., University of Victoria, 2014

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

In the Department of Psychology

© Lisa Haijing Gou, 2019

University of Victoria

All rights reserved. This dissertation may not be reproduced in whole or in part, by
photocopy or other means, without the permission of the author.

Day-to-Day Moderators of the link between Attachment Insecurity and Intimate Partner
Violence in Emerging Adulthood: A Daily Diary Study

by

Lisa Haijing Gou

B.Sc., Queen's University, 2012

M.Sc., University of Victoria, 2014

Supervisory Committee

Dr. Erica Woodin, Supervisor
Department of Psychology

Dr. Marsha Runtz, Departmental Member
Department of Psychology

Dr. Danu Stinson, Departmental Member
Department of Psychology

Dr. Natalee Popadiuk, Outside Member
Department of Educational Psychology and Leadership Studies

Abstract

Emerging adulthood (ages 18-25 years) is a developmental period marked by changes in attachment, the onset of serious dating relationships, and rates of intimate partner violence (IPV) up to 40% and 90% for physical and psychological IPV, respectively. This dissertation aims to investigate moderators of the link between insecure attachment, a known risk factor for IPV, and psychological IPV, coercive controlling behaviours, and relational aggression in emerging adulthood. One hundred and seventeen undergraduate students in dating relationships were recruited to partake in a baseline assessment followed by a 14-day daily diary study. During the baseline assessment, participants self-reported on putative trait level risk factors such as demographics and insecure attachment. During the daily diary portion, participants reported on their use of partner aggression (physical and psychological IPV, coercive controlling behaviours, and relational aggression; however, due to low base rates, physical IPV could not be analyzed as an outcome), as well as their experiences of felt partner acceptance and rejection, support and conflict in their relationships, alcohol use, and stress for each day. I hypothesized that attachment anxiety, problems in the dyadic relationship (inadequate support, conflict, and felt rejection and anxiety about acceptance), and putative disinhibitors (stress and alcohol consumption) would be directly linked to risk for perpetration of all forms of aggression and interact to predict risk for partner aggression. Hypotheses regarding partner support, conflict, and felt regard were also tested. Specifically, I hypothesized that ratings of partner support fit, hurt as a result of conflict, and daily felt regard would differ for more insecurely attached versus more securely attached individuals. Following application of exclusion criteria, data from 98 participants were analyzed using multilevel modeling in

Hierarchical Linear Modeling (Raudenbush et al., 1995). The results from this dissertation underscore the importance of attachment anxiety as an individual risk factor for IPV and identified more proximal risk factors that fluctuate on a daily basis. Attachment anxiety, felt rejection, and conflict were related to risk for all three forms of IPV. Unexpectedly, attachment avoidance was linked to decreased risk for coercive control. Anxiety about acceptance was uniquely associated with risk for psychological IPV, and inadequate support fit was uniquely associated with risk for coercive control. Greater attachment anxiety interacted with high conflict to predict greater risk for coercive control. No other significant two-way interactions between attachment anxiety and problems in the dyadic relationship emerged. Contrary to hypotheses, stress and alcohol consumption were linked to decreased risk for coercive control. Stress also appeared to suppress the link between dyadic problems and risk for psychological IPV on a given day, and dyadic problems paired with alcohol consumption was related to a decreased risk of coercive control. High stress and greater dyadic problems interacted to predict greater risk for coercive control as expected. No conclusions could be drawn about 2-way interactions between stress and dyadic problems and alcohol consumption and dyadic problems when predicting relational aggression, as the model did not converge. This study did not find support for the “perfect storm theory” of aggression (in which a 3-way interaction between risk factors is associated with greatest risk of IPV) when predicting psychological IPV. The “perfect storm theory” could not be tested in relation to coercive control and relational aggression as these models did not converge. The findings from this study contribute to our knowledge of why some people perpetrate IPV and not others, and why people perpetrate IPV on some days and not others. These

results inform the multiple possible points of entry for prevention and interventions aiming to promote healthy relationships in emerging adults.

Table of Contents

Supervisory Committee	ii
Abstract	iii
Table of Contents	vi
List of Tables	viii
List of Figures	ix
Acknowledgments.....	x
Dedication	xi
Introduction.....	1
Intimate Partner Violence (IPV)	2
Emerging Adulthood.....	9
Individual Factors	11
Dyadic Factors	25
Situational and Contextual Factors	31
Limitations of Current Literature	45
The Current Study.....	47
Hypotheses.....	50
Method	53
Participants.....	53
Procedures.....	55
Measures	56
Data Preparation and Analysis Plan.....	63
Results.....	79
Hypothesis 1.....	79
Hypothesis 1a.....	80
Hypothesis 1b.....	80
Hypothesis 2.....	82
Hypothesis 2a.....	84
Hypothesis 2b.....	86
Hypothesis 3a.....	87
Hypothesis 3b.....	89
Hypothesis 4.....	91
Hypothesis 5.....	93
Hypothesis 6.....	96
Hypothesis 7.....	100
Discussion	103
Attachment Anxiety and IPV	103
Partner Support and Conflict	106
Felt Rejection, Felt Acceptance, and Anxiety about Acceptance	109
Dyadic Problems and IPV	112
Moderators of the link between Attachment and IPV	115

Disinhibiting Factors	117
The “Perfect Storm” Theory	122
Limitations and Future Directions	123
Clinical Implications	127
Conclusion	135
References	137
Appendix A	165
Appendix B	167

List of Tables

Table 1: Hypothesis 1. Attachment anxiety predicting psychological IPV, coercive controlling behaviours, and relational aggression	78
Table 2: Hypothesis 1b. Attachment anxiety and avoidance split by gender predicting psychological IPV, coercive controlling behaviours, and relational aggression	81
Table 3: Hypothesis 2. Attachment anxiety and avoidance predicting support fit	82
Table 4: Hypothesis 2a. Support type and attachment insecurity predicting support fit..	84
Table 5: Hypothesis 2b. Attachment anxiety and avoidance predicting hurt as a result of conflict	85
Table 6: Hypothesis 3a. Attachment anxiety and avoidance predicting felt rejection, anxiety about acceptance, and felt acceptance	87
Table 7: Hypothesis 3b. Felt rejection and anxiety about acceptance predicting psychological IPV, coercive controlling behaviours, and relational aggression	89
Table 8: Hypothesis 4. Support, conflict, and attachment threat predicting psychological IPV, coercive controlling behaviours, and relational aggression	91
Table 9: Hypothesis 5. Support, conflict, and attachment threat with cross-level interaction with attachment anxiety predicting psychological IPV, coercive controlling behaviours, and relational aggression	94
Table 10: Hypothesis 6. Alcohol and stress and their interactions with dyadic problems predicting psychological IPV and coercive controlling behaviours	96
Table 11: Hypothesis 7. Alcohol, stress, and dyadic problems two-way interactions and cross-level 3-way interactions with attachment anxiety predicting psychological IPV and coercive controlling behaviours	100

List of Figures

Figure 1: Proposed model for risk for IPV perpetration	50
Figure 2: Model testing the Perfect Storm Theory	77

Acknowledgments

I owe my thanks to my dissertation committee for lending their time and expertise to my project from the proposal stage to the defense. I appreciate all of your contributions, including your unique perspectives, ideas, and suggestions, which have challenged me and brought depth to this project.

I would also like to express my gratitude to the Social Sciences and Humanities Research Council of Canada for supporting my research throughout my doctoral program.

Dedication

To my graduate research supervisor Erica, I am endlessly grateful for your mentorship and support throughout my graduate training. I could not ask for a more knowledgeable, competent, approachable, and kind supervisor. One of the best choices I have made was coming to UVic to work with you.

Audra & Emily: I cannot imagine the past 7 years with better friends, colleagues, and leaders by my side. I look forward to a lifetime of friendship ahead.

Arlen: Over the last 20 years you have been my biggest cheerleader and have inspired me through your amazing achievements, humility, and kindness. Your support throughout this degree has been invaluable, and I am so lucky you are my best friend.

To my partner, Phil: you are the safe harbour from which I explore and to which I return. Thank you for growing with me.

Steve: as only a sibling can, you've motivated me throughout my PhD with equal parts encouragement and good-humoured derision. You said it first and more eloquently, but I'm lucky that my big brother is also one of my best friends.

To my mother and father: through great adversity you made the hard journey to pursue higher education and left a smoother path for me to follow in your wake. My achievements are built on the foundations of your love and work ethic.

Thank you to all of you. I have become and continue to strive to be a better person, scholar, and clinician for having known you.

Introduction

The onset of serious dating relationships and the formation of long-term romantic relationships are normative parts of emerging adulthood, the developmental period spanning ages 18 to 25 (Arnett, 2000). These formative experiences provide opportunities for young adults to develop the psychosocial skills necessary to successfully navigate future close relationships, and may set a precedent for the expectations and behaviours they carry with them to subsequent partnerships (Shulman & Connolly, 2013). Although healthy dating experiences may foster interpersonal competence and promote positive adjustment (Bouchey, 2007; Furman & Shaffer, 2003), romantic relationships can also be characterized by violence.

Approximately 30-40% of adults report ever being physically victimized by a romantic partner according to estimates from community samples (Archer, 2000; Kar & O'Leary, 2010; Thompson et al., 2006). Rates of victimization are higher in clinical and high-risk samples, with 40-50% of adults reporting lifetime physical victimization (Coker, Smith, McKeown, & King, 2000; El-Bassel et al., 2007). The rates for exposure to psychological aggression are even higher, occurring among 70-80% of adult men and women in the general population (Simpson & Christensen, 2005; Stets & Straus, 1990). Prevalence estimates vary more widely in samples of adolescent and university-aged individuals, with rates observed from 15-40% for physical aggression (Neufeld, McNamara, & Ertl, 1999; Sears, Byers, & Price, 2007; Silverman, Raj, Mucci, & Hathaway, 2001; White & Koss, 1991) and 70-90% or more for psychological aggression (Banyard, Arnold, & Smith, 2000; Neufeld et al., 1999; White & Koss, 1991).

In light of the prevalence of both forms of partner violence, gaining an understanding of the factors that may increase or decrease its risk and occurrence during the foundational years of emerging adulthood is paramount. Putative risk factors for IPV in emerging adulthood gleaned from the existing literature include individual, dyadic, and situational characteristics that may reduce the quality of one's relationships, increase the likelihood of conflict, and decrease partners' capacity to resolve conflicts in a constructive manner (Woodin & O'Leary, 2009). These factors make it more likely that individuals will aggress against their partners. Insecure adult romantic attachment has been theorized to drive motivation for IPV (Mayseless, 1991), and multiple studies have supported its role as a key predictor of both men's and women's psychological and physical IPV perpetration (Gormley, 2005). This dissertation will examine interactions between insecure romantic attachment as an individual vulnerability, and dyadic, and situational moderators of risk for IPV in emerging adults.

Intimate Partner Violence (IPV)

Violence that occurs in the context of a romantic relationship is termed intimate partner violence (IPV). IPV can manifest in multiple forms, and although other forms of violence (e.g., sexual) exist and exhibit unique patterns of perpetration and victimization, the focus of this dissertation is on physical, psychological, and relational aggression and coercive control in romantic relationships.

Physical IPV. Physical IPV includes behaviours such as hitting, slapping, or shoving a partner (Jose & O'Leary, 2009). Although severity of specific acts of physical IPV can be measured using a somewhat continuous system (i.e., mild, moderate, and severe), it is generally accepted that there are qualitatively distinct subcategories of

physical IPV, which include: situational couple violence, intimate terrorism, and violent resistance (Johnson, 1995; 2010; Johnson & Leone, 2005).

The distinction between situational couple violence and intimate terrorism is thought to be one of motivation, frequency of violence, and risk of injury, whereby perpetrators of the former are motivated by a desire to control the current situation, aggress against their partners less frequently, and are less likely to injure their partners, whereas perpetrators of the latter are motivated by a more pervasive desire to control their partners at all times, aggress against their partners more frequently, and are more likely to cause physical injury (Johnson, 1995; 2010). These two forms of physical aggression also differ in that situational couple violence is characterized by equal perpetration by men and women, a tendency for violence not to escalate, and reciprocity in terms of which partner initiates the violence (Johnson, 1995; 2010). By contrast, intimate terrorism is by and large perpetrated by men in heterosexual relationships, has a tendency to escalate in frequency and intensity, and is generally not reciprocated by women (Johnson, 1995; 2010). The third category, violent resistance, is thought to reflect a pattern of violence carried out by victims of intimate terrorism as a method of self-defense, more frequently seen in women (Johnson, 2010). Although the current study does not explicitly distinguish between the three forms of violence, university samples such as the one employed in this study typically display the situational couple violence variety of physical IPV (by virtue of self-selection of participants into the study and exclusion criteria for severe or injurious IPV), whereas intimate terrorism and the accompanying violent resistance are more often encountered in clinical samples (Halford, Petch, Creedy, & Gamble, 2011; Hamberger & Guse, 2002).

Psychological IPV. Psychological IPV also can be conceptualized as a continuum of non-physically violent behaviours, with less severe and more highly prevalent behaviours, such as yelling at your partner, on one end, and more severe and less normative behaviours, such as threatening physical harm to your partner, on the other end (Jose & O’Leary, 2009). Historically, physical IPV has received more attention than its psychological counterpart from researchers studying partner aggression. In the past, researchers may have deemed it unnecessary to include both physical and psychological IPV measures, perhaps in part because the two are highly correlated (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). However, it is prudent to study psychological IPV in its own right for a number of reasons. The effects of psychological IPV can be as deleterious to victims as those of physical IPV, and furthermore the former contributes to the prediction of declines in mental and physical health, over and above the influence of the latter (Coker et al., 2002; O’Leary, 2004; Seedat, Stein, & Forde, 2005; Taft et al., 2006). In addition, while psychological IPV may occur in the absence of physical IPV, the reverse is seldom the case (Simpson & Christensen, 2005; Stets & Straus, 1990; Testa, Livingston, & Leonard, 2003), and while physical IPV tends to decline over the lifespan, psychological IPV remains relatively stable (Fritz & O’Leary, 2004; Vickerman & Margolin, 2008). Lastly, psychological IPV often precedes the onset of physical IPV in relationships (O’Leary, 2004), and thus studying the former may help researchers to understand how and why the transition to physical aggression occurs (particularly during the initializing romantic relationships characterizing emerging adulthood), and to identify possible intervention strategies for preventing the onset of physical IPV.

Relational IPV. Of particular importance when studying emerging adults,

relational IPV is characterized by behaviours intended to harm a partner through manipulation of the romantic relationship resulting in social exclusion or diminishment of their social status (Archer & Coyne, 2005; Crick & Grotpeter, 1995). While relational aggression includes behaviours that are non-physical and can cause victims emotional or psychological distress, relational aggression is distinct from psychological IPV in that the behaviours specifically target the interpersonal relationship (e.g., by giving a partner the silent treatment, committing infidelity, or threatening to end the relationship; Goldstein, 2011).

The relational aggression literature initially focused on aggression occurring in platonic friendships in school-aged children. Early findings showed that relational aggression was a relatively common phenomenon that may be particularly salient for girls, as girls were more likely to use relational aggression than more overt forms of aggression (e.g., yelling, hitting; Österman et al., 1998). Girls' use of relational aggression is likely due in part to the notion that social relationships and interpersonal closeness have higher value for girls and constitute a more relevant and consequential target for aggression, as well as the ways in which girls are socialized to express anger indirectly (Crick & Grotpeter, 1995; Goldstein & Tisak, 2004; Letendre, 2007).

Regardless of gender, relational aggression may be a more socially acceptable or discreet way to harm another individual, and therefore it is a form of aggression that may be seen as more developmentally normative or less easily detected in the romantic relationships of emerging adults. Though there is less extant research on relational aggression in young adults' romantic relationships, preliminary findings do suggest that relational aggression may co-occur with other forms of aggression or escalate to other forms of IPV over time

(Leadbeater, Banister, & Yeung, 2008; Lento, 2006), pointing to a need to study this behaviour alongside other forms of IPV.

Coercive control. Coercive controlling behaviours can be thought of as separate from other forms of IPV in that implicit in these behaviours are a demand and a threat, and perpetrators monitor their partners' behaviours in order to ensure compliance with their demands (Dutton & Goodman, 2005). Examples of these behaviours include restricting a partner's use of communication devices, isolating them from friends or family, or preventing them from engaging in activities outside of the relationship. Coercive control has been used as a key basis of distinction between intimate terrorism (also termed patriarchal terrorism) and situational couple violence (also termed common couple violence; Johnson, 1995; 2008; 2010; Kelly & Johnson, 2008). Perpetrators of intimate terrorism are motivated by a pervasive desire to control their partners, and this form of IPV is associated with more frequent aggression and greater risk for physical injury to the victim (Johnson, 1995; 2008; 2010). Accordingly, victims of intimate terrorism typically experience significant fear of their partner, are coerced to comply with the partner's threats and demands, and may suffer serious psychological consequences (Dutton & Goodman, 2005; Kelly & Johnson, 2008; Nielson, Hardesty, & Raffaelli, 2016; Swan, Gambone, Caldwell, Sullivan, & Snow, 2008). Intimate terrorism characterizes many of the cases of IPV seen in clinical samples (e.g., women's shelters or the judicial system; Kelly & Johnson, 2008).

Patterns of violent coercion and long-term exertion of control over a partner are less common in community samples. However, it has come to light that these couples do engage in more isolated or time-limited acts of coercive control, and these behaviours are

correlated with IPV (Robertson & Murachver, 2011). Indeed, there is some speculation that coercive control could precede, co-occur with, or follow the escalation of physical IPV in a given relationship (Dutton & Goodman, 2005). There is also evidence in both college and clinical samples that coercive control predicts the use of psychological and physical IPV (Graham-Kevan & Archer, 2008; Schnurr, Mahatmya, & Basche, 2013). Therefore, it is pertinent to study these behaviors in community samples to determine how coercive control and IPV may be related over time, and whether the former may serve as a marker for couples at risk for escalations in IPV or other forms of relationship deterioration.

Outcomes associated with IPV. In emerging adult samples, IPV in all of its forms has been linked to negative outcomes including internalizing and externalizing problems, substance use, physical health problems, and injury (Bagner, Storch, & Preston, 2007; Banyard & Cross, 2008; Campbell, 2002; Munoz-Rivas, Graña, O’Leary, & González, 2007; Prinstein, Boergers, & Vernberg, 2001; Smith & Donnelly, 2000; Straight, Harper, & Arias, 2003). Young adults exposed to IPV also are more likely to experience issues of identity and self-worth, including decreased self-esteem and increased self-blame (Cornelius & Resseguie, 2007; Jezl, Molidor, & Wright, 1996), and impairments in occupational and interpersonal functioning, including cognitive impairment, problems with academic and job performance, decreased problem solving and communication skills, decreased relationship quality, and attitudes condoning IPV (Banyard & Cross, 2008; Cornelius & Resseguie, 2007; Harper, Austin, Cercone, & Arias, 2005; Linder, Crick, & Collins, 2002; Prospero, 2006; Robertson, & Murachver, 2006; Smith & Donnelly, 2000; Straight et al., 2003). Furthermore, experiencing dating

aggression in adolescence confers risk for engaging in intimate partner violence in adulthood (National Center for Injury Prevention and Studies Control 2006; O'Leary, et al., 1989). Given the well-documented deleterious effects of IPV and its potential stability over the lifespan, it is important to identify predictors and antecedents of IPV in emerging adulthood that may be amenable to intervention to promote healthy and adaptive adult development.

The extant literature has identified several correlates of IPV as putative risk factors for becoming a perpetrator of aggression against one's partner, or for becoming a victim of aggression by one's partner. Importantly, though certain characteristics may increase the likelihood that one is a perpetrator or victim of IPV, these characteristics do not absolve aggressors of their responsibility for their actions, nor do they make victims culpable for their partners' actions. There exists a tendency for perpetrators, victims, and society as a whole to blame individuals for provoking the violence enacted against them (Gracia & Herrero, 2006; Henning, Jones, & Holdford, 2005; Miller & Porter, 1983). It is not the intention of this project to place blame on victims of violence. It is pertinent to note that even an individual bearing all the purported risk factors is in no way set on an inevitable trajectory. Thus, possessing these risk factors or having a partner bearing certain characteristics does not absolve any individual from responsibility for his or her violent behaviour. Rather, it is the aim of this study to gain a broader understanding of the multi-faceted and interacting factors contributing to IPV, including aspects outside the individual, as partner violence is a complex phenomenon that cannot be explained by a single causal factor, or studied in isolation from one's context. With those caveats in

mind, I will first begin with a discussion of the developmental period of emerging adulthood to situate this project.

Emerging Adulthood

An ideal developmental period within which to study IPV and its risk factors is emerging adulthood. Described by Arnett (2000), emerging adulthood spans the ages of 18 to 25 and encompasses several critical transitions and processes. Firstly, emerging adulthood is the period in which individuals begin to transfer their primary attachments from their families of origin to romantic partners (Fraley & Davis, 1997). Their relationships with these romantic partners often constitute formative dating relationships that shape their beliefs and behaviours and act as learning opportunities for subsequent relationships to come (Shulman & Connolly, 2013). With dating inevitably comes interpersonal conflict, and although conflict is not inherently problematic and in fact can provide many opportunities for growth and skill building in relationships, it may also expose individuals to the use or experience of various forms of IPV. Studying individuals during emerging adulthood allows us to understand IPV in its earliest incarnations.

While research has shown that IPV in young adults has some commonalities with IPV in older samples and in the marital violence literature, IPV in emerging adulthood also appears to have unique attributes. For one, the level of commitment and the legal and economic ramifications of the initiation and dissolution of relationships differs for these age groups, such that emerging adults may have more freedom to leave and enter relationships if they are unmarried, without children, and are supported by their own income or supported financially by family members (Shorey, Cornelius, & Bell, 2008). Additionally, peer influence and socially normative behaviours are much more salient for

individuals during emerging adulthood than in their later lives, and therefore attitudes towards aggression or the importance of being in romantic relationships to conform to peer expectations may have a greater impact on the behaviour of young adults (Smith & Donnelly, 2000; Sousa, 1999). Along the same vein, inherently sexist gender roles imposed on this age group may be more extreme, encouraging dominance, aggression, and control in young men on the one hand, and submissiveness, nurturance, and dependency in young women on the other hand (Levy, 1991; Sousa, 1999). These stereotyped expectations may have bearing on men's and women's proclivity toward perpetration or victimization in their romantic relationships, and the forms of IPV that they use and experience. In addition, because emerging adulthood is typically a time during which individuals experience their first relationships, their relative inexperience and lack of solidified expectations for their own and their partner's behaviour towards one another may make them more tolerant of aggression or less able to clearly identify certain behaviours as violent (O'Keefe, 1986). Lastly, families, society, and the broader community may trivialize IPV in young adults' relationships as not serious or a normative part of being young, and these attitudes may make identification, intervention, or help-seeking for young adults in relationships characterized by IPV difficult (Smith & Donnelly, 2000). Therefore, it is important to study IPV during this developmental period as findings derived from the general adult population may not fully generalize to this group or capture the unique aspects of dating aggression during this part of the lifespan.

In addition to the onset of adult romantic attachment, dating, and potentially dating aggression, emerging adulthood is often the stage for exploration in areas like alcohol use, which may have implications for functioning in romantic relationships and

conflict resolution. Alcohol use during this developmental period is especially prevalent in the college and university population. Rates of alcohol use for postsecondary students indicate that roughly 70-80% have consumed alcohol in the past year, and rates of binge drinking and clinically significant alcohol use problems are higher in this population than the general population of emerging adults (Dawson, Grant, Stinson, & Chou, 2004; Slutske, 2005; Wechsler, Davenport, Dowdall, Moeykens, & Castillo, 1994).

Lastly, as literature from the neuropsychology field has revealed, emerging adulthood marks the final stages of development in the prefrontal cortex, the area of the brain responsible for executive functions, self-regulatory behaviour, and higher order inhibitory processes (e.g., Diamond, 2002). This has implications for emotion regulation in emerging adults, as these faculties can be undergoing development into the second decade of life. This means that emerging adults may be more prone to lapses in judgment and self-control than older adults when found in emotionally evocative situations.

All of these unique aspects of the emerging adulthood period have implications for how we conceptualize the many factors that may contribute to risk for IPV in young adults. Working from this developmental lens, it is possible take into account the different ways in which the following risk factors may be salient in emerging adulthood, in contrast to the middle and late stages.

Individual Factors

Adult romantic attachment. Hazan and Shaver (1987) proposed the concept of adult romantic attachment, extending attachment theory as it applies to infants to the understanding the bonds formed between adult romantic partners. In their seminal paper, Hazan and Shaver identified three styles of adult attachment: secure, anxious/ambivalent,

and avoidant. Shortly thereafter, adult attachment theory was developed and conceptualized using a four-category model with the following attachment styles: secure, preoccupied, dismissive, and fearful (Bartholomew, 1990; Bartholomew & Horowitz, 1991). Later, evidence supporting a dimensional approach to attachment orientations emerged, characterizing attachment on two dimensions: attachment anxiety and attachment avoidance (Brennan, & Shaver, 1995; Fraley, & Waller, 1998; Simpson, & Rholes, 1998). Attachment anxiety is characterized by dependence, a need for closeness and reassurance from one's partner, and a fear of being abandoned, while attachment avoidance is characterized by excessive independence, a desire to maintain emotional distance from one's partner, and discomfort with intimacy. Individuals low on both dimensions are considered securely attached, and those high on one or both dimensions considered insecurely attached. Although both categorical and dimensional systems remain present in contemporary literature, the four-category model can and has been reframed in terms of dimensions of attachment anxiety and avoidance as follows: secure attachment corresponds to low anxiety and low avoidance, preoccupied attachment corresponds to high anxiety, dismissive attachment corresponds to high avoidance, and fearful attachment corresponds to high anxiety and high avoidance (Dutton, Saunders, Starzomski, & Bartholomew, 1994; Shaver & Hazan, 1993).

Adult attachment theory provides an organizational framework for understanding the ways in which romantic partners react in response to stress, separation from one another, and conflict (Pietromonaco & Barrett, 2000). It also has clear relevance for the study of partner violence, as insecure attachment orientations have been linked to risk for IPV. It is estimated that approximately 55% of adults have secure attachment

orientations, whereas the other 45% would be classified as having insecure attachment orientations (25% classified as avoidant and 20% classified as anxious) based on data from community samples (Brennan, Clark, & Shaver, 1998; Shaver & Clark, 1994; Shaver & Hazan, 1993). When these figures are juxtaposed next to the 30-40% of adults who engage in physical IPV and 70-80% of adults who engage in psychological IPV, it becomes clear that not all individuals who have an insecure attachment orientation aggress against their partners, and conversely not all those who aggress against their partners have insecure attachment orientations. The factors differentiating individuals with insecure attachment orientations who do or do not aggress against their partners have yet to be determined.

Relationship of attachment insecurity to IPV. Gormley's 2005 review of the research linking insecure attachment and perpetration of IPV revealed patterns of thinking and behaviour associated with the two dimensions of insecure attachment. Attachment anxiety is associated with difficulties functioning independently, self-blame, problems with affect regulation, and acting in a manner which may be perceived as overly demanding by partners. Attachment avoidance on the other hand, was linked to discomfort with intimacy, blaming of others, and using distance as a method to regulate one's affect.

There is empirical evidence linking both attachment anxiety and avoidance with physical and psychological IPV perpetration, with evidence that adult attachment may mediate the link between other causal factors such as childhood maltreatment and IPV (Dutton, & White, 2012; Godbout et al., 2009). While adults who have achieved attachment security in their romantic relationships may have the capacity to be non-

reactive and flexible when distressed or when perceiving threats to their connection with their partners, insecurely attached adults may resort to more rigid, engrained strategies, including the use of violence (Schneider & Brimhall, 2014). Violence arising from the dimensions of insecure attachment in adulthood may be differentially motivated, such that individuals with attachment anxiety may act aggressively (e.g., by using criticism, blame, or physical aggression) in an effort to maintain connection or avoid abandonment by their partners, whereas individuals with attachment avoidance may use aggression in order to maintain self-control, exert control over others, or to push others away, thereby creating the emotional distance they desire from their partners (Gormley, 2005). These dimensions of attachment insecurity may drive the perpetration of IPV in some individuals.

Allison, Bartholomew, Mayseless, and Dutton (2008) described male-perpetrated partner violence as a strategy for regulating distance in their intimate relationships as dictated by men's attachment needs. They interviewed couples in which the male partner had been referred for intervention for physical violence. They then applied qualitative, thematic analysis to the interviews and found two patterns of violence: pursuit and distancing, which were associated with attachment anxiety and attachment avoidance, respectively. According to the couples interviewed, the men in this sample used physical IPV as a means to either force a partner to attend to them (the pursuit strategy) or to push a partner away when they perceived too high a level of intimacy (the distancing strategy). The strategies employed by the men were associated with their attachment orientations, such that pursuit was associated with anxious attachment, and distancing with avoidant attachment.

In a study comparing a clinical sample of violent husbands to non-violent controls, men categorized as securely attached were more often found in the non-violent control group, and men categorized as preoccupied, or fearful, were more often found in the violent group (Dutton et al., 1994). Attachment orientation and physical and psychological IPV were measured via self-report instruments. These findings should be interpreted with the caveat that some men in the non-violent control group actually did report incidents of IPV. When analyzing the dimensions of attachment anxiety and attachment avoidance, it was found that both were related to psychological IPV, but attachment anxiety was uniquely associated with physical IPV. The men who were classified as insecurely attached also endorsed jealousy and anger at higher rates than men who were securely attached. Specifically, fearful attachment was most strongly positively correlated with jealousy and anger, followed by preoccupied attachment. Secure attachment was negatively correlated with jealousy and anger as expected.

Researchers have also found associations between patterns of men's attachment and conflict behaviours by observing their discussion of an unresolved problem with their wives. In a study by Gottman et al. (1996), the Specific Affect Coding System was used to code affect elicited during these discussions. Dismissing and preoccupied husbands showed more domineering behaviours (characterized by attempts to force partners to comply with or submit to one's own view) compared to securely attached husbands. There were also unique behaviours associated with each insecure attachment orientation. Dismissing husbands tended to use distancing tactics such as stonewalling, tuning out their partners, and displays of contempt, whereas preoccupied husbands had a tendency to provoke their wives to engage with them via strategies like acting belligerent.

Fournier et al. (2011) studied the link between IPV and the attachment needs of anxiously attached men using the framework of the demand-withdraw pattern of communication. The demand-withdraw pattern occurs when couples experience conflict and one partner pursues the other by blaming or demanding change, such as increased closeness or intimacy, while the other partner withdraws, stonewalls, or otherwise evades these requests (Christensen & Harvey, 1990). Fournier et al. (2011) found that when men are anxiously attached, a pattern may arise such that the man in a relationship demands (due to his fear of rejection and abandonment), and the woman may withdraw (either in reality due to the intrusive or excessive nature of the demands, or her behaviour may be perceived as withdrawal by the man if his attachment fears are so extreme that they cannot be assuaged with any level of reassurance). This pattern was revealed to be particularly risky, as it mediated the association between men's attachment anxiety and their use of psychological and physical IPV against their partners. Although women's aggression and attachment anxiety was not investigated in this study, it should be noted that the woman-demand/man-withdraw pattern is actually more common in North American samples (Christensen & Heavey, 1990; 1993), and therefore it would be interesting to see whether this mediation would hold when the genders are reversed.

Female-perpetrated IPV also has been linked to insecure attachment. In a sample of female undergraduates, attachment anxiety, but not avoidance, was a significant predictor of physical IPV perpetration (Orcutt et al., 2005). Post-hoc tests revealed that attachment anxiety was higher in reciprocally violent women versus non-violent women; however, no significant differences were found between women who were only victims or perpetrators of IPV. Attachment avoidance was also investigated as a potential

moderator for the relationship between attachment anxiety and IPV perpetration, and the results indicated that females higher in attachment anxiety, but lower in attachment avoidance, reported significantly more IPV perpetration than females elevated in both. In another study, undergraduate students of both sexes involved in reciprocally aggressive dating relationships scored higher on the preoccupied and fearful-avoidant scales of the Relationship Questionnaire, and reported greater interpersonal problems than their peers in non-aggressive dating relationships (Bookwala & Zdaniuk, 1998).

Data from my master's thesis (Gou, 2014) indicated that in couples expecting their first child, attachment anxiety was a risk factor for men's psychological and physical aggression perpetration. Although this main effect was not significant for women, women's attachment anxiety and avoidance were linked to their IPV perpetration via a mediator, relationship dissatisfaction. This mediation effect was not evident in men. Whereas the findings seemed to indicate that attachment anxiety was linked to IPV (albeit via different pathways for men and women), the evidence for the role of avoidance was more equivocal. While attachment anxiety may increase risk for aggression across a broad range of situations, attachment avoidance may only confer risk under a more specific set of circumstances.

In terms of relational aggression, Goldstein, Chesir-Teran, and McFaul (2008) investigated the characteristics that distinguished young adults who had high levels of perpetration and/or victimization from those with low levels of exposure to relational IPV. They found that the low aggressor/low victim group was distinct from all other groups (i.e., high aggressor/high victim, high aggressive/low victim, and low aggressor/high victim) in that their attachment anxiety was significantly lower. The low

aggressor/low victim group also reported significantly lower levels of attachment avoidance compared to the high aggressor/high victim group.

There is clear empirical support for a relationship between insecure attachment orientations and partner violence; however, as already noted, there is no 1:1 correlation between individuals with insecure attachment and individuals who use IPV. The question remains, under what circumstances do attachment anxiety and avoidance trigger violence in intimate relationships? The answer may lie in how and when the attachment system is activated, and how individuals and their partners respond once this activation occurs.

Activation of the attachment system and emotion regulation. Mikulincer and Shaver (Mikulincer & Shaver, 2008; Shaver & Mikulincer, 2006) have described how the attachment system is activated when individuals perceive signs of threat or experience stressful circumstances that increase negative affect and distress. These threatening or stressful events may be related to attachment-related needs or fears, such as the need to depend on others or to act independently, or the threat of being rejected or being emotionally vulnerable. When there is a perceived threat or an actual event that activates the attachment system (e.g., observing one's romantic partner conversing with a potential romantic rival, or being separated from one's partner for a time), Mikulincer and Shaver propose that the attachment system allows individuals to assess the potential alternative response strategies and to select a strategy to address the negative emotions and distress elicited by the activating event. Therefore, one purpose of the attachment system is to respond to and regulate aversive emotions arising from appraisals of threat or demands from the environment. In other words, the attachment system serves an emotion regulatory function.

Beginning in infancy, the attachment system allows children to regulate their emotions via the primary strategy of achieving proximity to caregivers (Bowlby, 1973; 1982). When children are distressed or perceive threats to their well-being in the environment, they adaptively and instinctively attempt to be closer to their caregivers to receive support. When these bids for proximity are consistently successful, children develop a sense of attachment security in that they begin to internalize the belief that supportive caregivers are reliably available. As an extension of this internalized belief, they are free to explore the world around them knowing that their caregivers are standing by to provide safety and support if they encounter threat and to help regulate and soothe any distress that may arise (Bowlby, 1982). However, when attachment figures are not reliably or consistently available, or when attachment figures are actually the source of fear or distress to the child, children learn that proximity seeking is not sufficient or viable as an emotion regulatory strategy and may therefore learn to use secondary attachment strategies in lieu (Mikulincer, Shaver, & Pereg, 2003). These secondary strategies correspond to insecure attachment orientations and will be described next as they relate to adult emotion regulation.

In adolescence, individuals begin to transfer attachment functions from caregivers to romantic partners. They also increasingly internalize attachment figures such that physical proximity to these individuals is not always necessary, as a mental representation may suffice (Mikulincer & Shaver, 2008). Just as in childhood, emotion regulatory functions in young adults differ based on one's attachment orientation. The ideal developmental outcome for adult emotion regulation via the attachment system, according to Diamond and Aspinwall (2003), is the capacity to flexibly transition

between the use of self-regulatory behaviours and attachment-based regulatory strategies based on the requirements and resources present in a given situation. This adaptive flexibility in emotion regulatory strategies characterizes adults with secure attachment orientations. These individuals are able to seek proximity to their attachment figures either physically or by accessing their internalized mental representations of these figures in times of threat or distress, with the expectation that doing so will alleviate negative affect and facilitate coping based on previous experiences of support and caring from these figures (Mikulincer et al., 2003). This emotion regulation strategy also allows individuals to feel secure, competent, and capable in the face of adversity, fostering their autonomy and personal resilience in the absence of the physical presence of attachment figures (Mikulincer & Shaver, 2008). Therefore, attachment security paves the way for adults to confidently employ self-regulatory strategies in times of stress, while being secure in the belief that if needed, supportive others can be called upon or accessed in memory to provide additional reassurances or practical resources.

Unfortunately, not all adults achieve this desired balance between self-regulatory and attachment-based strategies. For adults who are insecurely attached, that is anxious or avoidant in their orientation, emotion regulatory strategies may instead fall under one of two extremes. Shaver and Mikulincer (2002) called the strategies adopted by anxious and avoidant individuals hyperactivating and deactivating strategies, respectively.

Hyperactivating strategies are employed by individuals high in attachment anxiety, those who have experienced inconsistency in the availability of their attachment figures. Just as in the concept of variable-ratio reinforcement in operant conditioning (Skinner, 1957), the effect of inconsistently successful bids for proximity is an increase in

the rate of response, namely proximity seeking. Attachment anxiety arises out of the experience of an attachment figure as sometimes available, soothing, and supportive, but unreliably so, such that the attachment figure cannot be counted on with certainty to fulfill an individual's attachment needs at any given time (Ainsworth, Blehar, Waters, & Wall, 1978). Yet because there are times when proximity seeking is successful in procuring the desired support, anxious individuals do not abandon proximity seeking altogether as an emotion regulation strategy in times of distress; rather, they up-regulate the use of this strategy in response to inconsistent responsiveness from attachment figures (Mikulincer et al., 2003). Anxious individuals may exaggerate, prolong, or otherwise intensify their negative emotions and expressions of distress in an effort to draw attention and support from an attachment figure who may otherwise be unresponsive to or ignore their baseline levels of activation.

By contrast, deactivating strategies, those that are associated with attachment avoidance, are dominated by self-regulatory strategies, eschewing any form of reliance on others. This extreme self-reliance develops when individuals have experienced their caregivers or close others as non-responsive, rejecting, or excessively punitive to their needs (Ainsworth et al., 1978). Thus, avoidant individuals learn that proximity seeking is not a viable option and that their attachment figures are not to be relied upon as a source of support or comfort. In order to reconcile their distress in the absence of supportive others, avoidant individuals learn to suppress, deny, and ignore threats to their attachment relationships and their need for connectivity, and instead employ predominantly intrapersonal coping and problem solving strategies (Mikulincer et al., 2003). Eventually avoidant individuals no longer respond to signs of risk of separation or abandonment as

they adopt a distancing strategy to protect themselves from negative affect via isolation and self-sufficiency.

Given the links between the attachment styles and their corresponding emotion regulation strategies, it can be hypothesized that those individuals with anxious attachment orientations and therefore hyperactivating emotion regulation strategies may be hypersensitized to the perception of threat, particularly to signs of abandonment or rejection, and may engage in excessive bids for attention and reassurance as result. In the context of a romantic relationship, this may mean that these individuals react much more strongly to cues from their partner that secure individuals may recognize as ambiguous or neutral, or from which they may be able to recover quickly. Anxious individuals may consistently endorse fears that their partners will leave them or will commit acts of infidelity. In response they may use strategies such as excessive proximity seeking, reassurance seeking, displays of helplessness and distress to procure support from the partners on which they are dependent.

Avoidant individuals on the other hand, with their corresponding deactivating strategies, may deny the need for sharing or intimacy with others and as result appear indifferent to ambiguous or even real signs of rejection from their partners. They may retreat or withdraw from discussions that promote personal disclosure or a deepening of connections, be staunchly stoic in the face of conflict, or refuse to engage in conflict with their partners at all. They may prefer to isolate themselves or problem solve on their own when stressors arise in their lives, rather than to turn to close others for support.

Therefore, it seems reasonable to hypothesize that anxiously attached individuals will be more dysregulated by the experience of conflict within their relationships or by

perceiving their partners as unsupportive in times of distress. Conversely, avoidant individuals will likely experience less dysregulation in response to conflict, perhaps less even than individuals with secure attachment orientations to the extent that they are perceived as cold or indifferent; yet they may experience discomfort if their partners attempt to provide affection or support to them in times of stress. These attachment orientations and emotion regulatory strategies make individuals differentially vulnerable to risk for escalation of conflict in their romantic relationships, and therefore to the use of IPV, in different situations. Anxious individuals may be more likely to aggress against their partners in the context of perceived rejection, abandonment, or underprovision of support, whereas avoidant individuals may be more likely to become aggressive in response to uncomfortable levels of intimacy or perceived overprovision of support.

It has been established that attachment anxiety and hyperactivation of the attachment system manifest as intensified bids for proximity to and attention from attachment figures who are experienced as inconsistently available. One of the ways in which anxious individuals may escalate their bids for attention from their partners is in the use of aggression. As the need to express the intensity of their negative affect and to communicate their distress and dependency on their partners grow, and if anxious individuals' attachment fears go unchecked, they may escalate to the use of IPV.

For example, anxious attachment has been linked to physical IPV in a college sample of men and women via angry temperament and attempts to control one's partner (Follingstad, Bradley, Helff, & Laughlin, 2002). The data from this sample supported a model in which individuals who were anxiously attached experienced anger as a result of actual or anticipated threats to their attachment needs (i.e., separation, loss, rejection from

a romantic partner). In an effort to mitigate their feelings of anger, individuals in this sample experienced a need to control their partners to maintain proximity and prevent abandonment. At the extreme, these control efforts manifested as physical violence. The results supported this model in that angry temperament mediated the link between anxious attachment and need for control over one's partner. Need for control in turn mediated the link between angry temperament and increased frequency and severity of physical IPV.

Babcock and colleagues (2000) separated distressed married couples into two groups: one in which the husbands were violent towards their wives, and one in which no violence was present. Using the Adult Attachment Interview, the husbands' attachment orientations were categorized as secure, avoidant, or anxious. A significantly greater proportion of violent husbands were classified as avoidant or anxious (i.e., insecurely attached) compared to the distressed, but non-violent husbands. Furthermore, avoidant and anxious husbands used more domineering tactics in their interactions with their wives (i.e., attempting to force compliance) than secure husbands. Avoidant and anxious husbands also differed, in that avoidant husbands used distancing tactics including stonewalling, tuning out their partner, and contempt, while anxious husbands provoked their wives to engage with them using belligerence and did not use distancing tactics. In addition, it appeared that avoidant men tended to respond with violence to disagreement from their partners, whereas anxious men tended to respond with violence to prevent their partners from withdrawing from the conflict. These results parallel the demand-withdraw pattern proposed by Christensen and Heavey (1990) and observed in other studies of insecure attachment. In particular, this study illustrates the emotion regulatory strategies

employed by men based on attachment strategy, and links the use of violence with the attachment needs of avoidant and anxious individuals.

Dyadic Factors

As discussed in the preceding section, the various attachment styles are associated with differences in emotion regulation and activation of the attachment system. Those with insecure romantic attachment may experience greater activation of the attachment system or greater emotional dysregulation given the same situations compared to securely attached individuals. Events that may activate the attachment system or increase negative affect include instances in which individuals feel as though the support they are receiving from a partner is insufficient or inappropriate to their needs, or conflict in general, particularly if it arouses attachment-related fears such as fear of abandonment or fear of emotional intimacy or disclosure. To better understand how certain dyadic interactions may moderate the effect of attachment insecurity on risk for IPV via activation of the attachment system, I will next look at the literature on partner support and conflict.

Partner support and conflict. As described above, Mikulincer and Shaver (2008) described securely attached adults as more likely to seek closeness with others as an emotion regulatory strategy when distressed compared to anxious and avoidant individuals. Perhaps one of the reasons why is that secure individuals also are more likely to find proximity seeking helpful in times of stress or adversity. The mere presence of a supportive partner is sufficient to help securely attached individuals manage negative affect, whereas this strategy may not be as beneficial for those with anxious or avoidant attachment.

In general, those with different attachment styles may react to and benefit from the provision of support differently. In an interesting study paradigm, Mikulincer and Florian (1997) exposed undergraduates to anticipation of a stressful event and then assigned them to receive emotional support or instrumental support from a same-sex conversation partner, or no support, and measured the effect on participants' positive and negative affect and level of fear. Participants were told that they were going to handle a poisonous snake. They then self-reported on their affective state and were instructed to either speak to a conversation partner about their feelings regarding the task (emotional support) or about how they would handle the task and what strategies they would use (instrumental support), or in the last condition they simply sat in the waiting room alone (no support). Following the conversation or waiting period they self-reported on their affective state again. Controlling for positive and negative affect prior to support provision, there was an interaction between attachment and type of support. Individuals who were secure in their attachment reported less negative affect and less fear of the snake when they received support versus when waiting alone (regardless of the type of support they received). By contrast, those with avoidant attachment only reported less negative affect and fear after receiving instrumental support compared to no support; furthermore, avoidant individuals actually reported more negative affect and fear after receiving emotional support compared to no support. Those with anxious attachment reported more negative mood and fear after receiving instrumental support compared to no support, and emotional support and waiting alone did not differ in terms of their effect on mood.

These findings appear consistent with the hyperactivating and deactivating strategies proposed for anxious and avoidant individuals. Whereas secure individuals can flexibly use both emotional and instrumental support from another individual to manage negative affect, anxious and avoidant individuals may become more distressed if the type of support they receive does not match their attachment needs. Avoidant individuals may benefit from instrumental support because a discussion of problem-solving strategies promotes the self-regulatory approach to emotion regulation that avoidant individuals prefer to use. For the same reason, emotional support may actually further dysregulate avoidant individuals as this type of support may activate their attachment fears surrounding relying on others and emotional disclosure and intimacy. Anxious individuals on the other hand may view instrumental support as threatening. They may view encouragement on self-reliance and problem solving as lost opportunities for interpersonal dependency and communication of their distress to others. Therefore, an increase in negative emotions may serve the goal of communicating this distress and lack of capacity to handle such situations on one's own. Further, emotional support also did not appear beneficial for anxious individuals, consistent with their tendency to need excessive reassurance and maintain their level of distress in order to assuage attachment fears related to abandonment and rejection.

Convergent findings were obtained by Moreira et al. (2003) in their study of undergraduate students. They conducted factor analyses on a measure of attachment and a measure of perceived social support. The measure of attachment unsurprisingly revealed factors corresponding to the secure, anxious, and avoidant orientations. From the measure of perceived social support emerged two factors corresponding to intimate support and

casual support. Intimate support items related to having close, dependable others who served as confidants for very personal disclosures. Casual support items referred to more surface level support such as appreciating someone for their personality characteristics and having interests in common. For individuals high in attachment anxiety, it appeared that intimate support had a negligible effect on their levels of psychological distress. However, those with more secure attachment orientations were less distressed if they perceived greater intimate support in their lives. For those high in avoidance, casual support seemed to confer a benefit in terms of decreased psychological distress, but this did not hold for more securely attached individuals. Again, these results are in line with a hyperactivating and deactivating model of emotion regulation in anxious and avoidant individuals, respectively.

Observational data also supports differences in the effectiveness of social support on emotion regulation by attachment style. Simpson and colleagues (2007) videotaped couples who were instructed to engage in a stressful conflict-resolution discussion regarding a current problem in their relationship. These videos were then coded for emotional, instrumental, and physical support provided by each partner, as well as distress displayed and response to partner support by each partner. Actor-partner interdependence analyses revealed that individuals who had more secure attachment representations responded more favourably to their partners' provision of emotional support, compared to avoidant individuals. Avoidant individuals responded more favourably to their partners' provision of instrumental support compared to secure individuals. No significant effects were found for partner physical support. The authors did not hypothesize or test any effects of attachment anxiety.

In general, it appears that attachment security allows individuals to receive support from others and utilize it in an effective manner in order to regulate negative emotions, yet attachment insecurity somehow renders some forms of support ineffective in different ways. Anxious and avoidant individuals may benefit from different forms of support or may receive other forms to their detriment, in line with their corresponding attachment fears and needs.

Simpson and Overall (2014) have also proposed that anxious and avoidant attachment can be “buffered” by partners who use behaviours that complement their attachment-related fears and needs to successfully regulate negative affect. Though conflict and stress tends to activate the attachment fears associated with anxiety and avoidance, the authors proposed that partners of insecurely attached individuals who are sensitive to the pattern of fears relevant to these individuals can help regulate them. For example, an anxious individual whose partner reassures them that they will consistently love and support them may experience a decrease in distress during conflict. Conversely, an avoidant individual whose partner accommodates their need for independence and control by using “soft” requests for change and respecting their autonomy may also be able to downregulate negative affect. Therefore, though partners can exacerbate or maintain negative affect through the provision of support that triggers attachment fears in insecurely attached individuals, so too can they provide responsive, and thereby effective, support that is attuned to the particular needs of these individuals.

Insecurely attached individuals may also perceive conflict itself differently. In a daily diary study of undergraduate couples, Campbell et al. (2005) measured individuals’ perceptions of conflict with their romantic partners over the span of two weeks.

Multilevel modeling revealed that more anxious individuals reported more daily conflict overall in their romantic relationships than less anxious individuals. Moreover, anxious individuals reported more conflict than would be expected based on their partners' reports on the same days. This indicates that anxious individuals are not necessarily experiencing more conflict objectively, but rather more sensitized or hypervigilant to signs of conflict. Individuals with anxious attachment were also more likely to indicate that their conflict with their partners escalated beyond the scope of the initial topic that was being discussed, and that they experienced more emotional hurt as a result of conflict. Campbell et al. also measured daily perceptions of partner support, and while the perception of the amount of support partners provided did not differ by attachment style, individuals high in avoidance reported that their experiences of partner support were less positive than less avoidant individuals. Though the type of partner support was not specified, this finding is consistent with previous studies indicating that avoidant individuals may not benefit from the provision of emotional support, preferring self-regulatory strategies in times of distress.

It appears that when it comes to conflict and support, individuals' perceptions, attachment, and the type of support provided can all make a difference in whether support provision succeeds in de-escalating conflict. In particular, insecurely attached individuals who may be more likely to perceive increased conflict or to experience certain types of support from their partners as unbeneficial or even detrimental, may be at greater risk for escalations in negative affect and further conflict. These interactions between individual factors and support provision during conflict may lend insight into why some interactions ultimately culminate in aggressive behaviour, while others succeed in conflict resolution.

Situational and Contextual Factors

Individual vulnerabilities including attachment insecurity and dyadic processes such as support provision during conflict do not always culminate in aggression. An insecurely attached individual who is more emotionally reactive or dysregulated in response to a perceived lack of support from their partner or conflict within their relationship is by no means destined to act aggressively in these situations. Despite these individual and dyadic risk factors they may never escalate to the use of violence, or they may do so only on certain occasions. How individuals with certain characteristics respond to interactions with their partner on a given day may depend on broader situational or contextual factors, which explain why some individuals use IPV on some days and not others. Alcohol use and ego depletion are two such factors that will be taken into consideration in the following sections.

Alcohol use. A putative link exists between the consumption of alcohol and risk for the occurrence of IPV. The rationale behind this proposed link is that alcohol acts as a disinhibitor, making individuals more likely to engage in provoking or aggressive behaviours towards their partners, with less consideration of the consequences of such behaviours. Alcohol consumption may temporarily impair cognitive functioning such that individuals are less able to process information both in terms of quantity and depth, experience “tunnel vision” or an inability to shift their attention from provocative stimuli, and have difficulty accurately interpreting social cues (Giancola, 2000; Steele & Josephs, 1990). The deficits associated with a state of alcohol intoxication mean that behavioural responses are likely to be more extreme. The use of alcohol or a state of intoxication may also make the use of violence seem more acceptable, or may help perpetrators absolve

themselves of culpability for their actions while under the influence. Indeed, when alcohol has been experimentally administered in multiple studies, participants exhibit increases in aggressive behaviour, which researchers have posited results from the dampening of internal control over aggressive behaviour and reduced responsibility for actions while inebriated (Bushman & Cooper, 1990).

Frequency and quantity of alcohol consumption have been linked to physical IPV in several studies of men involved in the justice system with small to large effect sizes (Schumacher, Feldbau-Kohn, Smith Slep, & Heyman, 2001), and alcohol use appears to be associated with IPV even after controlling for demographic variables, personality factors, and relationship satisfaction, while successful treatment of alcohol use disorders appears to result in reductions in IPV (Leonard, 2005). In a meta-analysis of 50 studies, Foran and O'Leary (2008) reported a small to moderate effect size for the link between men's alcohol use and their physical IPV perpetration, and a small effect size for the link between women's alcohol use and their physical IPV perpetration. It appears that there is a temporal relationship between alcohol use and IPV such that drinking coincides with or precedes acts of aggression. Stets and Henderson (1991) asked men and women to reflect on the most recent instance of the most severe form of psychological and physical IPV they had reported in the last year, and to report on the context of that conflict including alcohol use. Their findings indicated that individuals who consumed alcohol prior to a conflict were at higher risk for perpetration and victimization. General drinking patterns were not associated with IPV, and therefore alcohol only appeared to increase risk in the context of a conflict. The researchers also asked respondents whether they endorsed the notion that people should not be held responsible for their actions while drinking, and

found a trend such that those who agreed with the statement were more likely to perpetrate IPV, lending some support to the reduced culpability hypothesis.

In a sample of women involved in the legal system for the perpetration of IPV, a timeline follow-back method was used to determine whether physical IPV perpetration and victimization were more likely on days marked by alcohol consumption (Stuart et al., 2014). Odds ratios indicated that women were 10-12 times more likely to perpetrate physical IPV on a drinking compared to nondrinking day, with the greatest risk on heavy drinking days (defined by consumption of more than four drinks on one occasion). Each additional drink consumed conferred an added 17-20% risk in engaging in physical IPV. Alcohol consumption was also associated with women's risk for victimization, such that women were 5-6 times more likely to experience physical IPV on drinking days compared to nondrinking days, with the greatest risk on heavy drinking days. Each additional drink consumed was associated with a 13-15% increase in risk for physical victimization. Notably, these relationships were significant even after controlling for the use of other recreational substances.

A timeline follow-back study of young adults (Rothman et al., 2012) also found a temporal association between alcohol consumption and psychological and physical IPV, such that men and women were roughly 1.7 to 2.0 times more likely to perpetrate psychological and physical IPV on drinking versus nondrinking days, with the greatest risk on heavy drinking days (four or more drinks on a day for women, five or more for men). Women also were 1.3 times more likely to be subject to psychological IPV on drinking versus nondrinking days, and men were 1.7 times more likely to be victims of physical IPV on a drinking versus nondrinking day. The authors also brought attention to

concerns that assigning a causal role to alcohol use for IPV may place blame on victims for using alcohol or absolve perpetrators from responsibility for their actions while under the influence. They reminded readers that alcohol is one of many factors involved in risk for IPV, and thus one important potential point of intervention that deserves attention, not a sole causal factor.

The argument for a temporal association between alcohol use and risk of IPV is made stronger with the use of prospective research methodologies. Parks and colleagues (2008) surveyed college women with a history of IPV victimization and alcohol use daily using an automated phone survey for eight weeks. The researchers did not distinguish between IPV perpetration and victimization in their survey, instead querying women's "involvement" in IPV without specifying their role, citing the often reciprocal nature of IPV in this population as their reasoning. Through multilevel modeling they found that women's risk for being involved in verbal IPV was doubled and their risk for involvement in physical IPV was almost 12 times greater on heavy drinking (four or more drinks) versus nondrinking days. This effect did not appear to hold for more moderate drinking episodes (i.e., fewer than four drinks in a day). When instances of aggression were analyzed, it was revealed women were three times as likely to have consumed alcohol in the 24 hours preceding incidents of verbal victimization compared to days when they were not involved in verbal IPV.

Using a daily diary method, Moore et al. (2011) also found that on days on which perpetrators were drinking and drinking more heavily, it was more likely for IPV to occur later that day. Undergraduate students in their sample reported on their daily alcohol use and IPV perpetration for two months using electronic handheld devices provided by the

researchers. Multilevel modeling revealed that individuals were roughly two and three times more likely to perpetrate psychological and physical IPV, respectively, on drinking days versus nondrinking days. There was also a linear increase in risk such that each additional drink was associated with an increase in odds of 1.16 and 1.13 for perpetrating psychological and physical IPV, respectively. The temporal association between alcohol consumption and IPV perpetration was stronger for men, such that men were approximately seven times more likely to use psychological IPV on drinking versus nondrinking days, while women's risk increased by only 1.60 times on drinking days. In addition, the additive risk conferred by each additional drink consumed was greater for men versus women. Moore et al. also discussed how alcohol consumption may interact with more distal individual factors such as personality to push people over a threshold so that they are less likely to inhibit their use IPV.

Another daily diary study of male undergraduate students also found a link between acute alcohol intoxication and subsequent IPV perpetration (Shorey, Stuart, McNulty, & Moore, 2013). Participants were emailed a link to an online survey every day for 90 days. Multilevel modeling revealed that the men were twice as likely to perpetrate physical IPV on drinking versus nondrinking days, almost four times as likely on heavy drinking versus nondrinking days, and that each additional drink was associated with a 1.12 increase in the odds. For psychological IPV, more moderate drinking and the number of drinks did not predict perpetration, but heavy drinking increased the odds of perpetrating aggression almost twofold compared to nondrinking days.

There has been a consistent finding in the literature demonstrating that alcohol use appears to contribute more to risk for IPV for men than women. In a national study of the

United States, men were significantly more likely to have reported alcohol-use related IPV compared to women (Caetano, Schafer, & Cunradi, 2001), which may be partially explained by the higher prevalence of drinking in general in men versus women. Indeed it appears that men tend to consume greater quantities of alcohol and to have more problem use than women (Nolen-Hoeksema, 2004). Beyond mere prevalence, men and women also seem to differ in that men are more likely to engage in aggressive behaviour when intoxicated than women (Bushman, 1997). Alcohol use also increases the likelihood that men, but not women, will cause injury to their partner via IPV (Thompson & Kingree, 2006). In addition, men may be more likely to use alcohol as a form of avoidant coping or in order to manage their distress (Cooper, Russell, Skinner, Frone, & Mudar, 1992), which may make them more prone to behavioural dysregulation when intoxicated. Further investigation of alcohol consumption along with other risk factors that alcohol may potentially interact with in a sample inclusive of men and women may shed light on this apparent gender difference.

There is a paucity of literature investigating the link between alcohol use and forms of IPV beyond physical and psychological IPV (i.e., coercive control and relational aggression). One exception is a longitudinal study of adolescents conducted by Woodin et al. (2016). In their sample, earlier peer physical aggression was related to later romantic relational aggression in young adulthood, and this association was fully mediated by heavy episodic alcohol use (concurrent with romantic relational aggression). The researchers posited that dysregulated and antisocial behaviour in adolescence is linked to risk for later heavy alcohol use, which acts as a disinhibitory factor increasing concurrent risk for aggression in romantic relationships.

The relationship between alcohol use and IPV perpetration or victimization appears complex, and it is likely that alcohol consumption on its own may serve as only a crude predictor of IPV. However, alcohol consumption (particularly heavy consumption) may be an important component of a broader biopsychosocial model, in which it (or rather, its effects on cognitive and social functioning) serves as a moderator of other risk factors by increasing the likelihood of IPV on drinking days.

Ego depletion. Another construct that evidences daily variation and could be an important component in models of risk for IPV is ego depletion. Ego depletion is a concept coined by Baumeister et al. in their seminal 1998 series of experiments. The theory states that individuals' self-control resources are renewable, yet finite. Therefore, the ability to exert self-control to make deliberate choices to initiate or inhibit behaviour (also referred to as executive function by Baumeister et al.) diminishes with each act of self-control, such that when this resource is exhausted, individuals experience what is called ego depletion. Ego depletion, according to the resource-based theory of self-control, is a temporary state in which individuals experience a deficit in their ability or readiness to regulate their actions due to previous expenditures of this resource. Ego strength is thought to replenish following a period of rest.

More recently, Inzlicht and Schmeichel (2012) forwarded an alternative process model of ego depletion, citing several problems inherent in conceptualizing self-control as a limited resource (e.g., the inability of researchers to directly measure self-control resource depletion, the findings that several factors can attenuate the depletion effect, and the notion that from an evolutionary perspective it is not adaptive to be unable to flexibly engage self-control over long periods of time; Inzlicht, Schmeichel, & Macrae, 2014).

Inzlicht and Schmeichel (2012) proposed that the reduction in restraint that people show on subsequent tasks following their exercise of self-control on an earlier task reflects not the depletion of a finite resource, but instead a shift in their motivation and attention which serve to undermine their self-control on later tasks. Motivation is shifted away from pursuing externally rewarding, but cognitively taxing and therefore inherently aversive, goals (i.e., exercising self-control) towards pursuing intrinsically rewarding and pleasurable tasks (e.g., leisure activities). Simultaneously, attention is shifted away from cues that indicate a need for self-control to attain longer-term goals towards cues for gratification in the moment. Inzlicht et al. (2014) have also called these processes a shift from “need-to” to “want-to” goals. Therefore the critical distinction is that following exertion of self-control, ego depletion is not a state in which people are unable to engage in subsequent exercises of restraint, but one in which they are less motivated to do so and attending less to cues that indicate the need for self-control. Therefore with enough external motivation, depleted individuals are in fact capable of further acts of self-control, albeit far less likely.

Though it represents a conceptual shift, this updated view of ego depletion remains consistent with the data derived to date about self-control via the resource-based theory put forward by Baumeister and colleagues. The adoption of this new theory does not dramatically change the hypotheses one might produce about prior self-control leading to reduction in inhibitory processes in subsequent tasks, but simply our understanding of why this occurs.

It should be noted that there continues to be a debate about whether ego depletion actually exists, in terms of the behavioural phenomenon irrespective of which theory is

used to explain what may be happening at the cognitive level. An article by Friese et al. (2019) forwards several arguments as to why the seemingly robust literature demonstrating the effect of ego depletion may nevertheless be insufficient to accept that ego depletion is real (e.g., by highlighting artificially inflated effect sizes by virtue of publication bias and failures of replicability of previous studies demonstrating this effect). They also present several arguments as to why ego depletion should not be dismissed outright. As it remains inconclusive whether ego depletion can be defended as a real phenomenon, I present the following review of the ego depletion literature with the caveat that there is much controversy surrounding the topic. Though the following studies were conducted to support the resource-based theory originally espoused by Baumeister et al., they remain relevant for informing the hypotheses in this study. Given that a more nuanced dialogue surrounding ego depletion now exists, the results will be discussed using this updated framework and couched in the context of a continually evolving field.

Baumeister et al. (1998) investigated reductions in participants' exercise of self-control over time by conducting four initial experiments in which they attempted to exhaust participants' self-control resources and subsequently measured their self-regulatory behaviour, in order to detect any effects of ego depletion. In all four experiments, participants who were first tasked with activities that putatively result in ego depletion (e.g., resisting the temptation of a desirable food when hungry, engaging in active decision making, or regulating their affect in response to evocative stimuli) showed a reduction in their self-control on subsequent tasks (as evidenced by decreased persistence on puzzles and anagrams and a preference for passive versus active responding) compared to control groups that did not undergo ego depletion.

Taken together these four experiments proffer support for the updated theory that earlier acts of self-regulation result in a shift in motivation away from pursuing cognitively taxing acts of self-control that are not rewarding in and of themselves, towards inherently pleasurable tasks (previously conceptualized as the depletion of the finite resource of self-control resulting in subsequent impairment of self-regulatory ability). Since these pioneering studies, numerous other researchers have attempted to replicate the effects of ego depletion. In a meta-analysis of 83 studies experimentally manipulating ego depletion (Hagger, Wood, Stiff, & Chatzisarantis, 2010), an overall medium to large effect size was revealed for the effect of ego depletion on measures of self-control performance.

Given the heterogeneity of paradigms used in ego depletion studies to date, it appears that a broad array of deliberate choices, actions, and inhibitory behaviours influence the orientation of motivation towards “need-to” versus “want-to” goals (colloquially termed ‘willpower’ in some studies). In light of its broad applicability, some researchers have extended the concept of ego depletion to the regulatory processes involved in the inhibition of aggressive behaviours.

If inhibiting aggressive behaviours taps into the same self-control processes as outlined above, then engaging in an earlier act of self-regulation should make individuals less motivated to override the impulse to behave aggressively in response to provocation later on due to ego depletion. Stucke and Baumeister (2006) tested this very hypothesis in a series of three experiments. In all three studies, participants in the ego depletion condition were instructed to engage in an act of self-control to induce ego depletion (i.e., resisting the temptation to eat an appealing food while in a state of hunger or suppressing

emotional, body, and facial reactions to an evocative film). These participants were compared to control participants who were not instructed to inhibit their behaviour. In the second portion of each experiment, the experimenter insulted the participants (a normatively provocative event that results in aggressive impulses), and the participants' responses were measured for aggression (participants were able to respond by providing evaluations of the experimenter to their academic department, which they believed could influence the career of the experimenter).

In all three of Stucke and Baumeister's (2006) experiments, those in the ego depletion condition evaluated the experimenter significantly more negatively than those in the control condition following insult. These results suggest that due to earlier exercise of self-regulatory behaviour, those in the ego depletion condition showed diminished motivation to inhibit aggressive impulses towards the experimenter. In order to rule out the alternative explanation that the ego depletion conditions caused an increase in negative mood states such as anger or frustration, which then gave rise to greater aggression, participants in the third experiment were asked to rate their mood following the self-control portion and mood was entered as a covariate with no change in findings. This series of experiments indicates that while individuals may typically be able to inhibit their impulses to act aggressively in the face of perceived provocation, this inhibitory process may be compromised when they have already exercised self-control.

Building on these findings, DeWall and colleagues (2007) replicated the finding that ego depletion (experimentally manipulated) is related to a subsequent increase in aggression in a series of five studies. Aggression was measured several ways, including: amount of hot sauce participants administered to a person who had insulted them,

administering unpleasant blasts of white noise, giving someone a negative evaluation, and self-reports of the likelihood that they would use aggression in a provocative situation. Importantly, they found that the relationship between ego depletion and aggression was moderated by instigation, such that participants who had experienced ego depletion were more likely to aggress only when they were provoked via insult. A second moderator, trait self-control, was also revealed, such that participants who had low trait self-control were more likely to experience an urge to behave aggressively in response to provocation than those who had high trait self-control. Therefore, it appears that ego depletion can make it more likely for individuals to aggress, but only in the context of an instigating factor and especially for those individuals who have difficulty self-regulating in general.

Given that ego depletion appears related to decreased motivation to inhibit aggressive impulses, it seems logical to extend the concept to IPV. Specifically, if it is true that individuals are less motivated to inhibit aggressive behaviour when experiencing ego depletion, it follows that partners in a relationship may be more at risk for IPV on days when they have already engaged in self-regulatory behaviour. Finkel (2007) identified ego depletion as a putative risk factor for IPV perpetration via the weakening of inhibitory processes that would otherwise override aggressive proclivities.

In a series of studies, Finkel and colleagues (2009) tested the importance of self-control in the inhibition of aggressive behaviours toward a romantic partner. Their results showed that in the context of conflict with a partner, participants were much more likely to experience the temptation to inflict IPV on their partners than to actually follow through with these behaviours, suggesting that self-control processes are at play to inhibit these aggressive impulses. Further, prospective data indicated that those individuals who

had high trait levels of self-control reported fewer acts of IPV perpetration in the following year. Based on these preliminary results, the researchers next used experimental paradigms to manipulate self-control processes. They assigned participants to the ego depletion or control condition, as well as to a high or low provocation condition (in which they were led to believe that their partner had given them negative or positive feedback on a task, respectively). An interaction was found such that participants who experienced ego depletion behaved more aggressively (via proxies such as pressing a button that supposedly delivered a shock) towards their partners, but only if they were provoked. Therefore, it appears that self-control does indeed play a role in the inhibition of violence towards a partner, and that when self-control resources are depleted, participants may be more likely to act on aggressive impulses that arise following provocation.

Watkins, DiLillo, Hoffman, and Templin (2013) also tested the effect of ego depletion on aggression towards an intimate partner in a laboratory setting. Undergraduate students were assigned to the ego depletion condition (requiring them to exercise inhibitory self-control in a video viewing task) or the control condition (viewing a video with no instructions). Couples then engaged in a discussion about an area of conflict in their relationship, and rated their level of negative affect following the discussion. Finally, participants played a computer game against a player they believed to be their partner, and were able to administer aversive blasts of white noise to their partners, which the researchers used as an *in vivo* proxy for IPV. Using actor-partner interdependence analysis, they determined that ego depletion interacted with negative emotion in women to predict their aggression, but that this pattern did not hold for men.

The authors suggest that perhaps the conflict discussion meant to provoke aggression may not have had the same effect on men (e.g., if men felt that discussing the problem area was productive rather than provoking), and therefore ego depletion had no effect on aggression for men as there was no impetus for aggression to inhibit.

While ego depletion has predominantly been studied experimentally in the past, researchers have considered which real-life processes may signal or result in ego depletion, including the experience of daily stress and coping with said stress. Muraven and Baumeister (2000) reviewed the literature suggesting that stress and coping with stress taxes individuals' self-control resources, and therefore could lead to subsequent ego depletion. They argued that coping with stress involves monitoring of stressful stimuli, inhibiting attention to other competing stimuli, as well as regulation of any negative emotions that arise as a result of stress. Coping may also involve other inhibitory processes such as redirecting one's thoughts or attention to sensations. The experience of psychosocial stressors and coping with such stressors have been demonstrated as antecedents to failures of self-control in terms of smoking cessation relapse in longitudinal studies of in vivo behaviour (Doherty, Kinnunen, Militello, & Garvey, 1995). Stress and coping have also been linked to failures in self-regulation for other behaviours such as alcohol use (Hodgins, el Guebaly, & Armstrong, 1995) and eating (Wadden & Letizia, 1992). Therefore one real-world proxy for ego depletion that is temporally linked to failures in self-regulation is the experience of stress and coping.

Ego depletion appears to have relevance for temporal variations in risk for IPV, as individuals show a reduction in the exercise self-control and diminished inhibition of aggressive impulses following depletion of their ego strength. Therefore, individuals who

may otherwise override aggressive impulses may be less motivated to do so on days on which they have engaged in self-regulatory behaviour, increasing their risk for perpetrating IPV. Importantly, it appears that the association between ego depletion and aggression is moderated by provocation, such that even when individuals are depleted, they will typically not act aggressively unless something triggers an impulse to do so, suggesting an interaction between multiple risk factors.

Limitations of Current Literature

The literature reviewed thus far has focused on insecure adult attachment as it relates to risk for IPV perpetration, and a number of potential moderators of this association including partner support and conflict, alcohol consumption, and ego depletion. In the past, these variables have often been studied in isolation, as either risk factors for perpetration or victimization, with data from only men or women, or observed contemporaneously with IPV using cross-sectional designs. Furthermore, there has been a paucity of research on the mechanisms by which these variables influence IPV and how they may interact with one another in their association with IPV. These limitations create difficulties in defining directional relationships between IPV and its risk factors, and may fail to recognize that intra- and inter-individual characteristics may interact to predict IPV. Further, measuring IPV and other constructs at just one occasion or at a few widely spaced occasions does not allow for fine-grained temporal analysis of what actually directly precedes violence. Previous studies have not tested the main effects and interactions posited by the model that will be presented in this study together, and have not operationalized moderators of the association between attachment insecurity and IPV with the same measures, constructs, or time scale as in the current study. In particular,

previous studies investigating interactive effects of multiple time-varying risk factors have used only one measurement occasion and have often employed experimental manipulations or proxies for aggression (e.g., pressing a button believed to deliver a blast of unpleasant noise to a person in another room). The current study will expand upon the existing body of literature by employing a longitudinal daily diary method and by assessing actual in vivo behaviour in lieu of laboratory observations.

Therefore, the purpose of the current study is to clarify the relationships between individual differences in attachment, and IPV perpetration and victimization, with special attention to the moderating effects of the dyadic factors of partner support and conflict, and the situational factors of alcohol use and ego depletion. This study will also incorporate repeated measurements in a daily diary format, allowing for the coupling of behaviours that precede IPV with acts of aggression on a day-by-day basis. This will allow for both the investigation of why some individuals are at greater risk for IPV perpetration, as well as why some days are riskier than others. Daily diary studies have several additional advantages over traditional cross-sectional or repeated measurement designs. Diary methodologies typically capture greater frequencies of the target behaviours, and significantly reduce the retrospective biases inherent in self-report designs by closely coupling the experience of events with reporting (Bolger, Davis, & Rafaeli, 2003; Leigh, Gillmore, & Morrison, 1998). Specifically, daily diaries limit forgetting of events or the tendency for respondents to more readily report events that occurred more recently or to put more weight on these events when reporting on their average experience over a length of time (Stopka, Springer, Khoshnood, Shaw, & Singer, 2004). Daily diaries also allow researchers to observe time-based variance in behaviours,

and what causes the variability within and between persons by collecting data about other factors that covary with target behaviours, while using participants' data from different days to serve as their own controls (Bolger et al., 2003; Leigh et al., 1998).

The Current Study

Evidence for the main effects of attachment anxiety and avoidance on risk for IPV perpetration has been presented, but these results are at times equivocal, and it is clear that this is an incomplete picture. Adult attachment is a relatively stable individual construct (Scharfe & Bartholomew, 1994), particularly within a given relationship (Kirkpatrick & Hazan, 1994). Thus, in order to understand not only who perpetrates violence, but also why violence occurs on some days and not others, it is necessary to consider the interaction between insecure attachment and dyadic and contextual factors. Similarly, some of the moderators that have been identified may have main effects on risk for IPV in addition to their interactions with insecure attachment, and both types of relations are worthy of investigation.

In order to integrate insecure attachment and its putative moderators into one model of risk for IPV perpetration, and therefore to guide hypothesis development for the main effects and interactions in this study, it is helpful to use an existing framework as scaffolding. The I³ (pronounced I cubed representing instigation, impellance, and inhibition) model proposed by Finkel (2014) is one way to organize multiple risk factors and their interactions into a single model of IPV. The existing studies using the I³ model as a framework for studying risk factors for IPV have demonstrated its utility for hypothesizing and testing complex associations among these variables. The model produces a logical, face valid, and easily digestible narrative for complex two-way and

three-way interactions (e.g., ‘the Perfect Storm Theory’ which hypothesizes an interaction between high and low levels of multiple variables which predicts maximum likelihood for occurrence of IPV). The model also allows for the interaction of proximal and distal risk factors, or situational stressors and individual vulnerabilities, which allows for the operationalization of variables on different time metrics, based on theoretical reasoning (e.g., the interaction between stable personality traits and variables that fluctuate day-to-day).

The I³ model (Finkel, 2014) conceptualizes behaviour as arising from the main effects and interactions of three components: instigation, impellance, and inhibition. *Instigation* involves exposure to a target object, which affords a person some behaviour. When IPV is the behavioural outcome of interest, an example of instigation would be a person hearing their partner direct an insulting comment towards them. *Impellance* constitutes situational or dispositional variables not inherent to the instigating factor that increase one’s propensity to respond to the instigation with the target behaviour. Using the IPV example again, impellance may include one’s own attachment anxiety and the associated problems with emotion regulation strategies. Lastly, *inhibition* constitutes those factors that make it more likely that one will override the behavioural proclivity generated by instigation, impellance, and their interaction; inhibitory factors make it less likely for one to actually enact the target behaviour. In the case of IPV, inhibitory factors may include feeling a strong commitment to a romantic partner, while disinhibiting factors may include alcohol use and ego depletion. Further, the I³ model facilitates hypothesis generation surrounding how these variables relate to one another to predict IPV. The most widely known theory arising from the framework of the I³ model is the

“Perfect Storm Theory” (Finkel, 2014). This theory posits that a target behaviour is most likely to be enacted in circumstances where instigation and impellance are high, whereas inhibition is low. Any other combination of factors (e.g., low instigation, high impellance, low inhibition; high instigation, low impellance, low inhibition; etc.) will result in a lower likelihood that the behaviour is enacted.

Finkel and colleagues (2011) have previously applied the I^3 model to the study of IPV. They investigated dispositional aggressiveness as an impellance factor for IPV. Using a series of multi-method studies with nationally representative, undergraduate, and community samples, the authors found support for the interaction between dispositional aggression and inhibitors (i.e., ego depletion, stress, executive control) and instigators (i.e., perceived partner provocation, partner neuroticism). Results were in line with the Perfect Storm Theory such that the link between dispositional aggressiveness and IPV was strongest when inhibition was low and instigation high.

The constructs in the current study map onto the components of the I^3 model including impellent factors (i.e., individual vulnerability), instigating factors (i.e., dyadic factors), and inhibiting factors (i.e., situational factors). The hypothesized interactions between these variables can be understood from the perspective of the I^3 framework and the associated Perfect Storm Theory.

The constructs of interest for the current study will be situated in a single model for risk for IPV. I propose the model presented in Figure 1, in which I conceptualize attachment insecurity as an individual vulnerability factor that interacts with: 1) dyadic problems: perceived inadequacy of partner support and conflict, attachment threat (felt rejection and anxiety about acceptance); and 2) disinhibitors: alcohol use and ego

depletion, to predict IPV perpetration. The main effects and interactions following from this model will be outlined in the following hypotheses that are informed by attachment theory and the literature around how insecurely attached individuals may respond to attachment threat with hyperactivating and deactivating strategies of emotion regulation, as well as respond to partner support and conflict differently. Hypotheses are also informed by literature around alcohol consumption and ego depletion as disinhibitory risk factors for aggressive behaviour.

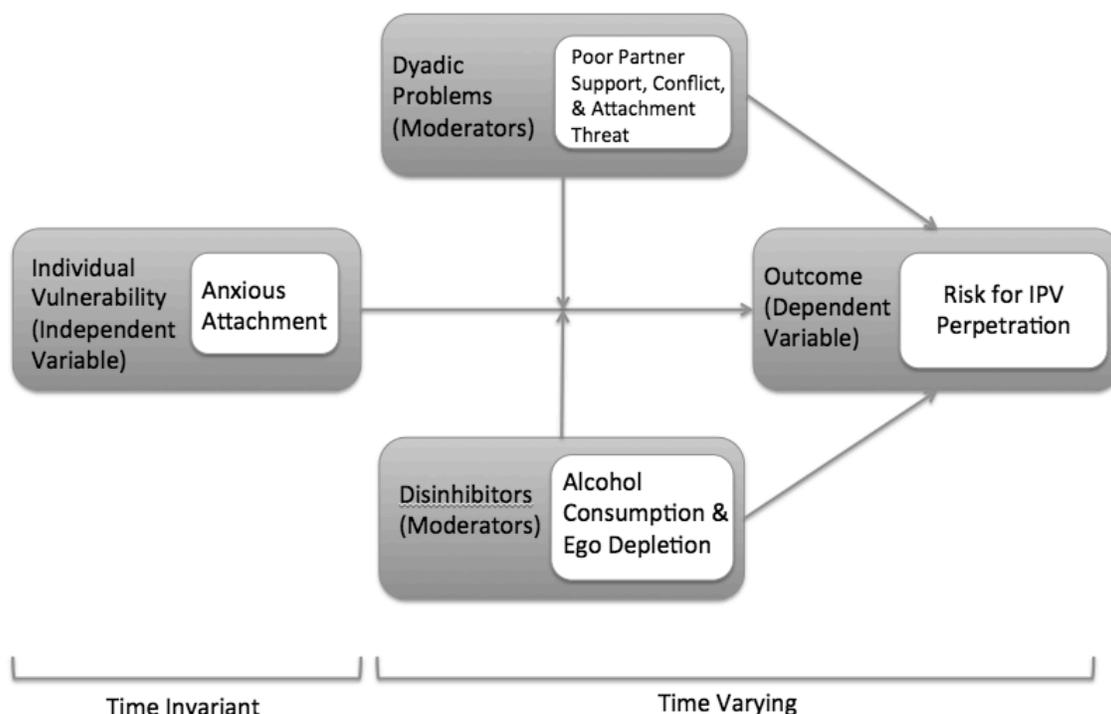


Figure 1. Proposed model for risk for IPV perpetration. Insecure attachment is the independent variable and interacts with moderators, daily variations in dyadic problems and disinhibitors, to predict the dependent variable, IPV perpetration.

Hypotheses.

1. Attachment anxiety will be related to increased risk for IPV perpetration.

- a. While attachment anxiety is typically slightly higher in women, both men and women high in anxiety will be more likely to perpetrate IPV.
 - b. Men and women who endorse high levels of non-gender normative attachment dimensions (i.e., men who are high in anxiety and women who are high in avoidance) may be especially likely to perpetrate IPV.
2. Securely attached individuals will be more likely to perceive partner support as beneficial than will insecurely attached individuals.
 - a. Avoidant individuals will perceive emotional partner support as less beneficial and instrumental support as more beneficial. Anxious individuals will perceive neither form of support as beneficial.
 - b. Relationship conflict will be more distressing to anxious and avoidant individuals than to secure individuals.
3. Participants will differ by attachment style on daily reports of felt rejection, felt acceptance, and anxiety about acceptance.
 - a. Anxious individuals will report greater felt rejection and anxiety about acceptance, and lower felt acceptance from their partner on a daily basis than secure or avoidant individuals. Avoidant individuals may report the lowest levels of felt rejection and anxiety about acceptance.
 - b. Women may be more likely to endorse felt rejection and anxiety about acceptance than men, but to the extent that either reports high levels of these they will be linked to IPV.
4. On days on which individuals perceive inadequate support, high conflict, or low positive regard from their partners, IPV will be more likely to occur subsequently.

5. There will be a 2-way interaction such that problems with perceived partner support, conflict, and low positive regard will be more dysregulating for anxiously attached individuals and therefore more likely to predict subsequent IPV.
6. There will be a 2-way interaction such that on days when individuals consume alcohol or experience ego depletion, they will be more likely to respond to subsequent problems with perceived support, conflict, and low positive regard using IPV.
7. There will be a 3-way interaction such that IPV will be most likely for individuals with anxious attachment on days on which they consume alcohol or experience ego depletion, and subsequently perceive problems with partner support, relationship conflict, or low positive regard.

Method

Data for this dissertation were collected through an electronic daily diary study of undergraduate psychology students. Data collection took place from March to November 2017. All study protocols were approved by the University of Victoria's Research Ethics Board.

Participants

One hundred and seventeen participants were recruited from the undergraduate psychology study pool. Students were given access to the study sign-up via the online portal. Participants were eligible if they were able to communicate in English, between the ages of 18 and 25, in a romantic relationship of at least 1-month's duration with a partner who was 18 or over, and had in-person contact with their romantic partner at least 2 days/week. Participants were asked to ensure that their partners had not already participated in the study.

Participants reported on their sex assigned at birth (56 male and 61 female) and their gender identity (56 identified as men, 58 as women, 2 as non-binary/third gender, and 1 as gender neutral). In terms of sexual orientation, 107 participants identified as straight/heterosexual, 1 as gay, 1 as lesbian, 7 as bisexual, and one participant did not respond. The majority of participants were not living with their partners (69.2%), described their relationships as exclusive (92.3%; 5.1% described their relationships as open), and were not married (94.9%; 3.4% common-law married; 0.9% legally married). The average length of participants' relationships was 1.94 years ($SD = 2.29$). The mean age of participants was 20.74 years ($SD = 1.99$), while the mean age of their partners was 22.12 years ($SD = 4.30$). Participants had an average of 14.26 years ($SD = 1.40$) of

education and an average yearly income of \$12,338 ($SD = 8,270$). Within the sample, 70.9% of participants identified as white or Caucasian, 14.5% as East Asian, 5.1% as South Asian, 3.4% as Indigenous, 3.4% as Latin American, 2.6% as West Asian or Arab, 1.7% as Black or African, and 0.9% as Southeast Asian, while 5 participants did not respond. Percentages add up to more than 100 as six participants identified as belonging to more than one demographic group.

Students received 8 psychology credits as compensation for completing the study (2 credits for the baseline assessment and 6 credits for the daily diary portion), which could be used to apply an extra 4% increase to their final grade in a psychology course. Participants who completed at least 11 of 14 daily diaries were entered into a draw to win one of two \$25 gift certificates to the campus bookstore at the study's completion.

Four men reported a change in relationship status during the two-week daily diary. These participants were informed that they were no longer eligible to continue in the study due to their change in relationship status and their data were excluded from analyses, but received full credits. One woman was the sibling of another participant in the study, and therefore her data were also excluded from analyses to minimize dependency in the data. The 10 participants who identified as LGBTQ were excluded from the analyses due to the fact that there were too few cases to analyze these groups separately. These participants were excluded with the acknowledgement that these populations may have lived experiences, particularly in the context of romantic relationships, that differ from cis-gendered, straight individuals. To lump LGBTQ individuals together with the dominant cis-gendered, heterosexual sample, or to generalize the results from the dominant group to these populations would be

methodologically and ethically problematic. After exclusions, there were a total of 102 baseline responses and 1,146 daily diary entries completed. Of these participants, 98 were included in analyses, as four participants were missing data at the variable level and could not be included in multilevel modeling.

Procedures

Once students vetted themselves through the eligibility criteria posted on the online portal and signed up for the study, they were scheduled for an hour-long baseline assessment. At the baseline assessment, participants were led through the informed consent procedure for the entire study, including the limits to confidentiality. They then completed self-report questionnaires on time-invariant variables (i.e., those that were not measured repeatedly throughout the daily diary portion, as they were not expected to change) for the remainder of the hour. Self-report questionnaires included measures of demographics, adult romantic attachment, intimate partner violence over the past year for the current relationship, relationship satisfaction, felt acceptance and rejection by their partner, alcohol consumption patterns and related problems over the past year, and trait self-control. Participants completed questionnaires online in separate rooms to minimize the social desirability bias that may be more prevalent with paper and pencil questionnaires, and to minimize confidentiality concerns.

At the end of the baseline assessment, participants received a debriefing on the baseline assessment and a list of referrals to services on campus and in the broader community (e.g., counseling and mental health services, crisis lines, transitional housing and shelters). Participants were then instructed on how to complete the daily diaries, commencing the day after the baseline assessment. They filled out a practice diary, and

were given the opportunity to ask for clarification about any items. Participants chose whether they preferred to receive daily text message prompts or emails with a link to each day's survey. No participants chose the option to complete paper and pencil daily diaries. The baseline assessment and daily diary surveys were hosted online using LimeSurvey, a service supported by the University of Victoria Psychology Department with all data stored on a server on campus.

For the 14-day period of the daily diary portion, participants received the survey link at 8pm each evening via text message or email, and were instructed to complete the survey as close to bedtime as possible to maximize participants' reporting of the full day's events. The survey was available for participants to fill out until 9am the following day. This sampling procedure has been used in previous daily diary studies (e.g., Bresin, 2014). The survey asked participants to report on the kind of contact they had with their partner that day (e.g., in-person, telephone), psychological and physical IPV perpetration and victimization, perceptions of partner support, conflict, acceptance, and rejection, alcohol use, and ego depletion for each day.

Measures

Romantic attachment. Participants self-reported on their adult romantic attachment orientation using the Revised Experiences in Close Relationships Inventory (ECR-R; Brennan et al., 1998; & Fraley et al., 2000; Appendix A). The ECR-R is a 36-item scale, which asks participants to rate their level of agreement with statements about how one might feel about romantic relationships, based on their experience of relationships in general. In the current study, the instructions were modified so that participants were asked to respond only based on their current relationship. The ECR-R

has two subscales, the anxiety subscale and the avoidance subscale, and example items from each are “I worry about being abandoned,” and “I get uncomfortable when a romantic partner wants to be very close,” respectively. Participants responded using a 7-point Likert scale (1 = *Disagree Strongly*, and 7 = *Agree Strongly*). Ten items were reverse coded. Items comprising the anxiety and avoidance subscales were totaled, with higher scores indicating greater levels of attachment anxiety and attachment avoidance, respectively. Scores on each subscale range between 18 and 126, with 72 as the cut-off for high (above 72) and low (below 72) attachment anxiety and avoidance (Brennan et al., 1998).

The anxiety and avoidance subscales from the ECR-R demonstrated excellent reliability for this sample, Cronbach’s $\alpha = .91$ for the attachment anxiety subscale, and Cronbach’s $\alpha = .94$ for the attachment avoidance subscale. Mean ratings were 55.47 ($SD = 19.59$) and 42.07 ($SD = 18.26$) for attachment anxiety and avoidance, respectively. For attachment anxiety, 18.6% of participants’ scores fell above the cutoff, and for attachment avoidance, 5.9% of participants’ scores fell above the cutoff.

Daily diary measures. Previous research on the daily diary methodology has indicated that their length should be minimized to increase compliance and mitigate bias over time due to fatigue or habituation (Bolger et al., 2003; Morren, Dulmen, Ouwerkerk, & Bensing, 2009). In service of this aim, previous researchers have focused on efficiently obtaining information from respondents using face-valid questions in the form of checklists for the presence of target behaviours or global Likert-rating scales for perceptions of mood and relationship variables (e.g., Feeney, 2002; Starr & Davila, 2012). These diary items capture daily variations in participants’ behaviours and

perceptions while minimizing the burden that comes with repeated measurements. The items for this study were formatted based on these considerations.

At the beginning of each daily diary, participants were asked, “Did you have face-to-face contact with your partner today (i.e., did you see them in person)?” and “Did you have telephone contact with your partner today *excluding texting* (i.e., talking on the phone, Skype, or FaceTime)?” If the answer was no to both questions, the survey skipped the items related to IPV and perceptions of interactions with partners. If the answer was no for in-person contact, but yes for telephone contact, the survey presented psychological but not physical IPV items. If the answer was yes to in-person contact (regardless of whether there was telephone contact or not), participants were presented with all physical and psychological IPV items. Participants who indicated that they had in-person and/or telephone contact with their partner were also asked to indicate the timeframe(s) of contact with their partner, “During what hours of the day did you see your partner in person?” and “During what hours of the day did you speak to your partner on the phone/Skype/FaceTime?” All participants were then presented the rest of the items related to each of the time varying constructs of interest. See Appendix B for the daily diary questionnaire in its entirety. Out of the 1,146 daily diary responses, participants reported seeing their partners in-person on 64.9% of daily diary entry days, and having telephone/Skype/FaceTime contact with their partners on 27.0% of the days. Participants reported having any form of contact with their partners on 888 (77.5%) of the daily diary days.

Intimate partner violence. Participants were asked to indicate via a checklist any instances of physical and psychological IPV (from the CTS2; Straus et al., 1996) that

they or their partner perpetrated that day and they were also asked to report as accurately as possible the time of each act of aggression. The questions were phrased as follows: “Please check all of the following behaviours that *you* used *towards your partner* today. For any behaviours you check, please indicate to the best of your ability at what time of day they occurred. If the behaviour occurred more than once, please list times for all occurrences (e.g., 10:14am, 2:38pm, 9:45pm),” and “Please check all of the following behaviours that *your partner* used *towards you* today. For any behaviours you check, please indicate to the best of your ability at what time of day they occurred. If the behaviour occurred more than once, please list times for all occurrences (e.g., 10:14am, 2:38pm, 9:45pm).” The list included the 20 physical and psychological aggression items from the CTS2 (e.g., “thrown something at your partner that could hurt,” and “insulted or swore at you”). In addition, there was one yes or no item assessing severity of injury (if any), “Did you receive any injuries resulting from your partner’s behaviour that require medical attention today?” which was used to identify any participants at high risk and in need of crisis intervention throughout the study. No participants indicated that they were at risk during the daily diary (i.e., reported injury requiring medical attention).

Participants reported perpetrating at least one act of psychological IPV in 27 diaries. Due to low endorsement of physical IPV (only four daily diaries endorsed any physical IPV perpetration), physical IPV was dropped as an outcome variable from the analyses. Psychological IPV was treated as a dichotomous outcome (absent or present) in all analyses.

Coercive controlling behaviours. Participants reported on their own and their partners’ perpetration of coercive controlling behaviours each day using a checklist of the

16 items adapted from the Dominance-Isolation subscale of the Psychological Maltreatment of Women Inventory (PMI; Tolman, 1989). The question was framed in the same way as the IPV items above. Participants reported perpetrating at least one act of coercive controlling behaviour in 28 diaries. Coercive controlling behaviours were treated as a dichotomous outcome (absent or present) in all analyses.

Romantic relational aggression. Participants reported any instances of romantic relational aggression perpetration or victimization on each day using a checklist of the 10 items from the romantic relational aggression subscale of the Self-Report of Aggression and Social Behaviour Measure (SASBM; Morales & Crick, 1998). The question was phrased in the same way as the IPV and coercive controlling behaviours items above. Participants reported perpetrating at least one act of relational aggression in 7 diaries. Relational aggression was treated as a dichotomous outcome (absent or present) in all analyses.

Felt partner acceptance and rejection. In order to assess participants' daily experiences of acceptance, rejection, and anxiety about acceptance by one's partner (perceived positive regard), three composite scales from a daily diary study conducted by Murray et al. (2003) were administered. Participants rated the degree to which they experienced what was described by each item that day (0 = not at all; 6 = extremely). The scales included 6 items of felt rejection (e.g., "rejected or hurt by partner,"), 6 items of felt acceptance (e.g., "partner accepts me as I am,") and 5 items of anxiety about acceptance (e.g., "partner is pulling away from me,").

Each of the three scales demonstrated good or excellent reliability (Cronbach's α = .93 for felt rejection, .92 for felt acceptance, and .84). In order to capture daily

experiences of attachment threat, the items from the felt rejection and anxiety about acceptance scales were combined to create an attachment threat composite score, which also demonstrated excellent reliability (Cronbach's $\alpha = .92$).

Partner support and conflict. Participants then reported on their perceptions of the support they received from their partner and the conflict they experienced with their partner for the day using 7-point Likert scale items (0 = not at all, and 6 = extremely). Partner support was assessed with three items corresponding to perceptions of emotional support, instrumental support, and adequacy of support. Participants were asked, "To what degree did your partner listen to or comfort you today?" to assess the level of emotional support they perceived from their partner; the phrasing of this item was based on a diary study of perceived emotional partner support by Bolger, Zuckerman, and Kessler (2000). To assess instrumental support, participants were asked, "To what degree did your partner help you solve a problem today?" This item was created based on the operationalization of instrumental support as problem solving in previous studies (Mikulincer & Florian, 1997; Simpson et al., 2007). Lastly, participants were asked, "How well did your partner's support fit your needs today?" to assess perceptions of partner support adequacy. This item was reverse coded to reflect problems with support fit in some analyses.

Likert items also were used to assess daily perceptions of conflict. The items were based on a daily diary study of perceptions of conflict in romantic relationships by Campbell et al. (2005). Participants were asked, "How often did you experience conflict with your partner today?" (0 = not at all, and 6 = extremely), "At what time did the most

serious conflict with your partner occur today (e.g., 6:19pm)?”, and “How hurt were you by this conflict?” (0 = not at all, and 6 = extremely).

In order to reduce the number of interaction terms, a composite score reflecting dyadic problems was created by combining the attachment threat, problems with support fit, and perceived conflict items. The attachment threat score was divided by the number of items comprising the scale before adding this value to the problems with support fit and perceived conflict items. Cronbach’s α for the items comprising the dyadic problems composite score was .69.

Alcohol use. Participants were also asked to quantify their daily alcohol use. First they were asked, “Did you consume any alcoholic drinks today?” If the answer was no, the survey skipped the remaining questions related to alcohol use. If the answer was yes, they were asked, “How many alcoholic drinks did you consume today (1 drink = 1 bottle/can of beer/cider, 5 oz. of wine, 1.5 oz. [1 shot] of hard liquor)?” and “During which hours of the day were you drinking (e.g., 11:25am-12:30pm, 7:00pm-10:45pm)?” Participants reported consuming any amount of alcohol beverages on 14.0% of the daily diaries. The amount consumed ranged from 0.2 to 12 standard drinks during one day. The average number of standard drinks consumed on drinking days was 2.63 ($SD = 2.28$).

Stress and coping. As ego depletion cannot be measured directly, stress and coping were used as proxies to assess taxation of participants’ self-regulatory processes on a daily basis. Likert scale items about daily experiences of stress and coping were based on items from the Coping Operations Preference Enquiry (COPE; Carver, Scheier, & Weintraub, 1989) and the Ways of Coping Questionnaire (Folkman, Lazarus, Dunkel-Schetter, & Gruen, 1986) that Muraven and Baumeister (2000) identified as related to

self-regulation and ego depletion. First, participants reported on their perception of experiences of stress that day, “To what degree did you confront difficult or stressful events today?” (0 = *not at all*, and 6 = *extremely*), and “At what time did you experience the most difficult or stressful event today (e.g., 6:19pm)?” They were then asked to report on their inhibitory coping with stress, “During these difficult or stressful events, to what degree did you purposefully concentrate on finding a solution?” and “During these difficult or stressful events, to what degree did you try to keep your feelings from interfering with other things?”

Data Preparation and Analysis Plan

Prior to conducting the main analyses, standard data screening procedures were conducted to determine the presence of potential outliers and to evaluate normality of the sampling distributions. The sampling distributions for attachment anxiety and avoidance were not significantly skewed or kurtotic. Therefore, data transformations were not deemed necessary to improve the normality of the sampling distributions. Missing value analysis was performed to determine whether data missing at the item level was missing at random. From the baseline data, the only variables for which more than 5% of data were missing were income (9.8%) and whether partners were living together (5.4%). Little’s MCAR test indicated that the data were likely to be missing completely at random ($\chi^2(11,744) = 6212.97, p = 1.00$). Missing data for items comprising composite scores (i.e., the ECR-R attachment anxiety and avoidance subscales) were replaced using mean item substitution.

Hypotheses were tested using multilevel modeling in Hierarchical Linear Modeling (HLM; Raudenbush et al., 1995). The HLM approach is appropriate for

handling longitudinal and nested data, and its use of maximum likelihood estimation precludes the need for balanced intervals between assessments for individuals and accommodates missing data (i.e., on days when participants did not complete the daily diary). The models used in this study are 2-level models, representing measurement occasions nested within individuals. Level-2 represents the level of the individual and comprises between-person variables that were only measured at one occasion as they are thought to be stable over time. Nested within Level-2 are the repeated measurement occasions for each individual, which make up Level-1. Level-1 represents daily diary entries and comprises within-person variables that do change and were measured each day.

To prepare data for analysis using HLM, Level-2 predictors and potential covariates (between-person variables) were grand-mean centered by subtracting the sample mean from each person's value on that variable. This aids interpretation as the results produced by HLM show how individuals who are higher or lower than average on a certain variable differ on the outcome of interest. Level-1 predictors (within-person variables) were person-mean centered by subtracting each person's mean on a given variable across all measurement occasions (i.e., their average score across all daily diaries) from each individual measurement. Person-mean centering was done to address the conflation of within-person and between-person effects and to obtain a pure estimate of the within-person effects at Level-1, as outlined by Peugh (2010). In other words, person-mean centering allows one to see how a given person's fluctuations from their own personal average on a predictor variable affect the outcome (independent of how they compare to other individuals). Time was centered on the first day of the daily diary.

Age, partner's age, gender, years of education, individual annual income, ethnicity, relationship status, cohabitation status, and length of relationship at the time of baseline assessment were all explored as potential covariates. None of these variables were significantly associated with the slopes of psychological IPV, coercive control, or relational aggression. Therefore, no covariates were entered into subsequent models.

The models estimating the main outcomes (psychological IPV, coercive controlling behaviours, and relational aggression) were fit using a Bernoulli sampling distribution (Raudenbush, Bryk, Cheong, Congdon, & du Tolt, 2004). This is because these outcome variables are dichotomously distributed (0 for the outcome did not occur on a given day, 1 for the outcome did occur on a given day). Bernoulli models yield odds ratios (the relative likelihood of an event occurring) and the results indicate whether a change in a given independent variable will coincide with an increase or decrease in the odds of the outcome event occurring. An independent variable with an odds ratio of less than 1 indicates that the outcome is less likely to occur as you increase the value of the independent variable. Conversely, if an independent variable has an odds ratio greater than 1, increasing the value of the independent variable increases the likelihood of that outcome happening. Odds ratios represent a comparison of probabilities.

The following equations comprise the basic form of the models predicting psychological IPV, coercive controlling behaviours, and relational aggression:

$$\begin{aligned} \text{Level-1:} \quad & \text{Prob}(PSYCH\ AGGRESSION_{ii} = 1|\pi_i) = \phi_{ii} \\ & \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\ & \eta_{ii} = \pi_{0i} \end{aligned}$$

$$\text{Level-2:} \quad \pi_{0i} = \beta_{00} + r_{0i}$$

and

$$\begin{aligned} \text{Level-1:} \quad & \text{Prob}(\text{COERCIVE CONTROL}_{L_{ii}} = 1 | \pi_i) = \phi_{ii} \\ & \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\ & \eta_{ii} = \pi_{0i} \end{aligned}$$

$$\text{Level-2:} \quad \pi_{0i} = \beta_{00} + r_{0i}$$

and

$$\begin{aligned} \text{Level-1:} \quad & \text{Prob}(\text{RELATIONAL AGGRESSION}_{ii} = 1 | \pi_i) = \phi_{ii} \\ & \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\ & \eta_{ii} = \pi_{0i} \end{aligned}$$

$$\text{Level-2:} \quad \pi_{0i} = \beta_{00} + r_{0i}$$

At Level-1, the probability of aggression on a given day for a given individual (ϕ_{ii}) with possible values ranging from 0 to 1 can also be expressed as an odds ratio $[\phi_{ii}/(1 - \phi_{ii})]$, which is a ratio of the probability of aggression occurring divided by the probability of aggression not occurring with possible values ranging from 0 to positive infinity. The logarithmic transformation of the odds ratio has possible values from negative infinity to positive infinity. At Level-2, the log transformation of the odds ratio for aggression for an individual is modeled as a function of the mean frequency of aggression across all individuals (β_{00} ; the sample average intercept), plus a residual term (r_{0i}) reflecting the deviation of each individual from the whole sample's average.

Other hypotheses concerning outcome variables outside of IPV (i.e., support fit, hurt as a result of conflict, felt rejection, felt acceptance, and anxiety about acceptance) were fit using models with a normal distribution. This is due to the fact that these outcome variables are not dichotomous, but rather continuously distributed. The following equations comprise the basic form of the models predicting support fit, hurt as a result of conflict, felt rejection, felt acceptance, and anxiety about acceptance:

$$\text{Level-1:} \quad \text{SUPPORTFIT}_{ii} = \pi_{0i} + e_{ii}$$

Level-2: $\pi_{0i} = \beta_{00} + r_{0i}$

and

Level-1: $HURT_{ti} = \pi_{0i} + e_{ti}$

Level-2: $\pi_{0i} = \beta_{00} + r_{0i}$

and

Level-1: $FELT REJECTION_{ti} = \pi_{0i} + e_{ti}$

Level-2: $\pi_{0i} = \beta_{00} + r_{0i}$

and

Level-1: $FELT ACCEPTANCE_{ti} = \pi_{0i} + e_{ti}$

Level-2: $\pi_{0i} = \beta_{00} + r_{0i}$

and

Level-1: $ANXIETY ACCEPTANCE_{ti} = \pi_{0i} + e_{ti}$

Level-2: $\pi_{0i} = \beta_{00} + r_{0i}$

At Level-1, the level of support fit, hurt, felt rejection, felt acceptance, or felt anxiety on a given day for a given individual is modeled as a function of the mean value of the that variable for that individual over the entire daily diary (π_{0i} ; the intercept) plus an error term (e_{ti}) reflecting day-to-day variations from the mean of that individual. At Level-2, the mean outcome value for an individual is modeled as a function of the mean outcome value across all individuals (β_{00} ; the sample average intercept), plus a residual term (r_{0i}) reflecting the deviation of each individual from the whole sample's average.

For each hypothesis, variables were entered at Level-1 or Level-2 to test their effects on the slope of the outcome variable. The models used to test each hypothesis are as follows.

Hypothesis 1: Attachment anxiety will be related to increased risk for IPV perpetration. At Level-2, time-invariant attachment anxiety was grand-mean centered, such that the sample mean was subtracted from each individual's attachment anxiety score. This was done so that the results would show the effect of being more anxious than the average person on perpetration of IPV. The following models predicted risk of psychological IPV, coercive controlling behaviours, and relational aggression, with attachment anxiety (ANX) entered at Level-2:

$$\begin{aligned} \text{Level-1:} \quad & \text{Prob}(\text{PSYCH AGGRESSION}_{ii} = 1|\pi_i) = \phi_{ii} \\ & \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\ & \eta_{ii} = \pi_{0i} \end{aligned}$$

$$\text{Level-2:} \quad \pi_{0i} = \beta_{00} + \beta_{01} * (\text{ANX}_i) + r_{0i}$$

and

$$\begin{aligned} \text{Level-1:} \quad & \text{Prob}(\text{COERCIVE CONTROL}_{ii} = 1|\pi_i) = \phi_{ii} \\ & \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\ & \eta_{ii} = \pi_{0i} \end{aligned}$$

$$\text{Level-2:} \quad \pi_{0i} = \beta_{00} + \beta_{01} * (\text{ANX}_i) + r_{0i}$$

and

$$\begin{aligned} \text{Level-1:} \quad & \text{Prob}(\text{RELATIONAL AGGRESSION}_{ii} = 1|\pi_i) = \phi_{ii} \\ & \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\ & \eta_{ii} = \pi_{0i} \end{aligned}$$

$$\text{Level-2:} \quad \pi_{0i} = \beta_{00} + \beta_{01} * (\text{ANX}_i) + r_{0i}$$

Hypothesis 1a: While both men and women high in anxiety will be more likely to perpetrate IPV, attachment anxiety will be slightly higher in women. A one-tailed t-test was used to test whether levels of attachment anxiety were significantly higher in women versus men.

Hypothesis 1b: Men and women who endorse high levels of non-gender normative attachment dimensions (i.e., men who are high in anxiety and women who are high in avoidance) may be especially likely to perpetrate IPV. In order to test the effects of gender on attachment and IPV, men's and women's attachment anxiety and avoidance were dummy coded such that separate parameter estimates were generated for men's anxiety and avoidance (*MEN ANX* and *MEN AVO*), and women's anxiety and avoidance (*WOMEN ANX* and *WOMEN AVO*). Men's and women's parameter estimates were then compared using hypothesis testing in HLM, to determine whether non-gender normative attachment orientations were more strongly linked to IPV (i.e., testing whether men's anxiety was more strongly associated with IPV than women's, and whether women's avoidance was more strongly associated with IPV than men's). All variables were grand-mean centered and entered at Level-2. The following models predicted risk of psychological IPV, coercive controlling behaviours, and relational aggression:

Level-1: $\text{Prob}(PSYCH\ AGGRESSION_{ii} = 1|\pi_i) = \phi_{ii}$
 $\log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii}$
 $\eta_{ii} = \pi_{0i}$

Level-2: $\pi_{0i} = \beta_{00} + \beta_{01}*(MEN\ ANX_i) + \beta_{02}*(WOMEN\ ANX_i)$
 $+ \beta_{03}*(MEN\ AVO_i) + \beta_{04}*(WOMEN\ AVO_i) + r_{0i}$

and

Level-1: $\text{Prob}(COERCIVE\ CONTROL_{ii} = 1|\pi_i) = \phi_{ii}$
 $\log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii}$
 $\eta_{ii} = \pi_{0i}$

Level-2: $\pi_{0i} = \beta_{00} + \beta_{01}*(MEN\ ANX_i) + \beta_{02}*(WOMEN\ ANX_i)$
 $+ \beta_{03}*(MEN\ AVO_i) + \beta_{04}*(WOMEN\ AVO_i) + r_{0i}$

and

Level-1: $\text{Prob}(RELATIONAL\ AGGRESSION_{ii} = 1|\pi_i) = \phi_{ii}$
 $\log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii}$

$$\eta_{ii} = \pi_{0i}$$

$$\text{Level-2: } \pi_{0i} = \beta_{00} + \beta_{01}*(MEN\ ANX_i) + \beta_{02}*(WOMEN\ ANX_i) \\ + \beta_{03}*(MEN\ AVO_i) + \beta_{04}*(WOMEN\ AVO_i) + r_{0i}$$

Hypothesis 2: Securely attached individuals will be more likely to perceive partner support as beneficial than insecurely attached individuals. To test this hypothesis, a model with support fit as the outcome and attachment anxiety and avoidance as Level-2 predictors was run. The following model predicted support fit:

$$\text{Level-1: } SUPPORT\ FIT_{ii} = \pi_{0i} + e_{ii}$$

$$\text{Level-2: } \pi_{0i} = \beta_{00} + \beta_{01}*(ANX_i) + \beta_{02}*(AVO_i) + r_{0i}$$

Hypothesis 2a: Avoidant individuals will perceive emotional partner support as less beneficial and instrumental support as more beneficial. Anxious individuals will perceive neither form of support as beneficial. To test participants' perceptions of how well emotional and instrumental support fit their needs, the types of support received on each day were entered as person-mean centered Level-1 predictors. Attachment anxiety and avoidance were then entered at Level-2 to examine their main effects as well as the cross-level interaction between attachment and type of support. Hypothesis testing was then conducted to determine whether the effects of attachment anxiety and attachment avoidance on the slopes of type of support differed significantly. The following model predicted support fit:

$$\text{Level-1: } SUPPORT\ FIT_{ii} = \pi_{0i} + \pi_{1i}*(EMO\ SUPPORT_{ii}) + \\ \pi_{2i}*(INSTRUM\ SUPPORT_{ii}) + e_{ii}$$

$$\text{Level-2: } \pi_{0i} = \beta_{00} + \beta_{01}*(ANX_i) + \beta_{02}*(AVO_i) + r_{0i} \\ \pi_{1i} = \beta_{10} + \beta_{11}*(ANX_i) + \beta_{12}*(AVO_i) + r_{1i} \\ \pi_{2i} = \beta_{20} + \beta_{21}*(ANX_i) + \beta_{22}*(AVO_i) + r_{2i}$$

Hypothesis 2b: Relationship conflict will be more distressing to anxious and avoidant individuals than secure individuals. A model predicting participants' hurt as a result of conflict with their partner was fit with attachment anxiety and avoidance as Level-2 predictors. The following model predicted hurt:

$$\text{Level-1: } HURT_{ii} = \pi_{0i} + e_{ii}$$

$$\text{Level-2: } \pi_{0i} = \beta_{00} + \beta_{01}*(ANX_i) + \beta_{02}*(AVO_i) + r_{0i}$$

Hypothesis 3a: Anxious individuals will report greater felt rejection and anxiety about acceptance and lower felt acceptance from their partner on a daily basis than secure or avoidant individuals. Avoidant individuals may report the lowest levels of felt rejection and anxiety about acceptance. Models predicting felt rejection, felt anxiety, and anxiety about acceptance were fit with attachment anxiety and avoidance entered at Level-2. The following models predicted felt rejection, felt acceptance, and anxiety about acceptance:

$$\text{Level-1: } FELT\ REJECTION_{ii} = \pi_{0i} + e_{ii}$$

$$\text{Level-2: } \pi_{0i} = \beta_{00} + \beta_{01}*(ANX_i) + \beta_{02}*(AVO_i) + r_{0i}$$

and

$$\text{Level-1: } ANXIETY\ ACCEPTANCE_{ii} = \pi_{0i} + e_{ii}$$

$$\text{Level-2: } \pi_{0i} = \beta_{00} + \beta_{01}*(ANX_i) + \beta_{02}*(AVO_i) + r_{0i}$$

and

$$\text{Level-1: } FELT\ ACCEPTANCE_{ii} = \pi_{0i} + e_{ii}$$

$$\text{Level-2: } \pi_{0i} = \beta_{00} + \beta_{01}*(ANX_i) + \beta_{02}*(AVO_i) + r_{0i}$$

Hypothesis 3b: Women may be more likely to endorse felt rejection and anxiety about acceptance than men, but to the extent that either reports high levels of these they will be linked to IPV. Gender was added at Level-2 to the models

predicting felt rejection and anxiety about acceptance. Further models predicting risk of psychological IPV, coercive controlling behaviour, and relational aggression were fit with felt rejection and anxiety about acceptance entered at Level-1. The models are as follows:

$$\text{Level-1: } \text{FELT REJECTION}_{ii} = \pi_{0i} + e_{ii}$$

$$\text{Level-2: } \pi_{0i} = \beta_{00} + \beta_{01}*(\text{GENDER}_i) + \beta_{02}*(\text{ANX}_i) + \beta_{03}*(\text{AVO}_i) + r_{0i}$$

and

$$\text{Level-1: } \text{ANXIETY ACCEPTANCE}_{ii} = \pi_{0i} + e_{ii}$$

$$\text{Level-2: } \pi_{0i} = \beta_{00} + \beta_{01}*(\text{GENDER}_i) + \beta_{02}*(\text{ANX}_i) + \beta_{03}*(\text{AVO}_i) + r_{0i}$$

and

$$\begin{aligned} \text{Level-1: } & \text{Prob}(\text{PSYCH AGGRESSION}_{ii} = 1|\pi_i) = \phi_{ii} \\ & \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\ & \eta_{ii} = \pi_{0i} + \pi_{1i}*(\text{FELT REJECTION}_{ii}) + \pi_{2i}*(\text{ANXIETY ACCEPTANCE}_{ii}) \end{aligned}$$

$$\begin{aligned} \text{Level-2: } & \pi_{0i} = \beta_{00} + r_{0i} \\ & \pi_{1i} = \beta_{10} + r_{1i} \\ & \pi_{2i} = \beta_{20} + r_{2i} \end{aligned}$$

and

$$\begin{aligned} \text{Level-1: } & \text{Prob}(\text{COERCIVE CONTROL}_{ii} = 1|\pi_i) = \phi_{ii} \\ & \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\ & \eta_{ii} = \pi_{0i} + \pi_{1i}*(\text{FELT REJECTION}_{ii}) + \pi_{2i}*(\text{ANXIETY ACCEPTANCE}_{ii}) \end{aligned}$$

$$\begin{aligned} \text{Level-2: } & \pi_{0i} = \beta_{00} + r_{0i} \\ & \pi_{1i} = \beta_{10} + r_{1i} \\ & \pi_{2i} = \beta_{20} + r_{2i} \end{aligned}$$

and

$$\begin{aligned} \text{Level-1: } & \text{Prob}(\text{RELATIONAL AGGRESSION}_{ii} = 1|\pi_i) = \phi_{ii} \\ & \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\ & \eta_{ii} = \pi_{0i} + \pi_{1i}*(\text{FELT REJECTION}_{ii}) + \pi_{2i}*(\text{ANXIETY ACCEPTANCE}_{ii}) \end{aligned}$$

$$\begin{aligned} \text{Level-2:} \quad \pi_{0i} &= \beta_{00} + r_{0i} \\ \pi_{1i} &= \beta_{10} + r_{1i} \\ \pi_{2i} &= \beta_{20} + r_{2i} \end{aligned}$$

Hypothesis 4: On days on which individuals perceive inadequate support, high conflict, or high attachment threat from their partners, IPV will be more likely to occur. Models predicting risk of psychological IPV, coercive controlling behaviours, and relational aggression were fit with lack of support fit, conflict, and attachment threat entered at Level-1. The models are as follows:

$$\begin{aligned} \text{Level-1:} \quad \text{Prob}(PSYCH\ AGGRESSION_{ii} = 1|\pi_i) &= \phi_{ii} \\ \log[\phi_{ii}/(1 - \phi_{ii})] &= \eta_{ii} \\ \eta_{ii} &= \pi_{0i} + \pi_{1i}*(INADEQUATE\ SUPPORT_{ii}) + \pi_{2i}*(CONFLICT_{ii}) \\ &\quad + \pi_{3i}*(ATTACHMENT\ THREAT_{ii}) \end{aligned}$$

$$\begin{aligned} \text{Level-2:} \quad \pi_{0i} &= \beta_{00} + r_{0i} \\ \pi_{1i} &= \beta_{10} + r_{1i} \\ \pi_{2i} &= \beta_{20} + r_{2i} \\ \pi_{3i} &= \beta_{30} + r_{3i} \end{aligned}$$

and

$$\begin{aligned} \text{Level-1:} \quad \text{Prob}(COERCIVE\ CONTROL_{L_{ii}} = 1|\pi_i) &= \phi_{ii} \\ \log[\phi_{ii}/(1 - \phi_{ii})] &= \eta_{ii} \\ \eta_{ii} &= \pi_{0i} + \pi_{1i}*(INADEQUATE\ SUPPORT_{ii}) + \pi_{2i}*(CONFLICT_{ii}) \\ &\quad + \pi_{3i}*(ATTACHMENT\ THREAT_{ii}) \end{aligned}$$

$$\begin{aligned} \text{Level-2:} \quad \pi_{0i} &= \beta_{00} + r_{0i} \\ \pi_{1i} &= \beta_{10} + r_{1i} \\ \pi_{2i} &= \beta_{20} + r_{2i} \\ \pi_{3i} &= \beta_{30} + r_{3i} \end{aligned}$$

and

$$\begin{aligned} \text{Level-1:} \quad \text{Prob}(RELATIONAL\ AGGRESSION_{ii} = 1|\pi_i) &= \phi_{ii} \\ \log[\phi_{ii}/(1 - \phi_{ii})] &= \eta_{ii} \\ \eta_{ii} &= \pi_{0i} + \pi_{1i}*(INADEQUATE\ SUPPORT_{ii}) + \pi_{2i}*(CONFLICT_{ii}) \\ &\quad + \pi_{3i}*(ATTACHMENT\ THREAT_{ii}) \end{aligned}$$

$$\begin{aligned}
\text{Level-2:} \quad \pi_{0i} &= \beta_{00} + r_{0i} \\
\pi_{1i} &= \beta_{10} + r_{1i} \\
\pi_{2i} &= \beta_{20} + r_{2i} \\
\pi_{3i} &= \beta_{30} + r_{3i}
\end{aligned}$$

Hypothesis 5: There will be a 2-way interaction such that problems with perceived partner support, conflict, and attachment threat will be more dysregulating for anxiously attached individuals and therefore more likely to predict subsequent IPV. Models predicting risk of psychological IPV, coercive controlling behaviours, and relational aggression were run with lack of support fit, conflict, and attachment threat entered at Level-1. Attachment anxiety was then entered at Level-2 to test its cross-level interactions with the Level-1 predictors. The models were as follows:

$$\begin{aligned}
\text{Level-1:} \quad & \text{Prob}(\text{PSYCH AGGRESSION}_{ii} = 1 | \pi_i) = \phi_{ii} \\
& \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\
& \eta_{ii} = \pi_{0i} + \pi_{1i} * (\text{INADEQUATE SUPPORT}_{ii}) + \pi_{2i} * (\text{CONFLICT}_{ii}) \\
& \quad + \pi_{3i} * (\text{ATTACHMENT THREAT}_{ii})
\end{aligned}$$

$$\begin{aligned}
\text{Level-2:} \quad \pi_{0i} &= \beta_{00} + \beta_{01} * (\text{ANX}_i) + r_{0i} \\
\pi_{1i} &= \beta_{10} + \beta_{11} * (\text{ANX}_i) + r_{1i} \\
\pi_{2i} &= \beta_{20} + \beta_{21} * (\text{ANX}_i) + r_{2i} \\
\pi_{3i} &= \beta_{30} + \beta_{31} * (\text{ANX}_i) + r_{3i}
\end{aligned}$$

and

$$\begin{aligned}
\text{Level-1:} \quad & \text{Prob}(\text{COERCIVE CONTROL}_{L_{ii}} = 1 | \pi_i) = \phi_{ii} \\
& \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\
& \eta_{ii} = \pi_{0i} + \pi_{1i} * (\text{INADEQUATE SUPPORT}_{ii}) + \pi_{2i} * (\text{CONFLICT}_{ii}) \\
& \quad + \pi_{3i} * (\text{ATTACHMENT THREAT}_{ii})
\end{aligned}$$

$$\begin{aligned}
\text{Level-2:} \quad \pi_{0i} &= \beta_{00} + \beta_{01} * (\text{ANX}_i) + r_{0i} \\
\pi_{1i} &= \beta_{10} + \beta_{11} * (\text{ANX}_i) + r_{1i} \\
\pi_{2i} &= \beta_{20} + \beta_{21} * (\text{ANX}_i) + r_{2i} \\
\pi_{3i} &= \beta_{30} + \beta_{31} * (\text{ANX}_i) + r_{3i}
\end{aligned}$$

and

$$\text{Level-1:} \quad \text{Prob}(\text{RELATIONAL AGGRESSION}_{ii} = 1 | \pi_i) = \phi_{ii}$$

$$\log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii}$$

$$\eta_{ii} = \pi_{0i} + \pi_{1i}*(INADEQUATE SUPPORT_{ii}) + \pi_{2i}*(CONFLICT_{ii}) + \pi_{3i}*(ATTACHMENT THREAT_{ii})$$

Level-2:

$$\pi_{0i} = \beta_{00} + \beta_{01}*(ANX_i) + r_{0i}$$

$$\pi_{1i} = \beta_{10} + \beta_{11}*(ANX_i) + r_{1i}$$

$$\pi_{2i} = \beta_{20} + \beta_{21}*(ANX_i) + r_{2i}$$

$$\pi_{3i} = \beta_{30} + \beta_{31}*(ANX_i) + r_{3i}$$

Hypothesis 6: There will be a 2-way interaction such that on days when individuals consume alcohol or experience stress, they will be more likely to respond to subsequent dyadic problems (composite of perceived support, conflict, and attachment threat) using IPV. Models predicting psychological IPV, coercive controlling behaviours, and relational aggression were run. Main effects and interaction terms were entered at Level-1. Interaction terms were computed by multiplying the z-scores of the variables in question. Interaction terms were: 1. alcohol consumption X dyadic problems, and 2. stress X dyadic problems. For hypotheses 6 and 7, random effects were not included for Level-1 predictors due to constraints on the number of parameter estimates in the model. The models were as follows:

Level-1:

$$\text{Prob}(PSYCH AGGRESSION_{ii} = 1|\pi_i) = \phi_{ii}$$

$$\log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii}$$

$$\eta_{ii} = \pi_{0i} + \pi_{1i}*(ALCOHOL_{ii}) + \pi_{2i}*(STRESS_{ii}) + \pi_{3i}*(DYADIC PROBLEMS_{ii}) + \pi_{4i}*(ALCOHOL X DYADIC PROBLEMS_{ii}) + \pi_{5i}*(STRESS X DYADIC PROBLEMS_{ii})$$

Level-2:

$$\pi_{0i} = \beta_{00} + r_{0i}$$

$$\pi_{1i} = \beta_{10}$$

$$\pi_{2i} = \beta_{20}$$

$$\pi_{3i} = \beta_{30}$$

$$\pi_{4i} = \beta_{40}$$

$$\pi_{5i} = \beta_{50}$$

and

Level-1:

$$\text{Prob}(COERCIVE CONTROL_{ii} = 1|\pi_i) = \phi_{ii}$$

$$\begin{aligned} \log[\phi_{ii}/(1 - \phi_{ii})] &= \eta_{ii} \\ \eta_{ii} &= \pi_{0i} + \pi_{1i}*(ALCOHOL_{ii}) + \pi_{2i}*(STRESS_{ii}) \\ &\quad + \pi_{3i}*(DYADIC PROBLEMS_{ii}) \\ &\quad + \pi_{4i}*(ALCOHOL X DYADIC PROBLEMS_{ii}) \\ &\quad + \pi_{5i}*(STRESS X DYADIC PROBLEMS_{ii}) \end{aligned}$$

Level-2:

$$\begin{aligned} \pi_{0i} &= \beta_{00} + r_{0i} \\ \pi_{1i} &= \beta_{10} \\ \pi_{2i} &= \beta_{20} \\ \pi_{3i} &= \beta_{30} \\ \pi_{4i} &= \beta_{40} \\ \pi_{5i} &= \beta_{50} \end{aligned}$$

and

Level-1:

$$\begin{aligned} \text{Prob}(RELATIONAL\ AGGRESSION_{ii} = 1 | \pi_i) &= \phi_{ii} \\ \log[\phi_{ii}/(1 - \phi_{ii})] &= \eta_{ii} \\ \eta_{ii} &= \pi_{0i} + \pi_{1i}*(ALCOHOL_{ii}) + \pi_{2i}*(STRESS_{ii}) \\ &\quad + \pi_{3i}*(DYADIC PROBLEMS_{ii}) \\ &\quad + \pi_{4i}*(ALCOHOL X DYADIC PROBLEMS_{ii}) \\ &\quad + \pi_{5i}*(STRESS X DYADIC PROBLEMS_{ii}) \end{aligned}$$

Level-2:

$$\begin{aligned} \pi_{0i} &= \beta_{00} + r_{0i} \\ \pi_{1i} &= \beta_{10} \\ \pi_{2i} &= \beta_{20} \\ \pi_{3i} &= \beta_{30} \\ \pi_{4i} &= \beta_{40} \\ \pi_{5i} &= \beta_{50} \end{aligned}$$

Hypothesis 7: There will be a 3-way interaction such that IPV will be most likely for individuals with anxious attachment on days on which they consume alcohol or experience stress, and subsequently perceived dyadic problems. Models predicting psychological IPV, coercive controlling behaviours, and relational aggression were run. The Level-1 main effects and interaction terms from hypothesis 6 were entered (1. alcohol consumption X dyadic problems, and 2. stress X dyadic problems).

Attachment anxiety was entered at Level-2 to test the cross level 3-way interactions between: 1. attachment anxiety X alcohol consumption X dyadic problems, and 2.

attachment anxiety X stress X dyadic problems. Significant interactions were then tested with simple slopes analyses. The models were as follows:

$$\begin{aligned}
 \text{Level-1:} \quad & \text{Prob}(\text{PSYCH AGGRESSION}_{ii} = 1 | \pi_i) = \phi_{ii} \\
 & \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\
 & \eta_{ii} = \pi_{0i} + \pi_{1i} * (\text{ALCOHOL}_{ii}) + \pi_{2i} * (\text{STRESS}_{ii}) \\
 & \quad + \pi_{3i} * (\text{DYADIC PROBLEMS}_{ii}) \\
 & \quad + \pi_{4i} * (\text{ALCOHOL X DYADIC PROBLEMS}_{ii}) \\
 & \quad + \pi_{5i} * (\text{STRESS X DYADIC PROBLEMS}_{ii})
 \end{aligned}$$

$$\begin{aligned}
 \text{Level-2:} \quad & \pi_{0i} = \beta_{00} + \beta_{01} * (\text{ANX}_i) + r_{0i} \\
 & \pi_{1i} = \beta_{10} \\
 & \pi_{2i} = \beta_{20} \\
 & \pi_{3i} = \beta_{30} \\
 & \pi_{4i} = \beta_{40} + \beta_{41} * (\text{ANX}_i) \\
 & \pi_{5i} = \beta_{50} + \beta_{51} * (\text{ANX}_i)
 \end{aligned}$$

and

$$\begin{aligned}
 \text{Level-1:} \quad & \text{Prob}(\text{COERCIVE CONTROL}_{ii} = 1 | \pi_i) = \phi_{ii} \\
 & \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\
 & \eta_{ii} = \pi_{0i} + \pi_{1i} * (\text{ALCOHOL}_{ii}) + \pi_{2i} * (\text{STRESS}_{ii}) \\
 & \quad + \pi_{3i} * (\text{DYADIC PROBLEMS}_{ii}) \\
 & \quad + \pi_{4i} * (\text{ALCOHOL X DYADIC PROBLEMS}_{ii}) \\
 & \quad + \pi_{5i} * (\text{STRESS X DYADIC PROBLEMS}_{ii})
 \end{aligned}$$

$$\begin{aligned}
 \text{Level-2:} \quad & \pi_{0i} = \beta_{00} + \beta_{01} * (\text{ANX}_i) + r_{0i} \\
 & \pi_{1i} = \beta_{10} \\
 & \pi_{2i} = \beta_{20} \\
 & \pi_{3i} = \beta_{30} \\
 & \pi_{4i} = \beta_{40} + \beta_{41} * (\text{ANX}_i) \\
 & \pi_{5i} = \beta_{50} + \beta_{51} * (\text{ANX}_i)
 \end{aligned}$$

and

$$\begin{aligned}
 \text{Level-1:} \quad & \text{Prob}(\text{RELATIONAL AGGRESSION}_{ii} = 1 | \pi_i) = \phi_{ii} \\
 & \log[\phi_{ii}/(1 - \phi_{ii})] = \eta_{ii} \\
 & \eta_{ii} = \pi_{0i} + \pi_{1i} * (\text{ALCOHOL}_{ii}) + \pi_{2i} * (\text{STRESS}_{ii}) \\
 & \quad + \pi_{3i} * (\text{DYADIC PROBLEMS}_{ii}) \\
 & \quad + \pi_{4i} * (\text{ALCOHOL X DYADIC PROBLEMS}_{ii}) \\
 & \quad + \pi_{5i} * (\text{STRESS X DYADIC PROBLEMS}_{ii})
 \end{aligned}$$

$$\begin{aligned}
 \text{Level-2:} \quad & \pi_{0i} = \beta_{00} + \beta_{01} * (\text{ANX}_i) + r_{0i} \\
 & \pi_{1i} = \beta_{10}
 \end{aligned}$$

$$\begin{aligned}\pi_{2i} &= \beta_{20} \\ \pi_{3i} &= \beta_{30} \\ \pi_{4i} &= \beta_{40} + \beta_{41}*(ANX_i) \\ \pi_{5i} &= \beta_{50} + \beta_{51}*(ANX_i)\end{aligned}$$

These models test the Perfect Storm Theory hypothesis (see Figure 2).

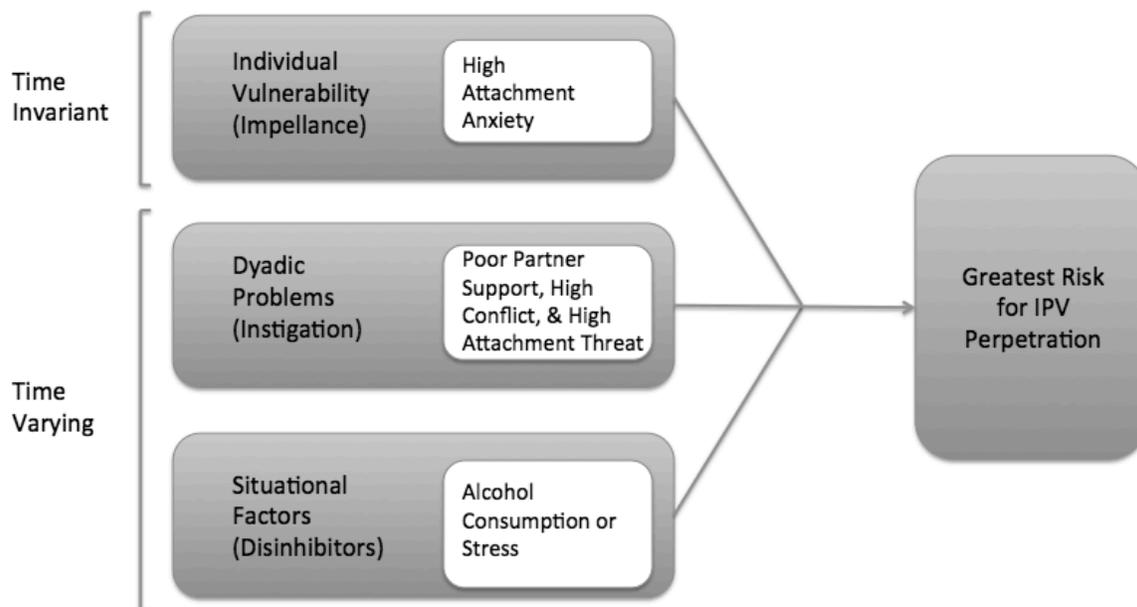


Figure 2. Model testing the Perfect Storm Theory (Hypothesis 7), whereby a 3-way interaction between high attachment anxiety, dyadic problems (a composite of poor partner support fit, high conflict, and high attachment threat), and a disinhibitor (alcohol consumption or stress) will predict the greatest risk for IPV perpetration.

Results

Hypothesis 1: Attachment anxiety will be related to increased risk for IPV perpetration

To test the first hypothesis, separate models predicting the relative likelihood of the three forms of IPV (psychological IPV, coercive controlling behaviours, and relational aggression) were fit with attachment anxiety as a Level-2 predictor. Estimates for fixed effects, standard errors, odds ratios, confidence intervals, and significance values are reported in Table 1.

Table 1.

Hypothesis 1. Attachment anxiety predicting psychological IPV, coercive controlling behaviours, and relational aggression.

	B	SE	Odds ratio	Confidence interval
Psychological IPV				
Intercept	-3.60***	0.17	0.03	(0.02, 0.04)
Attachment Anxiety	0.03***	0.01	1.03	(1.02, 1.06)
Coercive Controlling Behaviours				
Intercept	-3.59***	0.26	0.03	(0.02, 0.05)
Attachment Anxiety	0.04***	0.01	1.04	(1.02, 1.05)
Relational Aggression				
Intercept	-5.17***	0.38	0.01	(0.003, 0.012)
Attachment Anxiety	0.04***	0.01	1.05	(1.02, 1.07)

Note. B = unstandardized estimate; SE = standard error.

***p < .001.

In all three models, the likelihood of perpetrating aggression increased with increasing levels of attachment anxiety. Specifically, for every unit increase in attachment anxiety above the sample mean, participants were 1.03 times more likely to perpetrate psychological IPV, 1.04 times more likely to perpetrate coercive control, and 1.05 times

more likely to perpetrate relational aggression. In other words, the odds are 3-5% greater that a person with an attachment anxiety score 1 point above the sample mean would use these forms of aggression compared to a person with the mean attachment anxiety score. These results support hypothesis 1, in that attachment anxiety does appear to be associated with greater risk for all three forms of IPV perpetration.

Hypothesis 1a: While both men and women high in anxiety will be more likely to perpetrate IPV, attachment anxiety will be slightly higher in women

A one-tailed t-test revealed that on average women's attachment anxiety was significantly greater than men's $t(100) = 1.76, p = .041$, supporting hypothesis 1a.

Hypothesis 1b: Men and women who endorse high levels of non-gender normative attachment dimensions (i.e., men who are high in anxiety and women who are high in avoidance) may be especially likely to perpetrate IPV

The next set of models predicted the three forms of IPV with attachment anxiety and attachment avoidance as Level-2 predictors. Unlike the previous models, attachment anxiety and avoidance were dummy coded so that separate parameter estimates were produced for men and women, and thus these could be compared for gender differences.

Estimates for fixed effects, standard errors, odds ratios, confidence intervals, and significance values are reported in Table 2. Increases in men's attachment anxiety and women's attachment avoidance were associated with greater likelihood of psychological IPV. Men who were more anxious than average were more likely to perpetrate psychological IPV; men who had a one point increase above the mean in attachment anxiety were 1.05 times more likely to perpetrate psychological IPV. Women whose attachment avoidance was higher than average also were more likely to perpetrate psychological IPV; for every point above the mean on attachment avoidance, women

were 1.03 times more likely to perpetrate psychological IPV. The likelihood of perpetrating coercive controlling behaviours was associated with men's and women's attachment anxiety, as well as men's and women's avoidance. For every unit increase above the mean in attachment anxiety, men and women were 1.05 times more likely to perpetrate coercive controlling behaviour. By contrast, men and women who were more avoidant than average were less likely to perpetrate coercive controlling behaviour. For every unit increase above the mean on attachment avoidance, men were 0.95 times as likely to perpetrate coercive control and women were 0.97 times as likely to perpetrate coercive control. Lastly, relational aggression was significantly related to men's and women's anxiety, but not avoidance. Men and women who were more anxious than the average participant were 1.05 and 1.04 times more likely to perpetrate relational aggression per unit increase in anxiety above the mean.

Hypothesis testing was conducted to determine whether men and women differed in terms of the effects of their attachment anxiety and avoidance on likelihood of IPV perpetration. Specifically, it was hypothesized that men's attachment anxiety would increase men's odds of aggression to a greater extent than women's, and women's avoidance more than men's. For all three forms of aggression, men and women did not differ significantly in the degree to which attachment anxiety and avoidance increased or decreased the odds of aggression. These results indicate that attachment anxiety and attachment avoidance do not confer significantly different levels of risk for perpetration of IPV in men versus women, and are not consistent with the hypothesis that non-gender normative levels of attachment anxiety or avoidance are associated with greater risk of

aggression. Results for the model predicting coercive control were unexpected in that attachment avoidance was associated with decreased risk for both men and women.

Table 2.

Hypothesis 1b. Attachment anxiety and avoidance split by gender predicting psychological IPV, coercive controlling behaviours, and relational aggression.

	B	SE	Odds ratio	Confidence interval	Gender difference
Psychological IPV					<i>X</i> ²
Intercept	-3.60***	0.16	0.03	(0.02, 0.04)	
Men's Attachment Anxiety	0.04***	0.01	1.05	(1.02, 1.07)	2.23
Women's Attachment Anxiety	0.02	0.01	1.02	(0.99, 1.04)	
Men's Attachment Avoidance	0.01	0.01	1.01	(0.99, 1.04)	0.97
Women's Attachment Avoidance	0.03*	0.01	1.03	(1.00, 1.06)	
Coercive Controlling Behaviours					
Intercept	-3.78***	0.22	0.02	(0.02, 0.04)	
Men's Attachment Anxiety	0.05***	0.01	1.05	(1.03, 1.07)	0.004
Women's Attachment Anxiety	0.05***	0.01	1.05	(1.03, 1.07)	
Men's Attachment Avoidance	-0.05***	0.01	0.95	(0.93, 0.97)	0.55
Women's Attachment Avoidance	-0.03*	0.02	0.97	(0.94, 1.00)	
Relational Aggression					
Intercept	-5.24***	0.40	0.01	(0.002, 0.012)	
Men's Attachment Anxiety	0.05**	0.01	1.05	(1.02, 1.08)	0.26
Women's Attachment Anxiety	0.04*	0.02	1.04	(1.00, 1.07)	
Men's Attachment Avoidance	0.02	0.01	1.02	(1.00, 1.05)	0.05
Women's Attachment Avoidance	0.03	0.03	1.03	(0.98, 1.09)	

Note. B = unstandardized estimate; SE = standard error.

p* < .05, *p* < .01, ****p* < .001.

Hypothesis 2: Securely attached individuals will be more likely to perceive partner support as beneficial than insecurely attached individuals

To test the effects of insecure attachment on participants' perceptions of how well their partners' support fit their needs on a given day, a model predicting support fit was run with attachment anxiety and avoidance entered at Level-2. Since support fit is a

continuous outcome and was estimated using a model with a normal distribution, deviance values were provided in the output. The likelihood ratio test comparing the difference in deviance values between the fully unconditional model for support fit (i.e., a model with no predictors) and the model including attachment anxiety and avoidance was significant, $\chi^2(2) = 26.26, p < .001$. Therefore, the addition of attachment anxiety and avoidance significantly improved model fit compared to the fully unconditional model. Estimates for fixed effects, variance components, and significance values are reported in Table 3.

Table 3.

Hypothesis 2. Attachment anxiety and avoidance predicting support fit.

	B	SE	Variance	SD
Support Fit				
Intercept	4.30***	0.10	0.74***	0.86
Attachment Anxiety	-0.02**	0.01		
Attachment Avoidance	-0.02***	0.007		

Note. B = unstandardized estimate; SE = standard error; SD = standard deviation.

p < .01, *p < .001.

Both attachment anxiety and avoidance were significantly associated with support fit. Participants who were more anxious or more avoidant than the average person rated their partners' support to be less adequate. Ratings of partner support fell by an average of 0.016 and 0.023 points (on a 7-point Likert scale) for every unit increase in attachment anxiety and avoidance, respectively. These results are consistent with the hypothesis that individuals who are more insecurely attached perceive their partners' support as less beneficial than those who are more securely attached.

Hypothesis 2a: Avoidant individuals will perceive emotional partner support as less beneficial and instrumental support as more beneficial. Anxious individuals will perceive neither form of support as beneficial

Adding to the model from hypothesis 2, ratings of the degree of emotional support and instrumental support that participants received from their partners were added as Level-1 predictors. Attachment anxiety and avoidance were also investigated as moderators of the effect of type of support on perception of support fit. The likelihood ratio test comparing the difference in deviance values between the model for support fit including only attachment anxiety and avoidance and the model with the addition of emotional and instrumental support and their cross-level interactions with attachment was significant, $\chi^2(11) = 489.17, p < .001$. Therefore, the addition of emotional and instrumental support with attachment as a moderator significantly improved model fit.

Estimates for fixed effects, variance components, and significance values are reported in Table 4. Attachment anxiety and avoidance remained negatively associated with participants' ratings of support fit, such that more anxious and more avoidant individuals rated their partners' support as less adequate. In addition, on any given day participants who perceived their partners as providing greater levels of emotional support or greater levels of instrumental support also rated this support as more beneficial. In other words, the degree to which participants perceived their partners as being emotionally supportive or instrumentally supportive was positively associated with their perceptions of how beneficial their partners' support was day to day.

Table 4.

Hypothesis 2a. Support type and attachment insecurity predicting support fit.

	B	SE	Variance	SD	Attachment anxiety and
--	---	----	----------	----	------------------------

					<i>avoidance difference</i>
Support Fit					<i>X</i> ²
Intercept	4.27***	0.11	0.91***	0.95	
Attachment Anxiety	-0.02*	0.01			
Attachment Avoidance	-0.02**	0.01			
Emotional Support (within-person)					3.16
Intercept	0.38***	0.05	0.09***	0.3	
Attachment Anxiety	0.01*	0.003			
Attachment Avoidance	-0.002	0.003			
Instrumental Support (within-person)					0.85
Intercept	0.23***	0.04	0.03**	0.19	
Attachment Anxiety	-0.002	0.002			
Attachment Avoidance	0.003	0.003			

Note. B = unstandardized estimate; SE = standard error; SD = standard deviation.

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

Attachment anxiety also significantly moderated the association between level of partner emotional support and the degree to which the partner's support fit the participant's needs that day. The significance of the simple slopes for this interaction was tested using the method and online calculator created by Preacher, Curran, and Bauer (2006). The slopes for the association between emotional support and support fit were tested at three different values of attachment anxiety (i.e., 1 SD below the mean, mean, and 1 SD above the mean). Simple slopes tests revealed that although the magnitude of the slope for the relationship between emotional support and support fit increased at higher levels of attachment anxiety, none of the slopes were significantly different from zero. That is, although the relationship between emotional support and support fit appeared to be stronger for individuals who were more anxiously attached, the

association was nevertheless nonsignificant. There were no other significant interactions between attachment insecurity and type of support.

Hypothesis 2b: Relationship conflict will be more distressing (hurtful) to anxious and avoidant individuals than to secure individuals

A model predicting participants' feelings of hurt following conflict with their partners was run with attachment anxiety and avoidance entered as Level-2 predictors. The likelihood ratio test comparing the difference in deviance values between the fully unconditional model for hurt and the model including attachment anxiety and avoidance was significant, $\chi^2(2) = 10.69, p < .005$. Therefore, the addition of attachment anxiety and avoidance significantly improved model fit over the fully unconditional model. Estimates for fixed effects, variance components, and significance values are reported in Table 5.

Table 5.

Hypothesis 2b. Attachment anxiety and avoidance predicting hurt as a result of conflict.

	B	SE	Variance	SD
Hurt				
Intercept	1.70***	0.12	0.01	0.07
Attachment Anxiety	0.03***	0.01		
Attachment Avoidance	-0.01	0.01		

Note. B = unstandardized estimate; SE = standard error; SD = standard deviation.

*** $p < .001$.

Attachment anxiety was significantly associated with hurt, such that individuals who were more anxious than the average person reported greater feelings of hurt.

Specifically, for every unit above the mean a person scored on attachment anxiety, their ratings of hurt increased by 0.03 points (on a 7-point Likert scale). Avoidance was not related to hurt.

Therefore, the results obtained lend partial support to the hypothesis, in that more anxiously attached individuals do tend to report feeling hurt more by conflict than secure individuals; however, individuals with greater avoidance do not report a significant difference in their feelings of hurt.

Hypothesis 3a: Anxious individuals will report greater felt rejection and anxiety about acceptance and lower felt acceptance from their partners on a daily basis than secure or avoidant individuals. Avoidant individuals may report the lowest levels of felt rejection and anxiety about acceptance

Separate models were fit to predict the three outcome variables, felt rejection, felt acceptance, and anxiety about acceptance. Attachment anxiety and avoidance were entered into each model at Level-2. Likelihood ratio tests comparing the difference in deviance values between the fully unconditional models and the models including attachment anxiety and avoidance were significant, $\chi^2(2) = 37.22, p < .001$ for felt rejection, $\chi^2(2) = 52.84, p < .001$ for anxiety about acceptance, and $\chi^2(2) = 39.14, p < .001$ for felt acceptance. Therefore, the addition of attachment anxiety and avoidance significantly improved model fit for all three outcomes.

Estimates for fixed effects, variance components, and significance values are reported in Table 6. Both attachment anxiety and avoidance were significantly associated with greater ratings of felt rejection. Individuals reporting greater than average levels of anxiety and avoidance also reported ratings of felt rejection that were 0.01 units greater than average for every point increase in their attachment insecurity. Hypothesis testing revealed that attachment anxiety and avoidance were not significantly different in the magnitude of their associations with felt rejection.

For the model predicting anxiety about acceptance, attachment anxiety was significantly associated with greater anxiety about acceptance. For every point above the

mean an individual fell on attachment anxiety, they had an average increase of 0.03 in their anxiety about acceptance. Attachment avoidance was not associated with a change in anxiety about acceptance. Further, hypothesis testing showed that the association between attachment anxiety and anxiety about acceptance was significantly greater than the association between attachment avoidance and anxiety about acceptance.

Table 6.

Hypothesis 3a. Attachment anxiety and avoidance predicting felt rejection, anxiety about acceptance, and felt acceptance.

	B	SE	Variance	SD	Attachment anxiety and avoidance difference
Felt Rejection					
Intercept	0.52***	0.06	0.22***	0.46	X ²
Attachment Anxiety	0.01***	0.003			0.71
Attachment Avoidance	0.01*	0.004			
Anxiety about Acceptance					
Intercept	0.87***	0.07	0.41***	0.64	8.41**
Attachment Anxiety	0.03***	0.004			
Attachment Avoidance	0.01	0.01			
Felt Acceptance					
Intercept	4.65***	0.10	0.90***	0.95	2.6
Attachment Anxiety	-0.01*	0.01			
Attachment Avoidance	-0.03***	0.01			

Note. B = unstandardized estimate; SE = standard error; SD = standard deviation.

*p < .05, **p < .01, ***p < .001.

The model predicting felt acceptance showed that both attachment anxiety and avoidance were negatively associated with felt acceptance. Participants who were more anxious or more avoidant than the average person also reported lower felt acceptance

from their partners (on average, felt acceptance dropped 0.01 and 0.03 units for every point increase in attachment anxiety and avoidance above the mean, respectively).

These results are consistent with the hypothesis that attachment anxiety would be associated with greater felt rejection and anxiety about acceptance, and lower felt acceptance. There was also a significant association between attachment avoidance and greater felt rejection, which ran contrary to the hypothesis that avoidance would be associated with lower ratings of felt rejection. An association between avoidance and lower felt acceptance that was not hypothesized also emerged.

Hypothesis 3b: Women may be more likely to endorse felt rejection and anxiety about acceptance than men, but to the extent that either reports high levels of these they will be linked to IPV

To determine whether women are more likely to endorse felt rejection and anxiety about acceptance than men, gender was added at Level-2 to the above models predicting felt rejection and anxiety about acceptance from hypothesis 3a. Likelihood ratio tests comparing the difference in deviance values between the models predicting the outcomes with only attachment insecurity and the models including attachment insecurity as well as gender were not significant, $\chi^2(1) = 2.71, p > .05$ and $\chi^2(1) = 3.33, p > .05$ for felt rejection and anxiety about acceptance, respectively. Therefore, the addition of gender did not significantly improve model fit compared to the models including only attachment anxiety and avoidance. As increasing model complexity by adding gender is not justified by a corresponding decrease in deviance values, the results of these models are not reported. As the addition of gender did not improve model fit, the hypothesis that there would be an effect of gender on reports of felt rejection and anxiety about acceptance was not supported.

To test the effects of felt rejection and anxiety about acceptance on partner aggression, models predicting psychological IPV, coercive controlling behaviour, and relational aggression were fit with felt rejection and anxiety about acceptance entered at Level-1 (person-mean centered). Again, as the outcome variables are dichotomous, models were fit with a Bernoulli distribution. Estimates for fixed effects, standard errors, odds ratios, confidence intervals, and significance values are reported in Table 7.

Table 7.

Hypothesis 3b. Felt rejection and anxiety about acceptance predicting psychological IPV, coercive controlling behaviours, and relational aggression.

	B	SE	Odds ratio	Confidence interval
Psychological IPV				
Intercept	-2.76***	0.07	0.06	(0.06, 0.07)
Felt Rejection (within-person)	0.24**	0.09	1.28	(1.08, 1.52)
Anxiety about Acceptance (within-person)	0.36***	0.05	1.44	(1.31, 1.58)
Coercive Controlling Behaviours				
Intercept	-2.61***	0.07	0.07	(0.06, 0.08)
Felt Rejection (within-person)	0.45***	0.12	1.58	(1.24, 2.00)
Anxiety about Acceptance (within-person)	-0.03	0.10	0.97	(0.79, 1.18)
Relational Aggression				
Intercept	-4.87***	0.19	0.01	(0.005, 0.011)
Felt Rejection (within-person)	0.78**	0.24	2.18	(1.36, 3.50)
Anxiety about Acceptance (within-person)	0.22	0.28	1.25	(0.72, 2.19)

Note. B = unstandardized estimate; SE = standard error.

p < .01, *p < .001.

Higher levels of both felt rejection and anxiety about acceptance were significantly associated with greater risk for psychological IPV perpetration. On any given day, when participants reported feeling more rejected or more anxious about

acceptance compared to how they normally felt, they were also more likely to perpetrate psychological IPV. Specifically, for every unit increase in felt rejection and anxiety about acceptance, participants were 1.28 and 1.44 times more likely (an increase in odds of 28 and 44%) to perpetrate psychological aggression. For the models predicting coercive control and relational aggression, greater felt rejection was related to increased risk of aggression, but anxiety about acceptance was not. On days when participants reported feeling more rejected than usual, they were 1.58 times more likely to perpetrate coercive control and 2.18 times more likely to perpetrate relational aggression (an increase in odds of 58 and 118%). Therefore, although daily fluctuations in felt rejection appear to be linked to all three forms of aggression on a given day, anxiety about acceptance was only linked to increased likelihood of psychological IPV.

Hypothesis 4: On days on which individuals perceive inadequate support, high conflict, or high attachment threat from their partners, IPV will be more likely to occur

Three separate models, one predicting each form of IPV, were run with daily person-mean centered ratings of lack of partner support fit, conflict, and attachment threat entered at Level-1.

Estimates for fixed effects, standard errors, odds ratios, confidence intervals, and significance values are reported in Table 8. In the model predicting psychological IPV, participants' daily ratings of conflict with their partner were positively associated with risk for IPV. When individuals reported experiencing more conflict with their partners than usual on a given day, they were 1.50 times more likely to perpetrate psychological IPV for every unit increase in their conflict ratings. Daily lack of support fit and attachment threat were not significantly related to psychological IPV.

Table 8.

Hypothesis 4. Support, conflict, and attachment threat predicting psychological IPV, coercive controlling behaviours, and relational aggression.

	B	SE	Odds ratio	Confidence interval
Psychological IPV				
Intercept	-2.50***	0.06	0.08	(0.07, 0.09)
Lack of Support Fit (within-person)	0.04	0.02	1.04	(0.99, 1.09)
Conflict (within-person)	0.40***	0.06	1.50	(1.32, 1.70)
Attachment Threat (within-person)	0.03	0.06	1.03	(0.91, 1.17)
Coercive Controlling Behaviours				
Intercept	-2.30***	0.05	0.10	(0.09, 0.11)
Lack of Support Fit (within-person)	0.12***	0.03	1.13	(1.07, 1.19)
Conflict (within-person)	0.18**	0.06	1.20	(1.06, 1.36)
Attachment Threat (within-person)	-0.09	0.10	0.91	(0.75, 1.11)
Relational Aggression				
Intercept	-2.79***	0.07	0.06	(0.05, 0.07)
Lack of Support Fit (within-person)	0.03	0.05	1.04	(0.95, 1.13)
Conflict (within-person)	0.33**	0.11	1.39	(1.12, 1.73)
Attachment Threat (within-person)	-0.03	0.13	0.97	(0.75, 1.26)

Note. B = unstandardized estimate; SE = standard error.
 p < .01, *p < .001.

The model predicting coercive controlling behaviours revealed a different pattern of associations. Risk for coercive controlling behaviour was related to participants' daily ratings of lack of partner support fit, as well as partner conflict. Those who perceived their partners' support on a given day as less adequate than usual were 1.13 times more likely to perpetrate coercive control for every unit increase in support inadequacy.

Participants who perceived more conflict in their relationship than usual were 1.20 times more likely to perpetrate coercive controlling behaviours per unit increase in conflict.

Risk for coercive control was not related to daily ratings of attachment threat.

Lastly, the model predicting relational aggression produced a pattern of results similar to psychological IPV. Daily conflict was significantly associated with risk for relational aggression, such that participants who reported having more conflict with their partners than usual on a given day were 1.39 times more likely to use relational aggression for every unit increase in conflict. Support fit and attachment threat were not significantly associated with relational aggression.

These results partially support the hypothesis in that daily fluctuations in level of conflict with partners appear to be linked to risk for all three forms of partner aggression on a given day. Specifically, individuals who reported greater than normal conflict with their partner were 1.20 to 1.50 times more likely to perpetrate psychological IPV, coercive control, and relational aggression per unit increase in conflict. Support fit was not related to psychological IPV and relational aggression, but it was related to risk for coercive controlling behaviours. Consistent with hypotheses, participants who perceived their partners' support as less adequate were also more likely to use coercive control on those days. Attachment threat was not related to daily risk for any form of aggression.

Hypothesis 5: There will be a 2-way interaction such that problems with perceived partner support, conflict, and attachment threat will be more dysregulating for anxiously attached individuals and therefore more likely to predict subsequent IPV

Adding to the models predicting psychological IPV, coercive controlling behaviours, and relational aggression from hypothesis 4, attachment anxiety was entered at Level-2 as a cross-level moderator of daily support fit, conflict, and attachment threat.

Estimates for fixed effects, standard errors, odds ratios, confidence intervals, and significance values are reported in Table 9.

For the model predicting psychological IPV, daily conflict remained a significant predictor and attachment anxiety had a significant main effect on IPV, but there were no cross-level interactions between attachment anxiety and support fit, conflict, or attachment threat. In the model predicting coercive controlling behaviours, the main effects for support fit and conflict also remained significant. Attachment anxiety had a significant main effect on coercive controlling behaviours, and attachment anxiety also interacted with daily conflict to predict coercive control. Tests of simple slopes revealed that the magnitude of the association between daily conflict and risk of coercive control was greater for more anxious individuals. Participants with low (-1 SD) levels of attachment anxiety did not evidence greater risk of coercive control with increased daily conflict. However, participants with mean and high (+1 SD) levels of attachment anxiety did evidence greater risk of coercive control on days when they perceived greater conflict with their partners, and the likelihood of coercive control increased with increasing attachment anxiety. Specifically, participants with average levels of attachment anxiety were 1.10 times more likely to perpetrate coercive control with every unit increase in conflict above their personal mean. Participants with high levels of attachment anxiety were 1.26 times more likely to use coercive control on days when they rated conflict with partners one unit higher than average.

Table 9.

Hypothesis 5. Support, conflict, and attachment threat with cross-level interaction with attachment anxiety predicting psychological IPV, coercive controlling behaviours, and relational aggression.

	B	SE	Odds	Confidence
--	---	----	------	------------

			<i>ratio</i>	<i>interval</i>
Psychological IPV				
Intercept	-2.70***	0.06	0.07	(0.06, 0.08)
Attachment Anxiety (between-person)	0.02***	0.00	1.02	(1.01, 1.02)
Lack of Support Fit (within-person)	0.04	0.02	1.05	(1.00, 1.10)
Attachment Anxiety (between-person)	-0.0001	0.00	1.00	(1.00, 1.00)
Conflict (within-person)	0.52***	0.06	1.68	(1.48, 1.91)
Attachment Anxiety (between-person)	-0.003	0.00	1.00	(0.99, 1.00)
Attachment Threat (within-person)	-0.01	0.07	0.99	(0.86, 1.13)
Attachment Anxiety (between-person)	0.003	0.00	1.00	(1.00, 1.01)
Coercive Controlling Behaviours				
Intercept	-2.29***	0.05	0.10	(0.09, 0.11)
Attachment Anxiety (between-person)	0.010***	0.00	1.01	(1.01, 1.01)
Lack of Support Fit (within-person)	0.07**	0.02	1.08	(1.03, 1.13)
Attachment Anxiety (between-person)	0.004	0.002	1.00	(1.00, 1.01)
Conflict (within-person)	0.10*	0.04	1.11	(1.01, 1.21)
Attachment Anxiety (between-person)	0.007**	0.002	1.01	(1.00, 1.01)
Attachment Threat (within-person)	-0.09	0.09	0.92	(0.76, 1.10)
Attachment Anxiety (between-person)	-0.003	0.003	1.00	(0.99, 1.00)
Relational Aggression				
Intercept	-2.83***	0.08	0.06	(0.05, 0.07)
Attachment Anxiety (between-person)	0.01***	0.003	1.01	(1.01, 1.02)
Lack of Support Fit (within-person)	0.07	0.04	1.07	(0.98, 1.16)
Attachment Anxiety (between-person)	-0.003	0.003	1.00	(0.99, 1.00)
Conflict (within-person)	0.30**	0.1	1.35	(1.12, 1.64)
Attachment Anxiety (between-person)	0.00	0.004	1.00	(0.99, 1.01)
Attachment Threat (within-person)	-0.005	0.14	0.99	(0.76, 1.31)
Attachment Anxiety (between-person)	-0.001	0.004	1.00	(0.99, 1.01)
<i>Note.</i> B = unstandardized estimate; SE = standard error.				
*p < .05, **p < .01, ***p < .001.				

When predicting relational aggression, conflict remained the only significant main effect at Level-1. Attachment anxiety was significantly associated with relational

aggression at Level-2, but there were no significant interactions between attachment anxiety and any of the Level-1 predictors.

In summary, there was only evidence of a 2-way interaction in the model predicting coercive controlling behaviours; high conflict interacted with mean and high levels of attachment anxiety to predict increased risk of coercive control. Therefore, it appears that daily conflict is directly associated with increases in psychological IPV and relational aggression, and inadequate support fit is directly associated with increased coercive controlling behaviour, irrespective of a person's level of attachment anxiety. Conflict is also linked to coercive controlling behaviour for those who have mean or high levels of attachment anxiety, such that higher conflict increases risk of coercive control for those with average or high levels of anxiety, but not for those with low anxiety. Support fit and attachment threat did not interact with attachment anxiety to predict risk of partner aggression.

Hypothesis 6: There will be a 2-way interaction such that on days when individuals consume alcohol or experience stress, they will be more likely to respond to subsequent dyadic problems (composite of perceived support, conflict, and attachment threat) using IPV

Again, three models predicting the three forms of IPV were used to test this hypothesis. Daily number of standard alcoholic drinks consumed, degree of stress, and dyadic problems were entered at Level-1. In order to test whether alcohol and stress moderated the effect of dyadic problems on partner aggression, two interaction terms were also entered at Level-1: 1) alcohol X dyadic problems, and 2) stress X dyadic problems. Estimates for fixed effects, standard errors, odds ratios, confidence intervals, and significance values are reported in Table 10.

Table 10.

Hypothesis 6. Alcohol and stress and their interactions with dyadic problems predicting psychological IPV and coercive controlling behaviours.

	B	SE	Odds ratio	Confidence interval
Psychological IPV				
Intercept	-3.42***	0.36	0.03	(0.02, 0.07)
Alcohol (within-person)	-0.10	0.05	0.90	(0.81, 1.01)
Stress (within-person)	-0.10	0.11	0.90	(0.72, 1.12)
Dyadic Problems (within-person)	0.27**	0.09	1.30	(1.10, 1.55)
Alcohol X Dyadic Problems	-0.07	0.11	0.93	(0.75, 1.16)
Stress X Dyadic Problems	-0.53***	0.14	0.59	(0.44, 0.78)
Coercive Controlling Behaviours				
Intercept	-2.01**	0.72	0.13	(0.03, 0.57)
Alcohol (within-person)	-1.87***	0.30	0.15	(0.09, 0.28)
Stress (within-person)	-0.21**	0.07	0.81	(0.70, 0.93)
Dyadic Problems (within-person)	0.03	0.09	1.03	(0.86, 1.23)
Alcohol X Dyadic Problems	-1.00***	0.26	0.37	(0.22, 0.62)
Stress X Dyadic Problems	1.28***	0.06	3.59	(3.20, 4.04)

Note. B = unstandardized estimate; SE = standard error.

p < .01, *p < .001.

In the model predicting psychological IPV, dyadic problems emerged as the only predictor with a significant main effect. Participants who reported more dyadic problems than average on a given day were also 1.30 times more likely to perpetrate psychological IPV on those days for each unit increase in dyadic problems. The interaction between stress and dyadic problems was also significantly associated with risk for psychological IPV. Tests of simple slopes revealed that the magnitude of the association between dyadic problems and risk for psychological IPV differed based on the degree of stress a person experienced on a given day, but not in the direction that was expected. On low

stress days and median stress days, dyadic problems were associated with an increased likelihood of perpetrating psychological aggression. Participants were 6.44 times and 1.30 times as likely to use psychological IPV on low and median stress days, respectively, when dyadic problems were rated one unit greater on average. On high stress days, dyadic problems were associated with a decreased likelihood of psychological aggression, in that participants were only 0.26 times as likely to use psychological IPV on days when they experienced high stress and rated dyadic problems one unit greater than their personal mean.

For coercive controlling behaviour, there was a significant main effect of number of alcoholic drinks consumed and stress. Unexpectedly, drinking alcohol was associated with a decreased risk of coercive control, such that participants were only 0.15 times as likely to use coercive control for each drink consumed. Also contrary to hypotheses, stress was associated with decreased risk of coercive control, as participants were only 0.81 times as likely to use coercive control per unit increase in stress. Both two-way interactions were also significantly associated with coercive control. To test the simple slopes of this interaction, the association between dyadic problems and coercive control was examined at three different levels of alcohol use (0 drinks, 2 drinks, and 4 drinks, as alcohol use in this sample was low and 4 standard drinks is the cut-off for heavy alcohol consumption for women). In terms of the interaction between alcohol and dyadic problems, dyadic problems were not related to coercive control when participants had consumed no alcohol. When participants had consumed two and four drinks however, dyadic problems were related to risk for coercive control, such that higher levels of dyadic problems were associated with decreased likelihood of perpetrating coercive

control. Further, when participants consumed more alcohol, the magnitude of the inverse relationship between dyadic problems and risk for coercive control grew. Participants were only 0.14 times as likely to use coercive control when they had consumed two drinks and rated their dyadic problems one unit higher than their mean, and 0.02 times as likely to use coercive control when they had consumed four drinks and rated their dyadic problems one unit higher than their mean. Again, the nature of the interaction between alcohol and dyadic problems was not in the hypothesized direction. In terms of the interaction between stress and dyadic problems, at low and median levels of stress, dyadic problems were not significantly associated with risk for coercive control. On days when participants experienced high stress and more dyadic problems, they were 47.62 times more likely to use coercive control. The interaction between stress and dyadic problems was consistent with hypotheses.

The model predicting relational aggression did not converge. For models that did not converge due to math errors resulting from multicollinearity, correlations between all predictor variables were examined and interaction terms were omitted systematically to determine which components may be contributing to multicollinearity. This method was unable to produce a statistically robust model to test the hypothesis.

Therefore, the findings for psychological IPV suggested the presence of a two-way interaction between stress X dyadic problems. Dyadic problems were directly linked to increased risk of IPV. The simple slopes for the interaction between stress X dyadic problems revealed that on days when participants experienced low or median levels of stress and perceived more problems in their relationship, they were more likely to perpetrate psychological IPV. On days when participants experienced high levels of

stress and perceived more problems in their relationship, they were less likely to perpetrate psychological IPV. The findings for coercive controlling behaviours suggested a two-way interaction between alcohol X dyadic problems, as well as stress X dyadic problems. Dyadic problems were not directly associated with risk for coercive control on their own. Post-hoc tests of the alcohol X dyadic problems interaction revealed that on days when participants had consumed no alcohol, dyadic problems were not associated with increased risk for coercive control. On days when participants had consumed two or four drinks however, higher levels of dyadic problems were associated with a decreased risk of coercive control, with greater reductions in risk with more alcohol consumed. In terms of the interaction between stress and dyadic problems, on days when participants experienced low or median levels of stress, dyadic problems were not associated with risk for coercive control. On high stress days when participants perceived greater problems in their relationship, they were more likely to perpetrate coercive control. No conclusions can be drawn for relational aggression as the model predicting this outcome did not run.

Hypothesis 7: There will be a 3-way interaction such that IPV will be most likely for individuals with anxious attachment on days on which they consume alcohol or experience stress, and subsequently perceived dyadic problems

Adding to the models tested in hypothesis 6, three models were tested in which attachment anxiety was added as a cross-level interaction term to determine whether there were 3-way interactions between: 1) alcohol X dyadic problems X attachment anxiety, and 2) stress X dyadic problems X attachment anxiety predicting the three forms of partner aggression. Estimates for fixed effects, standard errors, odds ratios, confidence intervals, and significance values are reported in Table 11.

Table 11.

Hypothesis 7. Alcohol, stress, and dyadic problems two-way interactions and cross-level 3-way interactions with attachment anxiety predicting psychological IPV and coercive controlling behaviours.

	B	SE	Odds ratio	Confidence interval
Psychological IPV				
Intercept	-3.63***	0.30	0.03	(0.02, 0.05)
Attachment Anxiety (between-person)	0.04**	0.01	1.04	(1.01, 1.06)
Alcohol (within-person)	-0.08	0.05	0.92	(0.83, 1.02)
Stress (within-person)	-0.04	0.08	0.96	(0.81, 1.13)
Dyadic Problems (within-person)	0.34***	0.08	1.41	(1.21, 1.64)
Alcohol X Dyadic Problems	0.04	0.10	1.04	(0.86, 1.26)
Attachment Anxiety (between-person)	-0.0002	0.01	1.00	(0.99, 1.02)
Stress X Dyadic Problems	-0.53***	0.11	0.59	(0.47, 0.73)
Attachment Anxiety (between-person)	0.002	0.01	1.00	(0.99, 1.02)

Note. B = unstandardized estimate; SE = standard error.

p < .01, *p < .001.

For the model predicting risk of psychological IPV, there was a significant main effect for dyadic problems, such that on a given day participants who reported more problems than average were 1.41 times more likely to perpetrate psychological IPV per unit increase in dyadic problems. There was also a significant main effect of attachment anxiety, such that participants who were more anxious relative to the rest of the sample were 1.04 times more likely to perpetrate psychological IPV per unit increase in anxiety. The 2-way interaction between stress and dyadic problems remained the only significant interaction; both predicted 3-way interactions were not significant. Post-hoc tests again revealed that on low and median stress days, participants who perceived more problems in their relationships were more likely to use psychological IPV. Participants who experienced low and median levels of stress and perceived more problems were 6.91 and 1.41 times more likely to use psychological IPV per unit increase in dyadic problems. On

high stress days, participants who perceived more problems in their relationships were less likely to use psychological IPV. Participants who experienced high stress and perceived more problems were only 0.29 times as likely to use psychological aggression per unit increase in dyadic problems.

The models predicting coercive controlling behaviours and relational aggression did not converge. The same method used in Hypothesis 6 was used to determine whether multicollinearity could be reduced to produce statistically robust models that would converge; however, any models tested including the 3-way interaction did not converge.

In summary, the model predicting psychological IPV did not produce significant 3-way interactions, and therefore the hypothesis was not supported. No conclusions can be drawn about coercive controlling behaviours and relational aggression due to statistical limitations. The data did not produce results consistent with the “perfect storm” hypothesis of IPV perpetration.

Discussion

This dissertation sought to investigate moderators of the link between insecure attachment, a known risk factor for IPV, and psychological IPV, coercive controlling behaviours, and relational aggression in emerging adulthood. The results underscored the importance of attachment anxiety as an individual risk factor for IPV and identified more proximal risk factors that fluctuate on a daily basis. Attachment anxiety, felt rejection, and conflict were related to risk for all three forms of IPV. Unexpectedly, attachment avoidance was linked to decreased risk for coercive control. Anxiety about acceptance was uniquely associated with psychological IPV, and inadequate support fit was uniquely associated with coercive control. Greater attachment anxiety interacted with high conflict to predict greater risk for coercive control. No other significant two-way interactions between attachment anxiety and problems in the dyadic relationship emerged. Contrary to hypotheses, stress and alcohol consumption were linked to decreased risk for coercive control. Stress also appeared to suppress the link between dyadic problems and risk for psychological IPV on a given day, and dyadic problems paired with alcohol consumption was related to a decreased risk of coercive control. High stress and greater dyadic problems interacted to predict greater risk for coercive control as expected. No conclusions could be drawn about 2-way interactions between stress and dyadic problems and alcohol consumption and dyadic problems when predicting relational aggression, as the model did not converge. This study did not find support for the “perfect storm theory” of aggression when predicting psychological IPV. The “perfect storm theory” could not be tested in relation to coercive control and relational aggression as these models did not converge. A detailed discussion of the results follows.

Attachment Anxiety and IPV

This dissertation sought to investigate the daily moderators of attachment insecurity as an individual risk factor for the perpetration of IPV. A well-documented finding in the research literature was replicated in this study in that individuals who were more anxious than the average person also had a significantly greater likelihood of perpetrating psychological IPV, coercive control, and relational aggression over the two-week daily diary period. The existing literature has shown that attachment insecurity, and particularly anxious attachment, is associated with perpetration of different forms of IPV for men and women across diverse samples (Dutton et al., 1994; Dutton, & White, 2012; Fournier et al., 2011; Godbout et al., 2009; Goldstein et al., 2008; Gou, 2014; Schneider & Brimhall, 2014).

This study also sought to deepen the understanding of how attachment is related to IPV by exploring how gender and gender roles may interact with attachment styles to predict perpetration of aggression. To this aim, the hypothesis that men who were anxious and women who were avoidant would be at highest risk for IPV perpetration was tested. This hypothesis was made on the basis that in general, attachment anxiety tends to be higher in women and attachment avoidance is higher in men (as was borne out in this sample), and that perhaps having an insecure attachment orientation that is at odds with stereotyped or acceptable gender roles in heterosexual relationships would increase a person's risk for aggression. In fact, attachment anxiety was not more strongly associated with IPV perpetration for men and similarly, attachment avoidance was not more strongly associated with IPV perpetration for women. While not significant, differences in risk conferred by anxiety and avoidance for men and women were consistently in the

hypothesized directions (i.e., men's anxiety and women's avoidance tended to have higher odds ratios for IPV, but not significantly so).

It is possible that the restricted range of attachment insecurity sampled in this study contributed to these null findings, as less than 20% of participants fell in the clinical range for attachment anxiety and just under 6% of participants fell in the clinical range for attachment avoidance. Although both men and women were represented in the clinical range for anxiety and avoidance, they were low in number. This, coupled with the fact that overall, women reported higher levels of anxiety and men avoidance (as expected) means that we were not able to sample a large portion of highly anxious men and highly avoidant women. Thus, we likely did not capture the individuals that may evidence this amplified risk of aggression with non-gender normative attachment orientations.

One unexpected finding also emerged in that higher levels of attachment avoidance actually decreased the likelihood of perpetrating coercive control for both men and women. While this association was not hypothesized a priori, it is consistent with attachment theory in that avoidant individuals use deactivating strategies that include distancing themselves from partners both physically and emotionally when the attachment system is activated (Mikulincer & Shaver, 2008). Coercive controlling behaviours are more in line with hyperactivating strategies that increase proximity, control, and engagement with partners, albeit in unhealthy ways. Therefore, it follows that risk for coercive control would be increased by attachment anxiety, but decreased with attachment avoidance based on their respective attachment strategies and behavioural correlates. In some ways, attachment avoidance may be seen as a protective

factor buffering against coercive control, as avoidant individuals are more likely to maintain distance and independence from their partners rather than wanting to monitor and control them. It should be noted however that avoidant strategies may also be detrimental to relationships in the long-term as discomfort with intimacy and deactivating strategies are related to decreased relationship satisfaction and functioning (Butzer & Campbell, 2008; Li & Chan, 2012). Self-protective distancing strategies come at the cost of closeness with others, and preclude opportunities for partners to demonstrate their dependability and practice effective conflict resolution, at the detriment of the overall functioning of the relationship (Murray, 2005; Shi, 2003).

It appears that within this sample, regardless of gender, attachment anxiety is a potent risk factor for IPV, whereas attachment avoidance may decrease risk for coercive controlling behaviours.

Partner Support and Conflict

Several hypotheses about perceived partner support and conflict were tested, as poor support fit and high conflict were proposed moderators of the link between attachment anxiety and IPV. In terms of partner support, both anxious and avoidant individuals were expected to perceive partner support as less beneficial than more securely attached individuals, on the basis that securely attached individuals are more likely to find proximity to supportive others beneficial and to be more satisfied with the support they receive when distressed (Collins & Feeney, 2004; Moreira et al., 2003). Consistent with this hypothesis, participants who were more anxious or more avoidant than the average person also rated their partner's support as less beneficial than those more secure in their attachment during the daily diary. It is possible that partners of more

insecurely attached individuals truly did not provide as much support as partners of securely attached individuals or that insecurely attached individuals perceived the support provided by their partners as less beneficial. In support of the latter argument, Collins and Feeney (2004) found that insecure (anxious and avoidant) individuals were more likely to perceive their partner's support messages as less helpful and less well intended even when controlling for objective ratings of the actual quality of the support provided. Thus, it seems that insecure individuals are predisposed to perceive their social interactions more negatively than secure individuals do, and therefore are less likely to benefit from partner support independently of the actual quality or quantity of support provided.

Next, it was predicted that support fit would differ by support type and attachment orientation, such that avoidant individuals would rate emotional support as less beneficial and instrumental support as more beneficial, whereas anxious individuals would rate neither form of support as beneficial. This hypothesis was not supported, as people with different attachment orientations did not appear to perceive different types of support as more or less beneficial. Although attachment anxiety did appear to interact with emotional support, the level of emotional support individuals reported receiving was nevertheless unrelated to support fit.

These results failed to replicate the findings from previous studies demonstrating that anxious individuals may perceive instrumental support as less beneficial and that avoidant individuals may perceive emotional support as less beneficial, compared to securely attached individuals who tend to benefit from either form (Campbell et al., 2005; Florian, 1997; Simpson et al., 2007). It is possible that the way in which participants were queried about partner support influenced their reporting in this study. Participants were

asked to rate the degree to which they felt their partner “listened to or comforted” them or “helped solve a problem” each day, to query emotional and instrumental support, respectively. It is possible that this phrasing elicited reports of the degree to which participants felt their partners *successfully* provided emotional or instrumental support versus the intended query of how much partners attempted to provide support regardless of its effect. It is possible that anxious and avoidant participants simply may not have reported instances of emotional or instrumental partner support that they did not find beneficial, thereby precluding the detection of instances in which a form of support was provided but not perceived as beneficial.

With respect to relationship conflict, it was hypothesized that conflict would be more distressing to anxious and avoidant individuals than to more securely attached individuals. The results provided partial support for this hypothesis, as individuals who were more anxious than the average person also reported feeling more hurt by conflict day-to-day, but avoidance was not associated with greater hurt. This is consistent with Campbell and colleagues’ 2005 study showing that anxious individuals appear to be hypervigilant to signs of conflict, and thus are more likely to perceive greater conflict in their relationships, to report that conflict escalated, and to report greater emotional hurt resulting from conflict. The results are also consistent with Overall et al.’s 2014 daily diary study showing that the more anxious individuals were, the more they were hurt on days when they faced partner conflict. The results also support research showing that anxiously attached individuals perceive couple conflict as more intensely negative compared to more securely attached individuals (Wood, Werner-Wilson, Parker, & Perry, 2012). Yet another daily diary study found that individuals who felt less valued by their

partners (consistent with an anxious attachment schema) felt more hurt and rejected following days on which they had unusually high levels of conflict compared to individuals who felt more valued by their partners (Murray et al., 2003).

One possible explanation for the finding that conflict was not more distressing to avoidant individuals compared to securely attached individuals is that under situations of threat (i.e., conflict with one's partner), the deactivating defensive strategies of avoidant individuals serve to distance themselves from engaging with painful emotions, thereby attenuating their feelings of hurt (Edelstein & Shaver, 2004). Previous research has shown that avoidant individuals do experience distress in response to thoughts of separation from their partners (as evidenced by autonomic arousal when prompted to imagine such scenarios; Fraley & Shaver 1997), but they may appear less concerned due to their use of suppressing strategies to increase emotional distance in situations of attachment-related threat. It is also possible that avoidant individuals underreported or downplayed their feelings of hurt when filling out the daily diaries due to suppression or as another strategy for disengaging from these threatening feelings.

Felt Rejection, Felt Acceptance, and Anxiety about Acceptance

The next set of hypotheses related to another group of proposed moderators that may be linked to activation of the attachment system: felt rejection, felt acceptance, and anxiety about acceptance. It was expected that anxious individuals would report greater felt rejection and anxiety about acceptance, as well as lower felt acceptance from their partners on a daily basis compared to securely attached or avoidant individuals. It was also expected that avoidant individuals would report the lowest levels of felt rejection and anxiety about acceptance. The results were partially consistent with these hypotheses, as

individuals who were more anxious than the average person also reported greater felt rejection and anxiety about acceptance and lower felt acceptance during the daily diary. As expected, the association between attachment anxiety and daily anxiety about acceptance was significantly stronger than the association between attachment avoidance and daily anxiety about acceptance. These findings are consistent with the working models and hyperactivating strategies exhibited by anxious individuals, including hypervigilance for signs of rejection and preoccupation with ensuring closeness and intimacy with romantic partners (Mikulincer & Shaver, 2008).

Unexpectedly, avoidance was also associated with greater felt rejection and lower felt acceptance. This finding is apparently at odds with what is known about the defensive strategies of avoidant individuals, including distancing themselves from situations likely to activate attachment-related thoughts and feelings, using suppression when these do arise, and relying heavily on self-regulatory strategies (Edelstein & Shaver, 2004; Mikulincer, et al. 2003). However, these strategies do not eliminate the need to feel accepted even in highly avoidant individuals, as research shows that positive social feedback is linked to positive affect and state self-esteem in avoidant individuals even more so than in securely attached individuals (Carvallo & Gabriel, 2006). It is possible that while avoidant individuals may attempt to use distancing strategies to regulate feelings of rejection and non-acceptance by others, in situations where they are unable to avoid social feedback (i.e., when they are face-to-face or communicating directly with a romantic partner), their greater need for acceptance primes them to experience greater felt rejection or lower felt acceptance at the first signs that an interaction with a partner is going awry. Their reliance on deactivating strategies may also predispose them to

perceiving interpersonal situations as more threatening than securely attached individuals, in order to effectively employ distancing and suppressing strategies at the first signs of rejection or non-acceptance. This is consistent with how Mikulincer, Shaver, and Pereg (2003) describe avoidant individuals as using preemptive deactivating strategies when possible (e.g., actively not attending to threatening events, suppressing distressing thoughts and memories), as well as postemptive deactivating strategies when faced with a threat they could not avoid (e.g., distancing themselves from others when distressing feelings arise).

Further, an effect of gender was tested to determine whether women were more likely to endorse felt rejection and anxiety about acceptance than were men. The addition of gender to the model did not result in improved fit, and therefore this hypothesis was not supported. It was also hypothesized that greater felt rejection and anxiety about acceptance would be related to increased risk for IPV perpetration on a given day. Partial support for this hypothesis emerged. On days when participants were feeling more rejected by their partners, they also had a greater likelihood of perpetrating all three forms of aggression. Greater daily anxiety about acceptance was only associated with a higher likelihood of perpetrating psychological IPV, but not the other two forms of aggression. It seems that perceived rejection from a romantic partner is a salient risk factor for aggression, while anxiety about acceptance is linked specifically to the risk for psychological IPV.

Murray et al. (2000) have detailed how individuals who have a negative view of themselves (as evidenced by low self-esteem) tend to project this negativity onto their beliefs about their partners' perceptions of them, greatly underestimating their partners'

positive regard for them. This leads them to anticipate and be more sensitive to rejection from their partners and to feel less closeness in the relationship, which they cope with in turn by denigrating their partners in order to mitigate feelings of inferiority to the partner and anxiety about loss of the partner (Murray, et al., 2000; 2005; Murray, Rose, Bellavia, Holmes, & Kusche, 2002). In a daily diary study, people who felt less valued by their partners also perceived greater levels of rejection and had more anxiety about acceptance day to day, responding to their feelings of rejection and anxiety by subsequently treating their partners more coldly, critically, and in more rejecting ways (Murray et al. 2003). In the same study, women who felt generally less valued by their partners responded to feeling rejected or anxious on a given day with more anger towards their partners.

In the same way, individuals who have insecure attachment bonds with their partners may project their internal working models of themselves as unlovable or unworthy, onto their beliefs about their partners' perceptions of them. They may also be primed to experience greater felt rejection and anxiety about acceptance day to day, and respond to such perceived slights and low partner regard in denigrating, hostile ways, that may escalate to forms of IPV. Anxiety about acceptance may be specifically linked to psychological IPV, as calling a partner names or insulting them may serve to reduce the partner's status in an individual's eyes, and thereby reduce anxiety about the loss of their partner.

Dyadic Problems and IPV

The daily moderators that were related to problems in the dyadic relationship (i.e., support fit, conflict, and attachment threat – a composite of felt rejection and anxiety about acceptance) were tested as risk factors for IPV perpetration. It was predicted that on

days on which individuals perceived inadequate support from their partners, high conflict, or high attachment threat, they would be more likely to perpetrate IPV. There was support for this hypothesis, although the pattern of results differed based on the type of IPV being measured. Individuals were more likely to perpetrate all three forms of aggression on days when they experienced unusually high levels of conflict in their relationships. They were also more likely to perpetrate coercive control on days when they perceived a lack of support fit. Contrary to hypotheses, attachment threat did not covary with risk of partner aggression. Therefore, there is support for the coupling of conflict with all three forms of IPV and support fit with coercive control from day to day.

It is possible that psychological IPV and relational aggression as they were measured in this study constitute behaviours that are more reactive in nature (i.e., aggression that is enacted in response to anger or frustration; Crick & Dodge, 1996), while coercive controlling behaviours may be more instrumental and proactive. By their definition, coercive controlling behaviours are instrumental in that they aim to monitor or control a partner's behaviour. While relational aggression has been parsed into reactive and proactive forms (Murray-Close, Ostroy, Nelson, Crick, & Coccaro, 2010), the scale used here (the SASBM) is made up almost entirely of reactive items (e.g., "If my romantic partner makes me mad, I will flirt with another person in front of them,") and only one proactive item (i.e., "I have threatened to break up with my romantic partner in order to get them to do what I wanted,"). Therefore, it is likely that the form of relational aggression captured in this study was largely reactive. Similarly, although the measure of psychological IPV (the CTS-2) does not distinguish between reactive versus proactive aggression, these conflict behaviours are more likely to represent behavioural

dysregulation (e.g., yelling, swearing) in the moment versus instrumental proactive behaviours when compared to coercive control (e.g., preventing a partner from engaging in self-improvement activities). Therefore, coercive controlling behaviours seem less likely to reflect failures of emotion regulation in the moment compared to psychological IPV and relational aggression, and therefore may be amenable to different targets for intervention and prevention.

While aggression occurring on days when there is more conflict in the couple relationship fits well with a theory of aggression being reactive (i.e., emotional dysregulation associated with couple conflict escalating to behavioural dysregulation and use of aggression against one's partner), there may be a different explanation for the association between lack of support fit and coercive control. As discussed, coercive control may be conceptualized as more explicitly instrumental and proactive than the other two forms of aggression, and its unique association with lack of support fit may have to do with its function. Perhaps on days when participants perceive their partners as providing inadequate levels of support, coercive controlling behaviours are used as a means to solicit greater support in the future, by isolating partners from other people or activities that may compete for their time and attention outside of the relationship. Unfortunately, these types of behaviours are likely to be detrimental to relationship functioning and to paradoxically alienate a partner, potentially leading to the receipt even less support in the future or relationship dissolution in the long-run.

As for an explanation for the non-significant association between attachment threat and risk for the three forms of IPV, the previous models showed that while felt rejection appears to be associated with risk for all three forms of IPV, anxiety about

acceptance was only associated with psychological IPV. Therefore, the magnitude of the association between the composite score including both felt rejection and anxiety about acceptance and risk for IPV may not have been large enough to detect.

Moderators of the link between Attachment and IPV

The main hypotheses for this dissertation concerned day-to-day moderators of the link between attachment insecurity and IPV perpetration. Firstly, partner support, conflict, and attachment threat were hypothesized to moderate the relationship between attachment anxiety and IPV, such that on days when partner support was less adequate, conflict was higher, or attachment threat was higher, anxiously attached individuals would be more likely to perpetrate IPV. Attachment anxiety was consistently directly linked to all three forms of IPV, but there was only evidence of moderation of this effect when predicting coercive control. There was a significant 2-way interaction between conflict and attachment anxiety when predicting coercive control, in that the association between conflict and coercive control differed by level of attachment anxiety. Individuals who had average or high levels of attachment anxiety (but not those with low attachment anxiety) were more likely to perpetrate coercive control on days when they perceived higher conflict with their partners. Therefore, high levels of conflict interacted with average to high levels of attachment anxiety to predict perpetration of coercive control.

Given that anxiously attached individuals feel more hurt by conflict with their partners, it is not surprising to see that anxious individuals are also more likely to use coercive control on days with high conflict. As it appears that anxious individuals experience conflict as more distressing than do securely attached individuals, they may be more likely to respond to conflict with aggression. Alternatively, in Overall et al.'s 2014

study they found that anxious individuals were more likely to exaggerate their expression of hurt feelings following conflict in an effort to induce guilt in their partners and ultimately acquire greater closeness, reassurance, and accommodations from their partners. These behaviours can also be conceptualized as hyperactivating strategies associated with attachment anxiety (Mikulincer et al., 2003). It is possible that coercive controlling behaviours may be used by anxious individuals as behavioural strategies to express hurt and induce guilt in a partner following conflict (e.g., by accusing the partner of cheating). Coercive controlling behaviours may also be more effective when an anxious individual's partner feels guilty in response to an anxious person's hurt (e.g., a partner may be more likely to acquiesce to an anxious person's demands that they not spend time with friends or family members or pursue activities outside the relationship due to feelings of guilt). Ultimately, if the primary attachment need to maintain intimacy and secure a partner's reassurances of commitment is activated in anxious individuals by conflict in the romantic relationship, coercive controlling behaviours are effective (albeit harmful) strategies to serve this end, by maximizing the degree to which a partner is dependent on and accountable to the anxious person. Coercive controlling behaviours may be conceptualized as one of the hyperactivating strategies anxiously attached individuals use in response to conflict (Feeney & Karantzas, 2017). This is consistent with research showing that anxious individuals are more likely to display dominance in conflict with a romantic partner, likely as an attempt to ensure partner availability (Shi, 2003).

The findings also indicated that even individuals with average levels of attachment anxiety in this sample were more likely to perpetrate coercive control when

they perceived higher levels of conflict with their partner. It may be that high levels of perceived conflict activate the attachment system even for individuals with lower levels of attachment anxiety that might otherwise appear more securely attached outside of conflict situations.

Contrary to hypotheses, attachment anxiety did not appear to interact with poor support fit or attachment threat (i.e., felt rejection, anxiety about acceptance) to increase risk for coercive control. As in the previous model, poor support fit was directly related to coercive control. Again, coercive controlling behaviours may be an effective strategy individuals use to garner more support from partners on days when they perceive the level of support to be inadequate, regardless of attachment orientation. Attachment threat as it was conceptualized in this study (felt rejection and anxiety about acceptance) may not be as salient as actual perceived conflict when predicting IPV.

No moderation was seen in the models predicting psychological IPV and relational aggression. Instead, conflict and attachment anxiety independently predicted these forms of aggression, but did not interact. While attachment anxiety remains a potent risk factor for all forms of aggression, it appears that conflict can also increase risk of aggression independently of attachment. Regardless of attachment security, having conflict with a partner may increase one's risk of escalating to the use of aggressive behaviours including psychological IPV, coercive control, and relational aggression.

Disinhibiting Factors

Next it was expected that individuals would be more likely to respond to dyadic problems (a composite score including problems with support fit, partner conflict, and attachment threat) with IPV on days when they experienced greater levels of stress or

consumed more alcohol (disinhibiting factors). No conclusions could be drawn about whether stress and alcohol consumption function as disinhibitors with respect to risk for relational aggression, as the model predicting relational aggression did not converge.

Stress interacted with dyadic problems in different ways when predicting psychological IPV and coercive control. When predicting coercive control, stress interacted with dyadic problems in the hypothesized manner, with high stress and greater dyadic problems interacting to predict higher risk for coercive control. Dyadic problems alone were insufficient to increase risk for coercive control, and stress on its own was inversely related to risk for coercive control. A different pattern emerged when predicting psychological IPV, such that on low stress and median stress days, dyadic problems were associated with higher risk of psychological IPV. However, on high stress days, dyadic problems were associated with a decreased likelihood of psychological IPV. The direct association between dyadic problems and psychological IPV was in the predicted direction, in that IPV was more likely on days when individuals perceived more problems in their relationship. Therefore, in terms of psychological IPV, stress appeared not to act as a disinhibiting factor in its interaction with dyadic problems, but rather as a suppressor of the association between dyadic problems and IPV.

Coping with stress was originally hypothesized to reduce the likelihood that individuals would inhibit aggressive impulses towards their partners when feeling threatened or angry. From the ego depletion literature, coping with stressful situations (a form of self-regulation) shifts individuals' motivation and attention away from longer-term, extrinsically rewarding goals that are taxing for their self-regulatory systems, towards immediately gratifying and intrinsically rewarding impulses (Doherty et al.,

1995; Inzlicht & Schmeichel, 2012; Inzlicht et al., 2014; Muraven & Baumeister, 2000). This theory informed the hypothesis that participants who had to manage stress earlier in the day would be less likely to inhibit aggressive impulses towards their partners in the context of relationship problems later in the day, which appeared to be supported when predicting coercive control as high stress and greater dyadic problems interacted to increase risk of perpetration.

Why then did a different pattern emerge when predicting psychological IPV? Coercive controlling behaviours are instrumental and often indirect in that the jealousy, monitoring, and controlling behaviours can be enacted even when not in face-to-face contact (e.g., calling a partner to make them account for where they are, intercepting a partner's access to the telephone, other people, or resources). By contrast, the behaviours comprising psychological IPV tend to be more direct and may be more reactive (e.g., shouting or yelling at a partner, stomping out of a room). It is possible that the effect of managing a stressful day may also be to make individuals less motivated to engage with their partners in direct ways if they are experiencing relationship problems such as inadequate support, high conflict, or high attachment threat.

Perhaps another effect of managing stress and thereby experiencing some form of ego depletion is to turn individuals' attention away from situations that are not immediately gratifying (such as interacting with a partner with whom you are currently experiencing relationship problems) towards pursuits that are entirely unrelated to your relationship and more likely to be rewarding in the short term (e.g., withdrawing into solo hobbies, spending time with friends, etc.). Though pursuing more immediately gratifying response options may come at the expense of longer-term goals (e.g., maintaining a

healthy and satisfying romantic relationship by investing time and energy into conflict resolution), being less motivated to interact with a partner when problems are evident in the relationship may preclude the risk of escalations to IPV in the short-term. Therefore, managing stress earlier in the day may indirectly decrease risk for psychological IPV by making individuals less motivated to engage with their partners directly when there are problems in the relationship. On the flipside, lower levels of stress may not be taxing enough to create this attentional shift, such that individuals continue to engage in interactions with their partners even on days when they experience less partner support, more conflict, and greater rejection and anxiety about acceptance, thus leading to a greater likelihood of escalation to aggression.

Alcohol also interacted with dyadic problems to predict risk for coercive control. This interaction did not support the hypothesis of alcohol functioning as a disinhibitor to increase risk of aggression. Instead, dyadic problems were not associated with coercive control when participants had not consumed alcohol; however, participants who had consumed two or four drinks were *less* likely to perpetrate coercive control, with a higher number of drinks consumed corresponding to a greater decrease in risk. One possible explanation is that participants who perceived problems in the relationship may have used alcohol as a way to cope with or to disengage from the distress associated with these problems, instead of facing problems in the relationship directly (e.g., by confronting a partner about something that was upsetting them or trying to enact control over their behaviours). If alcohol is being used in this manner, it may be less likely for individuals to engage directly with their partners when problems are occurring in the relationship, and therefore preclude the risk of coercive behaviours.

Beyond their interactions with dyadic problems, drinking alcohol and experiencing stress were each directly associated with perpetration of coercive control. Unexpectedly, both drinking greater amounts of alcohol and experiencing greater levels of stress were associated with a decreased likelihood of coercive control perpetration. Thinking again of coercive control as a more proactive form of IPV, perhaps the models of alcohol and stress acting as disinhibitors that make behavioural dysregulation and escalation to aggression more likely do not fit. Given that coercive controlling behaviours are enacted with specific purposes in terms of ensuring later compliance or control over a partner's behaviour, perhaps drinking alcohol and being under more stress actually makes it less likely for individuals to engage in this somewhat goal-directed behaviour when there are no problems evident in the relationship to motivate the desire to monitor or control a partner.

The finding that alcohol was not linked to perpetration of psychological IPV and was associated with a decrease in risk for coercive control was unexpected given the small to moderate effect sizes typically found in the literature for the association between prior alcohol use and greater risk for IPV. Notably, the existing literature linking alcohol use and IPV has predominantly focused on physical IPV, with some studies including psychological IPV, and a paucity of literature examining risk of coercive control or relational aggression. The literature has also consistently demonstrated that it is not so much general consumption of alcohol or relatively light to moderate episodes of drinking that confer risk, but rather heavy concurrent drinking episodes that increase risk, with each additional drink amplifying the magnitude of risk (Moore et al., 2011; Parks et al., 2008; Rothman et al., 2012; Shorey et al., 2013; Stets & Henderson, 1991, Stuart et al.,

2014). While 21.6% of the current study's sample fell in the clinical cutoff range for functional impairment as a result of problem drinking reported at baseline, a minority of participants reported drinking any alcohol during the daily diary period and the average number of drinks consumed on the small number of reported drinking days (2.63 drinks) was well below the cutoff for heavy drinking (4 drinks for women and 5 drinks for men). It is likely that this study did not capture the type of alcohol consumption (and enough of the type of consumer) most strongly associated with risk for IPV. Perhaps the low levels of alcohol consumption in this study tapped into a different phenomenon whereby drinking alcohol was used to cope with or distance oneself from problems in the relationship, or whereby alcohol made it less likely for individuals to engage in deliberate goal-directed behaviours such as monitoring or controlling a partner.

The “Perfect Storm” Theory

Finally, the “Perfect Storm Theory” put forth by Finkel et al. (2011) that states that aggression is most likely when instigation and impellance are high and inhibition is low was tested. The hypothesis in this study stated that individuals would be at highest risk for perpetrating IPV when a particular set of risk factors converged. Specifically, a 3-way interaction between attachment anxiety (impellance), dyadic problems (poor partner support, greater partner conflict, attachment threat; i.e., instigation), and alcohol consumption or stress (disinhibition) was predicted, such that individuals with high attachment anxiety would be most likely to use IPV on days when they perceived dyadic problems, in addition to consuming greater quantities of alcohol or experiencing more stress.

This hypothesis was only tested with respect to risk for psychological IPV, as the models predicting risk for coercive control and relational aggression did not converge. There were no significant 3-way interactions when predicting psychological IPV, and therefore this study was unable to produce support for the “Perfect Storm Theory” of aggression. It remains to be tested whether the “Perfect Storm Theory” may have utility in predicting coercive control and relational aggression.

A number of factors most likely contributed to this study’s inability to detect a 3-way interaction when predicting psychological IPV. As demonstrated in the previous models, the individual risk factors proposed to interact together to increase the likelihood of IPV did not function in the predicted manner when examining their individual effects and 2-way interactions. First, alcohol consumption was not related to increased risk of psychological IPV. Next, although dyadic problems alone were linked to increased risk of IPV, stress unexpectedly interacted with dyadic problems to decrease the likelihood of aggression. Given that the components of the model that were conceptualized as disinhibitors did not behave in the manner predicted when investigated individually or in their interaction with other variables, it is not surprising that the cumulative interaction was not statistically significant as the variables comprising impellance, instigation, and disinhibition were most likely working against each other (with some increasing risk and some decreasing risk) instead of synergistically affecting risk in one direction.

Limitations and Future Directions

There are several limitations that should be noted as caveats to the results of this dissertation. Although the inclusion criteria for this study were deliberately left as open as possible to capture greater diversity in terms of gender identity and sexual orientation, the

number of participants recruited who identified as LGBTQ was not large enough to conduct analyses by group. Rather than lumping these participants into the larger sample of cis-gendered straight participants, which would be tantamount to ignoring the unique experiences members of the LGBTQ community may have in romantic relationships and issues such as marginalization and different experiences of gender roles that are not part of the experience of the dominant group, I chose to exclude these participants from my analyses. Results from a sample comprising cis-gendered, straight individuals cannot be generalized to members of the LGBTQ population, and to do so would not only be erroneous but harmful and contribute to the erasure of these individuals' experiences. The decision to exclude these participants is not without problems however, as some would argue that the heterogeneity within sexual and gender identity groups often is not acknowledged and that there are more similarities than differences in experiences between groups. Exclusion of LGBTQ participants also further contributes to the heterosexist biases in psychological research and may reify or amplify perceived differences between groups. Therefore, it is imperative that further research be undertaken which specifically targets recruitment of LGBTQ participants to determine whether the patterns of risk shown in this study are similar or different to those seen in more broadly representational samples.

Another major limitation of this study was the extremely low base rate of physical IPV reported in the daily diaries, which precluded modeling risk for physical IPV in the analyses. Although just over 20% of participants reported engaging in physical IPV during the past year, only four of the 1,146 diaries included in the analyses endorsed any physical IPV. Due to the lack of variability in this outcome, the models predicting

physical IPV could not be run. Therefore, the results from this study can only inform factors relating to risk for psychological IPV, coercive control, and relational aggression, which does not permit generalizability to physically aggressive relationships. As demonstrated through the results of this study, each form of aggression appears to have a unique pattern of factors associated with risk; therefore, it is likely that the manner in which the same risk factors relate to physical IPV will differ. It is possible that with a longer data collection period for the daily diaries, participants would have reported a higher incidence of physical IPV perpetration. It may also be necessary for future studies to recruit a higher risk sample to increase the probability of sampling physical IPV (e.g., by requiring participants to endorse high levels of psychological IPV or at least one act of physical IPV in the previous year to meet eligibility for inclusion). In addition, future research may use measures that explicitly distinguish between reactive and proactive forms of IPV, as these may represent distinct classes of behaviour that have different patterns of risk and consequences for relationships.

Similarly, the models testing the “Perfect Storm Theory” of aggression using coercive control and relational aggression as outcomes did not converge; therefore, no conclusions could be made about whether this theory holds when predicting these forms of aggression. Sampling greater base rates of all forms of IPV would allow for more robust statistical analyses. The low base rates of the forms of IPV sampled are also reflected in the relatively small odds ratios produced by the models in this project. Therefore, while some predictors were found to significantly increase risk for aggression relative to the overall sample, the likelihood of aggression occurring versus not occurring

overall was still small in most cases. Greater variability in the outcome variables would also likely result in greater odds ratios with more clinically significant implications.

Another limiting factor in this study was the limited range of attachment insecurity sampled, particularly with respect to attachment avoidance. About one fifth of participants fell above the clinical cutoff for attachment anxiety, but less than 6% of participants fell in the clinical range for avoidance. Although the main hypotheses concerned attachment anxiety and this variable did consistently evidence significant associations with IPV, it is possible that stronger associations or a different pattern of interactions with the daily moderating factors may have emerged with a more insecurely attached sample. It is expected that hyperactivating strategies and behavioural dysregulation would be more pronounced and more easily triggered in response to attachment threat in clinically anxiously attached individuals, which may further increase risk for IPV.

Additionally, the range of alcohol consumption sampled in this study was also limited, with a minority of participants reporting any drinking during the daily diary and the average number of drinks consumed on any given day well below that which would be considered “heavy drinking” (which tends to be associated with the greatest level of risk for aggression). Therefore, some of the unexpected findings with respect to alcohol consumption in this study may have been due to inadvertent sampling of a different pattern of drinking or drinkers.

In general, low variability in the variables of interest limited the ability to test many of the hypotheses about risk for aggression. This likely reflects the relatively well-adjusted, high functioning nature of participants who were sampled and self-selected into

this time-intensive study recruiting from an undergraduate population, an already relatively homogeneous population. While the undergraduate population was ideal in many ways due to its overlap with the developmental period of emerging adulthood, the trade-off between convenience and broader representation within the population must be acknowledged, as the lack of inclusion of community participants or higher risk participants most likely contributed to statistical limitations and as already mentioned limited generalizability. Again, future studies will benefit from recruitment of emerging adults via other avenues, including pursuing community and high-risk populations.

Models in this study did not include time as a predictor, as there were no hypotheses regarding the slope of risk for perpetration across the daily diary. Future studies employing multilevel modeling should consider including time as a variable to improve the reliability of estimates produced. Additionally, while some models tested the direct effects of on the outcome variables, gender may also be tested as a moderator of the association between predictor and outcome variables. Future studies employing this approach may shed further light on whether risk factors differ by gender.

Clinical Implications

Attachment anxiety consistently emerged as a unique risk factor for IPV, maintaining its association with IPV following the addition of more proximal risk factors/moderators. Attachment avoidance was also associated with increased likelihood of psychological IPV for women, and while attachment avoidance was associated with decreased risk for coercive control in both men and women in this sample, the long-term implications of attachment avoidance for dyadic functioning are concerning. Interventions that explicitly seek to increase the security of the attachment bond (i.e.,

Emotionally Focused Couple Therapy; EFCT) are a potential avenue for decreasing the risk of IPV in at-risk couples (e.g., those in which one or both partners evidence high levels of attachment anxiety or avoidance). Outcome studies of EFCT have demonstrated that insecurely attached couples who undergo EFCT show significant decreases in attachment avoidance over the course of therapy, and also show significant decreases in attachment anxiety when they are able to complete the therapeutic task of blamer softening (a key change event outlined in the EFCT process; Burgess Moser et al., 2016). Pre- to post-therapy improvements in attachment security were also observed via behavioural coding of an interaction task between partners, in that partners approached one another, were able to be comforted, showed interest in one another's distress, and responded to distress to a greater extent post-therapy. A two-year follow-up of the same couples demonstrated that attachment anxiety and the behavioural indices of secure attachment continued to improve up to two years following termination of therapy (Wiebe et al., 2017). Therefore, EFCT appears to demonstrate utility for the improvement of attachment security in couples, and therefore may be an effective intervention to reduce the risk of IPV in insecurely attached couples who are otherwise at risk.

It should be noted that EFCT would not be appropriate for all couples. Johnson, the founder of EFCT has stated that this approach is not appropriate for "clearly abusive couples" where expression of vulnerability is unsafe (Johnson, 2004). Other couple researchers have outlined criteria for determining when couple therapy in general is appropriate for couples who have experienced IPV, delineating clearly that couple therapy is contraindicated when there is violence resulting in severe injury requiring medical attention and when one partner has significant fear of the other (Stith,

McCollum, Amanor-Boadu, & Smith, 2012). Individual or gender-segregated group treatment may be best suited for these couples. The presence of severe psychological aggression and coercion (e.g., threats of violence, isolation from social contacts and resources, “gaslighting”) and sexual violence also suggest a broader pattern of intimidation and control that contraindicates conjoint treatment. In addition, couples in which one or both partners are currently struggling with substance use problems should be treated for substance use concurrently, as problem substance use (e.g., alcohol use disorders) is linked to IPV perpetration and successful treatment of substance use is linked to reductions in IPV (e.g., Leonard, 2005).

Although EFCT may be the most direct intervention for attachment insecurity for those couples who meet the eligibility criteria, EFCT is a longer-term therapy that requires motivation, commitment, and financial means beyond that which may be typical of emerging adult couples. Therefore, alternative preventative and treatment strategies targeting IPV may be more feasible for this population. Targeting the more proximal daily risk factors identified in this study (including conflict, inadequate partner support, felt rejection, and anxiety about acceptance) may be a more realistic way to minimize risk of IPV on a broader scale.

Conflict consistently emerged as a proximal risk factor for IPV, such that on days when participants experienced unusually high levels of conflict with their partners, their risk for IPV perpetration increased. Conflict on its own was sufficient to predict risk for all three forms of IPV on a given day and conflict interacted with attachment anxiety to predict coercive control, such that individuals with average to high levels of attachment

anxiety were more likely to perpetrate coercive control on high conflict days (but not those low in anxiety).

While conflict itself is an inherent part of romantic relationships, and learning to navigate disagreements with a romantic partner is a key component of healthy relationships, negative conflict styles can be detrimental to dyadic functioning and lead to escalation to IPV. Effective conflict resolution strategies (e.g., open conversation, showing concern for a partner's feelings, compromise) are associated with greater relationship satisfaction more generally and longevity of relationships in emerging adulthood compared to strategies such as withdrawing, minimizing the conflict, high expression of negative affect, and displaying disrespect or derision for a partner (Cramer, 2000; Sanderson & Karetsky, 2002; Shulman, Tuval-Maschiach, Levran, & Anbar, 2006). Communication and problem solving training approaches from behavioural couple therapies (e.g., Integrative Behavioural Couple Therapy; Christensen, Dimidjian, & Martell, 2015; Jacobson & Christensen, 1998) including teaching active listening, reflective and empathic responding, problem definition, and brainstorming and actioning solutions may build the skills that emerging adults have yet to develop. Emerging adults may not have models for effective conflict resolution to learn from, and research shows continuity between the conflict styles young adults are exposed to in their families of origin and their conflict styles in romantic relationships (Crockett & Randall, 2006; Reese-Weber & Marchand, 2002).

These skills can be taught and practiced in briefer formats compared to EFCT and could also be offered through group workshops to reach a broader base of emerging adults. Psychoeducational programs aiming to teach positive communication, empathic

responding, and problem solving skills already exist as pre-marital prevention initiatives, including the Prevention and Education Relationship Program (PREP for Strong Bonds; Markman, Stanley, & Blumberg, 2001) and the Compassionate and Accepting Relationships through Empathy program (CARE; Rogge, Cobb, Johnson, Lawrence, & Bradbury, 2002). Research suggests that couples who are at risk benefit most from interventions that target matching risk factors (i.e., couples with poor communication seemed to benefit the most from PREP which emphasizes communication skills, whereas couples who are low in emotional support seemed to derive the greatest benefit from CARE which is based on empathy skill-building; Williamson et al., 2015). Further, a study of couples who underwent PREP yet nonetheless later divorced found that these individuals reported that having the intervention earlier in their relationships would have been of greater benefit, and also that additional topics not covered in the PREP content (i.e., psychological IPV, identification of and resources for physical IPV) would have been of benefit, as these issues were often cited as reasons for relationship dissolution (Scott, Rhoades, Stanley, Allen, & Markman, 2013). Therefore programs reaching a younger population of emerging adults (regardless of whether they intend to legally marry) and specifically recruiting for those couples evidencing problems in communication, empathic responding, and problem solving while tailoring interventions to provide training in these skills as well as education around the prevention of IPV specifically may show promise.

Daily felt rejection and anxiety about acceptance were additional proximal risk factors associated with various forms of IPV. Anxiously attached individuals also reported higher levels of felt rejection and anxiety about acceptance. The hyperactivating

strategies anxious individuals use in response to felt rejection and anxiety about acceptance may run the risk of escalating to aggression. Paradoxically the hyperactivating strategies used by anxiously attached individuals to assuage their fears of separation when threatened also tend to push partners further away over time in a sort of self-fulfilling feedback loop that reinforces their anxiety. The behaviours they use in an attempt to reinstate connection and gain reassurance are often harmful and maladaptive, and partners of such individuals perceive them as needy, clinging, and demanding in the face of rejection and anxiety (Murray et al., 2003). Teaching communication and emotion regulation skills may help to mitigate risk of aggression by providing these individuals with more effective tools to manage their distress and assert their needs to their partners. In addition to the interventions from behavioural therapies noted above, distress tolerance skills including tools from Mindfulness-Based Stress Reduction (Kabat-Zinn & Nhat Hanh, 2012) or Dialectical Behaviour Therapy (Linehan, 2015), as well as cognitive therapy techniques to challenge the potentially distorted thinking or inaccurate appraisals of threat in anxiously attached individuals may bolster their own resources, so that they can self-soothe as well as effectively ask for support from partners. Again, these skills could be taught in a brief group workshop format offered to individuals or couples, particularly within postsecondary institutions or through community organizations which emerging adults are likely to frequent.

While prevention and intervention efforts aimed at targeting physical and sexual IPV, and to a lesser extent psychological IPV, in the emerging adult population have become increasingly prevalent as the need to address these public health issues is recognized, programming that targets more covert forms of IPV (including coercive

control and relational aggression) are less common (De Koker, Mathews, Zuch, Bastien, & Mason-Jones, 2013; Fellmeth, Herffernan, Nurse, Habibula, & Sethi, 2013; O'Leary & Slep, 2012; O'Leary, Woodin, & Fritz, 2006). This dissertation showed that these other forms of IPV have unique patterns of risk and therefore prevention and intervention efforts should be tailored to address the risk factors specific to them.

The importance of addressing coercive controlling behaviours is stressed, as a pervasive pattern of coercion is a key hallmark of the intimate terrorism subtype of physical IPV, which is associated with much higher rates of serious injury and homicide compared to situational couple violence (Beck & Raghavan, 2010; Johnson, 1995; 2010). The developmental progression of violence in couples with respect to coercive control is unclear (i.e., it has yet to be determined whether coercive control typically precedes escalation to physical violence, co-occurs with the onset of physical violence, or appears in already physically aggressive couples), and the sequelae associated with these behaviours is often cited by victims as more damaging than physical violence itself (Crossman & Hardesty, 2018; Dutton & Goodman, 2005). Even low levels of coercive control in community samples, which may or may not be accompanied by physical aggression, are associated with negative outcomes for individual partners, the dyad, and the parenting of young children (Gou, Duerksen, & Woodin, 2018). For these reasons, early prevention of coercive controlling behaviours is paramount.

Lack of support fit was uniquely associated with coercive controlling behaviours. Working with young adults to build their awareness of what their support needs are (e.g., emotional versus instrumental support based on attachment orientation) and providing education around how to communicate support needs to partners in direct and non-

coercive ways may help emerging adults more effectively garner appropriate support from their partners without resorting to coercive behaviours. Partners who are able to provide appropriate support (e.g., reassurances of love and emotional support to assuage the fears of anxiously attached individuals and softer negotiation tactics and instrumental support to bolster the autonomy and independence of avoidantly attached individuals) are able to effectively “buffer” partner insecurity, even during conflict (Simpson & Overall, 2014). Additionally, resources and psychoeducation around the subtle ways in which coercion can manifest in romantic relationships and the detrimental impacts coercive behaviours have on partner and dyadic well-being can also help emerging adults understand what constitutes healthy relationships, recognize when relationships have unhealthy dynamics, and strive for respectful partnerships.

Another outcome investigated in this study, romantic relational aggression, has been linked to internalizing and externalizing symptoms in young adults, as well as decreased relationship quality (Bagner et al., 2007; Ellis, Crooks, & Wolfe, 2008; Goldstein et al., 2008; Linder et al., 2002; Schad, Szwedo, Antonishak, Hare, & Allen, 2007). Although relational aggression is seldom studied in middle adulthood compared to physical or psychological IPV, one study found that the majority of married couples in a community sample evidenced some relational aggression, and that such aggression was related to poorer marital quality and stability (Carroll et al., 2010). Love withdrawal behaviours (e.g., withholding affection or sex during times of conflict) were used by the vast majority of couples and social sabotage behaviours (e.g., spreading negative information about a spouse to others outside the relationship with the explicit intent to harm their social status) were evidenced in over half of the husbands and two-thirds of

the wives in the study. It was also noted that relational aggression may involve denigration of a partner in front of children or use of children as a means to damage the relationship or the partner's status in the relationship. While relational aggression is most often studied in the context of school-aged children, the finding that the use of relational aggression persists well into adulthood highlights the need for intervention efforts tailored to this form of aggression, though further research illuminating how relational aggression fits into the broader context of partner violence in emerging adulthood and onwards will be necessary to inform these aims.

Conclusion

This dissertation underscored the importance of attachment anxiety as it relates to increased risk for perpetration of psychological IPV, coercive control, and relational aggression. Attachment avoidance was also related to increased risk of psychological IPV for women. Unexpectedly, attachment avoidance was related to decreased risk of coercive control for men and women. The results further shed light on the differences in how anxiously and avoidantly attached individuals may perceive partner support and conflict, as well as how they experience rejection, anxiety about acceptance, and acceptance within the relationship on a day-to-day basis. Namely, it appears that attachment insecurity is associated with lower daily perceived support fit, greater felt rejection, and lower felt acceptance. Attachment anxiety was also associated with greater hurt as a result of conflict and anxiety about acceptance. Daily variables that fluctuated with risk for all three forms of aggression included felt rejection and conflict. Dyadic problems (poor support fit, high conflict, and high felt rejection and anxiety about acceptance) were also associated with greater risk for psychological IPV on a given day,

while poor support fit was associated with greater risk for coercive control. Attachment anxiety interacted with high conflict to predict greater risk of coercive control on a given day. High stress and a greater degree of dyadic problems on any given day also interacted to predict a greater likelihood of coercive control.

Some unexpected findings emerged, including an apparent suppressing effect of stress on the link between dyadic problems and psychological IPV and a reduction in risk for coercive control on high stress days and with the consumption of alcohol. Support was not found for a Perfect Storm Theory of aggression in this sample.

The results inform multiple points of intervention to reduce the risk of partner aggression in emerging adults. While increasing the security of the attachment bond in romantic relationships is one way to address risk, there are also more proximal risk factors (including perceptions of daily conflict, inadequate partner support, felt rejection, and anxiety about acceptance) that are linked to various forms of aggression and may be more amenable to change. Interventions that aim to increase young adults' capacity to regulate their emotions, communicate their needs in effective ways to their partners, and manage conflict may be viable avenues for reducing risk for aggression and improving relationship functioning in this important developmental period.

References

- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). Patterns of attachment: Assessed in the strange situation and at home. Hillsdale, NJ: Erlbaum.
- Allen, J. P., Litten, R. Z., Fertig, J. B., & Babor, T. (1997). A review of research on the Alcohol Use Disorders Identification Test (AUDIT). *Alcoholism: Clinical and Experimental Research*, 21(4), 613-619.
- Allison, C. J., Bartholomew, K., Mayseless, O., & Dutton, D. G. (2008). Love as a battlefield attachment and relationship dynamics in couples identified for male partner violence. *Journal of Family Issues*, 29(1), 125-150.
- Archer, J. (2000). Sex differences in physical aggression to partners: A reply to Frieze (2000), O'Leary (2000), and White, Smith, Koss, and Figueredo (2000). *Psychological Bulletin*, 126(5), 697-702.
- Archer, J., & Coyne, S. M. (2005). An integrated review of indirect, relational, and social aggression. *Personality and Social Psychology Review*, 9(3), 212-230.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American psychologist*, 55(5), 469.
- Babcock, J. C., Jacobson, N. S., Gottman, J. M., & Yerington, T. P. (2000). Attachment, emotional regulation, and the function of marital violence: Differences between secure, preoccupied, and dismissing violent and nonviolent husbands. *Journal of Family Violence*, 15(4), 391-409.
- Bagner, D. M., Storch, E. A., & Preston, A. S. (2007). Romantic relational aggression: What about gender? *Journal of Family Violence*, 22(1), 19-24.

- Banyard, V. L., Arnold, S., & Smith, J. (2000). Childhood sexual abuse and dating experiences of undergraduate women. *Child maltreatment*, 5(1), 39-48.
- Banyard, V. L., & Cross, C. (2008). Consequences of teen dating violence understanding intervening variables in ecological context. *Violence Against Women*, 14(9), 998-1013.
- Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships*, 7(2), 147-178.
- Bartholomew K., & Horowitz, L.M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, 61(2), 226-244.
- Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: is the active self a limited resource? *Journal of Personality and Social Psychology*, 74(5), 1252.
- Beck, C. J. A., & Raghavan, C. (2010). Intimate partner abuse screening in custody mediation: The importance of assessing coercive control. *Family Court Review*, 48, 555-565.
- Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology*, 54(1), 579-616.
- Bolger, N., Zuckerman, A., & Kessler, R. C. (2000). Invisible support and adjustment to stress. *Journal of Personality and Social Psychology*, 79(6), 953.
- Bookwala, J., & Zdaniuk, B. (1998). Adult attachment styles and aggressive behavior within dating relationships. *Journal of Social and Personal Relationships*, 15(2), 175-190.

- Bouchev, H. A. (2007). Perceived romantic competence, importance of romantic domains, and psychosocial adjustment. *Journal of Clinical Child and Adolescent Psychology, 36*(4), 503-514.
- Bowlby, J. (1973). Attachment and loss: Vol. 2. Separation: Anxiety & anger. New York: Basic Books.
- Bowlby, J. (1982). Attachment and loss: Vol. 1. Attachment (2nd ed.). New York: Basic Books.
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46–76). New York: Guilford Press.
- Brennan, K. A., & Shaver, P. R. (1995). Dimensions of adult attachment, affect regulation, and romantic relationship functioning. *Personality and Social Psychology Bulletin, 21*(3), 267-283.
- Bresin, K. (2014). Five indices of emotion regulation in participants with a history of nonsuicidal self-injury: a daily diary study. *Behavior Therapy, 45*(1), 56-66.
- Burgess Moser, M., Dalglish, T. L., Johnson, S. M., Lafontaine, M., Wiebe, S. A., & Tasca, G. (2016). Changes in relationship-specific romantic attachment in Emotionally Focused Couple Therapy. *Journal of Marital and Family Therapy, 42*(2), 231–245.
- Bushman, B. J. (1997). Effects of alcohol on human aggression: Validity of proposed explanations. In J. B. Bushman & M. Galanter (Eds.), *Recent developments in*

alcoholism Vol. 13: Alcohol and violence: Epidemiology, neurobiology, psychology, family issues (pp. 227-243). New York, NY: Plenum Press.

- Bushman, B. J., & Cooper, H. M. (1990). Effects of alcohol on human aggression: An integrative research review. *Psychological Bulletin*, *107*(3), 341.
- Butzer, B., & Campbell, L. (2008). Adult attachment, sexual satisfaction, and relationship satisfaction: A study of married couples. *Personal relationships*, *15*(1), 141-154.
- Caetano, R., Schafer, J., & Cunradi, C. B. (2001). Alcohol-related intimate partner violence among white, black, and Hispanic couples in the United States. *Alcohol Research and Health*, *25*(1), 58-65.
- Campbell, J. C. (2002). Health consequences of intimate partner violence. *The Lancet*, *359*(9314), 1331-1336.
- Campbell, L., Simpson, J. A., Boldry, J., & Kashy, D. A. (2005). Perceptions of conflict and support in romantic relationships: the role of attachment anxiety. *Journal of Personality and Social Psychology*, *88*(3), 510.
- Carroll, J. S., Nelson, D. A., Yorgason, J. B., Harper, J. M., Ashton, R. H., & Jensen, A. C. (2010). Relational aggression in marriage. *Aggressive Behavior*, *36*(5), 315-329.
- Carvalho, M., & Gabriel, S. (2006). No man is an island: The need to belong and dismissing avoidant attachment style. *Personality and Social Psychology Bulletin*, *32*(5), 697-709.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of Personality and Social Psychology*, *56*(2), 267.

- Christensen, A., Dimidjian, S., & Martell, C. R. (2015). Integrative Behavioral Couple Therapy. In A. S. Gurman, J. L. Lebow, & D. K. Snyder (Eds.), *Clinical Handbook of Couple Therapy*, 5th Edition (pp. 61-94). New York, NY: Guilford.
- Christensen, A., & Heavey, C. L. (1990). Gender and social structure in the demand/withdraw pattern of marital conflict. *Journal of Personality and Social Psychology*, 59, 73-81.
- Christensen, A., & Heavey, C. L. (1993). Gender differences in marital conflict: The demand/withdraw interaction pattern. In S. Oskamp & M. Costanzo (Eds.), *Gender issues in contemporary society Vol. 6* (pp. 113-141). Thousand Oaks, CA: Sage Publications.
- Cohen, J. (1992). Statistical power analysis. *Current Directions in Psychological Science*, 1(3), 98-101.
- Coker, A. L., Davis, K. E., Arias, I., Desai, S., Sanderson, M., Brandt, H. M., & Smith, P. H. (2002). Physical and mental health effects of intimate partner violence for men and women. *American Journal of Preventive Medicine*, 23(4), 260-268.
- Coker, A. L., Smith, P. H., McKeown, R. E., & King, M. J. (2000). Frequency and correlates of intimate partner violence by type: physical, sexual, and psychological battering. *American Journal of Public Health*, 90(4), 553.
- Collins, N. L., & Feeney, B. C. (2004). Working models of attachment shape perceptions of social support: evidence from experimental and observational studies. *Journal of Personality and Social Psychology*, 87(3), 363.

- Cooper, M. L., Russell, M., Skinner, J. B., Frone, M. R., & Mudar, P. (1992). Stress and alcohol use: moderating effects of gender, coping, and alcohol expectancies. *Journal of Abnormal Psychology, 101*(1), 139.
- Cornelius, T. L., & Resseguie, N. (2007). Primary and secondary prevention programs for dating violence: A review of the literature. *Aggression and Violent Behavior, 12*(3), 364-375.
- Cramer, D. (2000). Relationship satisfaction and conflict style in romantic relationships. *The Journal of Psychology, 134*(3), 337-341.
- Crick, N. R., & Dodge, K. A. (1996). Social information-processing mechanisms in reactive and proactive aggression. *Child Development, 67*(3), 993-1002.
- Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*(3), 710-722.
- Crockett, L. J., & Randall, B. A. (2006). Linking adolescent family and peer relationships to the quality of young adult romantic relationships: The mediating role of conflict tactics. *Journal of Social and Personal Relationships, 23*(5), 761-780.
- Crossman, K. A., & Hardesty, J. L. (2018). Placing coercive control at the center: What are the processes of coercive control and what makes control coercive? *Psychology of Violence, 8*(2), 196-206.
- Dawson, D. A., Grant, B. F., Stinson, F. S., & Chou, P. S. (2004). Another look at heavy episodic drinking and alcohol use disorders among college and noncollege youth. *Journal of Studies on Alcohol, 65*(4), 477-488.

- DeWall, C. N., Baumeister, R. F., Stillman, T. F., & Gailliot, M. T. (2007). Violence restrained: Effects of self-regulation and its depletion on aggression. *Journal of Experimental Social Psychology, 43*(1), 62-76.
- De Koker, P., Mathews, C., Zuch, M., Bastien, S., & Mason-Jones, A. J. (2014). A systematic review of interventions for preventing adolescent intimate partner violence. *Journal of Adolescent Health, 54*(1), 3-13.
- Diamond, A. (2002). Normal development of prefrontal cortex from birth to young adulthood: Cognitive functions, anatomy, and biochemistry. In D.T. Stuss & R.T. Knight (Eds.), *Principles of frontal lobe function* (pp. 466-503). New York, NY: Oxford University Press.
- Diamond, L. M., & Aspinwall, L. G. (2003). Emotion regulation across the life span: An integrative perspective emphasizing self-regulation, positive affect, and dyadic processes. *Motivation and Emotion, 27*(2), 125-156.
- Doherty, K., Kinnunen, T., Militello, F. S., & Garvey, A. J. (1995). Urges to smoke during the first month of abstinence: relationship to relapse and predictors. *Psychopharmacology, 119*(2), 171-178.
- Dutton, D. G., Saunders, K., Starzomski, A., & Bartholomew, K. (1994). Intimacy-anger and insecure attachments as precursors of abuse in intimate relationships. *Journal of Applied Social Psychology, 24*(15), 1367-1386.
- Dutton, D. G., & White, K. R. (2012). Attachment insecurity and intimate partner violence. *Aggression and Violent Behavior, 17*(5), 475-481.
- Dutton, M. A., & Goodman, L. A. (2005). Coercion in intimate partner violence: Toward a new conceptualization. *Sex Roles, 52*(11-12), 743-756. doi: 10.1007/s11199-

005-4196-6

- El-Bassel, N., Gilbert, L., Wu, E., Chang, M., Gomes, C., Vinocur, D., & Spevack, T. (2007). Intimate partner violence prevalence and HIV risks among women receiving care in emergency departments: Implications for IPV and HIV screening. *Emergency Medicine Journal, 24*(4), 255-259.
- Ellis, W. E., Crooks, C. V., & Wolfe, D. A. (2009). Relational aggression in peer and dating relationships: Links to psychological and behavioral adjustment. *Social Development, 18*(2), 253-269.
- Feeney, J. A. (2002). Attachment, marital interaction, and relationship satisfaction: A diary study. *Personal Relationships, 9*(1), 39-55.
- Feeney, J. A., & Karantzas, G. C. (2017). Couple conflict: Insights from an attachment perspective. *Current Opinion in Psychology, 13*, 60-64.
- Fellmeth, G. L., Heffernan, C., Nurse, J., Habibula, S., & Sethi, D. (2013). Educational and skills-based interventions for preventing relationship and dating violence in adolescents and young adults. *Cochrane Database of Systematic Reviews 2013, 6*, 1-124.
- Finkel, E. J. (2007). Impelling and inhibiting forces in the perpetration of intimate partner violence. *Review of General Psychology, 11*(2), 193.
- Finkel, E. J. (2014). The I3 model: Metatheory, theory, and evidence. *Advances in Experimental Social Psychology, 49*, 1-104.
- Finkel, E. J., DeWall, C. N., Slotter, E. B., McNulty, J. K., Pond Jr, R. S., & Atkins, D. C. (2012). Using I³ theory to clarify when dispositional aggressiveness predicts

intimate partner violence perpetration. *Journal of Personality and Social Psychology*, 102(3), 533.

Finkel, E. J., DeWall, C. N., Slotter, E. B., Oaten, M., & Foshee, V. A. (2009). Self-regulatory failure and intimate partner violence perpetration. *Journal of Personality and Social Psychology*, 97(3), 483.

Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*, 50(5), 992.

Follingstad, D. R., Bradley, R. G., Helff, C. M., & Laughlin, J. E. (2002). A model for predicting dating violence: Anxious attachment, angry temperament, and need for relationship control. *Violence and Victims*, 17(1), 35-47.

Foran, H. M., & O'Leary, K. D. (2008). Alcohol and intimate partner violence: A meta-analytic review. *Clinical Psychology Review*, 28(7), 1222-1234.

Fournier, B., Brassard, A., & Shaver, P. R. (2011). Adult attachment and male aggression in couple relationships: The demand-withdraw communication pattern and relationship satisfaction as mediators. *Journal of Interpersonal Violence*, 26(10), 1-22.

Fraley, R. C., & Davis, K. E. (1997). Attachment formation and transfer in young adults' close friendships and romantic relationships. *Personal Relationships*, 4(2), 131-144.

Fraley, R. C., & Shaver, P. R. (1997). Adult attachment and the suppression of unwanted thoughts. *Journal of Personality and Social Psychology*, 73(5), 1080.

- Fraley, R. C., & Waller, N. G. (1998). Adult attachment patterns: A test of the typological model. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 77-114). New York, NY: Guilford Press.
- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology, 78*(2), 350-365.
- Friese, M., Loschelder, D. D., Gieseler, K., Frankenbach, J., & Inzlicht, M. (2019). Is ego depletion real? An analysis of arguments. *Personality and Social Psychology Review, 23*(2), 107-131.
- Fritz, P.A.T., & O'Leary, K. D. (2004). Physical and psychological partner aggression across a decade: A growth curve analysis. *Violence and victims, 19*(1), 3-16.
- Funk, J. L., & Rogge, R. D. (2007). Testing the ruler with item response theory: increasing precision of measurement for relationship satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology, 21*(4), 572-583.
- Furman, W., & Shaffer, L. (2003). The role of romantic relationships in adolescent development. In P. Florsheim (Ed.), *Adolescent romantic relations and sexual behavior: Theory, research, and practical implications* (pp. 3-22). New York, NY: Psychology Press.
- Giancola, P. R. (2000). Executive functioning: A conceptual framework for alcohol-related aggression. *Experimental and Clinical Psychopharmacology, 8*(4), 576-597.

- Godbout, N., Dutton, D., Lussier, Y., & Sabourin, S. (2009). Early exposure to violence, domestic violence, attachment representations, and marital adjustment. *Personal Relationships, 16*, 365-384.
- Goldstein, S. E. (2011). Relational aggression in young adults' friendships and romantic relationships. *Personal Relationships, 18*(4), 645-656.
- Goldstein, S. E., Chesir-Teran, D., & McFaul, A. (2008). Profiles and correlates of relational aggression in young adults' romantic relationships. *Journal of Youth and Adolescence, 37*(3), 251-265.
- Goldstein, S. E., & Tisak, M. S. (2004). Adolescents' outcome expectancies about relational aggression within acquaintanceships, friendships, and dating relationships. *Journal of Adolescence, 27*(3), 283-302.
- Gormley, B. (2005). An adult attachment theoretical perspective of gender symmetry in intimate partner violence. *Sex Roles, 52*(11-12), 785-795.
- Gottman, J. M., McCoy, K., Coan, J., & Collier, H. (1996). The specific affect coding system (SPAFF) for observing emotional communication in marital and family interaction. In J. M. Gottman (Ed.), *What predicts divorce: The measures* (pp. 112-195). Mahwah, NJ: Erlbaum.
- Gou, L.H. (2014). *Association of Depressive Symptoms, Insecure Romantic Attachment, and Relationship Dissatisfaction with Intimate Partner Violence During the Transition to Parenthood* (Unpublished master's thesis). University of Victoria, Victoria, BC.
- Gou, L.H., Duerksen, K.N., & Woodin, E.M. (2018). Coercive control during the transition to parenthood: An overlooked factor in family wellbeing? *Aggressive*

Behavior, 45(2), 139-150.

Gracia, E., & Herrero, J. (2006). Acceptability of domestic violence against women in the European Union: A multilevel analysis. *Journal of Epidemiology and Community Health*, 60(2), 123-129.

Graham-Kevan, N., & Archer, J. (2008). Does controlling behavior predict physical aggression and violence to partners? *Journal of Family Violence*, 23(7), 539.

Griffin, D. W., & Bartholomew, K. (1994). The metaphysics of measurement: The case of adult attachment. In K. Bartholomew & D. Perlman (Eds.), *Advances in personal relationships vol. 5: Attachment processes in adulthood* (pp. 17-52). London, England: Jessica Kingsley.

Hagger, M. S., Wood, C., Stiff, C., & Chatzisarantis, N. L. (2010). Ego depletion and the strength model of self-control: A meta-analysis. *Psychological Bulletin*, 136(4), 495.

Halford, W. K., Petch, J., Creedy, D. K., & Gamble, J. (2011). Intimate partner violence in couples seeking relationship education for the transition to parenthood. *Journal of Couple & Relationship Therapy*, 10(2), 152-168.

Hamberger, L. K., & Guse, C. E. (2002). Men's and women's use of intimate partner violence in clinical samples. *Violence Against Women*, 8(11), 1301-1331.

Harper, F. W., Austin, A. G., Cercone, J. J., & Arias, I. (2005). The role of shame, anger, and affect regulation in men's perpetration of psychological abuse in dating relationships. *Journal of Interpersonal Violence*, 20(12), 1648-1662.

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52, 511-524.

- Henning, K., Jones, A. R., & Holdford, R. (2005). "I didn't do it, but if I did I had a good reason": Minimization, denial, and attributions of blame among male and female domestic violence offenders. *Journal of Family Violence*, 20(3), 131-139.
- Hodgins, D. C., el-Guebaly, N., & Armstrong, S. (1995). Prospective and retrospective reports of mood states before relapse to substance use. *Journal of Consulting and Clinical Psychology*, 63(3), 400-407.
- Inzlicht, M. & Schmeichel, J. (2012). What is ego depletion? Toward a mechanistic revision of the resource model of self-control. *Perspectives on Psychological Science*, 7(5), 450-463.
- Inzlicht, M., Schmeichel, B.J., & Macrae, C.N. (2014). Why self-control seems (but may not be) limited. *Trends in Cognitive Sciences*, 18(3), 127-133.
- Jacobson, N. S. & Christensen, A. (1998). *Acceptance and change in couple therapy: A therapist's guide to transforming relationships*. New York, NY: Norton.
- Jezl, D. R., Molidor, C. E., & Wright, T. L. (1996). Physical, sexual and psychological abuse in high school dating relationships: Prevalence rates and self-esteem issues. *Child and Adolescent Social Work Journal*, 13(1), 69-87.
- Johnson, M. P. (1995). Patriarchal terrorism and common couple violence: Two forms of violence against women. *Journal of Marriage and the Family*, 57(2), 283-294.
- Johnson, M.P. (2010). *A typology of domestic violence: Intimate terrorism, violent resistance, and situational couple violence*. Lebanon, NH: Northeastern University Press.

- Johnson, M. P., & Leone, J. M. (2005). The differential effects of intimate terrorism and situational couple violence findings from the national violence against women survey. *Journal of Family Issues*, 26(3), 322-349.
- Johnson, S.M. (2004). *The practice of emotionally focused couple therapy* (2nd ed.). New York, NY: Brunner-Routledge.
- Jose, A., & O'Leary, K. D. (2009). Prevalence of partner aggression in representation and clinic samples. In K. D. O'Leary & E. M. Woodin (Eds.), *Psychological and physical aggression in couples: Causes and interventions* (pp. 15-35). Washington, DC: American Psychological Association.
- Kabat-Zinn, J. & Nhat Hanh, T. (2013). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness* (2nd ed.). New York, NY: Bantam.
- Kar, H. L., & O'Leary, K. D. (2010). Gender symmetry or asymmetry in intimate partner victimization? Not an either/or answer. *Partner Abuse*, 1(2), 152-168.
- Kirkpatrick, L. A., & Hazan, C. (1994). Attachment styles and close relationships: A four-year prospective study. *Personal Relationships*, 1(2), 123-142.
- Leadbeater, B. J., Banister, E. M., Ellis, W. E., & Yeung, R. (2008). Victimization and relational aggression in adolescent romantic relationships: The influence of parental and peer behaviors, and individual adjustment. *Journal of Youth and Adolescence*, 37(3), 359-372.
- Leigh, B. C., Gillmore, M. R., & Morrison, D. M. (1998). Comparison of diary and retrospective measures for recording alcohol consumption and sexual activity. *Journal of Clinical Epidemiology*, 51(2), 119-127.

- Lento, J. (2006). Relational and physical victimization by peers and romantic partners in college students. *Journal of Social and Personal Relationships*, 23(3), 331-348.
- Leonard, K. E. (2005). Alcohol and intimate partner violence: when can we say that heavy drinking is a contributing cause of violence? *Addiction*, 100(4), 422-425.
- Letendre, J. (2007). "Sugar and spice but not always nice": Gender socialization and its impact on development and maintenance of aggression in adolescent girls. *Child and Adolescent Social Work Journal*, 24(4), 353-368.
- Levy, B. (1991). *Dating violence: Young women in danger*. Seattle, WA: Seal Press.
- Li, T., & Chan, D.K-S. (2012). How anxious and avoidant attachment affect romantic relationship quality differently: A meta-analytic review. *European Journal of Social Psychology*, 42, 406-419.
- Linder, J. R., Crick, N. R., & Collins, W. A. (2002). Relational aggression and victimization in young adults' romantic relationships: Associations with perceptions of parent, peer, and romantic relationship quality. *Social Development*, 11(1), 69-86.
- Linehan, M.M. (2015). *DBT Skills Training Manual* (2nd ed.). New York, NY: Guilford Press.
- Maas, C. J., & Hox, J. J. (2005). Sufficient sample sizes for multilevel modeling. *Methodology*, 1(3), 86-92.
- Markman, H. J., Stanley, S. M., & Blumberg, S. L. (2001). *Fighting for your marriage: Positive steps for preventing divorce and preserving a lasting love*. San Francisco, CA: Jossey-Bass.

- Mayseless, O. (1991). Adult attachment patterns and courtship violence. *Family Relations*, 40(1), 21-28.
- Mikulincer, M., & Florian, V. (1997). Are emotional and instrumental supportive interactions beneficial in times of stress? The impact of attachment style. *Anxiety, Stress, and Coping*, 10(2), 109-127.
- Mikulincer, M., & Shaver, P.R. (2008). Adult attachment and affect regulation. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 503-531). New York, NY: Guilford Press.
- Mikulincer, M., Shaver, P. R., & Pereg, D. (2003). Attachment theory and affect regulation: The dynamics, development, and cognitive consequences of attachment-related strategies. *Motivation and Emotion*, 27(2), 77-102.
- Miller, D. T., & Porter, C. A. (1983). Self-blame in victims of violence. *Journal of Social Issues*, 39(2), 139-152.
- Moore, T. M., Elkins, S. R., McNulty, J. K., Kivisto, A. J., & Handsel, V. A. (2011). Alcohol use and intimate partner violence perpetration among college students: Assessing the temporal association using electronic diary technology. *Psychology of Violence*, 1(4), 315.
- Morales, J. R., & Crick, N. R. (1998). Self-report of aggression and social behavior measure. *Unpublished measure, University of Minnesota, Twin Cities Campus*.
- Moreira, J. M., de Fátima Silva, M., Moleiro, C., Aguiar, P., Andrez, M., Bernardes, S., & Afonso, H. (2003). Perceived social support as an offshoot of attachment style. *Personality and Individual Differences*, 34(3), 485-501.

- Morren, M., Dulmen, S., Ouwerkerk, J., & Bensing, J. (2009). Compliance with momentary pain measurement using electronic diaries: A systematic review. *European Journal of Pain, 13*(4), 354-365.
- Muñoz-Rivas, M. J., Graña, J. L., O'Leary, K. D., & González, M. P. (2007). Aggression in adolescent dating relationships: Prevalence, justification, and health consequences. *Journal of Adolescent Health, 40*(4), 298-304.
- Muraven, M., & Baumeister, R. F. (2000). Self-regulation and depletion of limited resources: Does self-control resemble a muscle? *Psychological Bulletin, 126*(2), 247.
- Murray, S. L. (2005). Regulating the risks of closeness: A relationship-specific sense of felt security. *Current Directions in Psychological Science, 14*(2), 74-78.
- Murray, S. L., Bellavia, G. M., Rose, P., & Griffin, D. W. (2003). Once hurt, twice hurtful: How perceived regard regulates daily marital interactions. *Journal of Personality and Social Psychology, 84*(1), 126.
- Murray, S. L., Rose, P., Bellavia, G. M., Holmes, J. G., & Kusche, A. G. (2002). When rejection stings: How self-esteem constrains relationship-enhancement processes. *Journal of Personality and Social Psychology, 83*(3), 556.
- Murray, S. L., Rose, P., Holmes, J. G., Derrick, J., Podchaski, E. J., Bellavia, G., & Griffin, D. W. (2005). Putting the partner within reach: A dyadic perspective on felt security in close relationships. *Journal of Personality and Social Psychology, 88*(2), 327-347.
- Murray-Close, D., Ostrov, J. M., Nelson, D. A., Crick, N. R., & Coccaro, E. F. (2010). Proactive, reactive, and romantic relational aggression in adulthood:

- Measurement, predictive validity, gender differences, and association with intermittent explosive disorder. *Journal of Psychiatric Research*, 44(6), 393-404.
- Muthén, B. O. (1994). Multilevel covariance structure analysis. *Sociological Methods & Research*, 22(3), 376-398.
- National Center for Injury Prevention and Control. (2006). Understanding teen dating abuse [PDF file]. Retrieved from www.cdc.gov/ncipc/pub-res/DatingAbuseFactSheet.pdf
- Neufeld, J., McNamara, J. R., & Ertl, M. (1999). Incidence and prevalence of dating partner abuse and its relationship to dating practices. *Journal of Interpersonal Violence*, 14(2), 125-137.
- Nolen-Hoeksema, S. (2004). Gender differences in risk factors and consequences for alcohol use and problems. *Clinical Psychology Review*, 24(8), 981-1010.
- O’Keeffe, N. K., Brockopp, K., Chew, E. (1986). Teen dating violence. *Social Work*, 31(6), 465-468.
- O’Leary, K. D. (2004). Psychological abuse: A variable deserving critical attention in domestic violence. In K. D. O’Leary & R. D. Maiuro (Eds.), *Psychological abuse in violent domestic relations* (pp. 3-28). New York, NY: Springer Publishing Company.
- O’Leary, K. D., Barling, J., Arias, I., Rosenbaum, A., Malone, J., & Tyree, A. (1989). Prevalence and stability of physical aggression between spouses: A longitudinal analysis. *Journal of Consulting and Clinical Psychology*, 57(2), 263-268.
- O’Leary, K. D., Foran, H., & Cohen, S. (2013). Validation of Fear of Partner Scale. *Journal of Marital and Family Therapy*, 39(4), 502-514.

- O'Leary, K. D., & Slep, A. M. S. (2012). Prevention of partner violence by focusing on behaviors of both young males and females. *Prevention Science, 13*(4), 329-339.
- O'leary, K. D., Woodin, E. M., & Fritz, P. A. (2006). Can we prevent the hitting? Recommendations for preventing intimate partner violence between young adults. *Journal of Aggression, Maltreatment & Trauma, 13*(3-4), 121-178.
- Orcutt, H. K., Garcia, M., & Pickett, S. M. (2005). Female-perpetrated intimate partner violence and romantic attachment style in a college student sample. *Violence and Victims, 20*(3), 287-302.
- Österman, K., Björkqvist, K., Lagerspetz, K. M., Kaukiainen, A., Landau, S. F., Frączek, A., & Caprara, G. V. (1998). Cross-cultural evidence of female indirect aggression. *Aggressive Behavior, 24*(1), 1-8.
- Overall, N. C., Girme, Y. U., Lemay Jr, E. P., & Hammond, M. D. (2014). Attachment anxiety and reactions to relationship threat: The benefits and costs of inducing guilt in romantic partners. *Journal of Personality and Social Psychology, 106*(2), 235-256.
- Pan, Y., & McBee, M. T. (2014). A flexible method for conducting power analysis for two-and three-level hierarchical linear models in R. *Journal of Modern Applied Statistical Methods, 13*(1), 463-483.
- Parks, K. A., Hsieh, Y. P., Bradizza, C. M., & Romosz, A. M. (2008). Factors influencing the temporal relationship between alcohol consumption and experiences with aggression among college women. *Psychology of Addictive Behaviors, 22*(2), 210-218.

- Peugh, J.L. (2010). A practical guide to multilevel modeling. *Journal of School Psychology, 48*, 85–112.
- Piantadosi, S., Byar, D. P., & Green, S. B. (1988). The ecological fallacy. *American Journal of Epidemiology, 127*(5), 893-904.
- Pietromonaco, P.R., & Barrett, L.F. (2000). The internal working models concept: What do we really know about the self in relation to others? *Review of General Psychology, 4*(2), 155-175.
- Preacher, K.J., Curran, P.J., & Bauer, D.J. (2006). Computational tools for probing interactions in multiple linear regression, multilevel modeling, and latent curve analysis. *Journal of Educational and Behavioral Statistics, 31*, 437-448.
- Prinstein, M. J., Boergers, J., & Vernberg, E. M. (2001). Overt and relational aggression in adolescents: Social-psychological adjustment of aggressors and victims. *Journal of Clinical Child Psychology, 30*(4), 479-491.
- Prospero, M. (2006). The role of perceptions in dating violence among young adolescents. *Journal of Interpersonal Violence, 21*(4), 470-484.
- Raudenbush, S. W., Brennan, R. T., & Barnett, R. C. (1995). A multivariate hierarchical model for studying psychological change within married couples. *Journal of Family Psychology, 9*(2), 161-174.
- Raudenbush, S. W., Bryk, A., Cheong, Y. F., Congdon, R., & du Tolt, M. (2004). *HLM 6: Hierarchical linear and nonlinear modeling*. Lincolnwood, IL: Scientific Software International.

- Reese-Weber, M., & Marchand, J. F. (2002). Family and individual predictors of late adolescents' romantic relationships. *Journal of Youth and Adolescence*, *31*(3), 197-206.
- Robertson, K., & Murachver, T. (2006). Intimate partner violence linguistic features and accommodation behavior of perpetrators and victims. *Journal of Language and Social Psychology*, *25*(4), 406-422.
- Rogge, R. D., Cobb, R. M., Johnson, M., Lawrence, E., & Bradbury, T. N. (2002). The CARE program: A preventive approach to marital intervention. In A. S. Gurman & N. S. Jacobson (Eds.), *Clinical handbook of couple therapy* (pp. 420-435). New York, NY: The Guilford Press.
- Rothman, E. F., Stuart, G. L., Winter, M., Wang, N., Bowen, D. J., Bernstein, J., & Vinci, R. (2012). Youth alcohol use and dating abuse victimization and perpetration: a test of the relationships at the daily level in a sample of pediatric emergency department patients who use alcohol. *Journal of Interpersonal Violence*, *27*(15), 2959-2979.
- Saunders, J. B., Aasland, O. G., Babor, T. F., De la Fuente, J. R., & Grant, M. (1993). Development of the alcohol use disorders identification test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption-II. *Addiction*, *88*(6), 791-804.
- Schad, M. M., Szwedo, D. E., Antonishak, J., Hare, A., & Allen, J. P. (2008). The broader context of relational aggression in adolescent romantic relationships: Predictions from peer pressure and links to psychosocial functioning. *Journal of Youth and Adolescence*, *37*(3), 346-358.

- Scharfe, E., & Bartholomew, K. I. M. (1994). Reliability and stability of adult attachment patterns. *Personal Relationships, 1*(1), 23-43.
- Schneider, C., & Brimhall, A. S. (2014). From scared to repaired: Using an attachment-based perspective to understand situational couple violence. *Journal of Marital and Family Therapy, 40*(3), 367-379.
- Schnurr, M.P., Mahatmya, D., & Basche III, R.A. (2013). The role of dominance, cyber aggression perpetration, and gender on emerging adults' perpetration of intimate partner violence. *Psychology of Violence, 3*(1), 70-83.
- Scott, S. B., Rhoades, G. K., Stanley, S. M., Allen, E. S., & Markman, H. J. (2013). Reasons for divorce and recollections of premarital intervention: Implications for improving relationship education. *Couple and Family Psychology: Research and Practice, 2*(2), 131-145.
- Shulman, S., & Connolly, J. (2013). The challenge of romantic relationships in emerging adulthood reconceptualization of the field. *Emerging Adulthood, 1*(1), 27-39.
- Shulman, S., Tuval-Mashiach, R., Levran, E., & Anbar, S. (2006). Conflict resolution patterns and longevity of adolescent romantic couples: A 2-year follow-up study. *Journal of Adolescence, 29*(4), 575-588.
- Schumacher, J. A., Feldbau-Kohn, S., Slep, A. M. S., & Heyman, R. E. (2001). Risk factors for male-to-female partner physical abuse. *Aggression and Violent Behavior, 6*(2), 281-352.
- Sears, H. A., Byers, E. S., & Price, E. L. (2007). The co-occurrence of adolescent boys' and girls' use of psychologically, physically, and sexually abusive behaviours in their dating relationships. *Journal of Adolescence, 30*(3), 487-504.

- Seedat, S., Stein, M. B., & Forde, D. R. (2005). Association between physical partner violence, posttraumatic stress, childhood trauma, and suicide attempts in a community sample of women. *Violence and Victims, 20*(1), 87-98.
- Shaver, P. R., & Clark, C. L. (1994). The psychodynamics of adult romantic attachment. In J. M. Masling & R. F. Bornstein (Eds.), *Empirical perspectives on object relations theories* (pp. 105-156). Washington, DC: American Psychological Association.
- Shaver, P. R., & Hazan, C. (1993). Adult romantic attachment: Theory and evidence. *Advances in Personal Relationships, 4*, 29-70.
- Shaver, P.R., & Mikulincer, M. (2006). Adult attachment strategies and the regulation of emotion. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 446-465). New York, NY: Guilford Press.
- Shi, L. (2003). The association between adult attachment styles and conflict resolution in romantic relationships. *American Journal of Family Therapy, 31*(3), 143-157.
- Shorey, R. C., Cornelius, T. L., & Bell, K. M. (2008). A critical review of theoretical frameworks for dating violence: Comparing the dating and marital fields. *Aggression and Violent Behavior, 13*(3), 185-194.
- Shorey, R. C., Stuart, G. L., McNulty, J. K., & Moore, T. M. (2014). Acute alcohol use temporally increases the odds of male perpetrated dating violence: A 90-day diary analysis. *Addictive Behaviors, 39*(1), 365-368.
- Sibley, C. G., & Liu, J. H. (2004). Short-term temporal stability and factor structure of the revised experiences in close relationships (ECR-R) measure of adult attachment. *Personality and Individual Differences, 36*(4), 969-975.

- Silverman, J. G., Raj, A., Mucci, L. A., & Hathaway, J. E. (2001). Dating violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality. *JAMA*, *286*(5), 572-579.
- Simpson, J. A., & Overall, N. C. (2014). Partner buffering of attachment insecurity. *Current Directions in Psychological Science*, *23*(1), 54-59.
- Simpson, J. A., & Rholes, W. S. (Eds.). (1998). *Attachment theory and close relationships*. New York, NY: The Guilford Press.
- Simpson, J. A., Winterheld, H. A., Rholes, W. S., & Oriña, M. M. (2007). Working models of attachment and reactions to different forms of caregiving from romantic partners. *Journal of Personality and Social Psychology*, *93*(3), 466-477.
- Simpson, L. E., & Christensen, A. (2005). Spousal agreement regarding relationship aggression on the Conflict Tactics Scale-2. *Psychological Assessment*, *17*(4), 423-432.
- Skinner, B. F. (1957). The experimental analysis of behavior. *American Scientist*, *45*(4), 343-371.
- Slutske, W. S. (2005). Alcohol use disorders among US college students and their non-college-attending peers. *Archives of General Psychiatry*, *62*(3), 321-327.
- Smith, D. M., & Donnelly, J. (2000). Adolescent dating violence: A multi-systemic approach of enhancing awareness in educators, parents, and society. *Journal of Prevention & Intervention in the Community*, *21*(1), 53-64.
- Snijders, T. A. (2005). Power and sample size in multilevel linear models. In B. S. Everitt & D. C. Howell (Eds.), *Encyclopedia of statistics in behavioral science vol. 3* (pp. 1570-1573). New York, NY: Wiley.

- Snijders, T. A. (2011). Multilevel analysis. In M. Lovric (Ed.), *International encyclopaedia of statistical science* (pp. 879-882). Berlin, Heidelberg: Springer.
- Sousa, C. A. (1999). Teen dating violence. *Family Court Review*, 37(3), 356-374.
- Starr, L. R., & Davila, J. (2012). Responding to anxiety with rumination and hopelessness: Mechanism of anxiety-depression symptom co-occurrence? *Cognitive Therapy and Research*, 36(4), 321-337.
- Steele, C. M., & Josephs, R. A. (1990). Alcohol myopia: Its prized and dangerous effects. *American Psychologist*, 45(8), 921-933.
- Stets, J. E., & Henderson, D. A. (1991). Contextual factors surrounding conflict resolution while dating: Results from a national study. *Family Relations*, 40(1), 29-36.
- Stets, J. E., & Straus, M. A. (1990). Gender differences in reporting marital violence and its medical and psychological consequences. In M. A. Straus (Ed.), *Physical violence in American families* (pp. 151-166). New Brunswick, NJ: Transaction.
- Stith, S. M., McCollum, E. E., Amanor-Boadu, Y., & Smith, D. (2012). Systemic perspectives on intimate partner violence treatment. *Journal of Marital and Family Therapy*, 38(1), 220-240.
- Stopka, T. J., Springer, K. W., Khoshnood, K., Shaw, S., & Singer, M. (2004). Writing about risk: Use of daily diaries in understanding drug-user risk behaviors. *AIDS and Behavior*, 8(1), 73-85.
- Straight, E. S., Harper, F. W., & Arias, I. (2003). The impact of partner psychological abuse on health behaviors and health status in college women. *Journal of Interpersonal Violence*, 18(9), 1035-1054.

- Straus, M. A. (2004). Cross-cultural reliability and validity of the Revised Conflict Tactics Scales: A study of university student dating couples in 17 nations. *Cross-Cultural Research, 38*(4), 407-432.
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised Conflict Tactics Scales (CTS2): Development and preliminary psychometric data. *Journal of Family Issues, 17*(3), 283-316.
- Stuart, G. L., Moore, T. M., Elkins, S. R., O'Farrell, T. J., Temple, J. R., Ramsey, S. E., & Shorey, R. C. (2013). The temporal association between substance use and intimate partner violence among women arrested for domestic violence. *Journal of Consulting and Clinical Psychology, 81*(4), 681-690.
- Stucke, T. S., & Baumeister, R. F. (2006). Ego depletion and aggressive behavior: Is the inhibition of aggression a limited resource? *European Journal of Social Psychology, 36*(1), 1-13.
- Tabachnick, B.G. & Fidell, L.S. (2012). *Using multivariate statistics* (6th ed.). London, England: Pearson Higher Education.
- Taft, C. T., O'Farrell, T. J., Torres, S. E., Panuzio, J., Monson, C. M., Murphy, M., & Murphy, C. M. (2006). Examining the correlates of psychological aggression among a community sample of couples. *Journal of Family Psychology, 20*(4), 581-588.
- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality, 72*(2), 271-324.

- Testa, M., Livingston, J. A., & Leonard, K. E. (2003). Women's substance use and experiences of intimate partner violence: A longitudinal investigation among a community sample. *Addictive Behaviors, 28*(9), 1649-1664.
- Thompson, M. P., & Kingree, J. B. (2006). The roles of victim and perpetrator alcohol use in intimate partner violence outcomes. *Journal of Interpersonal Violence, 21*(2), 163-177.
- Thompson, R. S., Bonomi, A. E., Anderson, M., Reid, R. J., Dimer, J. A., Carrell, D., & Rivara, F. P. (2006). Intimate partner violence: Prevalence, types, and chronicity in adult women. *American Journal of Preventive Medicine, 30*(6), 447-457.
- Tolman, R. M. (1989). The development of a measure of psychological maltreatment of women by their male partners. *Violence and Victims, 4*(3), 159-177.
- Vickerman, K. A., & Margolin, G. (2008). Trajectories of physical and emotional marital aggression in midlife couples. *Violence and Victims, 23*, 18-34.
- Wadden, T. A., & Letizia, K. A. (1992). Predictors of attrition and weight loss in patients treated by moderate and severe caloric restriction. In T.W. Wadden, & T.B. VanItalie (Eds.), *Treatment of the seriously obese patient* (pp. 383-410). New York, NY: Guilford Press.
- Watkins, L. E., DiLillo, D., Hoffman, L., & Templin, J. (2015). Do self-control depletion and negative emotion contribute to intimate partner aggression? A lab-based study. *Psychology of Violence, 5*(1), 35-45.
- Wechsler, H., Davenport, A., Dowdall, G., Moeykens, B., & Castillo, S. (1994). Health and behavioral consequences of binge drinking in college: A national survey of students at 140 campuses. *JAMA, 272*(21), 1672-1677.

- White, J. W., & Koss, M. P. (1991). Courtship violence: Incidence in a national sample of higher education students. *Violence and Victims, 6*(4), 247-256.
- Wiebe, S. A., Johnson, S. M., Lafontaine, M. F., Burgess Moser, M., Dalgleish, T. L., & Tasca, G. A. (2017). Two-year follow-up outcomes in emotionally focused couple therapy: An investigation of relationship satisfaction and attachment trajectories. *Journal of Marital and Family Therapy, 43*(2), 227-244.
- Williamson, H. C., Rogge, R. D., Cobb, R. J., Johnson, M. D., Lawrence, E., & Bradbury, T. N. (2015). Risk moderates the outcome of relationship education: A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 83*(3), 617-629.
- Wood, N. D., Werner-Wilson, R. J., Parker, T. S., & Perry, M. S. (2012). Exploring the impact of attachment anxiety and avoidance on the perception of couple conflict. *Contemporary Family Therapy, 34*(3), 416-428.
- Woodin, E. M., & O'Leary, K. D. (2009). Theoretical approaches to the etiology of partner violence. In D. J. Whitaker, J. R. Lutzker, D. J. Whitaker, J. R. Lutzker (Eds.), *Preventing partner violence: Research and evidence-based intervention strategies* (pp. 41-65). Washington, DC: American Psychological Association.
- Woodin, E.M., Sukhawathanakul, P., Caldeira, V., Homel, J., & Leadbeater, B. (2016). Pathways to romantic relational aggression through adolescent peer aggression and heavy episodic drinking. *Aggressive Behavior, 42*(6), 563-576.

Appendix A

Experiences in Close Relationships Inventory – Revised

The following statements concern how you feel in your current romantic relationship. Respond to each statement by indicating how much you agree or disagree with it. Write the number in the space provided, using the following rating scale:

1 2 3 4 5 6 7

Disagree
Strongly

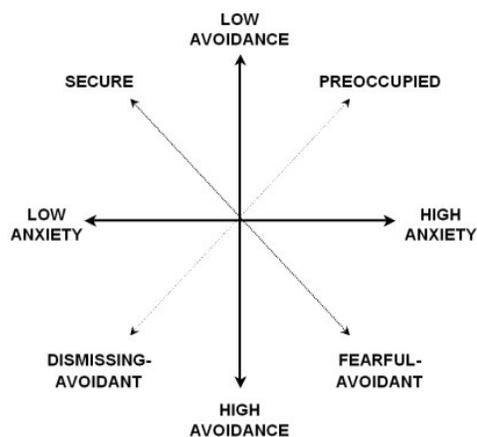
Neutral/Mixed

Agree Strongly

- _____ 1. I prefer not to show a partner how I feel deep down.
- _____ 2. I worry about being abandoned.
- _____ 3. I am very comfortable being close to romantic partners.
- _____ 4. I worry a lot about my relationships.
- _____ 5. Just when my partner starts to get close to me I find myself pulling away.
- _____ 6. I worry that romantic partners won't care about me as much as I care about them.
- _____ 7. I get uncomfortable when a romantic partner wants to be very close.
- _____ 8. I worry a fair amount about losing my partner.
- _____ 9. I don't feel comfortable opening up to romantic partners.
- _____ 10. I often wish that my partner's feelings for me were as strong as my feelings for them.
- _____ 11. I want to get close to my partner, but I keep pulling back.
- _____ 12. I often want to merge completely with romantic partners, and this sometimes scares them away.
- _____ 13. I am nervous when partners get too close to me.
- _____ 14. I worry about being alone.
- _____ 15. I feel comfortable sharing my private thoughts and feelings with my partner.
- _____ 16. My desire to be very close sometimes scares people away.
- _____ 17. I try to avoid getting too close to my partner.
- _____ 18. I need a lot of reassurance that I am loved by my partner.
- _____ 19. I find it relatively easy to get close to my partner.
- _____ 20. Sometimes I feel that I force my partners to show more feeling, more commitment.
- _____ 21. I find it difficult to allow myself to depend on romantic partners.
- _____ 22. I do not often worry about being abandoned.
- _____ 23. I prefer not to be too close to romantic partners.
- _____ 24. If I can't get my partner to show interest in me, I get upset or angry.
- _____ 25. I tell my partner just about everything.
- _____ 26. I find that my partner(s) don't want to get as close as I would like.
- _____ 27. I usually discuss my problems and concerns with my partner.
- _____ 28. When I'm not involved in a relationship, I feel somewhat anxious and insecure.
- _____ 29. I feel comfortable depending on romantic partners.
- _____ 30. I get frustrated when my partner is not around as much as I would like.
- _____ 31. I don't mind asking romantic partners for comfort, advice, or help.
- _____ 32. I get frustrated if romantic partners are not available when I need them.
- _____ 33. It helps to turn to my romantic partner in times of need.
- _____ 34. When romantic partners disapprove of me, I feel really bad about myself.
- _____ 35. I turn to my partner for many things, including comfort and reassurance.
- _____ 36. I resent it when my partner spends time away from me.

Scoring:

1. Reverse key items with a box around the number. (1 →7, 2→6, 3→5, 5→3, 6→2, 7→1)
2. Add the total for the even _____ and odd _____ numbers
3. Even = Anxiety; Odd = Avoidance
4. Scores from 18-126; Midpoint is 72 (determine if you're high or low) Note: don't take your "category" too seriously. The measure is not designed to put you into only one category.



Appendix B

Daily Diary Questionnaire

Welcome to today's daily diary survey for the study **ONE DAY AT A TIME**. By entering your unique identifier code, clicking "NEXT," and completing the survey, you are giving your implied ongoing consent to participate.

Answer the following questions based on what has occurred since the time you woke up today. For your own privacy, please complete this survey in a location where your screen cannot be viewed by others.

Are you still in a relationship with the same partner you were with when you began this study? YES or NO

(If NO, survey ends and participant is directed to list of resources and sent an email to say that they no longer qualify to continue participation and a debriefing email)

1. a) Did you have face-to-face contact with your partner today (i.e., did you see them in person)? YES or NO

b) During what hours of the day did you see your partner in person?

2. a) Did you have telephone contact with your partner today *excluding texting* (i.e., talking on the phone, Skype, or FaceTime)? YES or NO

b) During what hours of the day did you speak to your partner on the phone/Skype/FaceTime?

(If NO to both Q1. A) and Q2. A), survey skips Q3. And Q4.).

(If NO to Q1. A) and YES to Q2. A), survey skips Q3.u. to Q3.gg. And Q4.u. to Q4.gg.).

(ELSE continue to Q3.).

3. Please check all of the following behaviours that *you used towards your partner* today. For any behaviours you check, please indicate to the best of your ability at what time of day they occurred in the box provided next to each behaviour. If the behaviour occurred more than once, please list times for all occurrences (e.g., 10:14am, 2:38pm, 9:45pm).

- a. Insulted or swore at your partner
- b. Called your partner fat or ugly
- c. Destroyed something belonging to your partner
- d. Shouted or yelled at your partner
- e. Stomped out of the room or house or yard during a disagreement
- f. Accused your partner of being a lousy lover
- g. Done something to spite your partner
- h. Threatened to hit or throw something at your partner

- i. Put down your partner's physical appearance

- j. Monitored your partner's time and made your partner account for where they were
- k. Was jealous or suspicious of partner's friends and acquaintances
- l. Did not want partner to go to school or other self-improvement activities
- m. Accused your partner of cheating
- n. Interfered in your partner's relationships with other family members
- o. Tried to keep your partner from doing things to help themselves
- p. Restricted your partner's use of the telephone or cellphone

- q. Threatened to break up with your partner in order to get them to do what you wanted.
- r. Tried to make your partner jealous when you were mad at them.
- s. Cheated on your partner because you were angry at them.
- t. Gave your partner the silent treatment when they hurt your feelings in some way.
- u. Flirted with another person in front of your partner when they made you mad.

- v. Threw something at your partner that could hurt
- w. Twisted your partner's arm or hair
- x. Pushed or shoved your partner
- y. Used a knife or gun on your partner
- z. Punched or hit your partner with something that could hurt
- aa. Choked your partner
- bb. Slammed your partner against a wall
- cc. Beat up your partner
- dd. Grabbed your partner
- ee. Slapped your partner
- ff. Burned or scalded your partner on purpose
- gg. Kicked your partner

4. Please check all of the following behaviours that *your partner* used *towards you* today. For any behaviours you check please indicate to the best of your ability at what time of day they occurred in the box provided next to each behaviour. If the behaviour occurred more than once, please list times for all occurrences (e.g., 10:14am, 2:38pm, 9:45pm).

- a. Insulted or swore at you
- b. Called you fat or ugly
- c. Destroyed something belonging to you
- d. Shouted or yelled at you
- e. Stomped out of the room or house or yard during a disagreement
- f. Accused you of being a lousy lover
- g. Did something to spite you
- h. Threatened to hit or throw something at you

- i. Put down your physical appearance
- j. Monitored your time and made you account for where you were
- k. Was jealous or suspicious of your friends and acquaintances

- l. Did not want you to go to school or other self-improvement activities
- m. Accused me of cheating
- n. Interfered in your relationships with other family members
- o. Tried to keep you from doing things to help yourself
- p. Restricted your use of the telephone or cellphone

- q. Threatened to break up with you in order to get you to do what they wanted.
- r. Tried to make you jealous when they were mad at you.
- s. Cheated on you because they were angry at you.
- t. Gave you the silent treatment when you hurt their feelings in some way.
- u. Flirted with another person in front of you when they were mad.

- v. Threw something at you that could hurt
- w. Twisted your arm or hair
- x. Pushed or shoved you
- y. Used a knife or gun on you
- z. Punched or hit you with something that could hurt
- aa. Choked you
- bb. Slammed you against a wall
- cc. Beat you up
- dd. Grabbed you
- ee. Slapped you
- ff. Burned or scalded you on purpose
- gg. Kicked you

5. Did you receive any injuries resulting from your partner's behaviour that require medical attention today? YES or NO

(For paper-and-pencil questionnaires only) If you have answered yes to this question, please contact the principal investigator immediately at lisagou@uvic.ca.

Answer the following questions based on how you feel **today**. (0 = *not at all*, and 6 = *extremely*)

- 6. To what degree did you feel rejected or hurt by your partner?
- 7. To what degree did you feel that your partner doesn't understand you?
- 8. To what degree did you feel that your partner isn't there for you?
- 9. To what degree did you feel that your partner was angry with you?
- 10. To what degree did you feel your partner was irritated with you?
- 11. To what degree did you feel that your partner didn't really care what you think?

12. To what degree did you feel that your partner loves you?
13. To what degree did you feel that your partner accepts you as you are?
14. To what degree did you feel that your partner overlooks your faults?
15. To what degree did you feel comforted or reassured by your partner?
16. To what degree did you feel your partner is proud of you?
17. To what degree did you feel uplifted by your relationship?
18. To what degree did you worry about disappointing your partner?
19. To what degree were you unsure whether your partner is happy in your relationship?
20. To what degree did you feel your partner is pulling away from you?
21. To what degree did you feel your partner is bored with you?
22. To what degree did you feel you care more about this relationship than your partner?
23. To what degree did your partner listen to or comfort you today? (0 = *not at all*, and 6 = *extremely*)
24. To what degree did your partner help you solve a problem today?
25. How well did your partner's support fit your needs today?
26. How often did you experience conflict with your partner today? (0 = *not at all*, and 6 = *extremely*)
27. At what time did the most serious conflict with your partner occur today (e.g., 6:19pm or if no conflict at all indicate N/A)?
28. How hurt were you by this conflict? (0 = *not at all*, and 6 = *extremely*).
29. Did you consume any alcoholic drinks today? YES or NO

(If NO to Q29., survey skips Q30. and Q31.).
30. How many alcoholic drinks did you consume today (1 drink = 1 bottle/can of beer/cider, 5 oz. of wine, 1.5 oz. [1 shot] of hard liquor)?
31. During which hours of the day were you drinking (e.g., 11:25am-12:30pm, 7:00pm-10:45pm)?

32. To what degree did you confront difficult or stressful events today? (0 = *not at all*, and 6 = *extremely*)

33. At what time did you experience the most difficult or stressful event today (e.g., 6:19pm)?

34. During these difficult or stressful events, to what degree did you purposefully concentrate on finding a solution?

35. During these difficult or stressful events, to what degree did you try to keep your feelings from interfering with other things?