

Predicting Relationship Satisfaction during the Transition to Parenthood:  
Associations between Intimate Partner Violence, PTS Symptoms, and Substance Misuse.

by

Alina Sotskova,  
B.A., York University, 2007

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**Supervisory Committee**

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## Abstract

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Transition to parenthood can be a stressful time for a couple, especially for couples at risk for substance misuse and intimate partner violence. Relationship satisfaction tends to decline in the first year of parenthood as the partners are adjusting to the demands of their new roles as parents. History of trauma and current symptoms of Post-traumatic Stress (PTS) have been associated with decreased intimacy, communication, and relationship adjustment, yet there is a lack of research on how PTS symptoms and trauma history affect parents and families. The current study investigated how PTS symptoms and trauma history affect new parents' relationship satisfaction in the presence of substance misuse and intimate partner violence. Ninety eight heterosexual couples filled out questionnaires one year after the birth of their first child. Hierarchical multiple regression results indicated that PTS symptoms predicted relationship satisfaction over and above IPV victimization and substance misuse for men. However, for women, psychological IPV victimization was the only significant multivariate predictor for women. Additionally, for men, PTS symptoms interacted with harmful drinking to predict relationship satisfaction. The results suggest that women's relationship functioning is particularly affected by psychological aggression while men's relationship functioning is particularly susceptible to effects of harmful drinking and their own PTS symptoms. Implications are discussed.

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## Introduction

Traumatic experiences, Post-traumatic Stress (PTS) symptoms, Intimate Partner Violence (IPV), and substance misuse can have profound and long-term negative consequences for couples and families, leading to relationship discord and depression, among other outcomes (e.g., Cleaver, Nicholson, Tarr, & Cleaver, 2007). Additionally, there is considerable evidence suggesting that traumatic events, substance misuse, and IPV affect men and women differently. For example, research on IPV suggests that women tend to be injured more often and more severely than men and tend to experience more negative consequences of IPV, such as work- and finances-related problems than men; women are also more likely to be victims of homicide as a result of IPV (Loseke & Kurz, 2005; Tjaden & Thoennes, 2000). Also, some studies have reported a higher association between psychological and sexual aggression perpetration for men when compared to women (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Further, women are much more likely to experience sexual victimization than men, which is also associated with higher risk for developing Post-Traumatic Stress Disorder (PTSD) (e.g., Hermann, 1992; Najavits, 2007). It is important to study how PTS symptoms, IPV, and substance misuse affect men and women *in relationships* as both men and women's patterns of substance use, for example, can be affected by relationship dynamics (e.g., Cleaver et al., 2007).

Further, PTS symptoms, IPV, and substance misuse also tend to be related in such a way that they are likely to reinforce one another. For instance, substance use can provide temporary relief from acute PTS symptoms, but can also create a substance dependency, which is associated with other health costs (e.g., Monson, Fredman, &

Adair, 2008). The transition to parenthood can be a stressful time for the couple as they adjust to being parents (Mitnick, Heyman, & Smith-Slep, 2009). If the couple was already at risk for aggression or substance misuse before the birth of their first child, the stress associated with the transition to parenthood can mean that IPV, PTS symptoms, and substance misuse can exacerbate one another (e.g., McCrady, Epstein, Cook, Jensen, & Hildenbrand, 2009; Monson, Langhinrichsen-Rohling, & Taft, 2009). For example, higher levels of stress may decrease the threshold for physical aggression for one partner; for the other partner, experiencing increased physical aggression may lead to an increase in their substance mis/use.

However, there is a lack of research on how previous traumatic events and reactions to such events (i.e., PTS symptoms, depression) affect new parents. Therefore, one of the goals of the current study is to investigate how trauma history and PTS symptoms affect the relationship satisfaction of new parents while controlling for IPV and substance misuse. Examining how the above risk factors affect new parents' relationship adjustment can provide important information about the couples' functioning as they adjust to the roles of parents. Such research can help to a) identify couples and families who are at risk for conflict, violence, and relationship discord; and b) focus the targets of prevention and intervention efforts aimed at new couples and families.

## **Intimate Partner Violence**

Intimate partner violence (IPV) is a serious issue that affects a large proportion of married and co-habiting heterosexual couples (e.g., Straus, 2005; Taft et al., 2006). For the purposes of this thesis, I will use the label of IPV to include various forms of violence and aggression between intimate partners, such as physical, sexual, psychological, and emotional violence and abuse (O’Leary & Woodin, 2009). One reason for this is that the research literature contains many different names for violence in relationships: abuse, battering, domestic violence, and so on (e.g., Barnett, Miller-Perrin, & Perrin, 1997). Most of these definitions are very specific, focusing only on the physical or sexual aspect of violence or focusing only on violence in specific contexts (i.e., marriage) (Barnett et al., 1997). However, the term “intimate partner violence” does not presume that the aggression is physical, psychological, or sexual in nature. Therefore, the term “IPV” can be used to refer to any type of aggression in relationships and to occurrence of different types of violence in the same relationship. The advantage of using the term “IPV” instead of other terms is that IPV neither excludes different forms of violence nor limits its focus to violence that occur in some types of intimate relationships (i.e., common law relationships), but not others (i.e., dating relationships). There is no one consistent definition of IPV, so for the purposes of this report IPV will include any type of behaviour that is harmful to and/or aggressive towards one’s intimate partner. For instance, put-downs, yelling, name-calling, threatening, coercion, and deliberate ignoring of partner are examples of psychological violence whereas slapping, pushing, and throwing objects at another person are examples of physical violence.

Another rationale for this terminology is that various forms of abuse and aggression tend to occur together. For instance, physical and sexual abuse are very likely to be accompanied by emotional and/or psychological abuse or neglect (Testa, Livingston, & Leonard, 2003). Conversely, psychological or emotional abuse is more frequent than physical abuse in both community and clinical samples and is more likely to occur in the absence of physical forms of IPV (Simpson & Christensen, 2005; Stets & Straus, 1990). This can be alarming if one considers the recent research evidence suggesting that psychological and/or emotional abuse can be just as harmful to individuals as physical abuse (Taft et al., 2006). However, it is important to acknowledge that various types of IPV do not occur with the same frequency and severity.

### **Physical Violence**

**Clinical Samples.** Historically, research on physical IPV has been conducted with clinical samples, such as individuals and couples seeking treatment for IPV and women's shelter populations. As a result, a large body of evidence has accumulated that indicates that there are high rates of physical violence in couples and individuals seeking mental health services. For physical IPV within couples, reviews of the literature indicate that rates range from 36% to 58% across different clinical samples (Jose & O'Leary, 2009; Najavits, Sonn, Walsh, & Weiss, 2004). Women tend to be injured more often and more severely than men and tend to experience more negative consequences related to work and finances than men; women are also more likely to be victims of homicide as a result of IPV (Loseke & Kurz, 2005; Tjaden & Thoennes, 2000). However, some recent research shows that women may perpetrate physical violence at a higher rate than men (Najavits et al., 2004; Simpson & Christensen, 2005). However, disentangling these

results is a difficult task; the prevalence rates reflect only one aspect of very complex situations.

Despite the high rates of physical aggression in clinical samples, some researchers in this area believe that the rates of physical aggression in clinical samples are still underestimated. Some of those reasons for underreporting experiencing and/or perpetrating physical aggression include varying perceptions and definitions of physical aggression and reluctance to report when presenting to the clinic with other mental health concerns (Jose & O'Leary, 2009). This is concerning because couples who are presenting for treatment are likely to be in distress and have insufficient strategies for coping with stress and relationship conflict. Physical and other violence can undermine their coping resources even further by adding more hostility, mistrust, and anger to the couple's everyday lives. The IPV and any other mental health problems that the couple is facing can exacerbate one another and erode the couple's sense of safety, affection, and support. Unfortunately, such distress can lead to an escalation in aggressive behaviour by one or both partners as the couple may lack healthier strategies for communication, problem-solving, emotional regulation, and self-expression (Cano & Vivian, 2003).

**Community samples.** Recent research suggests that the prevalence of physical aggression among couples in nationally representative US community samples ranges from 10-12% per year (Jose & O'Leary, 2009; Straus, 2005; Taft et al., 2006;). Studies of Canadian samples provide mixed results, sometimes reporting similar rates, and sometimes reporting differences between Canadian and US samples. For example, a study done by Grandin and Lupri (1997) reports that overall rate for physical IPV was higher for Canadian married couples when compared with American married couples.

The authors found overall yearly rates for husband-to-wife violence to be at 18.3% and for wife-to-husband violence to be at 25.3% (Grandin & Lupri, 1997) for Canadian couples. This gender difference was consistent when the results were analysed for different types of aggression (i.e., minor aggression, severe aggression, etc.) (Grandin & Lupri, 1997).

There are mixed reports regarding the gender differences in physical IPV perpetration and victimization. Some studies have found an approximately equal level of physical violence perpetration (e.g., Archer, 2000; Taft et al., 2006), while others found that women perpetrated physical violence at a higher rate (e.g., Cunradi, Bersamin, & Ames, 2009; Grandin & Lupri, 1997), and yet other studies found that men are more likely to repeat their acts of physical aggression (e.g., Straus, 2005; Tjaden & Thoennes, 2000). These differences are likely attributable to differences between samples (e.g., couples seeking couples-oriented therapy vs. couples from the community), differences in data collection, research methods (i.e., what were the main aims of the study), and types of research questions asked.

On the other hand, a study of Canadian police reports presents a very different picture of IPV. This non-representative study of police reports that were related to violent crimes indicated that 27% of the 205,000 violent crimes reported in 2002 were related to spousal abuse (Brzozowski, 2004). Of these 27%, 85% of the crimes were reported by women and 15% by men (Brzozowski, 2004). Rather than a difference in actual rates, this probably represents the difference in reporting. Since men are less likely to be seriously injured or to report feeling frightened of their partner in related to an episode of IPV, it is probable that men are less likely to report being the victim of IPV

(e.g., Coker et al., 2002; Loseke & Kurz, 2005). Also, the social stigma associated with the image of a man who is being abused by his female partner may play a role in the difference between men and women's reporting rates. Further, minor assault (i.e., slapping) was the most common type of IPV reported (72%) (Brzozowski, 2004).

### **Psychological Aggression**

**Clinical samples.** For psychological aggression, the rates in clinical samples are often above 90% and, in some samples, may be as high as 96% (Jose & O'Leary, 2009; Najavits et al., 2004; Simpson & Christensen, 2005). Some studies report higher rates of female-to-male aggression while others report the opposite, although studies show that women are less likely to perpetrate psychological violence at the very severe levels, such as coercion and humiliation (Jose & O'Leary, 2009). It is likely that the rates differ as a result of differences between samples and research methodology. However, what is clear is that couples from clinical samples experience extremely high rates of psychological aggression.

**Community samples.** The rates of psychological violence in community samples are vary more widely from sample to sample when compared to studies done with clinical samples. Some estimates of prevalence of psychological aggression perpetration in community samples are as high as 80-90% for both men and women; other studies report lower, but still significant rates of 50-60% (Jose & O'Leary, 2009). Further, a Statistics Canada report on types of crimes that were reported to the police indicated that uttering threats is considered minor assault by the Canadian police force, the RCMP; this form of assault was the second most common types of IPV reported (25%), second to minor physical assault (72%), such as shoving or slapping (Brzozowski, 2004).

Psychological aggression has consistently been found to have an equally deleterious effect on individual and couple functioning as physical aggression (e.g., Coker et al., 2002; Seedat, Stein, & Forde, 2005). Considering the high prevalence rates of psychological aggression and its invisible and often intangible nature, this comprises a serious social problem.

### **Sexual Violence**

Sexual aggression in intimate relationships remains a controversial phenomenon. It was not possible to study rape within marriage until 1983, since it was a legal impossibility. There were no laws protecting women from being raped by their husbands, which means that a husband could not be legally charged with sexually assaulting his wife. Still, there is disagreement between researchers as to the differences between sexual assault/rape, sexual coercion, sexual harassment, and sexual abuse. Different terms carry with them different connotations and some terms, such as sexual coercion or harassment, are used to signify a more benign form of violence. The use of different terms is often influenced by the discipline and the culture surrounding each research study; thus, the choice of terms to use in specific research and the choice of how those terms should be defined to the participants can be affected by political and ideological issues. Despite the disagreement on research terminology, there is no evidence that sexual harassment or coercion is more benign than sexual assault. In fact, continued sexual aggression of any kind tends to be more psychologically and emotionally damaging than single incidents of sexual violence (Herman, 1992, p. 47). However, both men and women in intimate relationships are more likely to experience continued rather than isolated sexual violence (Monson et al., 2009). For the purposes of

this thesis, sexual aggression will be defined as any unwanted and either coercive or violent sexual act, such as unwanted sexual remarks, forced sexual intercourse, coerced watching of pornography, and so on.

**Clinical samples.** There is a large gender difference in sexual violence victimization. For women's experience of sexual aggression, several studies estimate the prevalence of sexual assault in clinical samples of individuals and couples to be between 10% and 34% while the prevalence of sexual coercion and harassment tends to range from 25-50% (Monson et al., 2009; White & Widom, 2003). However, prevalence rates in specific clinical samples tend to be much higher; this will be discussed later on. Much less is known about prevalence rates for men's experiences of sexual victimization due to a lack of research in this area. Research on prevalence of sexual victimization in clinical populations continues to focus on women's clinics, shelters, and programs, and thus men who seek clinical services are not represented in such research.

**Community samples.** The rates of sexual violence in large, representative samples tend to be lower than in clinical samples. However, results of studies of sexual victimization prevalence highly depend on how researchers define sexual victimization and what types of sexual violence they choose to measure. Marshall and Holtzworth-Munroe (2002) reported a 10% rate of sexual assault in the past year for women. A representative study of 8000 men and 8000 women in the United States reported a 4.5% lifetime prevalence of male-to-female completed rape (Tjaden & Thoennes, 2000). However, completed rape is one of many forms of sexual victimization; attempted rape, sexual coercion, and other forms of sexual violence were not measured in this study. Statistics Canada reports that out of violent crimes reported to the police, only 1% of

these reports were related to sexual assault (Brzozowski, 2004). This is important to note because women are much more likely to be victims of sexual assault than men, whether it occurs in an intimate relationship or not (e.g., Monson et al., 2009). These low rates of reporting clearly indicate that Canadian women are still facing significant barriers to reporting violent crimes of a sexual nature.

Regarding rates of men's sexual victimization, one study reported 0.3% lifetime prevalence rate for female-to-male rape (Tjaden & Thoennes, 2000). Other sources from studies of dating couples report slightly higher estimates of female sexual aggression against men, between 1% and 5% (Monson et al., 2009). However, the lack of research does not necessarily mean that the phenomenon does not exist; more research is required in this area.

### **Interpreting Prevalence Rates**

It is worthwhile to note that research conclusions about the *frequency* of violence perpetration cannot be extended to conclusions about the *dynamic* in which the violence occurs for the couple; for example, if a study finds a higher rate of women's perpetration of violence, this does not necessarily mean that women were the primary aggressors. There may be a systemic bias in men's responding to the questions about violence due to impression management or other reasons. Indeed, research findings show that men are less likely to report their aggression perpetration while women are actually more likely to report it (Archer, 2000; Godbout, Dutton, Lussier, & Sabourin, 2009). Also, the shifting cultural norms that have begun to cast male-against-female violence as a serious issue, while still treating female-against-male violence as a non-issue or sometimes even a joke may have an effect on the differences in reporting aggression for men and women

(Straus, 2005). Another important point to remember is that without measuring the antecedents or the consequences of violence, it is impossible to tell which party initiated the violence and/or was impacted more severely by the violence.

The wealth of research suggests that, at the community level at the very least, both men and women initiate and perpetrate physical and psychological IPV, although evidence is mixed on whether men or women are *more likely* to initiate violence. This has been a more recent and controversial finding because it contradicts the previously held belief that males perpetrate most, if not all, violence in interpersonal relationships.

### **Other Gender Differences in IPV**

There are additional gender differences in the perpetration and experience of IPV that apply to both community and clinical samples. As described above, studies found that men are much more likely to perpetrate acts of sexual aggression than women (Monson et al., 2009). Further, the experience of sexual aggression, such as rape or sexual molestation, has been consistently related with higher risk of developing psychopathology, specifically PTSD and depression, when compared to other forms of IPV (Savage et al., 2007; Taft et al., 2009). Finally, men are approximately six times more likely to commit homicide of their female partner in context of IPV than women (Straus, 2005). Women are also more likely to experience fear of their partner and more likely to experience financial strain as a result of leaving the relationship in which IPV is present (Coker et al., 2002; Jose and O’Leary, 2009). These findings, some of which are contradictory and some of which reflect a profound difference in the experience of IPV between men and women, strongly suggest that prevalence rates do not capture the complex picture of IPV.

Prevalence rates are often based on instruments such as the Conflict Tactics Scale-Revised (CTS-R), which can reliably measure the incidence of experiencing and perpetrating IPV in a relationship. The type of questions usually asked on CTS-R and other measures of IPV are related to frequency and severity of IPV acts either experienced and/or perpetrated. However, what CTS-R and other similar measures do not investigate is how, why, and when the IPV occurs in the couple and whether one partner is engaging in defensive IPV more than the other. Any conclusions drawn from prevalence data must be considered in light of this important shortcoming. Although the prevalence studies can tell us a lot about IPV and can describe the frequency of the phenomenon, they cannot explain it. Thus, it is important for clinicians and researchers alike to maintain an open mind about what type of IPV may be occurring within the couple they are working with and not to assume either that men are the exclusive perpetrators of IPV or that both partners necessarily hold the same degree of responsibility in every case of mutual IPV perpetration.

### **Common Couple Violence**

Recent research has begun to differentiate between *battering or abuse* and *common couple violence*. Common couple violence refers to the dynamic in which both partners engage in IPV. Common couple violence is more likely to involve milder acts of aggression compared with battering or abuse, as the violence may be more situational rather than pervasive (Johnson, 1995). In any case of IPV, but especially in the case of common couple violence, it is very difficult to disentangle whether or not one of the partners is the primary perpetrator of IPV. In some cases, there may be no primary aggressor as both partners engage in provoked and unprovoked IPV at approximately

equal rates (Johnson, 1995; Jose & O’Leary, 2009). In other cases, especially when the couple has a long history of IPV within the relationship, it may be the case that originally one of the partners was the primary aggressor, but after long-standing IPV, both partners engage in aggressive acts towards one another at about the same rate. Another important distinction between battering and common couple violence is that in the battering situation, the partner who is more likely to be the primary aggressor is also more likely to use controlling and coercive tactics (Henning, Renauer, & Holdford, 2006; Najavits et al., 2004). This is an important finding because the traditional view of IPV holds that batterers almost always rely on controlling tactics, such as controlling the partner’s finances and isolating the partner from his/her friends (Johnson, 1995). However, these research findings show that this comprises a type of IPV, but does not reflect the nature of all relationships in which IPV is present.

### **Risk Factors for IPV**

A history of interpersonal trauma, lower education, lower income, increased relationship distress, substance misuse, and persistent stressors have been identified as common risk factors for experiencing and perpetrating IPV (Cano & Vivian, 2003; Chase et al., 2003; Orcutt et al., 2003). Meta-analytic research evidence also suggests that the risk for perpetration of IPV is highest for young adults (O’Leary & Woodin, 2005). This does not mean that older individuals do not perpetrate IPV. Although the general trend in community samples is that IPV declines with age, this trend is not representative of all the people in the community. On the other hand, individuals from clinical samples either may not show the same trend or may, in fact, show an increase in IPV with age (O’Leary & Woodin, 2005). Further, previous histories of trauma and relationship distress appear

to be the most robust predictors of IPV perpetration for women (e.g., Chase et al., 2003). For men, Antisocial Personality Disorder (ASPD), Borderline Personality Disorder (BPD), anger dysregulation, and jealousy have been implicated as risk factors for perpetrating IPV (Foran, & O'Leary 2008; Knight & Guay, 2006). The severity of aggression has been identified as a risk factor for further aggression in both men and women, i.e., the more severe the aggression, the more likely it is that the aggression will continue in the future (Woodin & O'Leary, 2006).

Studies of cultural factors have not produced consistent results. The rates of IPV in ethnic minorities in Canada and the US fluctuate from below the general population average to above average from study to study. At times, when an above average rate is found in an ethnic minority group, the effect of ethnicity disappears when SES and/or education are controlled for (Jose & O'Leary, 2009; Taft et al., 2009). This suggests that restricted social opportunity, such as lower parental education and lower individual income, and the systematic stress that may be associated with it are the risk factors at play rather than membership in any ethnic minority group. These findings complicate the issue of studying prevalence of IPV in various cultural groups because some groups, such as African-Canadians and African-Americans, experience systemic and systematic discrimination and their educational and personal opportunities can be negatively affected by this phenomenon.

Here we once again run into the issue of prevalence rates being incapable of explaining the complexity of what is actually going on in a particular research sample. For instance, if one sample of IPV rates in an African-Canadian community indicates that the rates of IPV are below average in this sample, the researchers don't know what

factors contribute to this effect; did the individuals in this sample experience less systematic discrimination or restrictions of their opportunities? Did they have strong networks of pro-social support? Has this particular community found a unique way to decrease risk of IPV in their area? These questions are often left unanswered. Research that is capable of answering these questions by employing diverse methodology is needed.

### **Consequences of IPV in Relationships and During the Transition to Parenthood**

The consequences of experiencing IPV are often deleterious for both individuals in the couple and for the couple's functioning. For women, experiencing IPV has been linked with specific mental health disorders (PTSD, anxiety, mood, and substance misuse disorders), low self-esteem, decrease in adaptive coping skills, decrease in social support, increased isolation, and suicidal behaviours (McCrary et al., 2009; Monson et al., 2009). If either or both of the partners experience any such consequences, it can have a profound impact on the functioning of the couple as a whole. IPV in couples has been associated with decreased relationship satisfaction, decreased trust and affection between partners, increased conflict, and continued/escalated IPV for both partners (Jose & O'Leary, 2009; Monson et al., 2009; Straus, 2005).

Such consequences can form vicious cycles for the couple. For instance, a couple in which one or both partners witnessed the use of IPV as a problem-solving tactic in their families of origin may be at higher risk for using IPV in the same way, especially following a stressful event for the couple. As consequences, one or both partners can experience depression and resentment towards their partner. The depression can lead to deterioration in adaptive coping skills, leading the couple to continue to rely on IPV as a

way to cope with relationship distress. As a result of continued IPV, both partners are likely to experience relationship dissatisfaction, which will sustain the depression, the resentment, and the IPV. Getting out of such a cycle, no matter what level of IPV the couple experiences (mild, moderate, severe, psychological, physical, or both) will be very difficult as the couple faces multiple behavioural, emotional, physical, and psychological barriers to healing.

The presence of IPV has profound implications for the couple and the future family during the transition to parenthood. Relationship adjustment and satisfaction are some of the most robust predictors of a positive adaptation to parenthood roles (Doss, Rhoades, Stanley, & Markman, 2009). Not only does IPV negatively affect relationship adjustment, but it also creates a hostile and potentially physically dangerous environment for the child. Studies report mixed evidence regarding the incidence of IPV during pregnancy, which is a time of adjustment for the couple and can be stressful for both partners. Research evidence suggests that the rate of IPV during pregnancy in the general population is approximately 8-11% (Campbell, Garcia-Marino, & Sharps, 2004; Stampfel, Chapman, & Alvarez, 2010). However, the rates tend to be higher in clinical samples and samples that reflect multiple disadvantages or risk factors. For instance, Charles and Perreira (2007) found that in one study, 30% of women and 40% of men have experienced some form of IPV during and after pregnancy. However, this study included persons from both typical and vulnerable populations and oversampled participants who were unwed mothers (Charles & Perreira, 2007). This may partially explain the high rates of IPV found in the study. IPV during pregnancy has been found to be a strong predictor of IPV following the child's birth (Charles & Perreira, 2007). In a

study of rural women from low SES backgrounds, the rate of any type of IPV during pregnancy was 81% and the rate of physical IPV was 28% (Bailey & Daugherty, 2007). In this study, physical IPV specifically was associated with psychological IPV and increased substance misuse and smoking during the pregnancy (Bailey & Daugherty, 2007). IPV during pregnancy has also been associated with low-birth weight of the infant, although other related factors, such as smoking, could be influencing the birth weight as well (Jasinski, 2004; Stampfel et al., 2010).

There is lack of research on the psychological effects of IPV during pregnancy on the couple and on the child. However, since IPV that occurs outside of the context of pregnancy is associated with profound psychological difficulties, it is likely that it also exerts negative effects on the couple and the future family during the pregnancy. However, more research is needed in order to form a comprehensive understanding of what these effects might be, how they might be different during and after pregnancy, and how they may be buffered or prevented.

Pregnancy itself is unlikely to trigger IPV for a couple high in relationship satisfaction, social support, and adaptive coping skills who have not previously experienced IPV in their relationship. However, the evidence suggests that if the couple is experiencing IPV prior to the pregnancy, then any potential stress associated with adapting to the challenges of pregnancy may trigger an escalation of IPV (Charles & Perreira, 2007; Stampfel et al., 2010). Unwanted pregnancy also increases the risk of IPV (Charles & Perreira, 2007). Conversely, some couples experience a decrease of IPV during the pregnancy (Stampfel et al., 2010). This can sometimes represent a lull in relationship conflict as one or both partners experience a strengthening of their

connection and relationship satisfaction during the pregnancy. However, when the couple begins to adjust to new roles, stressors, and responsibilities of parenthood, IPV can re-surface and escalate above the couple's pre-childbirth baseline (Mitnick et al., 2009; Stampfel et al., 2010).

### **IPV and Families**

First-time parents frequently experience decreased relationship satisfaction, decreased intimacy, decreased quality of sleep, and increased stress, especially during the first year of parenthood (Charles & Perreira, 2007; Doss et al., 2009). For a couple already at risk for IPV, these factors can exacerbate that risk. Further, these factors can form a cyclical relationship with IPV and thus lead to a variety of difficulties for the couple and the child, such as continued relationship conflict and dissatisfaction, decreased parental confidence and competency, decreased parental warmth, depression and anxiety for the family members, and behavioural and emotional problems in the child (Fals-Stewart, Kelley, Fincham, Golden, & Logsdon, 2004; Stampfel et al., 2010). For children, growing up in such an environment can have a deleterious effect on their development in social, emotional, psychological, and physical domains (Cleaver et al., 2007; Fals-Stewart et al., 2004). Chronic depression, anxiety, and low self-esteem are common sequelae of growing up in a household where IPV takes place. Even if IPV stops, prolonged exposure to IPV in childhood can often mean that the individual will continue to suffer from these problems for many years (Fals-Stewart et al., 2004). Experiencing IPV as a child also puts one at risk for both perpetrating and experiencing additional IPV in adolescence and adulthood (Ehrensaft, Cohen, Brown, Smailes, Chen, & Johnson, 2003). In addition, coping with a child who has emotional or behavioural

difficulties can be frustrating and thus increase parental stress and decrease parental confidence in their abilities as parents. Such effects can actually lead to less competent or more aggressive parental tactics because the parents may not find any effective way of working with their child on his or her difficulties. Such a dynamic can be self-sustaining and can maintain the family in a dysfunctional state for years. Finally, aggressive discipline increases the risk for child abuse (Fals-Stewart et al., 2004).

## **Substance Misuse and IPV**

### **Substance Misuse**

Substance misuse, including alcohol misuse, represents a growing problem in Canada and the US. The term substance misuse will be used throughout this thesis to include both what the DSM-IV-TR calls substance abuse and dependence (American Psychiatric Association, 2000). The criteria for a substance abuse diagnosis requires that the person exhibit a maladaptive pattern of substance use over the last 12 months, characterized by one or more of the following symptoms: recurrent substance use resulting in failure to meet role obligations; recurrent use in physically dangerous situations; “recurrent substance-related legal problems;” and recurrent use despite significant social problems (American Psychiatric Association, 2000). A diagnosis of substance dependence is different in that it requires at least three of the following symptoms: tolerance; withdrawal; substance use in greater amount than expected; unsuccessful attempts to reduce use; the person spends a lot of time procuring or using the substance; the person gives up other activities; use continues despite a range of problems associated with it (American Psychiatric Association, 2000). In order to capture both types of substance-related problems, the term substance misuse will be used to signify a pattern of harmful use of substances, including licit and illicit substances and alcohol.

Yearly prevalence of substance misuse is approximately 11%, while lifetime prevalence is closer to 27% (Tapert, Tate, & Brown, 2001). However, these rates increase dramatically in populations that face multiple obstacles, such as IPV, trauma, poverty, and severe mental health disorders (Tapert et al., 2001). Historically, research studies reported that women’s rates of substance misuse were lower than men’s.

However, in the last few decades women's rates of substance misuse and dependency have been steadily on the rise. Currently, men's and women's overall rates of illicit drug use remain approximately the same, although there are differences between samples. However, men are still three to four times more likely to suffer from alcohol dependency or abuse than women and women are twice more likely to misuse prescription drugs than men (Grella, 2008). Currently, men are more likely to present to inpatient treatment centres for substance misuse, such as detox and stabilization centres, and supportive recovery. Men are also more likely to suffer from more severe consequences of substance misuse, such as homelessness, and bankruptcy (Grella, 2008). However, both men and women experience a wide range of deleterious consequences as a result of substance misuse.

Substance misuse lies on a spectrum and its effects on one's life can range from minimal to fatal. Consequences of substance misuse can include job losses, serious health problems, anxiety, depression, elevated risk for sexually transmitted infections (STI's), which can affect the individual's psychological, physical, emotional, and social functioning. Long-standing substance misuse can erode the person's adaptive coping mechanisms, problem-solving skills, ability to regulate one's emotions, and general life skills. At the severe end of the substance misuse continuum these effects are likely to be intensified (Najavits, 2007; Tapert et al., 2001). For instance, substance misuse can become a replacement for other forms of coping and thus affect the person's ability to cope safely with daily stressors and difficult events. It can also affect the person's judgment and lead them to make decisions that can put them in dangerous situations, such as committing illegal acts in order to procure money so that one can later purchase

their drug of choice. Finally, substance misuse is frequently comorbid with other mental health disorders, such as anxiety, depression, suicidal behaviour, and BPD (McDowell & Clodfelter, 2001; Smith & Book, 2010; Strausner & Nemenzik, 2007).

### **Substance Misuse within Couples**

In couples, substance misuse is a significant predictor of decreased relationship satisfaction, increased conflict, decreased communication, and increased IPV (Clever et al., 2007). Research on substance use during IPV has traditionally focused on male-perpetrated IPV and men's substance (mis)use. Further, studies that have looked at substance misuse of both partners in the context of IPV cannot necessarily disentangle the independent effects of substance use by men and women, since the rate of substance misuse of one partner tends to be highly correlated with the rate of use of the other partner. Although some studies have found a relationship between the women's substance misuse and IPV (e.g., Kaufman, Kantor, & Straus, 1990), other studies have found that this effect disappears when the men's substance misuse is held constant (Kaufman, Kantor, & Asdigian, 1997). Therefore, not enough is known about the substance misuse patterns of women who either perpetrate IPV and/or are victimized by IPV. However, research suggests that for men, substance misuse correlates with anger dysregulation, mental health disorders such as ASPD and BPD, developmental trauma (i.e., childhood emotional, psychological, physical, or sexual abuse), and attitudes about violence towards women (Carillo & Zarza, 2008; White & Widom, 2003). These factors also co-vary with perpetration of IPV, suggesting a strong association between IPV and substance misuse. However, the correlational nature of the link between IPV and

substance misuse makes it challenging to understand underlying causal mechanisms of IPV.

Correlates of substance misuse in couples vary widely from sample to sample, suggesting a complex, multi-factorial causation model of both IPV and substance misuse. Some risk factors that have been associated with substance misuse in intimate relationships include emotional distress, lower education and SES, relationship distress, and belief in the connection between one's partner's substance misuse and the decrease in relationship quality (Chase et al., 2003; White & Widom, 2003). IPV has also been identified as a risk factor for substance misuse (White & Widom, 2003). However, the relationship between substance misuse and IPV is a complex one and it will be addressed further on.

Substance misuse can comprise a self-sustaining cycle of dysfunction for the couple, especially when it is characterized by dependence, is chronic and severe, and/or co-occurs with other mental health conditions, such as PTSD and depression. Stressors and negative consequences associated with substance misuse can serve as catalysts for escalation of the misuse (Carillo & Zarza, 2008; Najavits, 2007). For women who are already prone to substance misuse, interpersonal stressors, such as an argument with an intimate partner, are more likely to lead to an escalation of substance misuse or to a relapse (McCrary et al., 2009). Therefore, it is especially important to study how relationship dynamics affect men's and women's substance misuse. Intimate relationships can play an important role in either maintenance or jeopardy of recovery from substance misuse.

### **IPV and Substance Misuse**

Research literature has identified a robust link between substance misuse and IPV. In situations where sexual IPV is present or where IPV results in a homicide, the rates of substance use by the perpetrator are often as high as 50% (e.g., Abbey, 2002). In other cases of IPV, rates of substance use before the IPV episode(s) range from 20% to 50% (e.g., Stalans & Ritchie, 2008). Further, substance misuse appears to put both men and women at risk for perpetrating IPV, although more research on women's substance misuse before and during IPV is needed. Evidence for this comes from studies that show that men and women presenting for treatment for substance misuse are six to eight times more likely to engage in IPV towards their partner (Fals-Stewart, 2003; O'Farrell & Murphy, 1995). Some studies of women from clinics that address substance misuse have found that women who misuse substances may be at even higher risk for experiencing IPV. Some studies of women from such settings report extremely high rates of experiencing IPV, ranging from 50% to 95%, and higher rates of experiencing rather than perpetrating sexual IPV and IPV that results in serious bodily injury (Najavits et al., Sonn, Walsh, & Weiss, 2004; Savage et al., 2007).

There are several models for understanding the link between substance misuse and IPV. In the spurious effects model, the relationship between substance use and IPV appears to exist, but disappears when other variable(s), such as age, are held constant. In the indirect effects model, substance use is conceptualized as harmful to relationships; the link between substance misuse and IPV is thought to be mediated by relationship discord. In the proximal effects model, the intoxication causes IPV directly (Fals-Stewart et al., 2009). There is research evidence to support each of these models. In the moderator models of the relationship between substance misuse and IPV, relationship functioning

has emerged as a consistent moderator (Testa et al., 2003). However, it is unlikely that one of these models is the only correct model. The relationship between IPV and substance misuse can take different forms in different couples. For example, substance misuse can be a secondary effect of relationship distress; in this case, the distress leads to an escalation of recreational substance use to substance misuse. Then, when other variables like relationship satisfaction and coping abilities are controlled for, substance misuse may appear to have no relationship to IPV. Such a situation supports the spurious effects model, but does not necessarily mean that there is no relationship between substance misuse and IPV. Rather, it may indicate that substance misuse is a secondary problem or a consequence of other problems.

### **Substance Misuse During and After the Transition to Parenthood**

Research shows that men and women are likely to reduce their substance (mis)use during pregnancy, but high levels of pre-pregnancy substance misuse predict an escalation of post-pregnancy substance misuse (Bailey et al., 2008; Richman, Rospenda, & Kelley, 1995). This may be related to the decrease in relationship satisfaction after the birth of the child, increased stress, increased demands on the couple, and a lack of healthier coping strategies (Anthony, Austin, & Cormier, 2010). However, some women continue to use substances during the pregnancy. For instance, a representative study of 1,800 pregnant women by Havens, Simmons, Shannon and Hansen (2009) found a 25% rate of any substance use in the past month. However, the prevalence rates for use of specific substances in the past month were lower. The rates for use of illicit drugs, cigarettes, and alcohol were 4.7%, 18.9% and 10%, respectively. Also, the authors found the use of all substances decreased significantly in the second and third trimesters

(Havens et al., 2009). Overall rates of substance use, including cigarettes, during pregnancy tend to be somewhat lower, around 10-12% (Anthony et al., 2010). Less is known about men's patterns of substance use during their partner's pregnancy; in addition, men's rates of substance misuse during pregnancy vary more than women's. Some studies have found that men's substance use levels stay the same regardless of the pregnancy (e.g., Bailey et al., 2008). A recent study has found rates of consistent use of substances like alcohol (binge-drinking) and marijuana for younger men (aged 24-27) to be at 57% and 54%, respectively (Bailey et al., 2008). The (mis)use of substances by the mother puts the child at higher risk for birth and developmental defects and delays, such as low birth weight (LBW) and Fetal Alcohol Spectrum Disorder (FASD) (Anthony et al., 2010). For the couples whose relational functioning is already at risk, the stress associated with raising a child with a developmental condition may trigger escalated substance misuse, which, in turn, may sustain the low perceived relationship quality and decreased parental competence and confidence (Bailey et al., 2008). Finally, substance misuse by one or both partners during pregnancy is often related to IPV and relationship dissatisfaction (Stalans & Ritchie, 2008). Without treatment, a couple facing such multiple barriers are likely to continue to engage in these behaviours and experience the negative consequences associated with them.

### **Treatment of Substance Misuse**

Interventions for substance use and IPV have traditionally remained separate. Even now some clinicians, following the proximal effects model of IPV and substance misuse, believe that treating the substance misuse successfully will result in a reduction of IPV. There is some evidence that this does, indeed, occur (O'Farrell, Fals-Stewart,

Murphy, & Murphy, 2003; O`Farrell & Murphy, 1995). However, even when there is a reduction of IPV following substance misuse treatment, IPV does not disappear completely, and may return to pre-treatment levels during or after a substance-related relapse (O`Farrell et al., 2003). Further, separate treatments do not address the existing relationship between substance use and IPV. Despite the controversy surrounding conjoint couples treatment for substance use and IPV, the preliminary outcomes for behavioural couples therapy (BCT) and other integrated treatment models demonstrate a greater reduction in both substance use and IPV than separate IPV and substance misuse treatment protocols (Carillo & Zarza, 2008; Epstein, McCrady, Morgan, Cook, Kugler, & Ziedonis, 2007). This implies that the relationship between IPV and substance misuse is important to address in treatment, as these comorbid difficulties are more than just the sum of problems associated with IPV and substance misuse separately.

## Interpersonal Trauma

### Prevalence and Correlates

Some studies suggest that each individual experiences at least one *family-related* stressful event in their life, which has the potential to be traumatic. Examples of such events include sexual molestation by a family member, divorce, parent's mental health problem, close relative's substance misuse problem, witnessing violence between parents, and so on (Menard, Bandeen-Roche, & Chilcoat, 2004). However, types and severity of trauma vary; so do people's responses to and perceptions of the trauma. Interpersonal traumas, such as sexual assault, robbery, combat-related trauma, child neglect, and child and adult abuse appear to be more highly associated with the development of PTSD and other psychological disorders than traumas related to natural disasters or accidents (Herman, 1992; Najavits, 2007). For this reason, this review will focus on interpersonal trauma only. The prevalence rates of adult sexual, physical, and psychological abuse have already been discussed above.

A classic study by Felitti et al. (1998) surveyed 18,175 individuals in the United States and reported the following prevalence rates for traumatic events that occur in childhood: sexual abuse - 22%; physical abuse - 10.8%; psychological abuse - 11.1%; exposure to inter-parental violence - 12.5%; exposure to substance abuse in the family - 25.6%. Child abuse is often underreported, even more so than adult abuse, partly due to the lack of autonomy of the victim and the common situation in which a family member is the abuser (Felitti et al., 1998; Menard et al., 2004). Experiencing abuse in childhood is one of the strongest predictors of experiencing abuse in adulthood (e.g., Ehrensaft et al., 2003). Childhood abuse has also been linked with chronic and severe physical and mental health effects, such as irritable bowel syndrome, digestive problems, substance

misuse, depression, PTSD, ASPD, and so on (Ehrensaft et al., 2003; Thompson et al., 2004). Some researchers hypothesize that chronic mental health consequences result from the abuse interrupting the normal development of trust for others, self-esteem, and sense of safety and security (Menard et al., 2004).

### **Risk Factors for Trauma-Related Psychopathology**

How a person experiences and responds to a potentially traumatic event and whether or not the person develops trauma-related psychopathology depends on an interaction of complex factors. Some factors implicated in the development of clinical symptoms post-trauma include the presence of risk factors such as low social support, history of previous trauma, and substance misuse (Fals-Stewart et al., 2004; Najavits, 2007; Orcutt et al., 2003). Protective factors that can help the person cope with the trauma include high education and SES levels, pre-trauma mental health adjustment, ability to use a variety of problem-solving and coping strategies, and appropriate attribution of responsibility for the trauma (Fals-Stewart et al., 2004; Najavits, 2007). For example, a person with a rigid cognitive style who tends to attribute blame to internal and stable causes may also attribute the blame for the trauma to themselves, even if they were in no way responsible for the traumatic event. If this person does not have access to any emotional support, he or she may not hear anything to the contrary. Guilt, shame, and self-blame that may ensue are generally indicative of a higher risk of developing PTSD. Thus, the development of psychopathology following a trauma may depend on the presence of risk factors as much as it depends on the absence of protective factors.

### **Simple PTSD and Complex PTSD.**

PTSD is one of the most common psychological disorders that follow a traumatic event. Its prevalence in the general population is 8% (American Psychiatric Association, 2000). However, in clinical populations, such as in settings that provide treatment for substance misuse, the prevalence can range from 50% to 70% (Savage et al., 2007).

PTSD only occurs in about half the people exposed to traumatic events, suggesting that the development of PTSD after a trauma is contingent on unique combinations of factors (Fairbank, Ebert, & Caddell, 2001). The current DSM-IV-TR conceptualization of PTSD requires that a person experience a traumatic event and a sequelae of symptoms such as re-experiencing of the trauma, emotional numbing, hyperarousal, avoidance of cues that remind the person of the event, and so on (American Psychiatric Association, 2000).

PTSD is often comorbid with anxiety, mood, and substance-related disorders, self-harm, and suicidal ideation (American Psychiatric Association, 2000). Many people describe living with PTSD as “living in fear” and feeling like one has to constantly be aware of everything around them in case that there’s a threat to their well-being (Herman, 1992).

PTSD symptoms often interfere with social functioning, as survivors of interpersonal trauma often have difficulties with forming trusting relationships; occupational functioning, as physical and mental health symptoms often influence the person’s ability to concentrate and work under pressure; and individual functioning, as suicidal ideation, shame, and self-blame can comprise significant obstacles to enjoying life and coping well with daily stressors (Herman, 1992; Najavits, 2007).

A key feature of the current PTSD criteria is that there should be one or multiple (but clearly identifiable) traumatic event(s) that continue to be associated with distress

and PTSD-type symptoms (American Psychiatric Association, 2000). This feature is sometimes problematic because it excludes the possibility of experiencing a different type of PTSD as a result of psychological or emotional abuse and neglect that cannot be easily identified or isolated. Herman (1992) was one of the first researchers to propose the category of complex PTSD. According to Herman (1992), complex PTSD can result from trauma that is prolonged and chronic rather than isolated to discrete incidents, such as being a prisoner of war or a victim of chronic child abuse. Psychological abuse can sometimes result in a different presentation of complex PTSD because it is less easily identifiable, but can create a toxic atmosphere of hostility and coercive control (Dorahy et al., 2009; Herman, 1992). Chronic psychological-emotional abuse has also been termed *developmental trauma*, indicating the detrimental effect of psychological abuse on typical development (Dorahy et al., 2009).

There are three main differences between complex PTSD and simple PTSD. In complex PTSD there are: a) greater somatization problems, i.e., more severe and chronic psychosomatic pain, such as fibromyalgia; b) more frequent and severe dissociation that can sometimes be expressed as Dissociative Identity Disorder; and c) more severe and chronic affective problems, such as extreme emotional dysregulation, development of borderline traits, and chronic depression (Cloitre et al., 2009; Herman, 1992). In addition, people suffering from complex PTSD are at higher risk for developing dysfunctional patterns of relating to others, such as attachment issues and difficulties trusting people, and problems related to the very core of their identity, such as low self-esteem, drive, and compartmentalized identities (Cloitre et al., 2009; Courtois & Ford, 2009; Dorahy et al., 2009; Herman, 1992). Empirical studies suggest that complex PTSD

consists of a developmental path and clinical presentation that is markedly different from “simple” PTSD (e.g., Cloitre et al., 2009). One of the reasons why complex PTSD places a person at higher risk for these problems is that complex PTSD is likely to be the result of traumatic event(s) that occur during key developmental period and thus disrupt normative development (Courtois & Ford, 2009). For example, emotional or sexual abuse at any age can be detrimental to mental health; however, if it’s happening while the person is in the developmental stage of trying to formulate a coherent identity, persistent abuse may pose obstacles to that process. Theoretically, such interruptions of normative development may be more difficult to resolve than traumas that do not occur during key conflicts of developmental stages (Courtois & Ford, 2009).

Complex PTSD may not be associated with symptoms such as flashbacks and re-experiencing of traumatic events, especially if the abuse was emotional-psychological in nature. Since currently there is no diagnostic criteria for complex PTSD, it may not be diagnosed as PTSD by a clinician unfamiliar with the heterogeneity in this disorder. What is potentially more problematic is if symptoms of complex PTSD are not understood from a trauma-informed perspective by the treating professional. If the symptoms are not understood as being connected to the trauma, the goals of treatment may not be in line with best practice. For example, if the client is diagnosed with a personality disorder instead of with complex PTSD, this may mean that the diagnosing clinician may pay less attention to how the trauma(s) influenced the client’s personality development and how an understanding of this can be incorporated into therapy. The symptoms of complex PTSD are more difficult to identify and treat and thus are likely to affect communication,

intimacy, and satisfaction in relationships in a more negative way (Courtois & Ford, 2009; Dorahy et al., 2009).

### **Consequences of Trauma and PTSD for Couples**

History of trauma, simple, and complex PTSD can present significant and unique challenges for couples in several ways. One possibility is that survivors of trauma, especially complex trauma, are more likely to enter and maintain intimate relationships in which abuse and/or coercive control is present (Seedat et al., 2005). This is hypothesized to be related to the disruption in the development of positive self-esteem, healthy views of relationship roles (i.e., a belief that both partners deserve to be treated with respect), ability to set and maintain boundaries, and ability to engage in goal-directed behaviour to get one's needs met in the relationship (Orcutt et al., 2003; Najavits et al., 2004). Many of the above difficulties are related to problems with attachment. When trauma is experienced early in life, healthy attachment is likely to be disrupted and the effects of insecure attachment can extend to relationship satisfaction in later life and in both experiencing and perpetrating violence in adult relationships (e.g., Godbout et al., 2009).

The individual with a previous history of trauma is likely to get re-traumatized in an abusive relationship, leading to decline in relationship satisfaction and mental health and possible increase in harmful coping strategies, such as substance misuse, self-harm, and dissociation (Herman, 1992; Najavits et al., 2004). However, it is important to note that previous history of trauma does not guarantee that a person will go on to develop relationships in which they are either experiencing or perpetrating the abuse; history of trauma merely elevates the risk (Ehrensaft et al., 2003).

Another way that a traumatic event(s) or PTSD can impact relationship functioning is by presenting the couple with a significant and continuous stressor, such as any number of negative consequences associated with trauma that were described above. Couples who are already at higher risk for relationship conflict (i.e., couples with low social support and low SES) are more likely to experience the trauma-related consequences, such as depression or PTSD, as more stressful and to engage in maladaptive coping strategies, such as substance misuse, intimate partner violence, and so on (Monson et al., 2008). For instance, it has been shown that history of trauma and PTSD can prime an individual to perceive others' intentions as more hostile than they actually are, which can lead to an angry defensive response (Orcutt et al., 2003). If one partner responds to a regular daily interaction in such a way, the other partner is not likely to understand the source of his or her anger and is likely to take that personally, leading to conflict. The conflict, in turn, can validate the traumatized partner's belief that their partner was initially being hostile to him or her. Such a dynamic can be further complicated if one or both partners experience attachment problems. For instance, one insecure pattern of attachment is disorganized attachment, which is characterized by a strong desire for an intimate relationship countered by a strong fear of intimacy (Godbout et al, 2009). The individual with disorganized attachment is likely to experience strong fear of abandonment and possessive behaviour some of the time and, at other times, withdraw from their partner in an attempt to distance themselves from the feared intimacy (Godbout et al). Such pattern of behaviour may appear inconsistent, confusing, and hurtful to the other partner, thus leading to conflict. However, conflict would only exacerbate either the fear of abandonment, or the fear of intimacy, or both. When these

fears become magnified, the behaviour of the person with disorganized attachment may reflect this, perhaps by becoming defensive, withdrawn, or aggressive. This creates a situation in which the risk for both partners engaging in violence or other maladaptive conflict strategies is heightened (Godbout et al).

PTSD and history of trauma also elevates the risk for both experiencing and perpetrating intimate partner violence for both men and women (Najavits et al., 2004; Orcutt et al., 2003). Other common negative consequences of trauma for couples include decreased quality of communication, decreased sexual intimacy, decreased connection, increased conflict and aggression, and decreased relationship satisfaction (Goff et al., 2006; Monson et al., 2008). These problems can form a vicious cycle for the couple and contribute to continuing relationship distress and possibly escalation in unhealthy coping strategies and intimate partner violence (Monson et al., 2008).

## **Substance Misuse, IPV, and Trauma during the Transition to Parenthood**

### **The Unique Relationship between Trauma, Substance Misuse, and IPV in Couples**

Trauma history and PTSD have a unique and complex relationship with intimate partner violence and substance misuse. Interpersonally traumatic events, especially when they occur early in life, are highly predictive of both experiencing and perpetrating intimate partner violence in adulthood (Seedat et al. 2005; Taft et al., 2009). Trauma risk and substance misuse also tend to have cyclical relationships. On one hand, substance misuse can affect the person's judgment and inhibitions and can lead them to put themselves in dangerous situations where they are at risk for being assaulted or otherwise traumatized. For instance, a woman may be at higher risk for sexual assault if she is living on the street as a result of her substance misuse (Savage et al., 2007). On the other hand, substance use can begin (within a context of an intimate relationship) as a way to have fun, but can become a dependency and replace healthier coping strategies and ways to bond for the couple (Carillo & Zarza, 2008).

Further, substance misuse and PTSD can reinforce one another. For instance, substance misuse (especially alcohol) can actually decrease the symptoms of PTSD in the short-term, such as anxiety and hyperarousal (Najavits, 2007; Savage et al., 2007). This can be especially valuable to the traumatized individual in the context of a relationship, as he or she may have trouble achieving sexual intimacy or asserting him/herself in the context of PTSD-related symptoms. However, an individual may become dependent on the substance's medicating effects. If the person (or the couple) continue to heavily self-medicate with substances, it may be possible that they do not frequently experience the hyperarousal and flashback symptoms of PTSD (Najavits, 2007; Savage et al., 2007). However, the negative long-term effects of heavy substance misuse may lead to the

person trying to stop or decrease their substance use. Unfortunately, when the person stops using substances, the lack of medicating effects of the substances can lead the person to re-experience hyperarousal, flashback, and flooding symptoms; these initial experiences can be particularly severe and frightening. However, because the person has been relying on the substance to manage their PTSD, they are unlikely to have many healthy coping strategies available to deal with the re-surfacing symptoms. Very often this type of pattern causes a relapse in the substance misuse and conditions the person to believe that they are unable to stop their substance misuse (Farley et al., 2004; Najavits, 2007).

Another common situation associated with substance misuse relapse is entering treatment for PTSD, because the treatment is often focused on going back to the trauma and remembering as many details as possible about it (Farley et al., 2004; Herman, 1992). Although this is usually done after much rapport and safety building, this process is still quite stressful and frightening for most clients. It is common for PTSD symptoms to temporarily get worse in treatment before they improve (Haskell, 2003). This is usually a high-risk period of time for relapse in any mental health symptoms. However, individuals whose coping resources may be depleted by the multiplicative effects of comorbid substance misuse and trauma may not be able to cope with the stress of worsening PTSD symptoms. They are more likely to relapse with the substance misuse so that they can either feel good or stop feeling terrible (Farley et al., 2004; Najavits, 2007). If one or both partners in a relationship are experiencing any of these types of patterns, these situations can be times of very high distress and psychological aggression for the couple. They can also put the couple at higher risk for other forms of IPV.

Substance misuse in couples has been strongly associated with psychological, physical, and sexual aggression (e.g., Stalans & Ritchie, 2008). Whether or not the individuals in the couple already have a history of trauma or experience PTSD symptoms, IPV puts the couple at higher risk for both individual problems, such as PTSD and depression, and relational problems, such as lack of trust, communication, and intimacy (e.g., Cleaver et al., 2007). For individuals with a history of trauma who are in a relationship where IPV and substance misuse are present, both individual and relational consequences are likely to be amplified (Haskell, 2003; Herman, 1992). In turn, decreases in intimacy, relationship satisfaction, and mental health adjustment can actually exacerbate the substance misuse, the IPV, and the severity of the trauma-related effects for individuals with and without a history of trauma (e.g., Goff et al., 2006). Couples whose functioning is already at high risk (couples who are homeless, have extremely high rates of substance misuse, and/or have serious comorbid mental health disorders) are likely to react to continued or escalated distress with an even greater severity in symptom escalation, such as homicidal IPV, suicidal ideation and behaviour, self-harm, and extreme substance misuse that could lead to a fatal overdose (Najavits, 2007).

### **Increased Risks during the Transition to Parenthood**

From reviewing the research related to substance misuse, interpersonal trauma experiences and reactions, and IPV in couples, it is clear that the interaction of these phenomena is more than just the sum of their parts. Experiencing these three mental health difficulties exerts multiplicative negative effects on the couple's individual and relational functioning. Unfortunately, the nature of these phenomena can actually lead to them maintaining one another (i.e., substance misuse blocking a successful re-integration

of the trauma memory) (e.g., Haskell, 2003; Monson et al., 2008). For couples who are in transition to parenthood, the presence of these three problems can put the couple, the child, and the future family at significant risk for prolonged distress. Although IPV can decrease during pregnancy, some factors can actually lead to the opposite effect, an escalation of IPV during the pregnancy (Bailey & Daugherty, 2007). Such factors can include severe stress, unwanted pregnancy, and physical problems during pregnancy (Bailey & Daugherty, 2007; Stampfel et al., 2010). Although there is a lack of research in this area, some studies suggest that PTSD symptoms do not change during pregnancy. However, if the pregnancy is a particularly stressful time for the couple, it is likely that PTSD symptoms can actually get worse during the pregnancy (Farley et al., 2004). If the person's substance of choice helps them cope with their PTSD symptoms, then this can lead to an increase in or maintenance of substance use (Najavits, 2007). Finally, although women are likely to decrease their substance use while they are pregnant, their partners are likely to continue to use substances at similar levels and both partners in the couple are likely to return to high levels of substance misuse after birth if they had high levels of substance misuse pre-pregnancy (Havens et al., 2009).

Since the first year of parenthood is associated with decreased relationship quality (e.g., Doss et al., 2009), it is likely that couples with a history of trauma who are suffering from IPV, PTSD symptoms, and substance misuse will experience more severe distress than typical couples. This can mean increased IPV, substance misuse, PTSD symptoms, and decreased relationship satisfaction, among other consequences. Any or all symptomatology present in the couple is likely to escalate when the new stressors of parental adjustment are added to the existing stressors of coping with IPV, trauma-related

difficulties like PTSD, and substance misuse. High levels of substance misuse, IPV, and PTSD symptoms may pose a significant challenge to the couple recovering from this stressful period of adjustment to parenthood, making it all the more likely that the IPV, substance misuse, and PTSD will continue to have a strong presence in the family after the first year of parenthood and continue to exert negative developmental influences on all of its members. IPV and substance misuse tend to be especially prone to generational transmission, thus also increasing the risk for perpetuating the cycle of violence throughout generations (e.g., Ehrensaft et al., 2003). Since childhood trauma especially may affect the person's long-term attachment style, the symptoms related to developmental trauma and/or PTSD are likely to be more integrated into the personality and thus be more difficult to change (Godbout et al., 2009). Without receiving help specific to history of trauma, PTSD, substance misuse, and IPV, couples who experience all three of these difficulties are less likely to improve on their own.

### **Insights from Treatment Literature and Implications for Prevention Efforts**

Research suggests that pregnancy is an ideal time for prevention efforts (Anthony et al., 2010). One reason for this is that couples, especially women, are likely to decrease their substance use during pregnancy. In some couples, IPV can also decrease during pregnancy as the couple's relationship satisfaction is temporarily elevated. Another reason is that couples who are getting ready to become new parents tend to be more open to new learning experiences and may be more likely to reflect on their patterns of behaviour while they are thinking about what kind of parents they would like to be. Finally, pregnancy is a time when a couple is likely to come in contact with treatment providers and become more comfortable or familiar with talking with health

professionals and receiving feedback (Anthony et al., 2010). Research on integrated treatment of substance misuse, IPV, and PTSD suggests that approaches that provide psychoeducation in a non-confrontational manner, teach clients about the relationship between the difficulties they are facing, teach the couple coping strategies for different situations, and help the couple increase constructive communication can be successful in reducing IPV, substance misuse, and PTSD symptoms (e.g., Chase et al., 2003; Monson et al., 2008). Finally, research on prevention of IPV suggests that interventions that target specific high-risk groups are more successful than interventions provided to the general population (O'Leary, Woodin, & Fritz, 2006). More research is needed that can investigate how these three specific risk factors relate to one another during the transition to parenthood; how high-risk couples and families could be identified; and what areas couples who are facing these challenges need most therapeutic support in. Such research is imperative in order to design more efficacious prevention and intervention protocols for high-risk couples and families because it would yield important information about potential therapeutic targets during prevention, which can help the couple and the future family avoid much conflict, distress, and violence.

## Current Study

### Purpose

The purpose of this study is to address a gap that currently exists in the research literature with respect to how trauma history, PTS symptoms, and other risk factors affect couples during the transition to parenthood. As discussed above, trauma history, PTSD, IPV, and substance misuse can have profound and long-term negative consequences for couples and families, such as relationship discord and depression (e.g., Cleaver et al., 2007). Also, these three factors tend to be related in such a way that they are likely to maintain one another. For instance, substance use can provide temporary relief from acute PTSD symptoms, but create a substance dependency which is associated with other costs (e.g., Monson et al., 2008). The transition to parenthood can be a stressful time for the couple as they are adjusting to their new roles as parents (Mitnick et al., 2009). If these risk factors were present in the couple before the birth of their first child, the stress associated with the transition to parenthood can mean that IPV, PTS symptoms, and substance misuse can exacerbate one another (e.g., McCrady et al, 2009; Monson et al., 2009). For example, higher levels of stress may decrease the threshold for physical aggression (IPV) for one partner; for the other partner, experiencing increased physical aggression may lead to an increase in their substance mis/use.

Expanding the knowledge of the relationships between risk factors and relationship adjustment during the transition to parenthood can create the possibilities to conduct further research on how specific combinations of risk factors can be addressed with tailored, evidence-based prevention and intervention strategies instead of strategies that have more of a general approach. Most couple-oriented approaches to prevention of high risk behaviours, such as intimate partner violence, use a general strategy of

buffering relationship satisfaction (e.g., Schultz, Cowan, & Cowan, 2006). However, there is some research showing success in using prevention techniques specific to the population instead relying on techniques that buffer relationship satisfaction only (e.g., Monson et al., 2008; Rynerson & Fishel, 1993). Further, tailoring interventions to specific populations, such as couples in which at least one partner has been diagnosed with PTSD, can improve the results of the intervention because it allows the service providers to address issues that are unique to a particular population (Monson et al., 2008). These findings suggest that couples-oriented prevention protocols may also be improved by tailoring the prevention programs to specific populations that may a. need the prevention service the most; and/or b. be most likely to respond to a particular prevention service. In addition, the results of this research can be used to help identify couples and families at highest risk for severe mental health and relational difficulties. Such information would be invaluable for assessment of couples and families, as identifying at-risk couples and families in an accurate and timely fashion would mean that there would be more chances to intervene and perhaps prevent escalation of certain mental health problems, such as substance misuse.

This study will focus on answering the questions that are currently left unaddressed in the research literature: 1. How do history of trauma, PTS symptoms, IPV, and substance misuse interact during the transition to parenthood? 2. Do history of trauma or PTS symptoms have a unique association with relationship satisfaction, over and above IPV and substance misuse? 3. Does trauma (in this study, measured separately by having a history of interpersonal trauma *and* currently experiencing symptoms of PTS) predict higher levels of IPV and substance misuse? 4. How does one partner's

substance misuse, violence perpetration, and PTS symptoms affect the other's partners relationship satisfaction?

### **Hypotheses**

The hypotheses for this project are as follows:

1. History of trauma and current PTS symptoms will have a unique association with relationship satisfaction while controlling for IPV and substance misuse. PTS symptoms and trauma history of each partner will have a negative effect on their own and their partner's relationship satisfaction.
2. The combination of history of trauma, PTS symptoms, substance misuse, and IPV will be most detrimental to relationship satisfaction (i.e., when compared to combinations of IPV and substance misuse, IPV and trauma history, etc.)
3. PTS symptoms will moderate the relationship between intimate partner violence and relationship satisfaction. This effect will be stronger for women.

## Method

### Design

The current study is part of the larger Partners to Parents project. The Partners to Parents study has recruited one hundred couples who were pregnant with their first child. The couples participate in the study at three time points: during the third trimester, one year after the child's birth, and two years after the child's birth. The second session consists of filling out validated questionnaires about mental health (i.e., anxiety, depression, substance misuse, PTS symptoms), parenting attitudes and experiences, relationship adjustment and dynamics, child behaviour, and so on, which the couples can complete via internet or on campus.

The current study analysed the data from the second wave of data collection of the Partners to Parents project (one year after the birth of their child). The focus of this thesis is on how trauma history and PTS symptoms interact with substance misuse and intimate partner violence during the transition to parenthood and how the interaction of these factors influences relationship satisfaction. Traumatic events, for the purposes of this project, were defined as any extremely negative or interpersonally stressful events, such as rape, robbery, psychological aggression, etc. The Post-traumatic Stress Symptoms assessed in this study were parallel to the DSM-IV-TR (APA, 2000) criteria for Post-traumatic Stress Disorder. However, since this study was conducted with a community sample, the focus was on the *range* of PTS symptoms in community couples, not on establishing a DSM-IV-TR-based diagnosis. Each participant filled out questionnaires pertaining both to a lifetime history of trauma and to PTS symptoms, which allows for an objective measure of how extensive their history of trauma is and how severely they are still affected by the traumatic event(s). Substance misuse was defined as a harmful use of

alcohol and/or drugs, indicated by either the levels of substance consumption and/or the presence of dependency or harmful pattern of use. Intimate partner violence subsumed psychological, emotional, physical, and sexual violence.

### **Participant recruitment**

The couples participating in the study were recruited from the greater Victoria region by way of placing advertisement brochures in the offices of midwives and maternity doctors and maternity stores. Advertisements were also distributed in the community (i.e., coffee shops and UVic campus). In addition, researchers conducted presentations about the study at pre-natal classes. Participants were offered a \$25.00 honorarium for completing the second wave questionnaires. In order to be eligible to participate in the original study, the couples had to be pregnant with their first child, be living together, and be over seventeen years of age. Couples going through the adoption process were not included in this study because the potentially unpredictable lengths of time associated with the adoption process would likely be in conflict with the longitudinal design of the study. Two same gender couples participated in the study.

### **Participants**

The final sample at Wave 2 was 88 women and 79 men. Two same gender couples participated in the larger research project, but were not included in the current study because: 1) the small n associated with same-gender couples would neither have sufficient statistical power to find significant results nor provide information that can generalize to the general population of same-gender couple; 2) the two same-gender couples may represent a different population from the heterosexual couples. Nineteen participants have either dropped out of the study or have not completed the follow-up

after multiple reminders. One couple dropped out due to an unsuccessful pregnancy. The participants were between 18 and 48 years of age. The mean age was 34 for male participants and 31 for female participants. Mean annual income for women was \$27,000 and for men it was \$49,700. These demographics suggest that the majority of the participants in the sample were likely from middle-class households. Approximately 11% of the participants identified themselves as a visible minority (Men: 4% Asian, 2% First Nations, 1% each Latin American, Portuguese, and Sikh; women: 3% First Nations, 6% Asian, 1% each African, East Indian, Filipina, and Latin American). The constitution of the sample is representative of the ethnic constitution of Victoria area (Statistics Canada, 2006).

### **Procedures**

*Wave 2.* At the first birthday of the participants' child, the participants were contacted by phone and/or email and asked if they were interested in continuing their participation in the study. For participants who agreed to continue their participation, the researchers presented the option to either complete the follow-up questionnaires on the internet or to visit the laboratory again and complete the follow-up questionnaires there. All of the participants opted for the option to complete the questionnaires on the internet. Although the participants clearly preferred using the internet to answer the follow-up survey, there is a potential issue with this strategy as there is no way to ensure that the individuals filled out their surveys independent of their partners' input or that the individuals didn't give their login information to someone else and had someone else complete the questionnaires for them. This condition was assured during the first wave of data collection by having the participants fill out questionnaires at the same time, but

in separate rooms. For the follow-up, the participants were given their own individual code and password to access the online questionnaires and were encouraged to do it separately from their partner. For the six couples who have separated by the time of the first follow-up, the researchers still provided the option to participate in the study, but answer modified questionnaires. Nineteen participants who no longer wished to participate in the full follow-up procedures were also given the option to answer a modified version of the follow-up questionnaires, which would only take ten minutes. Upon comparison of the demographic characteristics of the 19 participants who had dropped out of the study and those who hadn't, the only variable that emerged as statistically significant during an independent samples t-test was the number of years the couples have lived together. Surprisingly, the couples who dropped out of the study had higher average years of living together (7 years vs. 4.5 years couples still in the study). However, upon the examination of the individual data of the couples who have dropped out, one participant reported living with their partner for 17 years and two other participants reported living with their partners for 10 years, which may have skewed the average for this group. Thus, it may be important to examine the role of the amount of years the couple has lived together in the analyses as a potential covariate variable. The current drop-out rate of 7%, which is consistent with attrition rates of 6-7% in other longitudinal studies (e.g., Doss et al., 2009). If only one partner in the couple completed the questionnaires, their data were included in the study. The perpetration of IPV by the partner who did not complete the study was estimated from the other partner's report.

## **Measures**

### ***Intimate partner violence.***

*Conflict Tactics Scale Revised (CTS-R)*. The CTS-R is a measure of physical and psychological aggression for married, cohabiting, or dating couples. It also provides a measure of negotiation behaviours (Newton, Connelly, & Landsverk, 2001; Straus et al., 1996). CTS-R contains questions both about experiencing and perpetrating aggression in the past year. For example, a question about psychological aggression, such as, “Have you insulted or sworn at your partner?” is also asked as, “Has your partner insulted or sworn at you?” Scoring ranges from 1 to 8, 1 meaning “1 time,” 6 meaning “more than 20 times,” 7 meaning “never,” and 8 meaning “not in the past year, but has happened in the past” (Straus et al., 1996). While CTS-R provides a measure of injury, it does not provide a measure of the context of conflict strategies such as physical aggression, such as whether or not one of the partners is more likely to initiate violence. The CTS-R is comprised of four scales: physical aggression, psychological aggression, sexual aggression, and consequences of aggression (injury). During validation of the CTS-R, the internal consistency reliability analysis showed that all scales had good reliability, with alpha reliability coefficients of 0.79 or higher (Straus et al.). Construct validity analyses revealed trends consistent with previous research; for instance, the association between using psychological aggression and sexual aggression tactics was higher for men than for women (Straus et al.).

For the purposes of the current study, only the psychological and physical aggression subscales of the CTS-R were examined due to the low reliability of the sexual aggression subscale. Considering the possibility of the participants underreporting their own aggression, each of these variables were estimated using both their own and their partner’s score. Specifically, the highest of the two partners’ reports on each item was

used to estimate each participant's perpetration of aggression. Then the man's perpetration of aggression was used as an estimate of the woman's victimization, and vice versa. The psychological aggression variable showed good reliability for women (Cronbach's alpha = .70) and satisfactory reliability for men (Cronbach's alpha = .61). The physical aggression variable showed the opposite – reliability for women was satisfactory at Cronbach's alpha = .65 and for men was excellent at Cronbach's alpha = .88. According to the couples' reports, 81.8% of men and 87.5% of women perpetrated at least one act of psychological aggression, whereas 28.4% of women and 20.5% of men perpetrated at least one act of physical aggression. The victimization rates are as follows: 87.5% of men and 81.8% experienced at least one instance of their partner being psychologically aggressive, while 20.5% of women and 28.4% of men experienced at least one instance of physical aggression from their partner.

***Substance misuse.***

*Alcohol Use Disorders Identification Test (AUDIT)*. AUDIT is a measure that assesses harmful drinking patterns (Saunders et al., 1993). It is comprised of ten items that assess four domains: drinking behaviour, alcohol consumption, adverse psychological reactions, and alcohol-related problems. The response options range from “never” to “daily or almost daily,” resulting in minimum score of zero and maximum score of 40. Each domain was associated with at least a 0.7 alpha reliability coefficient in previous research (Saunders et al., 1993). In the representative sample used during the development of the questionnaire, 92% of participants diagnosed with an alcohol-related disorder had a score of 8 or higher on the AUDIT. Conversely, 94% of the participants without a diagnosed alcohol-related disorder had a score of 7 or less. The validity

statistics associated with the external reference group scores (i.e., scores for participants in the control group, who did not suffer from problematic alcohol use) were even higher, between 98% and 100% (Saunders et al., 1993).

The original version of AUDIT had poor reliability for women in the current study. Therefore, an amended version of the AUDIT was created. Using exploratory factor analysis, it was decided to retain only questions 2-5 and 8. Several items had to be deleted as they had zero variance for women, such as items that ask about having to have a drink first thing in the morning, someone being injured because of the participant's drinking, or someone suggesting to the participant to cut down their alcohol use. Further, an item asking "How often do you drink?" had restricted range and was associated with very low reliability for women. This item was also deleted. The women in the sample are all recent mothers and some of them are possibly breastfeeding. Therefore, this characteristic of the participants may have affected the AUDIT results. The revised AUDIT showed excellent reliability for men (Cronbach's alpha = .83) and satisfactory reliability for women (Cronbach's alpha = .58). Only 4% of men scored at or above the cut-off of 8 on the AUDIT (which represents problematic drinking), whereas none of the women scored above the cut-off. However, 8% of men scored in the borderline range (i.e., 6-7). None of the women scored above the cut-off or in the borderline range.

*Drug Abuse Screening Test (DAST)*. The DAST is a 10-item measure of frequency of drug use and problems associated with drug use in the past year (Skinner, 1982). It contains questions about problematic drug use, which are answered "yes" or "no." An example of such a question is, "Are you unable to stop using drugs when you want to?" A cut-off score of 3 on the DAST-10 represents a potential harmful pattern of

drug use. Using this cut-off score, 93% of participants with drug use problems were classified correctly (Cocco & Carey, 1998). The DAST-10 has been shown to correlate very well with The DAST-20, a longer version of this measure, ( $r=.97$ ), indicating good validity of The DAST-10 (Cocco & Carey, 1998). The DAST-10 was also able to reliably discriminate between participants with and without a drug use diagnosis,  $F(2, 92) = 28.63, p < .0001$ ; corresponding  $R^2 = .38$ , thus showing further evidence of validity of this measure (Cocco & Carey, 1998). The DAST-10 also showed good reliability,  $\alpha = .86$  (Cocco & Carey, 1998). For the purposes of this study, we added 24 questions about type and frequency of different drugs used in the past year before the pregnancy and during the pregnancy. These questions are scored on a scale ranging from 1 to 7, 1 meaning “never” and 7 meaning “40 times or more.” The total number of questions in the amended version is 34. However, the frequency of drug use did not correlate with any other variables in the study, so only the questions about problems associated with drug use (the original DAST questions) were used. The range for the original DAST is 0-10.

In the current study, The DAST displayed excellent reliability for both men and women (Cronbach’s  $\alpha = .94$ ). Using the cut-off score of 3, 8% of men and 4% of women reported problematic drug use. Drug use before and during pregnancy was calculated separately according to participants’ reports referring to before and after pregnancy.

### ***Relationship satisfaction.***

*Dyadic Adjustment Scale (DAS)*. The DAS is a 32-item questionnaire that measures relationship satisfaction (Spanier, 1976). The range of this instrument is 1-151. A score in the range of 90-100 indicates average or moderate relationship satisfaction. A

score of 50 or below indicates very low relationship adjustment. The DAS contains the following subscales: consensus (13 items), affectional expression (4 items), level of satisfaction and commitment to the relationship (10 items), and cohesion (5 items). However, for the purposes of this study, only the total DAS score, which is calculated by adding all of the DAS items together and represents overall relationship satisfaction, was used. Affectional expression subscale measures the level of satisfaction with current affectionate and sexual behaviour in the relationship; it consists of questions about “sexual relations” and “demonstrations of affection.” The last subscale, cohesion, measures the extent to which the couple engage in enjoyable mutual activities. The DAS scores are predictive of verbal abuse (Spanier, 1976). The DAS is a widely used measure of relationship adjustment and many recent studies have confirmed its factor structure (e.g., South, Krueger, & Iacono, 2009).

The DAS is capable of reliably discriminating between couples that are married or cohabiting and the couples that have separated, suggesting good criterion validity (mean scores for each group, respectively, are 114.8 and 70.7,  $p < .001$ ) (Spanier, 1976). During the development of the measure, it correlated well with an earlier measure of marital adjustment, the Locke-Wallace Marital Adjustment Scale. The correlation coefficients were .86 for married and .88 for divorced respondents (Spanier, 1976). Cronbach’s alpha for The DAS is .96, indicating excellent reliability (Spanier, 1976). The DAS can generate two scores: DAS for self (which reflects each partner’s own satisfaction with the relationship) and DAS for partner (which reflects the ratings of each person’s partner in relation to their level of satisfaction with the relationship). The DAS for partner score is generated by matching the DAS score within the couple.

The DAS was associated with excellent reliability in the current study (men: Cronbach's alpha = .93; women: Cronbach's alpha = .88). In terms of relationship satisfaction, 15.5% of men and 16.6% of women reported average relationship satisfaction (represented by scores in the 90-110 range), 10.3% of men and 3.6% of women reported below average relationship satisfaction ( $DAS < 90$ ), and 74.2% of men and of 79.8% women reported above average relationship satisfaction ( $DAS > 110$ ).

### ***Trauma.***

*PTSD checklist (PCL).* The PCL is a 17-item scale that measures symptoms of PTSD as they are outlined in the DSM-IV-TR diagnostic category. The symptom clusters include hyperarousal, re-experiencing, and avoidance/numbing. Each item asks the participant to what degree they have been bothered by a particular symptom in the past month; items are scored on a scale of 1 to 5, with 1 meaning "not at all" and 5 meaning "extremely. The range is between 17 and 85. The suggested cut-off score is 44 (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). A score or 44 or higher suggests presence of clinical PTSD. Initial research on the PCL indicated good validity (kappa = .64 when compared with diagnosis of PTSD from SCID for DSM-III-TR) and reliability (test-retest reliability coefficient = .96) (Weathers, Litz, Herman, Huska & Keane, 1993). Further research also demonstrated good diagnostic efficiency of .90 when using 44 as a cut-off score (compared to a clinical interview for PTSD based on DSM-IV) and good internal consistency (Cronbach's alpha = .94) (Blanchard et al., 1996). Diagnostic efficiency refers to an instrument's ability to correctly identify persons with a clinical diagnosis.

The reliability for the PCL in this study was excellent: Cronbach's alpha = .85 (men) and Cronbach's alpha = .91 (women). None of the men and only 1% of the women in this study scored above the cut-off score of 44. However, it was not a goal of this study to determine whether or not the participants meet the diagnosis of PTSD, which is what the cut-off score is commonly used for. Both male and female participants reported a range of PTS symptoms.

*Trauma History Questionnaire (THQ)*. The THQ is a widely-used measure that assesses exposure to traumatic experiences (Green, 1996). It includes 20 questions about sexual, physical, natural disaster, and other potentially traumatic events that a person may have experienced and questions about the frequency with which the event(s) occurred. An example is, "Has anyone ever attempted to or succeeded in breaking into your home when you weren't there?" Scoring ranges from 1 to 5, 1 meaning "never" and 5 meaning "four or more times," with the total score ranging from 0 to 100. The THQ displays good test-retest reliability, with percentages of agreement for each item ranging from 79% (i.e., physical attack without a weapon) to 100% (natural or human-made disaster) (Mueser et al., 2001). The amended version of the THQ used in this study contains 20 items, including items such as, "Have you ever had a spouse, a romantic partner, or child die?" and "Have you ever had a serious accident at work, in a car, or somewhere else?" Some items were excluded as they could have correlated highly with the questions about physical or psychological IPV on the CTS-R. An example of such an item is, "Has anyone, including family members or friends, ever attacked you with a gun, knife or some other weapon?" Since the THQ measures frequency of experiences, not presence of symptoms, there is no specific cut-off point used with this measure. High scores

indicate higher level of exposure to traumatic events. The total score on the THQ was used as the unit of analysis, as it represents cumulative experiences of traumatic events over one's life. The reliability of THQ was good for the male participants in this study (Cronbach's alpha = .80) and satisfactory for the female participants (Cronbach's alpha = .60).

In the current sample, 87.3% of men and 86.4% of women reported experiencing at least one traumatic event in their lives. However, men and women reported different frequencies of specific events they experienced (see Table 1). Men's rates of reporting events related to potential injuries, car accidents, and robberies were 24-41% higher than women's reports of the same events.

On the other hand, women reported 60-66% higher rates of sexually traumatic events, including unwanted intercourse and unwanted sexual contact, which is consistent with rates found in previous studies (e.g., Tjaden & Thoennes, 2000). When correlated with the total PCL score, the THQ items that were significantly correlated with PCL for men were: serious injury; serious or life-threatening illness; all items pertaining to unwanted sexual contact; being attacked without a weapon and injured; and other stressful situations (see Table 2). For women, the items were: robbery; car accident; serious injury; seeing someone killed or injured; all items pertaining to unwanted sexual contact; being spanked or beaten by a family member; and other stressful situations.

**Table 1 Endorsement of THQ items for men and women**

Table 1		
<i>Endorsement of THQ items for men and women (lifetime)</i>		
	Men	Women
THQ item	%	%
1. Stick-up or mugging	11.5	8.0
2. (Attempted) robbery	48.2	36.4
3. Break in when there	22.8	28.2
4. Break in when not there	8.9	3.4
5. Serious accident	41.8	31.8
6. Human-made disaster	11.4	5.7
7. Been seriously injured	32.9	10.2
8. Situational with potential for serious injury/death	50.6	30.7
9. Saw someone killed or injured	45.6	38.4
10. Seen or handled dead bodies	35.4	30.7
11. A relative was murdered or killed	16.5	8.0
12. Spouse or child died	8.9	5.7
13. Life threatening illness	11.4	8.0
14. Intercourse against your will	7.6	18.2
15. Someone touched private parts under force	5.1	14.8
16. Other unwanted sexual contact	8.9	22.7
17. Attacked with a weapon	7.6	3.4
18. Attacked without a weapon	3.8	1.1
19. Family member pushed or spanked	12.7	13.6
20. Other extraordinarily stressful situation	22.8	36.4

*Note.* N = 88(women) & 79(men)

The next step was to create two variables representing trauma history. One variable contained all the questions that were excluded from the THQ due to potentially being confounded with the CTS-R questions. This variable was named “relational trauma history.” All the questions included in the “relational trauma history” pertained to being victimized by a family member or intimate partner, which was the main reason for their exclusion from the total trauma history score. The other variable contained the rest of the THQ questions and was named simply “trauma history.” However, relational trauma history displayed poor reliability and thus was excluded from further analyses.

***Depression.***

*Center for Epidemiologic Studies Depression Scale (CES-D).* (Radloff, 1977).

This variable was included as a covariate because PTS symptoms are often comorbid with depression (e.g., Labat, Sonne, Randal, Anton, & Brady, 2004). CES-D measures the individual’s level of current depressive symptoms, which represents their state in the past week. The CES-D contains 20 items and each item is scored on a scale of zero to three, representing the frequency of each symptoms experienced (Radloff, 1977). The range of the scale is from zero to 60, with the total score reflecting the frequency of symptoms. Some examples of the items on the CES-D are, “I felt hopeful about the future,” and “I felt that everything I did was an effort.” During validation, the CES-D displayed excellent internal consistency for clinical and general population groups (coefficient alpha = .90 and .85, respectively) (Radloff, 1977). Test-retest reliability was acceptable ( $r=.51$  at 2 week interval and  $r=.67$  at 4 week interval).

**Table 2 Correlations between THQ items and PCL total**

Table 2		
<i>Correlations between THQ items and PCL total</i>		
	Men	Women
THQ item	<i>r</i>	<i>r</i>
1. Stick-up or mugging	.15	.06
2. (Attempted) robbery	.13	.26*
3. Break in when there	.04	<.01
4. Break in when not there	.17	-.05
5. Serious accident	.13	.40***
6. Human-made disaster	.12	.11
7. Been seriously injured	.23*	.38***
8. Situation with potential for serious injury/death	.15	.19
9. Saw someone killed or injured	.16	.28**
10. Seen or handled dead bodies	.17	.03
11. A relative was murdered	.14	<.01
12. Spouse or child died	.14	.03
13. Life threatening illness	.25*	.12
14. Intercourse against your will	.34**	.48***
15. Someone touched private parts under force	.25*	.40***
16. Other unwanted sexual contact	.48***	.53***
17. Attacked with a weapon	.09	.06
18. Attacked without a weapon	.27*	.20
19. Family member pushed or spanked	.18	.42***
20. Other stressful situation	.33*	.52***

*Note.* N = 88(women) & 79(men)  
 \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

In the current study, CES-D displayed excellent reliability, indicated by Cronbach's alpha of .87 for men and .90 for women. Means and SD's are displayed in Tables 1 and 2; 16.5% of men and 14.8% of women scored above the cut-off score of 16 on the CES-D. However, this was expected as the CES-D measures symptoms in the current week, which do not generally remain stable. The suggested cut-off of 16 reflects a potentially clinical level of depression, although this scale was designed to measure depression symptoms in the general population rather than provide diagnosis (Radloff, 1977). The CES-D also displayed good discriminant validity, with correlations between CES-D and other measures of depression ranging from .51 to .83 (Radloff, 1977).

## Results

Prior to conducting analyses, diagnostics were performed on all measures, including checking for outliers, missing data, and abnormal kurtosis and distribution. There was no missing data because the online questionnaires that the participants filled out do not allow one to finish the survey unless every question has been answered. Data was examined for potential outliers, defined as two standard deviations above or below the mean. One outlier each was transformed in the THQ, PCL, and AUDIT and several outliers were transformed in the CTS-R in order to improve kurtosis. A data point was considered an outlier if it was two standard score deviations above or below the standard score mean. Such outliers were transformed to the value of the next highest or lowest data point, which does not affect the results of multiple regression analyses. Moreover, two raw scores were changed in the CTS-R due to a likely typo by the participants. Two participants had answered all of the CTS-R aggression questions negatively, except for one question about severe physical aggression, which they endorsed at the highest possible level. However, in the online survey where the participants complete the questionnaires, the fields for the answer “never” and the answer that represents the highest amount of occurrences possible are right beside one another. Also, the partners of these participants reported zero occurrences for each of these items and during wave 1 data collection, the participants’ response to the same question was “never.” Considering the way the participants answered the rest of the CTS-R questions, it was reasonable to conclude that this was a typo and, therefore, their answer to this one question was changed to “never.”

The following variables were based on each partner's self report: trauma history (THQ), PTS symptoms (PCL), substance misuse (DAST and AUDIT), and depression (CED). The IPV variables (CTS-R) were based on a combination of partners' reports as described above in the Measures section. The self relationship satisfaction variable (DAS) was based on each participant's own report, while partner relationship satisfaction variable (DAS) was based on the respective report of each participant's partner. That is, the partner relationship satisfaction for male partners is represented by the female's partners' reports, and vice versa.

Next, the relationships between the two dependent variables (partner's relationship satisfaction and self-reported relationship satisfaction) and possible demographic covariates were tested through bivariate correlations and one-way ANOVA's. These demographic variables included: age, income, minority background, Aboriginal status, type of work (i.e., employed, homemaker, student), legal marriage status, the length of time that the couple has spent living together, and education. No demographic variables displayed a statistically significant relationship with either relationship satisfaction variable. Thus, the only covariate included in this study was depression, measured by CES-D.

Subsequently, all possible bivariate correlations were computed (see Tables 3 and 4). History of trauma and PTS symptoms were two separate measures of trauma; harmful drinking and harmful drug use were two separate measures of substance misuse; psychological and physical IPV were separate measures of IPV. Consistent with the hypotheses of this study, PTS symptoms were correlated with relationship satisfaction for men and women such that they were inversely related to self relationship satisfaction.

For women, history of trauma was not related to either relationship satisfaction variable, but was significantly correlated with depression and PTS symptoms. For men, on the other hand, history of trauma only correlated with the PTS symptoms; there was no link between the amount or frequency of traumas that men have experienced and other variables. These results did not support the hypotheses that history of trauma will be inversely related to relationship satisfaction.

Problematic drug use did not correlate with any other variables (perhaps due to very low incidence of problem drug use in the sample) and was thus excluded from further analyses.

Hierarchical regression (Lindenberger & Potter, 1998) was chosen as the main method of analysis because it is best suited for answering the research question of whether or not history of trauma and PTS symptoms make a unique contribution to relationship satisfaction, over and above other vulnerabilities (aggression and substance misuse). Further, history of trauma and PTS symptoms were included in the last block of the hierarchical regression together so that the overall effect of the trauma-related variables could be examined together. Although history of trauma is likely to chronologically precede PTS symptoms, the results did not change when history of trauma was entered in a different order in the regression (1<sup>st</sup> block, 2<sup>nd</sup> block, and last block, but independently from PTS symptoms).

### **The Effect of PTS Symptoms on Self and Partner's Relationship Satisfaction**

*Hypothesis 1: History of trauma and current PTS symptoms will have a unique association with relationship satisfaction while controlling for IPV and substance misuse.*

*PTS symptoms and trauma history of each partner will have a negative effect on their own and their partner's relationship satisfaction.*

This hypothesis involved two steps. First, the researcher examined how each participant's history of trauma and PTS symptoms affected *their own* relationship satisfaction over and above the participant's substance misuse and IPV victimization. Second, the effect of each participant's own PTS symptoms and history of trauma on *their partner's* relationship satisfaction was examined.

Table 3 Summary of Intercorrelations for Men

Measure	1	2	3	4	5	6	7	8	9	10	11	M	SD
1. Psych. IPV Perpetration <sup>a</sup>	—											14.03	16.34
2. Physical IPV Perpetration <sup>a</sup>	.54***	—										.72	2.00
3. Psych. IPV Victimization <sup>a</sup>	.75***	.35***	—									18.00	21.54
4. Physical IPV Victimization <sup>a</sup>	.61***	.82***	.43***	—								1.39	3.04
5. Harmful Drug Use	-.09	.01	.11	-.05	—							2.22	3.43
6. Harmful Alcohol Use	.38***	.21	.22	.26*	.19	—						.69	1.19
7. PTS symptoms	.15	.21	.26*	.26*	-.03	.13	—					5.23	6.08
8. Trauma history	-.07	.12	-.11	.13	.07	-.03	.34**	—				7.46	7.66
9. SelfDAS	-.31**	-.15	-.52***	-.06	.12	-.16	-.56***	-.06	—			114.03	17.47
10. Partner DAS <sup>a</sup>	-.47***	-.19	-.43***	-.18	-.02	-.23*	-.20	-.02	.51***	—		117.91	12.76
11. Depression	.23*	.18	.48***	-.26*	.12	.26*	.58***	.15	-.57***	-.25*	—	9.20	7.66

Note. IPV = Intimate Partner Violence; PTS = Post-traumatic stress; DAS = Dyadic Adjustment Scale, a measure of relationship satisfaction.  
<sup>a</sup> = N(88)  
 \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 4 Summary of Intercorrelations for Women

Measure	1	2	3	4	5	6	7	8	9	10	11	M	SD
1. Psych. IPV Perpetration <sup>a</sup>	—											18.00	21.54
2. Physical IPV Perpetration <sup>a</sup>	.44***	—										1.39	3.04
3. Psych. IPV Victimization	.75***	.61***	—									14.03	16.34
4. Physical IPV Victimization	.35***	.82***	.54***	—								.72	2.00
5. Harmful Drug Use	-.03	.07	.06	-.05	—							.60	1.91
6. Harmful Alcohol Use	.03	-.13	-.09	.26*	.09	—						.69	1.19
7. PTS symptoms	.18	.09	.04	.26*	.13	.16	—					7.15	8.08
8. Trauma history	.14	-.02	-.02	-.06	.04	.24*	.65***	—				4.86	4.65
9. Self DAS	-.43***	-.26*	-.48***	-.18	-.21	.01	-.24*	-.15	—			118.00	13.00
10. Partner DAS <sup>a</sup>	-.52***	-.18	-.43***	-.26*	-.01	.04	-.22	-.08	.50***	—		114.46	17.75
11. Depression	.08	.12	.13	.35*	.13	.09	.59***	.35**	-.25*	-.14	—	9.55	8.53

Note. IPV = Intimate Partner Violence; PTS = Post-traumatic stress; DAS = Dyadic Adjustment Scale, a measure of relationship satisfaction.  
<sup>a</sup> = N(79)  
 \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Self relationship satisfaction.** To test this hypothesis, a hierarchical multiple regression was performed. Self relationship satisfaction (see Table 5) was regressed on harmful drinking, psychological IPV victimization, physical IPV victimization, PTS symptoms, and history of trauma, while controlling for depression. As a covariate, depression was entered in the first block. Harmful drinking, psychological IPV, and physical IPV were entered in the 2<sup>nd</sup> block; and PTS symptoms and history of trauma were entered in the 3<sup>rd</sup> block.

For men, PTS symptoms predicted self relationship satisfaction over and above depression and psychological IPV victimization ( $\beta = -.40, p < .001$ ) (see Table 5). When PTS symptoms were entered in the 3<sup>rd</sup> block, the R squared change was significant ( $R^2\Delta = .10, p < .05$ ). However, depression and psychological IPV victimization remained significant even with PTS symptoms in the 3<sup>rd</sup> block ( $\beta = -.24, p < .05$  and  $\beta = -.38, p < .001$ , respectively). These results suggest that, for men, PTS symptoms, depression, and experiencing psychological IPV are all robust predictors of their own relationship satisfaction.

**Table 5 Hierarchical Multiple Regression Analyses Predicting Self Relationship Satisfaction**

Steps and Predictors	Men				<i>R</i> <sup>2</sup> change	Women				
	Overall					<i>R</i>	Overall			<i>R</i> <sup>2</sup> change
	<i>R</i>	<i>F</i>	$\beta$	<i>t</i>			<i>F</i>	$\beta$	<i>t</i>	
1. Depression	.57	36.41***	-.24	-2.10*	.25	5.64*	-.09	-.76		
2. IPV and Alcohol Use	.65	13.40***			.10*	.52	7.28***		.20***	
Psych. IPV Victimization			-.38	-3.78***			-.51	-4.4***		
Physical IPV Victimization			.19	2.00			.09	.80		
Harmful Alcohol Use			-.02	-.18			.01	.14		
3. Trauma	.72	7.79***			.10*	.54	5.18***		.02	
PTS symptoms			-.40	-3.75***			-.16	-1.07		
Trauma history			.08	.84			-.02	-.12		

*Note.* \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

For women, the results did not support the hypothesis (see Table 5). PTS symptoms did not predict women's relationship satisfaction when Psychological IPV victimization and substance misuse was controlled for ( $\beta = -.51, p < .001$ ) and the R squared change was not significant in the 3<sup>rd</sup> block, even though depression and PTS symptoms were significantly related to relationship satisfaction at the bivariate level (see Table 4).

Therefore, the experience of psychological IPV in their relationship is the most robust predictor of women's relationship satisfaction at the multivariate level. A post-hoc paired-samples t-test was conducted to test whether there were significant differences between men and women's mean levels of PTS symptoms, but this test was not significant.

**Partner relationship satisfaction.** Likewise, a hierarchical multiple regression was performed to test how history of trauma and PTS symptoms of one partner ("partner 1") may affect the relationship satisfaction of the other partner ("partner 2"), while controlling for partner 2's depression and harmful drinking and partner 1's IPV perpetration (see Table 6). Depression was entered in the 1<sup>st</sup> block; harmful drinking, psychological IPV perpetration, and physical IPV perpetration were entered in the 2<sup>nd</sup> block; PTS symptoms and history of trauma were entered in the 3<sup>rd</sup> block.

**Table 6 Hierarchical Multiple Regression Analyses Predicting Partner's Satisfaction**

Table 6										
<i>Hierarchical Multiple Regression Analyses Predicting Partner's Relationship Satisfaction for Men (N=88) and Women (N=79): Perpetration of IPV</i>										
Steps and Predictors	Men					Women				
	Overall				<i>R</i> <sup>2</sup> change	Overall				<i>R</i> <sup>2</sup> change
	<i>R</i>	<i>F</i>	$\beta$	<i>t</i>		<i>R</i>	<i>F</i>	$\beta$	<i>t</i>	
1. Depression	.25	5.19*	-.09	-.69		.14	1.40	-.10	-.70	
2. IPV and Alcohol Use	.49	5.76***			.18***	.55	8.00***		.29***	
Psych. IPV Perpetration			-.47	-3.60***				-.57	-4.86***	
Physical IPV Perpetration			-.11	-.86				.11	.97	
Harmful Alcohol Use			-.03	-.27				.13	1.24	
3. Trauma	.50	3.87**			.01	.56	5.26***		.01	
PTS symptoms			-.10	-.75				-.10	-.57	
Trauma history			.01	.06				.05	.37	

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

The results of these analyses contradicted the hypothesis that history of trauma and PTS symptoms of one partner will have a unique association with the relationship satisfaction of the other partner (see Table 6). Psychological IPV perpetration predicted the partner's relationship satisfaction for both men ( $\beta = -.47, p < .001$ ) and women ( $\beta = -.57, p < .001$ ), while neither PTS symptoms nor history of trauma of one partner predicted the relationship satisfaction of the other partner. The R squared change was only significant in the 2<sup>nd</sup> block for both men and women. Although men's own harmful drinking and depression correlated with their partner's relationship satisfaction at the bivariate level, this result was not found at the multivariate level. The results suggest that men's psychological aggression has a robust association with women's relationship satisfaction, over and above women's depression, PTS symptoms, and harmful drinking (and vice versa).

### **Interactions between PTS Symptoms, Harmful Drinking, and IPV**

*Hypothesis 2: The combination of history of trauma, PTS symptoms, substance misuse, and IPV will be most detrimental to relationship satisfaction (i.e., when compared to combinations of IPV and substance misuse, IPV and trauma history, etc.).*

As with Hypothesis 1, IPV victimization was the predictor tested with self relationship satisfaction while IPV perpetration was the predictor tested with partner's relationship satisfaction. To test this hypothesis, hierarchical multiple regression was performed.

**Self relationship satisfaction.** First, self relationship satisfaction was regressed on psychological IPV victimization, harmful drinking, PTS symptoms, all two-way interaction terms, and the three-way interaction term, while controlling for depression. The covariate (depression) was entered in the 1<sup>st</sup> block; the main effects were entered in

the 2<sup>nd</sup> block; all two-way interactions between PTS symptoms, harmful drinking, and psychological IPV were entered in the 3<sup>rd</sup> block; and the three-way interaction between the latter variables was entered in the 4<sup>th</sup> block. History of trauma and physical IPV victimization were excluded from these analyses as they were not significant in the previous hierarchical regression. The results provided some support for this hypothesis, although there were differences between men and women.

The three-way interaction term was not significant for either men or women, suggesting that the combination of PTS symptoms, psychological IPV victimization, and harmful drinking is not necessarily a stronger predictor of self relationship satisfaction or partner relationship satisfaction than psychological IPV alone. However, for men, the three-way interaction term was associated with a probability of  $p=.107$  ( $\beta=-.74$ ). It is possible that the non-significant result was influenced by the amount of power, as there were only 79 men in the sample. Next, the two-way interactions were examined. For men, the interactions between: a) PTS symptoms and harmful drinking; and b) psychological IPV victimization and harmful drinking were both significant (see Table 7). In order to represent the interactions graphically, PTS symptoms, psychological IPV victimization, and harmful drinking were centered and recoded into categorical variables, so that a score of -1 on each variable represented the “low” range (below the median) and a score of 1 indicated the “high” range (at or above the median) on each particular variable.

For women, no interaction terms were significant. However, the interaction between PTS symptoms and harmful drinking trended towards significance.

**Table 7 Hierarchical Multiple Regression Analyses Predicting Self Relationship Satisfaction: Testing Interaction Effects**

Table 7  
*Hierarchical Multiple Regression Analyses Predicting Self Relationship Satisfaction for Men and Women: Testing Interaction Effects*

Steps and Predictors	Men				Women			
	<i>R</i>	<i>F</i>	$\beta$	<i>t</i>	<i>R</i>	<i>F</i>	$\beta$	<i>t</i>
1. Depression	.57	36.41***	-.27	-2.34*	.25	5.64*	-.11	-.92
2. Main effects	.70	17.54***			.53	7.72***		
Psych. IPV Victimization <sup>a</sup>			-.44	-2.14*			-.60	4.05***
PTS symptoms			-.38	-2.43*			-.50	-2.30*
Harmful Alcohol Use			-.67	-2.51*			-.16	-.89
3. Two-way Interactions	.73	11.36***			.56	4.83***		
PTS x Alcohol Use			.71	2.04*			.39	1.86
Psych. IPV x Alcohol Use <sup>a</sup>			.72	2.19*			.14	.73
PTS x Psych. IPV <sup>a</sup>			.06	.17			.32	1.61
4. Three-way Interaction	.74	10.51***			.56	4.35***		
PTS x IPV x Alcohol Use <sup>a</sup>			-.74	-1.63			-.17	-.99

*Note.* N=88(women) and 79(men).

<sup>a</sup> =N(88)

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

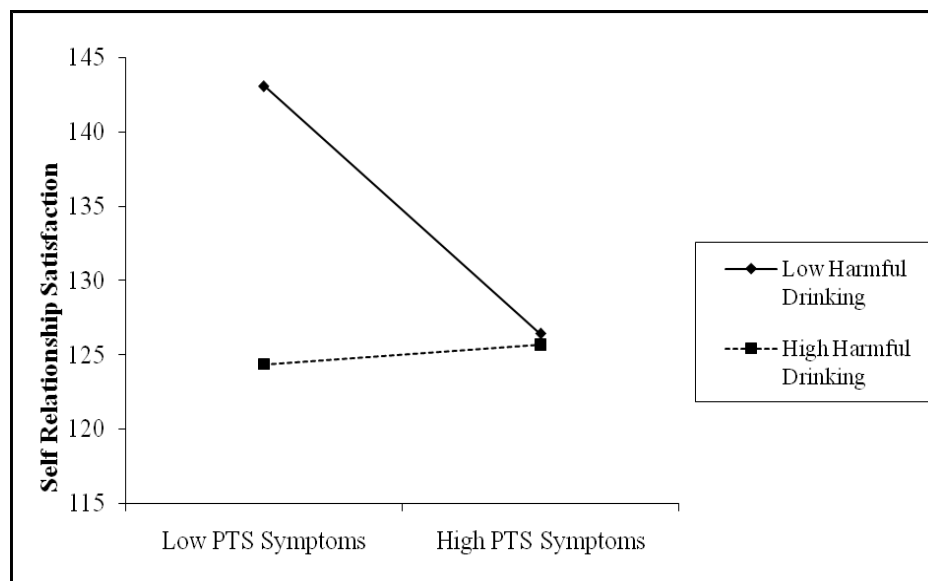
***The interaction between PTS symptoms and harmful drinking for men.*** The graph of the interaction between PTS symptoms and harmful drinking (see Figure 1) indicates that men who were in the low range for both harmful drinking and PTS symptoms had the highest relationship satisfaction. Men who scored high on the measure of harmful drinking reported significantly lower relationship satisfaction.

However, as the figure illustrates, the relationship satisfaction scores of men who scored low on harmful drinking but high on PTS symptoms were comparable to men who scored high on both harmful drinking and PTS symptoms. Also, both slopes in the graph are significant (Low Harmful Drinking slope:  $\beta=-1.24^{**}$ ; High Harmful Drinking slope:  $\beta=-1.45^{***}$ ), which means that within the interaction, both drinking and PTS symptoms have a negative impact on men's relationship satisfaction.

***The interaction between psychological IPV victimization and drinking for men.***

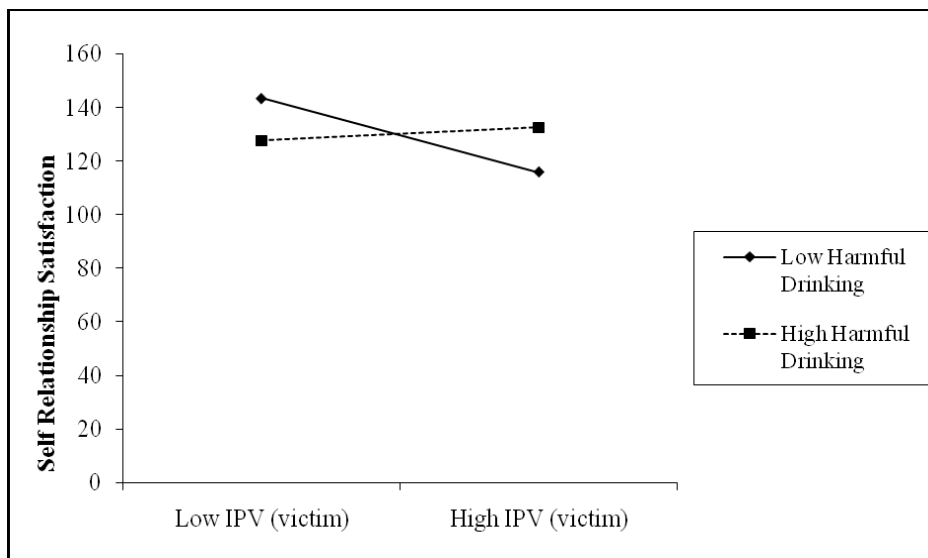
The relationship between psychological IPV victimization and harmful drinking predicting self relationship satisfaction is illustrated in Figure 2. Men who scored low on both harmful drinking and IPV victimization reported highest relationship satisfaction. Further, scoring low on one variable (i.e., IPV victimization) and high on the other (i.e., harmful drinking) was associated with lowered relationship satisfaction, but high harmful drinking was associated with a more even slope. Nevertheless, the regression slopes were significant at both high ( $\beta=-.36^{**}$ ) and low ( $\beta=-.33^{***}$ ) levels of harmful drinking, indicating that it is the *combination* of psychological aggression victimization and harmful drinking that is deleterious to men's satisfaction with their intimate relationship.

**Figure 1 Interaction between Men's PTS Symptoms and Harmful Drinking Predicting Their Own Satisfaction**



**Partner's relationship satisfaction.** Next, hierarchical multiple regression was performed with the partner's relationship satisfaction as the dependent variable and psychological IPV perpetration as one of the predictors. Similarly, depression was entered in the 1<sup>st</sup> block; all main effects were entered in the 2<sup>nd</sup> block; all two-way interactions were entered in the 3<sup>rd</sup> block; and the three-way interaction was entered in the 4<sup>th</sup> block. However, the results did not support the hypothesis. The only interaction term that was significant in these analyses was the interaction between psychological aggression perpetration and harmful drinking for men, standardized  $\beta=.59$ ,  $t=2.1$  ( $p<.04$ ) (see Table 8). The individual slopes (high vs. low harmful drinking) were also significant ( $\beta=-.26^{**}$  &  $\beta=-.53^{***}$ , respectively). All other effects were non-significant.

**Figure 2 Interaction between Men's Psychological IPV Victimization and Harmful Drinking Predicting Their Own Satisfaction**



**Table 8 Hierarchical Multiple Regression Analyses Predicting Partner Relationship Satisfaction: Testing Interaction Effects**

Table 8

*Hierarchical Multiple Regression Analyses Predicting Partner Relationship Satisfaction for Men and Women: Testing Interaction Effects*

Steps and Predictors	Men				Women			
	<i>R</i>	<i>F</i>	$\beta$	<i>t</i>	<i>R</i>	<i>F</i>	$\beta$	<i>t</i>
1. Depression	.25	5.19*	-.25	-2.28*	.14	1.41	-.14	-1.19
2. Main effects	.49	5.72***			.55	7.73***		
Psych. IPV Perpetration <sup>a</sup>			-.42	-3.69***			-.52	-5.04***
PTS symptoms			-.08	-.66			-.08	-5.8
Harmful Alcohol Use			-.03	-.28			.13	1.28
3. Two-way Interactions	.54	4.04***			.56	4.89***		
PTS x Alcohol Use			-.31	-.97			.12	.62
Psych. IPV x Alcohol Use <sup>a</sup>			.59	2.10*			-.15	-.79
PTS x Psych. IPV <sup>a</sup>			.16	.72			.15	.70
4. Three-way Interaction	.54	3.49*			.57	4.00***		
PTS x IPV x Alcohol Use <sup>a</sup>			.09	1.34			-.24	-.80

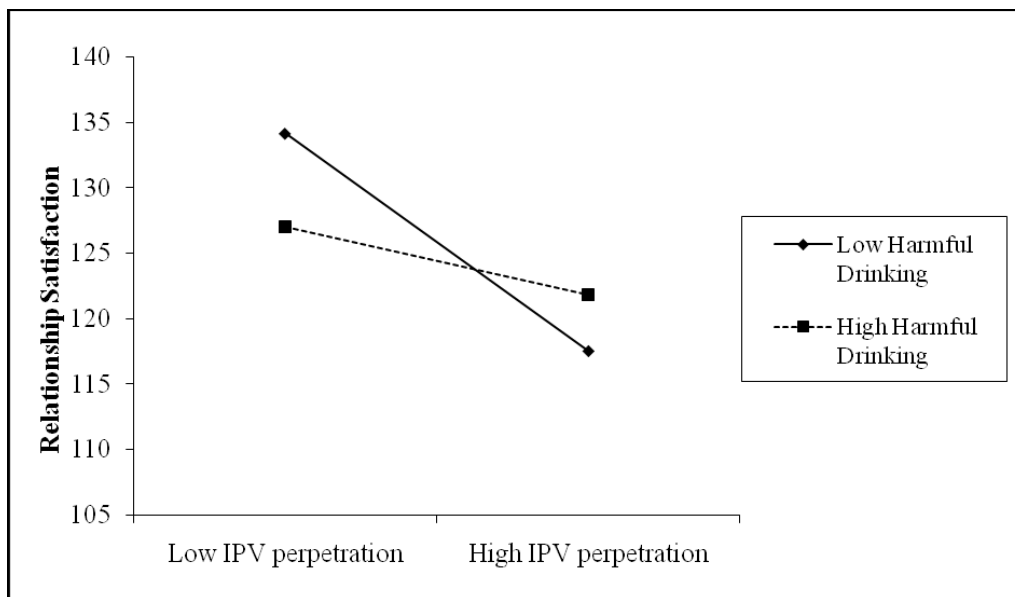
Note. N=88(women) and 79(men).

<sup>a</sup> =N(88)

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

*The interaction between psychological IPV perpetration and harmful drinking for men.* In order to examine the relationship between psychological IPV perpetration, harmful drinking, and partner's relationship satisfaction further, a moderation analysis was conducted with harmful drinking as a potential moderator of the relationship between psychological IPV perpetration and partner's relationship satisfaction. Using hierarchical multiple regression, partner's relationship satisfaction was regressed on harmful drinking, psychological IPV perpetration, and the interaction term between drinking and IPV. Main effects were entered in the 1<sup>st</sup> step and the interaction term was entered in the 2<sup>nd</sup> step. The interaction term explained a significant increase in variance in partner's relationship satisfaction,  $\Delta R^2=.04$ ,  $F(3, 73)=8.48$ ,  $p<.001$ . Therefore, men's harmful drinking was a significant moderator of the relationship between their own perpetration of psychological aggression and their partner's relationship satisfaction. Using a method suggested by Hayes and Matthes (2009), the slopes for high (1 SD above the mean) and low (1 SD below the mean) harmful drinking were plotted (see Figure 3). Prior to this, both of the predictor variables were centered in order to make the graph easily interpretable. As Figure 3 shows, the relationship satisfaction of women who were partnered with men who were high on either harmful drinking or psychological IPV perpetration was the lowest. Further, men's high IPV perpetration scores were associated with the lowest relationship satisfaction of their female partners. It appears that although the combination of harmful drinking and psychological IPV perpetration on the part of the men is associated with the lowest relationship satisfaction of the men's partners, psychological IPV perpetration by men is most detrimental to their partners' relationship adjustment.

**Figure 3 Interaction between Men's Psychological IPV Perpetration and Harmful Drinking Predicting Women's Satisfaction**



Overall, harmful drinking interacted with IPV victimization and perpetration variables, as well as with PTS symptoms, although the pattern of interactions for different for men and women.

### **PTS as a Potential Moderator of the Link between IPV and Relationship Satisfaction**

*Hypothesis 3: PTS symptoms will moderate the relationship between intimate partner violence and relationship satisfaction, i.e., higher levels of trauma will predict a stronger relationship between IPV and relationship satisfaction. This effect will be stronger for women.* Consistent with other analyses, PTS symptoms were used as an index of trauma. The psychological IPV variable was used while physical IPV was excluded due to non-significance in multivariate analyses. Once again, IPV victimization was tested as a predictor of self relationship satisfaction while IPV perpetration was tested as a predictor of partner relationship satisfaction. To test this hypothesis, a moderation analysis was conducted separately for self relationship satisfaction and

partner relationship satisfaction using multiple regressions. However, the results did not support the hypothesis: the interaction of PTS symptoms and psychological IPV victimization for self relationship satisfaction and the interaction of PTS symptoms and psychological IPV perpetration for partner relationship satisfaction were not statistically significant for either men or women.

## Discussion

To the researcher's knowledge, this is the first study that tested the link between relationship satisfaction and harmful drinking, psychological IPV victimization and perpetration, depression, history of trauma, and PTS symptoms during the first year of parenthood. As such, this study provides new information about this unique period in the lifespan. The results both support some of the existing literature and provide novel information, especially with regards to gender differences in how men and women of the same couple are affected by PTS symptoms and violence.

### PTS Symptoms and Relationship Satisfaction

*IPV Victimization, PTS Symptoms, and Self Relationship Satisfaction.* The finding that PTS symptoms predicted men's own relationship satisfaction while controlling for depression and psychological IPV victimization is a novel one, as, to the researcher's knowledge, no other recent study has investigated this relationship. The research literature on how PTS symptoms affect men is often restricted to veteran populations or examines the effects that PTS symptoms have on individual functioning, such as physical and mental health, rather than relationship functioning (e.g., Taft et al., 2007). Further, women's own relationship satisfaction was correlated with PTS symptoms and depression, but not when controlling for psychological IPV victimization. First of all, men and women's relationship satisfaction was affected by PTS symptoms, which supports previous literature (e.g., Parfitt & Ayers, 2009). At the same time, the finding that men's relationship satisfaction is jointly affected by PTS symptoms, psychological IPV victimization, and depression, while women's satisfaction appears to be primarily affected by psychological IPV victimization is a new finding. It is consistent

with research that has found that experiencing psychological aggression to be one of the most robust predictors of relationship satisfaction, over and above substance misuse (e.g., Taft et al., 2006) and the research that shows that psychological IPV victimization is particularly detrimental to women's overall well-being (e.g., Blasco-Ros, Sanchez-Lorente, & Martinez, 2010). On the other hand, this result contradicts the research literature that asserts that women are more negatively impacted by PTS symptoms than men (e.g., Ditlevsen & Elklit, 2010). Since there was no statistically significant difference between the means of PTS symptoms for men and women, this gender difference is likely *not* to be due to simple differences in amount or severity of PTS symptoms between women and men, but is possibly a result of a different interpretation of and threshold for such symptoms by men and women.

It is possible that, in relation to satisfaction in one's intimate relationship, men may be more negatively affected by PTS symptoms than women. There are several reasons for this possibility. First, men reported low incidences of unwanted sexual contact (5.1-8.9%), especially when compared with the incidences of robbery and injury (40%- 50%) (see Table 1); however, all of the unwanted sexual contact items correlated significantly with PTS symptoms for both men and women (see Table 2). Although the history of sexually traumatic events was not included in the analyses, if the participants experienced PTS symptoms as a result of sexual victimization, their experience was still captured by the measure of PCL, although it is not possible to tell which experiences may or may not be related to participants' PTS symptoms. Considering the lack of research, information, and services about men's sexual trauma (Monson et al., 2009), it is possible that it is more difficult for men to cope with PTS symptoms related to sexual rather than

physical or psychological trauma. The lack of services and information may lead to a silencing of men who have experienced interpersonal and especially sexual trauma and suffer from PTS symptoms as a result. Therefore, when compared to women, these men may not have had exposure to either other men's trauma narratives or common discourses (i.e., a discourse of being a sexual trauma "survivor" rather than "victim") that help shape their understanding of their trauma and/or PTS symptoms (e.g., Naples, 2003). Finally, men's expression of anger and hostility tends to be more socially sanctioned than women's (e.g., Fischer & Evers, 2009). If both men and women in this sample are experiencing PTS symptoms of hyperarousal and defensive anger, men may be more likely to express these symptoms, which then have a negative impact on the interactions with their partner and, thus, on men's own relationship satisfaction. Finally, the unique developmental period in family history (child's first birthday) may exert a unique influence on men's PTS symptoms. For instance, in light of their own traumatic experiences, fathers may be feeling particularly overprotective of their children as many infants at this time transition to day care.

***Men's and Women's IPV Perpetration and PTS Symptoms in Relation to Their Partner's Relationship Satisfaction.*** The analyses that tested the relationship between each participant's IPV perpetration and their *partner's* relationship satisfaction produced results that were quite different from the results regarding the relationship between IPV victimization, one's own PTS symptoms, and relationship satisfaction. While men's own PTS symptoms predicted their own relationship satisfaction, neither men's nor women's PTS symptoms predicted their *partner's* relationship satisfaction when controlling for perpetration of psychological IPV and depression. Psychological IPV perpetration was

the only significant multivariate predictor of partner's relationship satisfaction. One possible explanation is that the men were affected by the distress associated with their own PTS symptoms in ways that impacted their own satisfaction with the relationship. For instance, if they were experiencing symptoms associated with hyperarousal, anxiety and/or re-experiencing of the event(s), this may have blocked their ability to enjoy or appreciate their relationship with their partner. Since men's PTS symptoms did not impact their partner's relationship satisfaction, it is likely that PTS symptoms had an impact on men's own satisfaction via men's mental health and/or internal states rather than via relational processes, such as communication or intimacy. However, this explanation was not investigated in this study. Further research needs to examine how various features of PTSD (e.g., hyperarousal, avoidance, irritability) impact both individual and couple-related aspects of functioning.

The difference between results related to self vs. partner's relationship satisfaction has important implications for intervention and prevention efforts. If the focus of the intervention, whether therapy, counselling, or parenthood classes, is on the *individual's* adjustment and ability to cope with stressors in parenthood, then these results suggest that discussing how to cope with PTS symptoms, IPV, and alcohol misuse in the context of preserving one's relationship bond would be an important topic. Although PTS symptoms and harmful drinking were not significant in multivariate analyses done for women, this does not mean that it is not important to discuss these topics in an intervention. Rather, it means that practitioners have to take PTS symptoms and harmful drinking into account while working with new mothers, but pay particular attention to possible IPV in the relationship and how the mother may be coping with it.

### **Interaction Effects between PTS Symptoms, Harmful Drinking, and IPV**

With regards to the possible interaction effects between PTS symptoms, psychological IPV victimization, and harmful drinking, the analyses indicated another significant gender difference. For women, none of the interaction terms were significant while controlling for psychological IPV victimization, but the interaction between PTS symptoms and harmful drinking trended towards significance. These results suggest that, although psychological IPV victimization appears to be a particularly strong predictor of women's relationship dissatisfaction, PTS symptoms and harmful drinking (as illustrated by bivariate correlations and the trending interaction term) may still exert an effect on women's relationship satisfaction. When the trending interaction was represented graphically, the graph illustrated that if either PTS symptoms or harmful drinking was high, the women's relationship satisfaction was lowered. In the context of prevention and intervention, the combination of PTS symptoms and harmful drinking (which may indicate that women with PTS symptoms may be using alcohol to self-medicate their anxiety symptoms) appears to be an important aspect of functioning to consider in new mothers, even if there is psychological violence present in the relationship. However, the present study's results are limited by the fact that none of the women in the study scored in the problematic drinking range on the measure of harmful drinking.

For men, on the other hand, PTS symptoms interacted with harmful drinking to predict their own relationship satisfaction, which is a new finding. Likewise, the interaction between harmful drinking and psychological IPV victimization also predicted men's relationship satisfaction, which supports previous research (e.g., Leadley, Clark, & Caetano, 1999). The results pertaining to both of these interactions indicated that the combinations of PTS symptoms and harmful drinking or psychological IPV victimization

and harmful drinking were most injurious to men's satisfaction with their intimate relationship. Each interaction term was significant while the other term was controlled for, suggesting that these two combinations of risk factors represent two unique vulnerabilities to relationship discord. Specifically, these results suggest that men's relationship satisfaction is susceptible to negative effects of PTS symptoms (if the men are also misusing alcohol) even *after* accounting for psychological aggression victimization. There are several reasons why the link between PTS symptoms and alcohol misuse can be particularly detrimental to one's mental health and intimate relationship. For example, individuals with PTS symptoms are at particular risk for alcohol misuse because one or two alcoholic drinks can actually decrease the anxiety-related PTS symptoms (e.g., Najavits, 2007; Savage et al., 2007). If the person experiences this relief and believes that it is due to the alcohol, then they are likely to keep drinking. However, having two or more drinks has been associated with an *increase* of PTS symptoms, such as flashbacks and feelings of guilt (e.g., Najavits, 2007; Savage et al., 2007). However, the person may not realize the complexity of the relationship between the amount of alcohol consumed and PTSD symptoms, and continue to use alcohol to cope with PTSD, thus creating a dependency on a substance that can actually exacerbate their mental health symptoms. When considering prevention and intervention efforts with new fathers, it may be particularly important to pay attention to how they may be coping with prior experiences of trauma and/or symptoms of PTS, in order to help them develop and maintain healthy coping strategies while preventing alcohol misuse.

Finally, harmful drinking appears to be the "common denominator" that increases the couples' vulnerability in other areas (aggression and PTS symptoms). The results

suggest that if there is aggression in the relationship or one partner experiences PTS symptoms *and* one of the partners is misusing alcohol, the couple is more likely to experience relationship discord.

### **PTS Symptoms and Harmful Drinking as Potential Moderators**

The moderation analyses that tested each participant's PTS symptoms as a potential moderator of the relationship between 1) psychological IPV victimization and one's own relationship satisfaction; and 2) psychological IPV perpetration and the relationship satisfaction of one's partner were not significant. This suggests that, in this sample, PTS symptoms were related to IPV and relationship satisfaction (as illustrated by results of bivariate correlations), but PTS symptoms were not necessarily moderating the levels of psychological aggression. Although the results are not statistically significant, they are important to note, as they represent, to the researchers' knowledge, the first analyses of their kind conducted with couples during the first year of parenthood.

Moreover, post-hoc moderation analysis revealed that, for men, their own harmful drinking was a significant moderator of the relationship between psychological IPV perpetration and their partner's relationship satisfaction, such that higher harmful drinking was associated with higher IPV perpetration and lower relationship satisfaction. Although earlier research has illustrated that relationship discord can moderate the relationship between IPV and harmful drinking (Testa et al., 2003) or has established a correlational relationship between IPV, harmful drinking, and relationship problems (e.g., Fonseca et al. 2006), fewer studies have illustrated the moderating effect of alcohol misuse on the association between IPV and relationship satisfaction.

### **Strengths and Limitations**

This study's focus on the first year of parenthood is a particular strength, as most of the research conducted with couples does not include couples who have young children or does not focus exclusively on couples who are new parents. Additionally, this study is based on a medium-sized community sample, which increases the likelihood that its results can apply to the general population. Further, this study examined reports from both partners, which enhances the validity of the data as it minimizes the issue of underreporting. Finally, examining both IPV victimization and perpetration, as well as participant's own relationship satisfaction and their partner's relationship satisfaction, is a strength because it allows for a detailed analysis of the relationships between the outcome of relationship adjustment and the risk factors of PTS symptoms, substance misuse, and IPV.

Nonetheless, this study also contains a number of limitations. For example, the cross sectional design of this study does not permit the researcher to analyse how relationship satisfaction may be affected over time. However, the next wave of data for the Partners to Parents project is currently being collected, so there are possibilities of replicating these analyses with longitudinal data in the future. Second, the study's focus on the first year of parenthood may have affected the psychometric properties of some of the measures, most notably AUDIT for women, the measure of harmful drinking. Possibly due to breastfeeding, the item that asked about how frequently one drinks alcohol showed poor reliability for women and had to be excluded from analyses. Again, if the data had been collected over multiple time points, the reason for the poor reliability of this item may have been more apparent. Another limitation is that this study was not able to measure sexual intimate partner aggression or history of sexual trauma due to the

low reliability of the measures, which may have impacted the fact that history of trauma was not significantly related to most variables in the analyses. There were also a number of limitations associated with the trauma-related measures used in this study. For instance, there was no way to determine which event(s) the participants referred to when they filled out the PCL, which precludes conclusions about what type of traumatic events are more likely to be associated with PTS symptoms or relationship discord.

Additionally, the PCL was the only measure of PTS symptoms, thus limiting the study's conclusions about clinical levels of PTS symptoms or presence of PTSD diagnosis. A multi-method (i.e., scale, interview) approach to measuring PTSD would have strengthened this work, but such an approach was not possible since PTSD was not a key focus of the larger Partners to Parents study. Considering these limitations, the results may not generalize to persons experiencing severe PTS symptoms or complex PTSD.

Further, the correlational design of this study precludes conclusions about causation and thus cannot provide a firm explanation as to why men's relationship satisfaction was more impacted by PTS symptoms when compared with women. Qualitative methods, such as participant observation and semi-structured interviews may have contributed important information about how men and women understand and interpret their PTS symptoms; how they cope with such symptoms; and how such symptoms may or may not affect their relationship. Finally, this study focused on heterosexual couples only due to the fact that only two same-gender couples were interested in participating in the research. However, this study did not attempt to target non-heterosexual couples. Since non-heterosexual research participants may be more vulnerable and more difficult to reach through conventional advertising methods (Balsam

& Szymanski, 2005), future research needs to make a more concerted effort to include non-heterosexual couples in research.

### **Directions for Future Research**

In conclusion, this study opens many new avenues for future research, besides simply the possibility of replicating the current study with longitudinal data. For instance, harmful drinking moderated the relationship between psychological IPV and relationship satisfaction for men. Since this study did not contain a hypothesis about such a relationship, these results will be investigated in the future. Other future research with new parents is needed in order to replicate the results reported here. Further, studies that examine sexual aggression in intimate relationships and history of other traumatic events are needed, as sexual trauma and aggression are phenomenologically different from psychological or physical traumas and aggression (even though various forms of aggression often co-occur), yet reliable measures of sexual trauma and sexual aggression in intimate relationships are few. Longitudinal research that combines both quantitative and qualitative methodology would be best suited to explaining the complex dynamics between partners' substance misuse, IPV, PTSD, and relationship satisfaction. A particularly important finding of this study is that the relationship satisfaction of men and women in the same couple is affected by different, albeit related, risk factors. While psychological IPV victimization appears to be most strongly associated with women's relationship dissatisfaction, this does not mean that women's relational functioning is not affected by harmful drinking and PTS symptoms. Rather, the PTS symptoms appear to exert less of an effect on relationship satisfaction in the presence of psychological aggression in the relationship. Since all of the women in the sample were new mothers (1

year post partum), it is also likely that due to very low rates of drinking impacted the effect of harmful drinking in the analyses. On the other hand, the relationship satisfaction of the new fathers in this sample was equally affected by a number of risk factors, including psychological IPV victimization, harmful drinking, and PTS symptoms. The results strongly suggest that practitioners working with couples during the transition to parenthood need to adopt a gender-sensitive, yet comprehensive approach. Part of this approach would be to explore what risk factors are present in the relationship and how they are affecting each partner. Most importantly, it is imperative not to assume that partners of either gender will or will not have symptoms of PTS, or that partners of either gender will be more or less affected by PTS symptoms.

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**Appendix A**  
**Conflict Tactics Scale Revised (CTS-R)**  
(Straus, Hamby, Boney-McCoy, & Sugarman, 1996)

CTS-R is a copyrighted instrument. Examples of questions from various subscales follow.

*Physical Aggression Scale:*

Has your partner thrown something at you that could hurt?  
Have you thrown something at your partner that could hurt?  
Have you pushed or shoved your partner?

*Psychological Aggression Scale:*

Have you insulted or sworn at your partner?  
Has your partner insulted or sworn at you?  
Has your partner called you fat or ugly?

**Appendix B**  
**Alcohol Use Disorders Identification Test (AUDIT)**  
(Saunders, Aasland, Babor, de la Fuente, & Grant, 1993)

1. How often do you have a drink containing alcohol?
2. How many drinks containing alcohol do you have on a typical day when you are drinking?
3. How often do you have six or more drinks on one occasion?
4. How often during the last year have you found that you were not able to stop drinking once you had started?
5. How often during the last year have you failed to do what was normally expected from you because of drinking?
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
7. How often during the last year have you had a feeling of guilt or remorse after drinking?
8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?
9. Have you or someone else been injured as a result of your drinking?
10. Has a relative or friend, or a doctor or other health worker been concerned about your drinking or suggested you cut down?

**Appendix C**  
**Drug Abuse Screening Test (DAST)**  
(Skinner, 1982)

1. Have you used drugs other than those required for medical reasons?
2. Do you use more than one drug at a time?
3. Are you unable to stop using drugs when you want to?
4. Have you ever had blackouts or flashbacks as a result of drug use?
5. Do you ever feel bad or guilty about your drug use?
6. Does your partner (or parents) ever complain about your involvement with drugs?
7. Have you neglected your family because of your use of drugs?
8. Have you engaged in illegal activities in order to obtain drugs?
9. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?
10. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding)?

**Appendix D**  
**Dyadic Adjustment Scale (DAS)**  
 (Spanier, 1976)

**Instructions:** Most people have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list, by circling the appropriate number.

1. Handling finances
2. Matters of recreation
3. Religious matters
4. Demonstrations of affection
5. Friends
6. Sexual relations
7. Conventionality (correct or proper behavior)
8. Philosophy of life
9. Ways of dealing with parents
10. Aims, goals, and things believed important
11. Amount of time spent together
12. Making major decisions
13. Household tasks
14. Leisure time interests and activities
15. Career decisions
16. How often have you discussed or have you considered terminating your relationship?
17. How often do you or your partner leave each other after a fight?
18. In general, how often do you think that things between you and your partner are going well?
19. Do you confide in your partner?
20. Do you ever regret that you are together?
21. How often do you and your partner quarrel?
22. How often do you and your partner "get on each other's nerves"?
23. Do you kiss your partner?
24. Do you and your partner engage in outside activities together?

How often would you say the following events occur between you and your partner?

25. Have a stimulating exchange of ideas
26. Laugh together
27. Calmly discuss something
28. Work together on a project

These are some of the things about which couples sometimes agree and sometimes disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks:

29. Being too tired for sex  
30. Not showing love

31. The numbers on the line represent different degrees of happiness in your relationship. The middle point, "happy", represents the degree of happiness of most relationships. Please **circle the one number** that best describes the degree of happiness, all things considered, of your relationship.

0      1                      2                      3                      4                      5                      6

---

Extremely Unhappy                      Happy                      Perfectly Happy

32. Which of the following statements best describes how you feel about the future of your relationship? (Check only **one** box)

- I want desperately for my relationship to succeed, and would go to almost any length to see it does.
- I want very much for my relationship to succeed, and will do all I can to see that it does.
- I want very much for my relationship to succeed, and will do my fair share to see that it does.
- It would be very nice for my relationship to succeed, but I can't do much more than I am doing now to help it succeed.
- It would be nice if it succeeded, but I refuse to do any more than I am doing now to keep the relationship going.
- My relationship can never succeed, and there is no more that I can do to keep the relationship going.

**Appendix E**  
**PTSD Checklist (PCL)**

(Blanchard, Jones-Alexander, Buckley, & Forneris, 1996)

1. Repeated, disturbing memories, thoughts, or images of a stressful experience from the past?
2. Repeated, disturbing dreams of a stressful experience from the past?
3. Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)?
4. Feeling very upset when something reminded you of a stressful experience from the past?
5. Having physical reactions (e.g., heart pounding, trouble breathing, sweating) when something reminded you of a stressful experience from the past?
6. Avoiding thinking about or talking about a stressful experience from the past or avoiding having feelings related to it?
7. Avoiding activities or situations because they reminded you of a stressful experience from the past?
8. Trouble remembering important parts of a stressful experience from the past?
9. Loss of interest in activities that you used to enjoy?
10. Feeling distant or cut off from other people?
11. Feeling emotionally numb or being unable to have loving feelings for those close to you?
12. Feeling as if your future will somehow be cut short?
13. Trouble falling or staying asleep?
14. Feeling irritable or having angry outbursts?
15. Having difficulty concentrating?
16. Being "super-alert" or watchful or on guard?
17. Feeling jumpy or easily startled?

**Appendix F**  
**Trauma History Questionnaire (THQ)**  
(Green, 1996)

1. Has anyone ever tried to take something directly from you by using force or the threat of force, such as a stick-up or mugging?
2. Has anyone ever attempted to rob you or actually robbed you (i.e. stolen your personal belongings)?
3. Has anyone ever attempted to or succeeded in breaking into your home when you weren't there?
4. Has anyone ever tried to or succeeded in breaking into your home while you were there?
5. Have you ever had a serious accident at work, in a car or somewhere else?
6. Have you ever experienced a "man-made" disaster such as a train crash, building collapse, bank robbery, fire, etc., where you felt you or your loved ones were in danger of death or injury?
7. Have you ever been in any other situation in which you were seriously injured?
8. Have you ever been in any other situation in which you feared you might be killed or seriously injured?
9. Have you ever seen someone seriously injured or killed?
10. Have you ever seen dead bodies (other than at a funeral) or had to handle dead bodies for any reason?
11. Have you ever had a close friend or family member murdered, or killed by a drunk driver?
12. Have you ever had a spouse, romantic partner, or child die?
13. Have you ever had a serious or life-threatening illness?
14. Has anyone ever made you have intercourse, oral or anal sex against your will?
15. Has anyone ever touched private parts of your body, or made you touch theirs, under force or threat?
16. Other than incidents mentioned in Questions 12 and 13, have there been any other situations in which another person tried to force you to have unwanted sexual contact?
17. Has anyone, including family members or friends, ever attacked you with a gun, knife or some other weapon?
18. Has anyone, including family members or friends, ever attacked you without a weapon and seriously injured you?
19. Has anyone in your family ever beaten, "spanked" or pushed you hard enough to cause injury?
20. Have you experienced any other extraordinarily stressful situation or event that is not covered above?

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thesis/dissertation/project (Work) under the title of:  
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Associations between Intimate Partner Violence, PTS Symptoms, and Substance Misuse.  
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