Posttraumatic Stress Disorder in Survivors of Intimate Partner Violence

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by
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Kimberley Gayle Zorn, candidate for the degree of Master of Arts in Clinical Psychology, has presented a thesis titled, *Posttraumatic Stress Disorder in Survivors of Intimate Partner Violence*, in an oral examination held on June 26, 2013. The following committee members have found the thesis acceptable in form and content, and that the candidate demonstrated satisfactory knowledge of the subject material.

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Abstract

Previous research has found a relationship between intimate partner violence (IPV) and the development of posttraumatic stress disorder (PTSD; e.g. Basile, Arias, Desai, & Thompson, 2004). The purpose of the current study was to investigate PTSD in a diverse sample of Saskatchewan women who have experienced IPV. This study utilized the Composite Abuse Scale in order to examine whether or not severe combined, emotional, physical, or harassment abuse predict the development of PTSD. The Composite Abuse Scale allowed us to investigate combined forms of abuse, which included sexual violence as well as severe physical violence by an intimate partner. This study added to previous findings by accounting for experiences of abuse in childhood as well as potential moderating variables as measured by demographic characteristics. The current study was a sub-study of a larger research project called “The Healing Journey: A Longitudinal Study of Women Affected by Intimate Partner Violence”. The results suggest that all forms of IPV were significantly correlated with PTSD; however, once entered into the multiple regression only severe combined forms of abuse proved to be a significant predictor for PTSD. Further, emotional abuse in childhood and level of education were found to be significant predictors of PTSD alongside severe combined forms of abuse. Scientific and clinical implications are presented as well as directions for future research.
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Dedication

I would like to dedicate this thesis to all the women brave enough to come forward and share their experiences with intimate partner violence for the purposes of the Healing Journey project. It is because of their courage and strength that we are able to conduct research in the area of intimate partner abuse. I would also like to dedicate this thesis to my parents, Hal and Gail Zorn, who provided unconditional support and encouragement throughout this process. Lastly, I would like to dedicate this thesis to my siblings, my partner, Ryan Sawka, and my friends for their love and guidance throughout this journey.
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1.0 INTRODUCTION

In the past decade, research on the long term physical and mental health consequences associated with intimate partner violence (IPV) has been expanding. Various researchers have investigated the relationship between posttraumatic stress disorder (PTSD) and IPV. More specifically, researchers have found that physical, sexual, psychological, and stalking victimization by an intimate partner are all associated with increased PTSD symptoms (Basile, Arias, Desai, & Thompson, 2004). Further, Pico-Alfonso (2005) reported a positive correlation between the severity of IPV experienced and the magnitude of PTSD symptoms. Although these studies provide evidence for the relationship between various forms of IPV and PTSD symptomatology, there is still a need for future research in this area. Specifically, future research needs to examine the effects of sexual violence and severe combined forms of abuse when assessing PTSD. According to Dutton (2009), future research should also examine covariates of IPV and PTSD (i.e. childhood trauma) as well as various intervening variables (i.e. working status). Although previous research has been conducted in this area, to date no research has investigated a diverse Saskatchewan sample of women within a Canadian framework. The current study will fill gaps in the research by examining PTSD within a community based sample of women who have experienced IPV.

1.1 IPV definition and prevalence

For the purposes of this study, IPV will be defined as violent behaviour that causes physical, psychological, or sexual harm between persons in an intimate relationship (Statistics Canada, 2009a). Intimate partner will be defined as a current or
A former spouse, cohabitating partner, or sexually intimate partner (Coker, Smith, Bethea, King, & McKeown, 2000).

According to Heise, Ellsberg, and Gottmoeller (2002), IPV is one of the most pervasive forms of gender-based violence around the world. Researchers have reported lifetime prevalence rates of IPV to be anywhere between 10% (Heise et al., 2002) and 54% (Bonomi et al., 2006; Coker et al., 2000) within North America. These prevalence rates are subject to change depending on the definition and the research methods used to determine prevalence. Within Canada, spousal violence accounts for approximately 12% of all police-reported violent crime (Statistics Canada, 2009b). In Canada, women account for up to 83% of victims of IPV and are four times more likely to be killed by a current or former spouse than men (Statistics Canada, 2009b). Prevalence rates within Canada may be inaccurate because up to 78% of instances of spousal violence and abuse go unreported (Statistics Canada, 2009b). Statistics Canada (2008) found that rates of spousal violence were highest in Saskatchewan (329 per 100,000 population) when compared with other provinces. Aboriginal women within Canada, and specifically within Saskatchewan, are at an even greater risk of experiencing IPV. The Canadian Centre for Justice Statistics (2006) found that 21% of Aboriginal women have reported experiencing physical or sexual forms of IPV compared to 6% of non-Aboriginal women. In other words, Aboriginal spousal violence is over three times greater than that for non-Aboriginal people.

1.2 IPV and health

Research has shown that IPV is highly correlated with physical and mental health problems (Campbell, 2002; Coker et al., 2002; Pico-Alfonso, 2005). For instance, a
study by Bonomi and colleagues (2006) investigated the relationship between women’s health and IPV exposure in a sample of 3429 women ranging from 18 to 64 years of age. Findings from this study indicated that women who were exposed to IPV reported significantly worse health outcomes compared to a sample of women with no history of abuse. Results also suggest that women exposed to abuse for longer durations of time experienced the worst health outcomes when compared to the control group of women who had never experienced IPV. Further, women who reported recent incidents of IPV, such as abuse occurring within the last 5 years, were at higher risk of negative health outcomes (Bonomi et al., 2006).

Various other researchers have found similar results. For instance, Lown and Vega (2001) found that both physical and sexual forms of IPV are correlated with negative health outcomes. Likewise, Ellsberg, Jansen, Heise, Watts and Garcia-Moreno (2008) conducted a multi-country study on behalf of the World Health Organization where they examined the impact of IPV on women’s health throughout various parts of the world. This large scale study found that women who experienced abuse by an intimate partner were more likely to report that their health was poor or very poor (Ellsberg et al., 2008). The above findings illustrate the relationship between experiencing IPV and the subsequent development of negative health consequences. These physical and mental health consequences have been shown to last long after the abuse has ended (Campbell, 2002; Pico-Alfonso, 2005).

Physical health consequences of IPV can range from chronic pain, broken bones, arthritis, seizures, and frequent headaches (Campbell, 2002; Coker et al., 2002). Long-term physical health consequences may also include stomach ulcers, indigestion,
hypertension and various gastrointestinal symptoms such as loss of appetite (Campbell, 2002; Coker et al., 2000). Studies have found that prolonged health consequences of IPV, such as gastrointestinal symptoms, are associated with chronic fear and prolonged stress experienced by women within an abusive relationship (Campbell, 2002; Campbell et al., 2002). The above health consequences of IPV put women at greater risk of seeking care within an emergency room, and at greater risk of mortality (Campbell, 2002). According to Statistics Canada (2009a), women were nearly four times more likely to be killed by an intimate partner than men in 2007. Campbell (2002) adds to this finding stating, “40% to 60% of murders of women in North America are done by intimate partners” (p. 1331).

There have been numerous studies conducted on the mental health consequences of IPV. Ruiz-Perez and Plazaola-Castano (2005) found that women who have experienced IPV were more likely to report mental health issues when compared to a sample of women with no history of IPV. Researchers have reported that PTSD, depression, anxiety, eating disorders, insomnia, and substance abuse are all mental health issues that have been associated with IPV (Coker et al., 2000; Pico-Alfonso, 2005). Further, research suggests that depression and PTSD “…are the most prevalent mental-health sequelae of intimate partner violence” (Campbell, 2002, p. 1333). Coker and colleagues (2000) conducted a cross-sectional study of 1152 women recruited from various family practice clinics. Results corroborated previous findings that women who have experienced abuse are at increased risk of reporting mental health concerns.

1.3 Posttraumatic stress disorder
PTSD is an anxiety disorder characterized by the development of symptoms following exposure to an extreme traumatic event (APA, 2000). According to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR), there are six main criteria that need to be met for a diagnosis of PTSD: (a) The person has been exposed to a traumatic event in which the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others and the person’s response involved intense fear, helplessness, or horror; (b) The traumatic event is persistently re-experienced in one or more ways (e.g. recurrent and intrusive distressing recollections of the event, recurrent distressing dreams of the event); (c) Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma) in three or more ways (e.g. efforts to avoid thoughts, feelings, or conversations associated with the trauma, restricted range of affect, sense of foreshortened future); (d) Persistent symptoms of increased arousal (not present before the trauma) in two or more ways (e.g. difficulty falling or staying asleep, irritability or outbursts of anger, difficulty concentrating); (e) The duration of the disturbance (symptoms in Criteria B, C, and D) is longer than one month; (f) The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning. According to the DSM-IV-TR, “severity, duration, and proximity of an individual’s exposure to the traumatic event” are the most important factors affecting the likelihood of developing this disorder (APA, 2000, p. 466).

### 1.4 IPV and PTSD
As stated previously, PTSD has been shown to be one of the most prevalent mental health disorders associated with IPV (Golding, 1999). According to Woods (2000), women who experienced IPV are subject to both chronic threats and injuries as a result of ongoing violence as well as acute episodes of trauma through physical, psychological and sexual forms of abuse. Goldberg and colleagues (1990) also noted that PTSD is an appropriate response to abnormally high levels of trauma and stress. In other words, women who are displaying symptoms of PTSD following experiences of IPV should not be viewed as having a prior mental health condition; rather, these women are having a normal response to situations involving intense fear and threat (Goldberg et al., 2000).

A number of studies have found that women who have experienced IPV are at increased risk of developing PTSD compared to women who have never experienced abuse (Coker et al., 2005; Fedovskiy, Higgins, & Paranjape, 2008; Kemp, Green, Hovanitz, & Rawlings, 1995; O’Campo et al., 2006). In a meta-analysis conducted by Golding (1999) it was found that prevalence rates of PTSD ranged from 31% to 84% for women who have experienced IPV. These rates are higher than the estimated lifetime prevalence of 8% within the general population (APA, 2000) and 26% among women who have been the victim of a crime (Dutton, 2009).

A study by Woods and colleagues (2008) investigated the relationship between IPV, PTSD and physical health problems within a diverse sample of women who were seeking services from domestic violence agencies. Results suggest that all types of IPV (physical, emotional, sexual, threats of violence, and risk of homicide) were positively correlated with experiencing PTSD as well as a wide range of negative health
consequences (e.g. chronic pain, cardiovascular, respiratory, gastrointestinal, musculoskeletal) (Woods et al., 2008). Avoidance symptoms of PTSD were most predictive of developing severe physical health problems among women experiencing abuse. This research showcases the unique effects of IPV on both physical and mental health; specifically, the inherent physical health risks for women who are experiencing concurrent abuse and PTSD.

Numerous other studies have also examined the relationship between various forms of IPV and PTSD when examining the long-term mental health consequences of abuse. For instance, Basile et al. (2004) found that physical, sexual, psychological, and stalking victimization by an intimate partner were all associated with increased PTSD symptoms. Likewise, a study by Pico-Alfonso (2005) looked into the possible relationship between PTSD and various forms of IPV. This study found that women who experienced IPV had significantly higher rates of PTSD than women who had never been involved in an abusive relationship. A study by Jones, Hughs, and Unterstaller (2001) found that women who are currently seeking refuge in shelters are at a higher risk of developing PTSD symptomatology. The authors concluded that women residing in shelters may be at increased risk of mental health sequel because of limited social support networks and potentially lower incomes; further, these women are likely in a state of crisis at the time they seek out a safe space from their abusive partner (Jones et al., 2001).

Research suggests an association between violence severity and the risk for developing PTSD. Jones and colleagues (2001) found that both extent and severity of IPV experienced is related to the likelihood of developing PTSD. Specifically, it was
found that more severe forms of violence, whether it be sexual, physical, or psychological abuse, exacerbated PTSD symptoms (Jones et al., 2001). It was also noted that the more life threatening the abuse is perceived to be, the more likely that a woman will experience post traumatic symptoms. Sullivan, Cavanaugh, Buckner, and Edmondson (2009) corroborated these findings stating that frequency of physical, sexual, and psychological IPV were positively associated with greater PTSD. Further, Kemp and colleagues (1995) reported that women who had experienced IPV and had a diagnosis of PTSD were likely to report higher incidents of physical abuse, verbal abuse, injury, and forced sex when compared to women who had experienced abuse but were not found to have PTSD. In 2005, Pico-Alfonso also reported a positive correlation between the severity of IPV experienced and the magnitude of PTSD symptoms. Finally, Dutton and colleagues (2006) reported that greater severity and frequency of abuse is related to the development of PTSD. From our findings, there was only one study reporting no relationship between severity and frequency of violence experienced and PTSD (Humphreys, Lee, Neylan, & Marmar, 2001). In other words, the above studies provide extensive evidence for the notion that both severity and frequency of IPV, regardless of the type of abuse, may result in a greater chance of developing both PTSD as well as other mental health disorders.

The above studies indicate the relationship between all forms of IPV and the development of PTSD. Although this research suggests concrete findings about the relationship between IPV and PTSD, there are still gaps in the research that need to be addressed. Dutton (2009) argues that continued research in the area of PTSD and IPV is imperative for a number of reasons; specifically, interventions for PTSD have been
proven to be effective in reducing a variety of negative health outcomes for women survivors of IPV. In emphasizing the need for further research in this area, Dutton (2009) advocates for future studies to address covariates with a direct relationship to both IPV and PTSD (i.e. childhood trauma exposure), the effects of intervening variables (i.e. working status), and the need for longitudinal models to investigate PTSD within this population.

1.5  **Physical IPV and PTSD**

Various studies have found a positive correlation between severity of physical abuse and PTSD. For instance, Housekamp and Foy (1991) found that both extent and severity of exposure to physical violence within an intimate relationship were significantly associated with severity of PTSD symptoms. Likewise, Kemp, Rawlings and Green (1991) reported that degree of physical violence and frequency of violent episodes were positively correlated with PTSD. In addition, these authors found an interesting relationship between subjective level of distress and the development of PTSD. Specifically, it was found that perceptions of a physically violent episode may play an important role in the development of negative health consequences for women (Kemp et al., 1991). In fact, it was reported that subjective level of distress, otherwise known as individual perception of the violence, was the strongest predictor of PTSD even when accounting for length of time and extent of the abuse experienced (Kemp et al., 1991). In other words, this study adds to the literature by suggesting that there is a strong psychological component associated with physical violence. This psychological component, or the way in which women perceive the violence, may have significant impacts on a woman’s mental health.
Babcock, Roseman, Green and Ross (2008) investigated the relationship between various forms of IPV and PTSD. Results showed that psychological abuse and physical abuse were positively correlated with PTSD symptoms; however, when entered into the regression equation, only physical abuse proved to be a significant predictor of PTSD (Babcock et al., 2008). Authors argue that these findings do not suggest that psychological abuse is not harmful for women; rather, that there are simultaneous effects of physical and psychological abuse and that these constructs are extremely hard to separate. In addition, it was reported that psychological abuse was most harmful for women with low social supports suggesting a need for implementation of further community supports in order to alleviate the long-term effects of abuse (Babcock et al., 2008). Kemp and colleagues (1995) found similar results suggesting that PTSD was significantly higher for women who were physically abused when compared to women who had experienced only verbal abuse. These studies suggest that physical abuse plays a significant role in the development of PTSD.

Woods (2000) found that women who reported experiencing higher levels of physical IPV also had higher levels of PTSD symptomatology. Further, results showed that higher risk of homicide within an abusive relationship was associated with greater PTSD symptoms (Woods, 2000). This study adds to previous findings because it included an analysis of women who had been out of the abusive relationship for at least 2 years. Woods (2000) refers to this group of women as ‘post-abused’ and states that many women were out of the relationship for much longer than the minimum 2 year period. Results showed that 44-66% of post-abused women were still experiencing various PTSD symptoms including both intrusive memories and avoidance. This study
suggests that women who have experienced physical IPV are at high risk of PTSD long after the abuse has subsided. The above studies provide evidence for the relationship between physical IPV and PTSD. This research also suggests that severe forms of physical abuse may be more predictive of PTSD.

1.6 Psychological IPV and PTSD

Research on the relationship between psychological violence and mental health has increased substantially over the last decade. Psychological abuse most often includes threats to both physical and psychological health, threats to physical freedom, isolation from family and social supports, and numerous attempts to both degrade and/or humiliate the victim (Follingstad & DeHart, 2000; Pico-Alfonso, 2005). Social isolation is an important aspect of psychological abuse as it allows the abuser to induce further control and power over the woman while making her totally dependent on the abuser for social interaction, financial resources, and various other forms of information (Baldry, 2003). Kaysen and colleagues (2003) discuss the concept of chronic traumatization whereby the abusive environment “…contains an implied risk of danger even when there is no actual traumatic incident occurring” (p. 48). In other words, women in an abusive relationship are in a constant state of fear and forced to monitor their environment for signs of danger or threat (Kaysen et al., 2003). This constant state of fear, threat, and danger puts women at greater risk of developing PTSD. Numerous researchers have investigated the effects of chronic psychological abuse on women’s mental and physical health. Research suggests that psychological IPV is just as detrimental to women’s mental health as physical forms of abuse (Coker et al., 2005).
As mentioned previously, studies have found a relationship between severity of physical violence and PTSD symptomatology (Dutton, 2006). Contrary to these studies, multiple researchers argue that psychological abuse is more detrimental and more predictive of PTSD than physical abuse by an intimate partner. For instance, Mechanic, Weaver, and Resick (2008) reported that psychological abuse and stalking by an intimate partner were the best predictors of PTSD even when accounting for physical abuse. Further, when psychological abuse and stalking were entered into the multivariate equation, physical abuse was no longer a significant predictor of PTSD. A study by Pico-Alfonso (2005) reported that psychological abuse was the strongest predictor of PTSD even when compared to physical and sexual forms of IPV. Further, degree of psychological abuse was the strongest predictor of fear even when compared to severity of physical violence. Results showed a significant association between physical and psychological violence suggesting once again that these forms of abuse are inherently intertwined and difficult to separate into distinct and unique constructs (Pico-Alfonso, 2005). Pico-Alfonso and colleagues (2006) found similar results within a later study reporting once again that psychological abuse was the only factor contributing to PTSD symptomatology when assessing both physical and psychological IPV.

Various other studies have found remarkably similar results to that of Pico-Alfonso (2005). Arias and Pape (1999) reported that frequency and severity of physical abuse were not significant predictors of PTSD; however, psychological abuse was a significant predictor of PTSD after controlling for physical violence. Likewise, Baldry (2003) reported that physical violence was no longer a significant contributor to various psychological symptoms after accounting for the effects of psychological abuse. Street
and Arias (2001) found that although physical and psychological abuse were both correlated with PTSD, only psychological abuse remained significant when entered into the multivariate equation. This study added to previous research by investigating two types of psychological abuse: emotional/verbal abuse included withholding emotional resources, verbal attacks, and behaviours that degrade women; domination/isolation abuse included rigid observance of traditional sex roles, demands for subservience, and isolation from resources (Street & Arias, 2001). Results suggest that when separated into these distinct constructs, only emotional and verbal abuse was predictive of PTSD (Street & Arias, 2001).

Sackett and Saunders (1999) analyzed four types of psychological abuse with women who were accessing services from a variety of domestic violence agencies. The four types of psychological abuse studied were: ridiculing traits, criticizing behaviour, ignoring, and jealous/controlling behaviour. They compared the four types of psychological abuse with physical abuse to see which form of IPV was most predictive of “fear” (Sackett & Saunders, 1999). Similar to previous findings, they found that women exposed to psychological abuse were more likely to be in a constant state of fear; specifically, ridiculing traits, criticizing behaviour, and jealousy/controlling behaviour had the strongest relationship to fear (Sackett & Saunders, 1999). Although not directly investigating PTSD, this study adds to the growing evidence that psychological abuse is highly correlated with symptoms of fear. Finally, a study by Dutton, Goodman and Bennett (1999) reported that psychological abuse explained more of the variance than physical abuse on measures of acute stress, depression, and PTSD. The above studies provide extensive evidence for the impact of psychological abuse on women’s mental
health. They also provide support for the notion that physical and psychological violence are inherently intertwined and difficult to separate into unique constructs. In other words, women who experience physical violence are likely experiencing concurrent forms of psychological abuse which ultimately contributes to the development of PTSD.

1.7 Harassment IPV and PTSD

In recent years, the definition of IPV has broadened to include harassment and stalking behaviour by a current or former partner; the inclusion of stalking is vital as it allows for an examination of the true conditions under which violence and abuse occur against women (Tjaden, 2004). Stalking is associated with extreme distress and has been linked with the most severe forms of IPV such as homicide or attempted homicide (Bennett Cattaneo, Cho, & Botuck, 2011; McFarlane, Campbell, & Watson, 2002). According to the Department of Justice Canada (2004), targets of stalking are likely to experience high levels of psychological and emotional distress caused, in part, by the prolonged fear and terror that accompanies these acts of harassment. Targets of stalking are likely to fear that the behaviour of the stalker will increase and that the nature of the conduct will become more violent; this fear is often accompanied by feelings of “losing control” over one’s life (Department of Justice Canada, 2004).

A limited number of studies have investigated the impact of stalking on women targets. This research has shown that intimate partner stalking puts women at a higher risk for various mental health disorders (Bennett Cattaneo et al., 2011). More specifically, Basile et al. (2004) found that stalking behaviour by an intimate partner was associated with an increased risk for developing post-traumatic stress disorder (PTSD).
Likewise, Kamphuis, Emmelkamp, and Bartak (2003), investigated the effects of stalking behaviours by former intimate partners. They found that post-intimate stalking is associated with increased feelings of fear, shame, and sense of loss for women targets. Further, they reported that stalking severity, duration, and levels of stalking violence were all predictive of post-traumatic symptoms (Kamphuis et al., 2003). Although they did not use a standardized measure of PTSD, these results showcase the potential link between harassment and post trauma symptomatology.

Mechanic, Uhlmansiek, Weaver and Resick (2000) investigated the effects of stalking by comparing two groups of women: the first group of women experienced high levels of IPV with relentless stalking behaviours by their intimate partner; the second group of women experienced high levels of IPV with infrequent levels of stalking by their intimate partner. Results showed that women who experienced relentless stalking also reported experiencing more severe forms of physical, sexual and emotional abuse; further, women who were relentlessly stalked had significantly higher rates of abuse, violence, and physical injuries when compared to women experiencing IPV with infrequent stalking behaviours (Mechanic et al., 2000). In addition, women who were relentlessly stalked had significantly higher rates of PTSD and depression compared to women reporting low intimate partner stalking. The above results showcase the severity of stalking behaviours within an abusive relationship. Authors argue that future assessment instruments for IPV need to include an aspect of stalking related behaviours (Mechanic et al., 2000). Findings suggest a need for future research to incorporate stalking behaviours in addition to psychological, physical, and sexual forms of abuse. Research on the impact of stalking behaviour by intimate partners is extremely scarce.
The few studies available have focused on stalking and harassment by former intimate partners; however, research on the impact of stalking and harassment behaviours by current intimate partners is relatively nonexistent. The current study will add to this literature by utilizing a composite measure of abuse that includes harassment and stalking behaviours along with psychological, physical, and combined forms of abuse.

1.8 Sexual IPV and PTSD

Sexual violence by an intimate partner has been studied less extensively when compared with physical and psychological forms of IPV. Bonomi, Anderson, Rivara and Thompson (2007) argue that sexual assault at the hands of an intimate partner increases the potential for women to experience various forms of physical, mental and social stress. Further, Bonomi and colleagues (2007) state, “In addition to physical symptoms, sexual violence may erode a woman’s sense of safety and trust in what should be a pleasurable intimate act between two partners” (p. 988). Likewise, Temple, Weston, Rodriguez and Marshall (2007) argue that sexual abuse by a partner “...represents a greater breach of trust and is associated with more shame and secrecy” leading to further psychological distress and risk for the development of more severe psychopathology (p. 287). According to these authors, sexual violence brings about additional breaches of trust and safety above and beyond that experienced by physical or psychological abuse alone. Various studies have investigated the impact of sexual IPV on women’s mental health. Further, numerous studies have assessed the relationship between sexual IPV and the development of PTSD.

A study by Garcia-Linares and colleagues (2005) provides support for the notion that we must assess various forms of violence when studying the impact of IPV on
women’s mental and physical health. These authors argue that “…women are not homogenous in their experience of battering…” and we must explore various types of violence on women’s health in order to adequately assess the consequences of IPV (Garcia-Linares et al., 2005, p. 100). Results from this study revealed that one third of women who reported experiencing physical abuse by an intimate partner had also experienced sexual forms of IPV. Results also indicated that severity of physical violence is likely to escalate for women who are also experiencing sexual IPV (Garcia-Linares et al., 2005). These results suggest that studying one form of violence, such as physical IPV, may not provide an accurate representation of women’s experiences. It is important for researchers to investigate different forms of violence, the severity of violence experienced, and combined forms of violence when investigating the impacts of IPV. Further, these results suggest that a combination of physical and sexual violence may put women at greater risk for experiencing more severe forms of IPV. Future studies should attempt to investigate the combination of these more severe forms of violence and their impact on women’s health.

Bonomi and colleagues (2007) investigated the health implications of both physical and sexual IPV. This study examined health outcomes of women who had experienced physical IPV only versus those women who had experienced sexual IPV only. Further, this study looked at health outcomes of women who had experienced a combination of both physical and sexual IPV. Results from this study revealed that women who were exposed to sexual violence by an intimate partner, either with or without physical IPV, reported significant negative health outcomes which continued long after the abuse had subsided (Bonomi et al., 2007). In addition, women who
reported any experiences with sexual IPV had higher rates of depression and were more likely to report either fair or poor health outcomes compared to those women who had experienced physical IPV (Bonomi et al., 2007). These results suggest that sexual IPV puts women at greater risk of negative health outcomes even when compared to women who have experienced physical forms of abuse.

A study by Krupnick et al. (2004) corroborated the above findings when they assessed multiple types of violence and their subsequent impact on women’s mental health. Results showed that sexual violence posed the greatest risk for developing psychopathology; specifically, lifetime prevalence of PTSD was highest in the sexual violence group when compared to those women who experienced a physical assault (Krupnick et al., 2004). Likewise, Martinez, Garcia-Linares and Pico-Alfonso (2004), reported that women who were both physically and sexually abused reported more experiences with mental health concerns as opposed to those women who had experienced only physical abuse. These findings suggest that sexual violence plays a critical role in the development of negative health outcomes.

A study by Temple and colleagues (2007) investigated the impact of victim-offender relationships and sexual violence. Specifically, they examined the effects of intimate partner and non-partner sexual violence on women’s mental health within a community sample of ethnically diverse women. Findings from this study suggest that sexual violence by an intimate partner may have more negative consequences on women’s mental health when compared to sexual violence by a non-intimate partner (Temple et al., 2007). Results also showed that sexual assault by a current partner was the strongest predictor of PTSD when compared to sexual assault by a previous partner.
or a non-intimate partner. These results suggest that sexual violence in an intimate relationship may be especially traumatic and have extreme consequences for women who are subjected to sexual forms of IPV. Temple et al. (2007) suggest that women experiencing sexual IPV are at increased risk of experiencing multiple incidents of sexual violence which may lead to greater risk of developing PTSD. In other words, women living within a violent relationship are in a constant state of terror wondering when the next violent incident will occur. This constant perception of threat, both with sexual violence and other forms of IPV, may increase the likelihood of women developing PTSD symptomatology. These findings are crucial as they provide evidence for the seriousness of sexual violence within an intimate relationship. This study emphasizes the traumatic nature of sexual IPV and the need for further research, services, and interventions to be tailored towards women who are experiencing these forms of violence.

A study by McFarlane et al. (2005) looked specifically at the mental health consequences of sexual IPV and found a positive relationship between PTSD and reported sexual assaults. These findings were significant even after controlling for severity of physical abuse. The authors concluded that greater frequency and severity of sexual violence puts women at higher risk of developing PTSD. Bennice, Resick, Mechanic, and Astin (2003) found similar results, reporting that sexual violence severity explained a large portion of the variance in PTSD after accounting for physical violence severity. These authors conclude that experiences with sexual violence by an intimate partner put women at greater risk of developing PTSD. In addition, Lipsky et al. (2005) reported that women who experienced more incidents of physical and sexual IPV were at
higher risk of developing PTSD. Likewise, Coker et al. (2005) reported that sexual assault by an intimate partner was associated with greater PTSD symptomatology among women who experienced abuse. On the other hand, Pico-Alfonso et al. (2006) found that sexual violence was not an independent predictor to PTSD when accounting for other forms of IPV. These researchers called for future studies to examine the effects of sexual violence as well as other forms of IPV.

As shown above, previous research has examined the association between sexual IPV and PTSD. Specifically, researchers have found that sexual IPV has significant impacts on women’s mental health after controlling for the effects of physical abuse (e.g. Bennice et al., 2003). Further, research has found that sexual violence by an intimate partner may be associated with more severe forms of physical violence within a relationship (e.g. Garcia-Linares, 2005). Although these studies provide evidence for the relationship between IPV and PTSD, few studies have examined the effects of ‘severe combined’ forms of abuse; for instance, the effects of more severe physical violence and sexual abuse within a relationship and the development of PTSD. Also, no studies to date have investigated a diverse Saskatchewan sample within a Canadian framework.

Overall, the studies listed above exemplify the need for further research to investigate the unique impact of severe combined forms of IPV on women’s physical and mental health.

1.9 Childhood abuse and PTSD

As stated previously, it is vital for future research to assess covariates that have a direct relationship to both IPV and PTSD (Dutton, 2006). For instance, it is imperative that research controls for the combined effects of childhood trauma and abuse when exploring the relationship between IPV and PTSD symptomatology. There are a number
of reasons why it is important to assess for childhood abuse experiences when investigating the health consequences of IPV. One reason is the association between childhood abuse experiences and IPV. For example, researchers have found that those who have experienced abuse in childhood are at greater risk of being exposed to IPV in their adulthood (Seedat, Stein, & Forde, 2005). Seedat and colleagues (2005) found that childhood abuse experiences and low educational attainment were the only statistically significant predictors of IPV. This potential relationship between childhood experiences of abuse and IPV highlights the importance of including both forms of abuse within future research endeavors.

Researchers have also found that individuals who experience multiple forms of victimization throughout their lives are more susceptible to trauma related symptoms (e.g. Follette, Polusny, Bechtle, & Naugle, 1996). Krupnick and colleagues (2004) found that cumulative trauma puts women at the highest risk for negative mental health outcomes; for example, greater psychological distress, more psychiatric diagnoses, and poorer social functioning than those who had experienced a single traumatic event. Likewise, Campbell, Greeson, Bybee and Raja (2008) found that the more forms of violence a woman experiences (i.e. IPV, childhood abuse experiences, sexual harassment), the more likely they are to report poor physical and mental health.

Various studies have also assessed the relationship between childhood abuse and PTSD. For instance, a study by Astin, Ogland-Hand, Coleman, & Foy (1995) found that women with PTSD symptomatology were significantly more likely to have experienced childhood sexual abuse (CSA) compared to a group of women reporting no PTSD symptoms. Further, results showed that IPV and CSA predicted 37% of the variance in
overall PTSD levels (Astin et al., 1995). Krause, Kaltman, Goodman, and Dutton (2008) also found that CSA and severity of IPV each contributed uniquely to PTSD symptoms. These studies provide evidence for the relationship between CSA and IPV as well as CSA and PTSD. Therefore, in order to adequately assess the impact of IPV on PTSD symptoms, it is important to control for the effects of early traumatic experiences such as childhood abuse.

A study by Griffing, Lewis, Chu and Sage (2006) investigated the impact of childhood abuse experiences in a sample of women residing within a domestic violence shelter. Results suggest that women participants with a prior history of childhood abuse reported significantly higher rates of PTSD, as measured by a global PTSD severity score, when compared to women experiencing IPV but no instances of childhood abuse (Griffing et al., 2006). Further, results suggest that severity of PTSD symptoms is likely to coincide with the number of abuse experiences reported. Authors suggest that violence throughout childhood may have a cumulative effect with domestic violence experienced throughout adulthood (Griffing et al., 2006). In other words, women who are experiencing IPV and have a history of abuse in childhood may be more susceptible to psychological disorders when compared to women who are only experiencing violence in adulthood (Griffing et al., 2006). It has been suggested that current episodes of violence and fear may exacerbate previous feelings of fear and terror associated with childhood experiences of abuse (Griffing et al., 2006); thus, current post-trauma symptoms associated with the intimate partner abuse, paired with past instances of childhood trauma, may increase the likelihood that a woman will develop PTSD in adulthood.
A recent study by Becker, Stuewig and McCloskey (2010) examined the cumulative effects of childhood abuse and IPV in relation to PTSD. More specifically, they assessed the relationship between psychological, physical, and sexual forms of IPV and PTSD. Results showed a significant relationship between all forms of IPV and PTSD. In regards to childhood abuse experiences, they explored the relationship between childhood physical abuse, sexual abuse, and witnessing family violence in the home and PTSD symptomatology (Becker et al., 2010). They found that all forms of childhood abuse were independently correlated with PTSD. Initially, they wanted to explore the unique contribution of each type of IPV and PTSD; however, high multicollinearity between these variables prevented such analyses. Authors concluded that there is a high overlap between different types of IPV and utilized a total abuse score within subsequent regression analyses (Becker et al., 2010). When entered into the regression, only total experiences of IPV and sexual abuse in childhood were predictive of PTSD. Findings from this study suggest important relationships between various forms of IPV, childhood abuse experiences, and PTSD. This study added to previous findings on childhood abuse experiences by exploring the relationship between witnessing family violence and subsequent PTSD in adulthood; however, future studies need to address psychological and emotional abuse in childhood in relation to IPV and PTSD in adulthood.

The abovementioned findings provide preliminary results for the link between childhood abuse experiences, IPV, and subsequent development of PTSD. Previous research has paid particular attention to the impact of sexual abuse in childhood and PTSD. Recent research has begun exploring the impact of physical abuse and witnessing
family violence as it related to victimization in adulthood and the development of psychological disorders. Future research needs to investigate the potential relationship between psychological abuse and neglect in childhood in relation to IPV and PTSD. Future research in the realm of IPV and mental health needs to address the cumulative effects of previous trauma and the potential vulnerabilities that arise for these women.

1.10 **Demographics and PTSD.**

There are numerous intervening variables that may impact the relationship between IPV and PTSD. For instance, research suggests that working status has a relationship to both IPV and PTSD. Some authors argue that women who are unemployed are particular risk of developing PTSD and other mental health disorders (Jones et al., 2001). A study by Kimberling et al. (2009) investigated the relationship between physical and psychological forms of IPV, PTSD, and rates of unemployment. Results from the regression analysis showed that psychological IPV and PTSD were most predictive of unemployment. Further, unemployed women were significantly more likely to report current PTSD symptoms and experiences of both physical and psychological abuse within the past year (Kimberling et al., 2009). Research suggests that women who experience abuse may be more susceptible to unemployment for reasons such as physical injuries, psychological distress, seeking safety from the abuse, and the controlling actions of the abuser (Zink & Sill, 2004). In a qualitative study investigating women’s experiences with IPV and employment, Swanberg and Logan (2005) found that abusers may interfere with a woman’s ability to work in a number of ways; for instance, the abuser may make harassing phone calls to the woman’s work, stalk them at work, destroy the woman’s work clothes, or physically injure and restrain
the woman when they attempt to go to work. These results suggest that women who experience abuse face substantially barriers to employment. Unemployment likely results in further isolation and limited social supports for women who have experienced abuse; therefore, these women are at higher risk of developing mental health conditions as a result of decreased social supports and increased isolation from the world.

Other confounding variables that are worth examining include age, level of education, and children living in the home. Research has shown that higher education and older age may serve as protective factors that increase resiliency for women who have survived IPV (Coker et al., 2005). For instance, a study by Humphreys and colleagues (2001) found that women who were older and more educated reported fewer psychological symptoms than younger women with less education. Age may serve as a protective factor because women are most vulnerable to IPV throughout their teens and early twenties; hence, older women may be less prone to severe violence and subsequent mental health concerns (Jones et al., 2001). It has also been reported that women with a larger number of children are more at risk of experiencing PTSD (Jones et al., 2001).

1.11 Research objectives

Previous research has investigated the relationship between PTSD and IPV; however, there are still many gaps in the research that need to be addressed. Specifically, there is a need for research to examine the effects of sexual violence and severe combined forms of abuse when assessing PTSD symptomatology. Further, Dutton (2009) states that future research should examine covariates of IPV and PTSD (i.e. childhood trauma) as well as various intervening variables (i.e. working status). Dutton (2009) also calls for longitudinal models assessing the impacts of IPV on mental health.
To date, no research studies have assessed PTSD and IPV within a diverse Saskatchewan sample of Canadian women.

The purpose of the current study was to investigate PTSD in a diverse sample of Saskatchewan women who have experienced IPV. More specifically, this study utilized the Composite Abuse Scale (CAS; Hegarty, Bush & Sheehan, 2005; Hegarty, Sheehan, & Schonfeld, 1999) in order to examine whether or not emotional abuse, harassment, physical abuse, or severe combined forms of abuse were better predictors of PTSD. The CAS allowed us to investigate the combination of sexual violence and severe physical violence by an intimate partner. Further, the CAS allowed us to investigate the important contribution of stalking and harassment behaviours by an intimate partner. This study added to previous findings by controlling for abuse experienced during childhood as well as various intervening variables (i.e. working status). More specifically, this study addressed previous limitations by including childhood physical, sexual, emotional, and neglect abuse as well as witnessing family violence within childhood in order to examine the cumulative effects of trauma and PTSD. The current study analyzed semi-structured questionnaire responses obtained from a larger project known as the Healing Journey, a longitudinal investigation of women who have experienced IPV.

1.12 Hypotheses

Based on the findings of the research reviewed, the following primary hypotheses were tested:

1. It was hypothesized that all forms of abuse, as assessed by the CAS, would be significantly, positively correlated with PTSD. Previous research has shown that
psychological, physical, sexual, and stalking abuse by intimate partners are all correlated with PTSD symptomatology (e.g. Basile et al., 2004). Although using the CAS as a unique assessment of IPV, it was hypothesized that a similar positive relationship would ensue.

Secondary hypotheses were based on previous literature regarding childhood abuse experiences and their relation to IPV and the development of PTSD in adulthood (Astin et al., 1995; Krause et al., 2008); specifically, research indicates that individuals who experience multiple forms of victimization throughout childhood and adulthood are more likely to develop trauma related symptoms and various other mental health disorders (Griffing et al., 2006; Krupnick et al., 2004). A study by Becker and colleagues (2010) found a significant relationship between childhood physical abuse, sexual abuse, and witnessing family violence in childhood and PTSD in adulthood. Therefore, it was hypothesized that all forms of childhood abuse would be significantly and positively associated with PTSD. Although previous research has not examined the impact of childhood emotional abuse and neglect on PTSD, it was expected that these variables would be significantly correlated with PTSD. Previous literature also reports that childhood abuse may increase the likelihood that a woman will experience violence in adult relationships (Seedat et al., 2005); as such, it was hypothesized that abuse experiences in childhood would be positively correlated with abuse subscales as measured by the CAS.

2. It was hypothesized that severe combined forms of abuse would predict PTSD symptoms over and above the effects of emotional, physical, and harassment abuse by an intimate partner. Further, it was expected that severe combined forms of abuse
would remain the best predictor of PTSD when accounting for experiences of childhood abuse and demographic characteristics.

Very few studies have investigated the impact of severe combined forms of abuse and PTSD; however, research does suggest that sexual violence by an intimate partner puts women at greater risk of experiencing various mental health disorders (e.g. Bonomi et al., 2007). Research also suggests that women who experience concurrent physical and sexual abuse have reported more mental health concerns when compared with women who have reported physical abuse alone (Martinez et al., 2004). These results suggest that the combination of more severe forms of physical and sexual violence may have severe impacts for women’s mental health. No previous studies have analyzed the impact of severe combined forms of abuse on PTSD; thus, it was hypothesized, based on preliminary findings of sexual and physical abuse and PTSD, that severe combined forms of abuse would be the best predictor of PTSD after accounting for emotional, physical, and harassment abuse by an intimate partner.

2.0 METHOD

The current study was a sub-study of a larger research project called “The Healing Journey: A Longitudinal Study of Women Affected by Intimate Partner Violence”. The Social Sciences and Humanities Research Council and Community University Research Alliances (SSHRC/CURA) funds the Healing Journey project. Data collection for the healing journey was completed in 2008; however, data cleaning and analysis is ongoing and is being conducted by the Research and Education for Solutions to Violence and Abuse (RESOLVE) group in Saskatchewan, Manitoba, and Alberta; the Principal Investigator is Dr. Jane Ursel of the University of Manitoba. The project is a
longitudinal study focusing on the healing journey of women who have experienced physical IPV (See Appendix I).

2.1 Data collection

2.1.1 Participants. Ethics approval was received from the University of Regina and University of Saskatchewan Ethics Boards (Appendix A; Appendix B). Informed consent for the Healing Journey project was provided by all of the participants (Appendix C). Participants were selected based on four main inclusion criteria. 1) Participants had to have experienced a physical act of IPV since January 2000. 2) Participants could not have been in a state of crisis at the time of recruitment for the study. The second criteria asked that participants who had experienced a violent episode in the last three months prior to the study be excluded from recruitment. This was to prevent increased stress that may have resulted from participation in the study. 3) Women who presented with severe psychological disorders that may have influenced their ability to discuss experiences or participate in a two-hour interview were excluded from the study. More specifically, women who were in a state of mania or experiencing psychotic like symptoms were not included in the study. Women were also excluded from the sample if they were getting treatment or on medication that may have interfered with the interview. 4) Lastly, women who were not willing to participate for the entire duration of the study, which spans three and a half years, were excluded from the sample.

2.1.2 Instruments. Data collection for the entire Healing Journey project took place in a total of seven meetings or waves. These data were collected using semi-structured interviews. Questionnaires focused on demographic information, history, service utilization, as well as health status and parenting experiences. The items within
these questionnaires were taken from existing surveys or were original items developed by the Healing Journey team and have not been validated. The current study analyzed data collected from the first two interviews of the Healing Journey. Specifically, this study analyzed data from the Wave 1 demography and history questionnaire as well as the Wave 2 health and parenting questionnaires. The current study investigated age, working status, children living in the home, and education levels from the Wave 1 demography and history questionnaire (Appendix D). This study also analyzed questions regarding abuse experienced during childhood found in the Wave 1 demography and history questionnaire. Participants were asked if they experienced emotional abuse, physical abuse, sexual abuse, neglect, and/or witnessed violence between their parents. All of these responses were included in the analyses. This study utilized SPSS 18.0 to run multiple analyses.

Information regarding the participants’ experiences with IPV was collected at the first interview. The CAS was used to assess frequency and severity of abuse (Appendix E). This is a 30 item measure whereby participants answer using a five-point Likert scale (Hegarty, Bush, & Sheehan, 2005; Hegarty, Sheehan, & Schonfeld, 1999). The CAS is scored by summing the frequency scores of each of the items (Hegarty et al., 2005). Higher scores indicate more severe and frequent violence. Scores on the CAS can also be examined by focusing on the four subscales of the measure: severe combined abuse, physical abuse, emotional abuse, and harassment. These subscales are useful when trying to assess how different forms of IPV impact the physical and mental health of women who have experienced abuse. The proposed study will expand on previous findings by utilizing the CAS as a more comprehensive measure of abuse than is
typically used in the literature (Langille, Woods, & McKenzie, in progress). Previous studies have used the Conflict Tactics Scale to explore abuse experiences; however, the CAS has been proven to be a more effective and inclusive measure of abuse (Langille et al., in progress).

The PTSD Checklist Civilian Version (PCL-C; Weathers, Litz, Herman, Huska, & Keane, 1993) was utilized in the current study to screen for PTSD symptomatology (Appendix F). This is a self-report measure containing 17 items focused on the three main symptom clusters of PTSD; specifically, this measure assesses symptoms experienced within the previous month using a five point Likert-type scale. These symptom clusters reflect criteria specified in the fourth edition of the Diagnostic and Statistical Manual criteria (DSM-IV-TR; APA, 2000), and include re-experiencing (5 items), avoidance/numbing (7 items), and hyperarousal (5 items). The PCL has been demonstrated to have good reliability and validity (Blanchard et al., 1996). Higher scores on the PCL indicate greater PTSD symptoms. As recommended by Walker, Newman, Dobie, Ciechanowski, and Katon (2002), a cut off score of 30 was used for the current study in order to assess how many women in the given sample met criteria for PTSD.

2.2 Procedure

Recruitment for the Healing Journey took place in a number of steps. First, a variety of community service providers were contacted to inform them of the study and ask for permission to include the agency in the project. Agencies that showed interest in the project were sent full project descriptions and examples of recruitment materials. Information sessions were then held to provide the agencies with further information;
such as, what participation in the study entailed, and the type of participants that were being targeted. Following the information session, service providers were given recruitment forms and were asked to distribute these forms to participants who appeared to meet the inclusion criteria (Appendix G). Participants were also recruited through flyers, which gave the project description and contact information, and through word of mouth. These techniques were used to try and connect with individuals that were not using community services at the time of recruitment.

Approval for the Healing Journey project was received from the U of R ethics board. Recruitment of participants was primarily done by the community service providers. After initial recruitment, Academic Coordinators from the Healing Journey project forwarded forms sent to the University Coordinators by agency receptionists who mailed the contact information to the university coordinator who in turn sent the information to the project coordinator for assignment to interviewers. Interviewers from the Healing Journey would then contact the participants and conduct an informal second screening. Interviewers would use this informal interview to try and understand participants’ circumstances and to see whether participation in the study would be distressing for the individual. Interviewers were also responsible for reviewing informed consent and confidentiality, collecting contact information, explaining the study procedure, and scheduling the first interview.

Data collection included a semi-structured interview containing both closed and open ended questions. Following signing of informed consent, interviewers would read the questions and record all of the participants’ responses. Interview length varied, taking between one and six hours, depending on the participant. Once the interview was
finished, debriefing ensued. Debriefing included a number of steps. First, interviewers assessed the participants’ level of distress. If participants presented with any form of distress after the interview, they were referred for counseling. Participants were referred to a counseling service that they were currently using or a known service within the area. If necessary, suicide assessments were conducted. Following completion of the interview, participants were given a $50.00 honorarium for participation in the study. Participants were also given the interviewers’ contact information and a list of services for survivors of violence. Interviewers contacted participants approximately six to 24 months following the first meeting, for the second wave interview.

I worked as a research assistant with the Healing Journey project since 2008. During my time as a research assistant, I was responsible for duties such as data entry, data cleaning, and various other administrative responsibilities. I was also responsible for tracking and organization of honorariums. I have worked with the data on numerous occasions for other projects throughout my undergraduate and graduate degrees.

3.0 RESULTS

3.1 Preliminary Analysis

Prior to hypothesis testing, the data were cleaned for accuracy of responses, missing data, outliers, and the normality of the distribution. To begin, missing data points were examined. One participant was found to have a substantial number of data missing (67% missing data) and was thus excluded from the analysis. For individuals missing less than 5% of data for a given scale, mean or mode substitution was employed (Tabachnick & Fidell, 2001). For all individual categorical variables, missing data points were replaced with the mode; thus, mode substitution was used to replace missing
data points for employment status (7 cases) and whether or not there were children living in the home (2 cases). For age, data was replaced with the variable mean (1 case).

Missing data points on the PCL were replaced with the participant’s mean score on that measure (5 cases). Likewise, missing data points on the CAS subscales were replaced with the individual’s mean score from that subscale; as a result, mean substitution was used to replace missing data on the severe-combined (4 cases), emotional (3 cases), physical (3 cases), and harassment (1 case) abuse subscales of the CAS. Three individuals were missing more than 10% of data on the PCL and were excluded from the final regression analysis.

Next, descriptive statistics were run in order to examine outliers by determining the standardized value for the total and subscale scores of each measure. Following the recommendation of Tabachnick and Fidell (2001), if the z-score of a data point was equal to or greater than ±3.29 (p < .001, 2-tailed), the outlying score was changed to one unit larger than the next most-extreme non-outlying score in the distribution. Only one outlier was changed within the severe-combined scale of the CAS. Two outliers were detected within the age variable. When the multiple regression analyses were run with and without these variables, results showed no identifiable differences; therefore, age of these participants was kept intact and both of these cases were included in the final regression analysis.

3.2 Descriptive statistics

Frequencies were run on all demographic variables in order to determine the characteristics of the sample. The current study utilized a community sample of 183 Saskatchewan women who had experienced IPV and agreed to participate in the Healing
Journey project. There were 216 participants included in the first wave of interviews; however, due to attrition (13.6%) between the first and second waves of interviews only 184 women were included in the current analyses. As stated previously, one participant was missing a substantial amount of data and was excluded from the study; therefore, 183 participants were included in these descriptive analyses. A power analysis for linear multiple regression was conducted using G*Power and revealed that the current analyses involving PTSD and abuse would achieve adequate power at .93 (α = .05) with a small effect size (.15) and 183 participants (Faul, Erdfelder, Buchner, & Lang, 2009).

Participants demographic information is included in Table 1. The average age of participants was 36.8 years (SD = 12.28). Women were recruited from three major sites within Saskatchewan; specifically, 71 (39.0%) were recruited from Central Saskatchewan (e.g. Saskatoon), 54 (29.1%) were recruited from Northern Saskatchewan (e.g. Prince Albert), and 58 (31.9%) were recruited within Southern Saskatchewan (e.g. Regina). The majority of participants had a grade twelve education or higher (N = 115; 62.8%). The majority of participants were not employed at the time of the interview (N = 108; 59.0%). The majority of women had children living in the home with them at the time of the interview (N = 122; 66.7%). Participants answered five questions pertaining to abuse experienced throughout childhood (see Appendix H). The majority of this sample reported experiencing physical abuse (N = 99; 54.1%) and emotional abuse (N = 108; 59.0%) at some point in their childhood. Likewise, the majority of this sample reported witnessing family violence as a child (N = 98; 53.6%). A high percentage of women also reported experiencing sexual abuse during childhood (N = 87; 47.5%) and experiencing some form of neglect from caregivers (N = 65; 35.5%). In total, the
majority of participants in this sample reported experiencing abuse in childhood ($N = 135; 73.8\%$). Based on the recommendations by Walker et al. (2002), a cut-off score of 30 was utilized on the PLC in order to determine how many participants from this sample would meet criteria for PTSD. Results showed that 35% ($N = 63$) of women within this sample would likely meet criteria for PTSD.
Table 1.

Demographic information \((N = 183)\)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>(N) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>36.8 (12.28)</td>
</tr>
<tr>
<td><strong>Recruitment site</strong></td>
<td></td>
</tr>
<tr>
<td>Saskatoon</td>
<td>71 (39.0)</td>
</tr>
<tr>
<td>Prince Albert</td>
<td>54 (29.1)</td>
</tr>
<tr>
<td>Regina</td>
<td>58 (31.9)</td>
</tr>
<tr>
<td><strong>Level of education</strong></td>
<td></td>
</tr>
<tr>
<td>Less than grade 12</td>
<td>68 (37.2)</td>
</tr>
<tr>
<td>Grade 12 or higher</td>
<td>115 (62.8)</td>
</tr>
<tr>
<td><strong>Employment status</strong></td>
<td></td>
</tr>
<tr>
<td>Working</td>
<td>75 (41.0)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>108 (59.0)</td>
</tr>
<tr>
<td><strong>Children living in home</strong></td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>122 (66.7)</td>
</tr>
<tr>
<td>Absent</td>
<td>61 (33.3)</td>
</tr>
<tr>
<td><strong>Childhood abuse</strong></td>
<td></td>
</tr>
<tr>
<td>Physical abuse</td>
<td>99 (54.1)</td>
</tr>
<tr>
<td>Emotional abuse</td>
<td>108 (59.0)</td>
</tr>
<tr>
<td>Sexual abuse</td>
<td>87 (47.5)</td>
</tr>
<tr>
<td>Witnessed family violence</td>
<td>98 (53.6)</td>
</tr>
<tr>
<td>Neglect</td>
<td>65 (35.5)</td>
</tr>
<tr>
<td><strong>Childhood abuse total</strong></td>
<td></td>
</tr>
<tr>
<td>Experienced abuse</td>
<td>135 (73.8)</td>
</tr>
<tr>
<td>Never experienced abuse</td>
<td>48 (26.2)</td>
</tr>
</tbody>
</table>
Analyses of reliability were performed in order to assess internal consistency of all measures. Cronbach’s alpha is reported for each measure in Table 2. An internal consistency of .70 is considered acceptable (DeVellis, 2003). All but one measure was determined to have acceptable reliability. Cronbach’s alpha can be sensitive to the number of items within the scale; as such, the harassment subscale on the CAS likely fell below the recommended cutoff for internal consistency due to the limited number of items included within the scale (Pallant, 2000). The inter-item correlation for the harassment subscale (see Table 2) was analyzed and was demonstrated to be within the acceptable range of .2 to .4 (Briggs & Cheek, 1986). Therefore, this subscale was considered to be a reliable estimate of harassment abuse.
Table 2.

Summary of means, standard deviations, and reliability for scores on the CAS and PCL

<table>
<thead>
<tr>
<th>Measure (Range of Scores)</th>
<th>$M$</th>
<th>$SD$</th>
<th>$N$</th>
<th>$\alpha$</th>
<th>$M$ Inter-item $r$</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCL (60-75)</td>
<td>26.15</td>
<td>14.01</td>
<td>180</td>
<td>.92</td>
<td>.39</td>
</tr>
<tr>
<td>CAS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (30 items)</td>
<td>51.70</td>
<td>28.55</td>
<td>183</td>
<td>.94</td>
<td>.35</td>
</tr>
<tr>
<td>Severe-Combined (8 items)</td>
<td>.80*</td>
<td>.84*</td>
<td>183</td>
<td>.81</td>
<td>.34</td>
</tr>
<tr>
<td>Emotional (11 items)</td>
<td>2.35*</td>
<td>1.29*</td>
<td>183</td>
<td>.91</td>
<td>.47</td>
</tr>
<tr>
<td>Physical (7 items)</td>
<td>1.74*</td>
<td>1.15*</td>
<td>183</td>
<td>.92</td>
<td>.61</td>
</tr>
<tr>
<td>Harassment (4 items)</td>
<td>1.81*</td>
<td>1.21*</td>
<td>183</td>
<td>.65</td>
<td>.31</td>
</tr>
</tbody>
</table>

Note. Inter-item $r$ = Inter-item correlations. For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. PCL = Posttraumatic Stress Disorder Checklist; CAS = Composite Abuse Scale. * = item means and item standard deviations.
A repeated measures Analysis of Variance (ANOVA) was conducted to examine the response patterns associated with the CAS. More specifically, the repeated measures ANOVA was used to characterize the sample and compare how women within this sample responded to each of the CAS subscales. Examination of Mauchly’s test indicated that the assumption of sphericity had been violated, $W = .72, \chi^2 (5) = 59.99, p < .001$; therefore, degrees of freedom were corrected using the Greenhouse-Geisser estimates of sphericity ($\varepsilon = .855$). As shown in Table 3, results indicated a significant effect between CAS subscales. In order to assess specific mean differences between the CAS subscales, individual t-tests were conducted. A Bonferroni correction for multiple comparisons was applied in order to prevent alpha inflation (Field, 2009). Table 4 summarizes the findings for the differences across responses for the CAS subscales. The largest mean difference was observed between responses on the severe combined abuse subscale and the emotional abuse subscale of the CAS. The smallest significant difference was observed between the emotional abuse subscale and harassment subscale of the CAS. There was no significant difference found between the means of the physical abuse and harassment abuse subscales of the CAS.
Table 3.

Repeated measures analysis of variance

<table>
<thead>
<tr>
<th>Measure</th>
<th>SS</th>
<th>df*</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS Subscale Scores</td>
<td>226.71</td>
<td>2.56</td>
<td>88.41</td>
<td>136.36</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Error</td>
<td>302.61</td>
<td>466.68</td>
<td>.65</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* = Degrees of freedom corrected using Greenhouse-Geisser estimates of sphericity (ε = .855). CAS Subscale Scores = Composite Abuse Scale Subscale Scores; SS = Sum of Squares; MS = Mean Square.
Table 4.

Bonferroni comparison for CAS subscales

<table>
<thead>
<tr>
<th>Item Means</th>
<th>CAS Subscale</th>
<th>Mean Difference (Std. Error)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.35</td>
<td>Emotional</td>
<td>Harassment = .53** (.08)</td>
</tr>
<tr>
<td>1.81</td>
<td>Harassment</td>
<td>Physical = .61** (.09)</td>
</tr>
<tr>
<td>1.74</td>
<td>Physical</td>
<td>Severe-Combined = 1.55** (.08)</td>
</tr>
<tr>
<td>.80</td>
<td>Severe-Combined</td>
<td></td>
</tr>
</tbody>
</table>

*Note. Severe = Severe Combined Abuse Subscale of the Composite Abuse Scale; Emotional = Emotional Abuse Subscale of the Composite Abuse Scale; Physical = Physical Abuse Subscale of the Composite Abuse Scale; Harassment = Harassment Abuse Subscale of the Composite Abuse Scale. *p < 0.05, **p < .01.
3.3  Hypothesis testing

3.3.1  Relationships between IPV, childhood abuse, and PTSD.

Hypothesis 1 stated that all forms of abuse, as assessed by the CAS, would be significantly, positively correlated with PTSD symptomatology. Secondary hypotheses stated that experiences of childhood abuse would be positively associated with PTSD as well as subscales of the CAS. Secondary hypotheses were based on the current literature regarding childhood abuse experiences and their relation to IPV and PTSD in adulthood. It was predicted that experiences of abuse in childhood would be significantly, positively associated with CAS subscales and PTSD as measured by the PCL. Bivariate correlations were run in order to test the above hypotheses. Specifically, bivariate correlations were computed between the physical, emotional, severe combined, and harassment subscales of the CAS, the PCL, and five questions pertaining to abuse experiences in childhood. Due to the abovementioned hypotheses, all \( p \)-values are based on one-tailed tests of significance. As evident in Table 3, the PCL demonstrated statistically significant correlations with the CAS physical abuse subscale, \( r(178) = .240, p = .001 \), emotional abuse subscale, \( r(178) = .297, p < .001 \), severe combined subscale \( r(178) = .342, p < .001 \), and harassment subscale \( r(178) = .255, p < .001 \).

As predicted, the PCL also demonstrated significant positive associations with all measures of childhood abuse; specifically, the PCL was positively correlated with childhood physical abuse \( r(178) = .162, p < .05 \), childhood sexual abuse \( r(178) = .223, p < .01 \), childhood emotional abuse \( r(178) = .290, p < .001 \), witnessing family violence in childhood \( r(178) = .184, p < .01 \), and neglect in childhood \( r(178) = .262, p < .001 \).

Contrary to the above predictions, results indicate no statistically significant associations
between emotional abuse, physical abuse, and harassment abuse subscales of the CAS and childhood abuse. Although these constructs were not significantly correlated, it was found that severe combined forms of IPV, as assessed by the CAS, was positively related to childhood sexual abuse, $r(178) = .195, p < .01$, childhood emotional abuse, $r(178) = .182, p < .01$, witnessing family violence in childhood, $r(178) = .194, p < .01$, and neglect in childhood, $r(178) = .189, p < .05$. There was no significant relationship found between severe combined forms of IPV and childhood physical abuse, $r(178) = .088, p = .235$.

Not surprisingly, significant correlations were found between the abuse subscales of the CAS. Of particular interest are the strong associations between severe combined forms of intimate partner abuse with other types of abuse measured by the CAS. The largest correlation was found between severe combined and physical abuse subscales of the CAS, $r(178) = .757, p < .001$. A strong correlation was also found between severe combined and emotional abuse subscales of the CAS, $r(178) = .701, p < .001$. Although severe combined forms of abuse were expected to be associated with physical IPV, it is important to note the inherent relationship between psychological abuse and severe combined forms of abuse.
Table 5.

Correlations between childhood abuse experiences, IPV, and PTSD

<table>
<thead>
<tr>
<th>Measures</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Child-Physical</td>
<td>–</td>
<td>.31**</td>
<td>.68**</td>
<td>.48**</td>
<td>.43**</td>
<td>.09</td>
<td>-0.01</td>
<td>.03</td>
<td>-0.07</td>
<td>.16*</td>
</tr>
<tr>
<td>2. Child-Sexual</td>
<td>–</td>
<td>.39**</td>
<td>.43**</td>
<td>.32**</td>
<td>.20**</td>
<td>.11</td>
<td>.10</td>
<td>.03</td>
<td>.22**</td>
<td></td>
</tr>
<tr>
<td>3. Child-Emotional</td>
<td>–</td>
<td>.61**</td>
<td>.50**</td>
<td>.18**</td>
<td>.06</td>
<td>.05</td>
<td>-0.01</td>
<td>.29**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Child-Witnessed</td>
<td>–</td>
<td>.49**</td>
<td>.19**</td>
<td>-0.02</td>
<td>.06</td>
<td>.02</td>
<td>.18**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Child-Neglect</td>
<td>–</td>
<td>.19*</td>
<td>.08</td>
<td>.12</td>
<td>.07</td>
<td>.26**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. CAS-Severe</td>
<td>–</td>
<td></td>
<td>.70**</td>
<td>.76**</td>
<td>.59**</td>
<td>.34**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. CAS-Emotional</td>
<td>–</td>
<td></td>
<td>.62**</td>
<td>.64**</td>
<td>.30**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. CAS-Physical</td>
<td>–</td>
<td></td>
<td></td>
<td>.52**</td>
<td>.24**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. CAS-Harassment</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td>.26**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. PCL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. The numbers used for column headings represent the measure of same number designation in column 1. Child-Physical = Physical Abuse in Childhood; Child-Sexual = Sexual Abuse in Childhood; Child-Emotional = Emotional Abuse in Childhood; Child-Witnessed = Witnessed Family Violence in Childhood; Child-Neglect = Experienced Neglect in Childhood; CAS-Severe = Severe-Combined Abuse subscale of the Composite Abuse Scale; CAS-Emotional = Emotional Abuse subscale of the Composite Abuse Scale; CAS-Physical = Physical Abuse subscale of the Composite Abuse Scale; CAS-Harassment = Harassment Abuse subscale of the Composite Abuse Scale; PCL = Posttraumatic Stress Disorder Checklist. Sig. (1 tailed). *p < .05. **p < .01.
3.3.2 Testing a predictive model of PTSD

Hypothesis 2 stated that severe combined forms of abuse, as measured by the CAS, would predict PTSD symptoms over and above the effects of emotional, physical, and harassment abuse by an intimate partner. It was expected that severe combined forms of abuse would remain the best predictor of PTSD when accounting for experiences of childhood abuse and potential moderating variables as measured by demographic characteristics. In order to test this hypothesis, a stepwise hierarchical multiple regression was employed to determine the model that best predicts PTSD. Prior to beginning the regression analysis, multicollinearity was assessed and determined to be within acceptable ranges; more specifically, correlations between variables of interest did not exceed the recommended cut-off ($r \geq .90$; Field, 2009). The assumption of independent errors was also tested via the Durbin-Watson test and found to be within acceptable ranges (Field, 2009).

According to Petrocelli (2003), "Hierarchical regression involves theoretically based decisions for how predictors are entered into the analysis" (p. 9); in other words, it is imperative that there is a pre-determined order of entry for predictor variables based on theoretical foundations and hypotheses. As recommended by Stevens (2009), predictors with a known relationship to the dependent variable should be entered into the equation first while other variables should be entered into subsequent blocks to determine whether or not they have any incremental validity. Previous research suggests that multiple forms of IPV predict the development of PTSD symptomatology (Babcock et al., 2008; Mechanic et al., 2008; Pico-Alfonso, 2005; Street & Arias, 2001). Based on these findings, subscales from the CAS were entered into the first block, using stepwise
entry, in order to examine the distinct predictive value of severe combined, emotional, physical, and harassment abuse by an intimate partner and PTSD. The first model demonstrated a statistically significant contribution and explained 11.7% of the variance in PTSD, $F(1, 178) = 23.62, p < .001$. Severe combined abuse, as measured by the CAS, was the only statistically significant predictor included in the model, ($\beta = .342, p < .001$). Emotional abuse, physical abuse, and harassment abuse subscales of the CAS were excluded from the model.

Previous research has found a relationship between childhood abuse and PTSD; more specifically, regression analyses indicate that sexual abuse in childhood significantly contributes to variance in predicting PTSD even when accounting for the impact of IPV (Astin et al., 1995; Krause et al., 2008). The contribution of childhood emotional abuse, physical abuse, neglect, and witnessing family violence in the home, in relation to predicting PTSD has yet to be established. Due to these findings, experiences of childhood abuse were entered into the second block, using stepwise entry, in order to examine the incremental validity of childhood abuse for PTSD. This model demonstrated a statistically significant contribution and explained 17.1% of the variance in PTSD, $F(2, 177) = 18.30, p < .001$. At the second step, severe combined abuse remained a significant predictor ($\beta = .300, p < .001$) in the model as well as emotional abuse in childhood ($\beta = .237, p < .01$). All other forms of childhood abuse experiences were excluded from the model. The second model accounted for a significant increase in variance ($\Delta R^2 = .054$) from step one, $\Delta F (1, 177) = 11.58, p < .01$.

There are numerous intervening variables worth examining when investigating IPV and PTSD. For the current study, employment status, age, level of education, and
whether or not the participant had children living in the home were included as demographic characteristics of the sample. Previous research has yet to show a clear predictive relationship between the above mentioned demographic characteristics and PTSD; hence, these variables were entered into the third block of the regression analysis, using stepwise entry, in order to examine the additional effects of various moderating variables. The third model accounted for a significant increase in variance ($\Delta R^2 = .024$) from step two, $\Delta F(1, 176) = 5.19, p < .05$. Severe combined abuse ($\beta = .299, p < .001$), emotional abuse in childhood ($\beta = .224, p < .01$), and level of education ($\beta = -.155, p < .05$) were all significant predictors in the final regression model. All other demographic characteristics were excluded from the model. The final model demonstrated a statistically significant contribution and explained 19.5% of the overall variance in PTSD, $F(3, 176) = 14.22, p < .001$. See Table 4 for a summary of the hierarchical regression analysis for variables predicting PTSD.
Table 6.

Summary of hierarchical regression analysis for variables predicting PTSD

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B (SE)</th>
<th>β</th>
<th>p</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model 1</strong></td>
<td></td>
<td></td>
<td></td>
<td>.117</td>
</tr>
<tr>
<td>Constant</td>
<td>21.79 (1.35)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-Severe</td>
<td>0.76 (.16)</td>
<td>.34***</td>
<td>&lt; .001</td>
<td></td>
</tr>
<tr>
<td><strong>Model 2</strong></td>
<td></td>
<td></td>
<td></td>
<td>.171</td>
</tr>
<tr>
<td>Constant</td>
<td>18.44 (1.64)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-Severe</td>
<td>0.66 (0.15)</td>
<td>.30***</td>
<td>&lt; .001</td>
<td></td>
</tr>
<tr>
<td>Child-Emotional</td>
<td>6.69 (1.97)</td>
<td>.24**</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td><strong>Model (Final)</strong></td>
<td></td>
<td></td>
<td></td>
<td>.195</td>
</tr>
<tr>
<td>Constant</td>
<td>21.49 (2.10)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-Severe</td>
<td>0.66 (0.15)</td>
<td>.30***</td>
<td>&lt; .001</td>
<td></td>
</tr>
<tr>
<td>Child-Emotional</td>
<td>6.34 (1.95)</td>
<td>.22**</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>-4.47 (1.96)</td>
<td>-.16*</td>
<td>.024</td>
<td></td>
</tr>
</tbody>
</table>

Note. N = 180. $R^2 = .12$ for Step 1, $\Delta R^2 = .05$ for Step 2, $\Delta R^2 = .02$ for Step 3. CAS-Severe = Severe-Combined Abuse subscale of the Composite Abuse Scale; Child-Emotional = Emotional Abuse in Childhood; Education = Whether Participant Completed Grade 12 Education or Not; $R^2 =$ percent of variance explained by PTSD. * $p < .05$. ** $p < .01$. *** $p < .001$. 
4.0 DISCUSSION

The purpose of the current study was to investigate PTSD in a diverse sample of Saskatchewan women who have experienced IPV. This study utilized the CAS (Hegarty, Bush & Sheehan, 2005; Hegarty, Sheehan, & Schonfeld, 1999) in order to examine whether or not emotional abuse, harassment, physical abuse, or severe combined forms of abuse were better predictors of PTSD. The CAS allowed us to investigate experiences with sexual violence as well as severe physical violence by an intimate partner. Further, the CAS allowed us to investigate the important contribution of stalking and harassment behaviours by an intimate partner. This study added to previous findings by accounting for experiences of abuse in childhood and potential confounding variables such as employment status and level of education. The current study was a sub-study of a larger research project called “The Healing Journey: A Longitudinal Study of Women Affected by Intimate Partner Violence”. The project is a longitudinal study, conducted by RESOLVE, focusing on the healing journey of women who have experienced IPV. Findings from the abovementioned study, as well as a comparison between the current findings and previous literature in the area of IPV and PTSD, are discussed. Following this discussion, strengths and limitations of the current study will be examined. In closing, the scientific and clinical implications of the results will be addressed as well as recommendations for future avenues of research.

4.1 Prevalence of Childhood Abuse and PTSD

A high percentage of participants within the current sample reported a history of abuse in childhood. More specifically, it was found that the majority of participants reported experiencing physical abuse (54%), emotional abuse (59%), and witnessing family violence as a child (54%). Likewise, a high percentage of women reported
experiencing sexual abuse in childhood (48%) and some form of neglect from caregivers (36%). These reported rates of abuse are substantially higher than is seen in the general population. The Public Health Agency of Canada (2010) conducted a report on the incidence of childhood abuse and neglect across the country. This report suggests that of all substantiated abuse claims, physical abuse in childhood accounts for approximately 20%, emotional abuse 9%, sexual abuse 3%, exposure to family violence 34%, and neglect 34%. It is important to note that these findings were based only on substantiated claims of abuse meaning those cases that were brought forward to authorities, investigated, and found to be legitimate claims of abuse (Public Health Agency of Canada, 2010). These results do not include the number of childhood abuse cases that go unreported each year. In contrast, results from the current study include self-report data of abuse in childhood and have not necessarily been substantiated. A comparison between findings from the current study and results from the 2010 incidence report of childhood abuse in Canada are provided in Figure 1.

Various other studies have reported unsubstantiated prevalence rates of childhood abuse as assessed by self-report instruments. For instance, Briere and Eliott (2003) found that 32% of women in their sample had been the victim of sexual abuse and 20% had been the victim of physical abuse in childhood. Although these rates are higher than the substantiated abuse cases reported within the previous Public Health Agency of Canada (2008) incidence reports, they are still lower than what was seen in the current population of women who have experienced IPV. Results suggest that women who experience IPV are more likely to have experienced some form of abuse in childhood.
Figure 1.

*Prevalence Rates of Childhood Abuse: Comparison between Public Health Agency of Canada and Current Sample*
As recommended by Walker and colleagues (2002), a cut-off score of 30 on the PCL was indicative of meeting criteria for PTSD. Based on this criterion, 35% \((n = 63)\) of women within the current sample met criteria for PTSD. As stated previously, a meta-analysis by Golding (1999) found prevalence rates of PTSD to range from 31% to 84% for women who have experienced IPV. Although results from our sample are on the lower end of the spectrum, prevalence rates for this sample are consistent with previous findings and substantially higher than the estimated lifetime prevalence rates (8%) of PTSD within the general population (APA, 2000). Likewise, prevalence rates from this sample are higher than reported among women who have been the victim of a crime (26%) (Dutton, 2009).

4.2 **Response Patterns on the CAS**

A repeated measures ANOVA was conducted to examine response patterns associated with the CAS. Results indicated a significant effect between CAS subscales. The largest mean difference was observed between responses on the severe combined abuse subscale and the emotional abuse subscale. Further, results showed that women reported higher instances of emotional abuse compared to all other forms of abuse measured by the CAS. Results suggest that women within this sample were likely to experience more frequent instances of emotional abuse when compared to all other forms of IPV. This is not surprising given the nature of emotional and psychological abuse; specifically, that emotional abuse often includes repeated instances of verbal assaults, threats to physical freedom, and numerous attempts to both degrade and/or humble the victim (Follingstad & DeHart, 2000; Pico-Alfonso, 2005). The chronic nature of such emotional abuse is associated with the perpetrators desire to gain power and control over
their victim. The current results are consistent with such theories and indicate that frequency of emotional abuse may be higher than physical, sexual, or harassment forms of abuse by an intimate partner.

4.3 Relationships between IPV, child abuse, and PTSD

4.3.1 IPV and PTSD

Based on previous research (e.g. Basile et al., 2004), it was hypothesized that all forms of abuse, as measured by the CAS, would be significantly and positively correlated with PTSD. Basile and colleagues (2004) reported positive associations between physical, sexual, psychological, and stalking victimization by an intimate partner and PTSD. Results from the current study were congruent with these findings indicating significant correlations between physical, emotional, and harassment abuse by an intimate partner and PTSD. Further, results indicated a significant association between severe combined forms of IPV and PTSD. To our knowledge, previous studies have not investigated severe combined forms of abuse when assessing the impact of IPV and PTSD. Thus, this study adds to previous findings by accounting for the impact of simultaneous forms of intimate partner abuse and their relation to PTSD. This is the first empirical study to replicate the above findings within a diverse Saskatchewan sample of women participants and adds to the growing body of literature by investigating the mental health effects of IPV within a Canadian framework.

Previous research suggests a strong association between violence severity and PTSD. For instance, Jones and colleagues (2001) reported that more severe forms of violence, regardless of the type of abuse experienced, exacerbates PTSD symptomatology. Sullivan et al. (2009) corroborated these findings stating that frequency of physical, sexual, and psychological abuse were positively correlated with
PTSD symptoms. Kemp and colleagues (1995) reported that women who experienced IPV, and held a diagnosis of PTSD, were more likely to report a higher incidence of physical, verbal, and sexual abuse when compared to women without a diagnosis of PTSD. Various other researchers have suggested similar associations between frequency and severity of violence and risk for various mental health disorders (Dutton et al., 2006; Pico-Alfonso, 2005). The current study utilized the CAS in order to examine abuse experiences. Higher scores on the CAS indicate more severe and frequent violence; hence, positive correlations found between the CAS subscales and the PCL suggest that higher frequencies of IPV are related to an increased risk of developing PTSD. These results replicate previous findings and suggest that severity and frequency of abuse play a critical role in the development of PTSD.

It is important to note that research on the impact of intimate partner stalking is extremely scarce. The few studies available have focused specifically on stalking and harassment behaviours by former intimate partners as opposed to harassment within a current intimate relationship. The current findings add to the literature by utilizing the CAS as a more composite measure of abuse; specifically, this study was able to account for harassment and stalking behaviours as well as psychological, physical, and combined forms of abuse in relation to PTSD. Results suggest that stalking and harassment behaviours are associated with an increased risk of PTSD within our sample. These results provide further evidence for the importance of including stalking behaviours within IPV assessment tools. Future studies should continue investigating the long-term mental health consequences associated with intimate partner stalking.
Research on the relationship between psychological abuse and mental health has increased substantially over the last decade. Research suggests that psychological IPV is just as detrimental to women’s mental health as physical forms of abuse (Coker et al., 2005). In fact, numerous researchers have found psychological IPV to be more predictive of PTSD symptoms than physical violence (Arias & Pape, 1999; Baldry, 2003; Dutton et al., 1999; Street & Arias, 2001; Pico-Alfonso, 2005). Results from the current study are consistent with previous findings on psychological abuse and PTSD. Results indicate that while both emotional and physical IPV were significantly correlated with scores on the PCL, emotional abuse ($r = .30, p < .001$) had a slightly larger correlation coefficient than did physical IPV ($r = .24, p < .01$). These results do not provide evidence for the notion that psychological abuse is more predictive of PTSD; however, they do provide further confirmation that psychological abuse is significantly associated with PTSD and should be viewed in the same way as physical or sexual forms of IPV. This study confirms previous notions that psychological abuse and physical abuse can have similar detrimental impacts on a woman’s mental health while putting women at higher risk of developing post-trauma symptoms.

4.3.2 Child abuse and PTSD

Former studies have examined the relationship between childhood abuse experiences and PTSD within women who have experienced intimate partner abuse (e.g. Becker et al., 2010; Griffing et al., 2006). Research suggests that women who are experiencing IPV and have a history of childhood abuse are more susceptible to developing PTSD (Griffing et al., 2006). A recent study by Becker and colleagues (2010) found that childhood physical abuse, sexual abuse, and witnessing family violence in the
home were all correlated with PTSD symptomatology among a sample of women experiencing IPV. When entered into a multivariate regression analysis, both IPV and sexual abuse in childhood remained significant predictors of PTSD. The current study expanded on previous findings by including psychological abuse and neglect as additional experiences of childhood abuse.

To our knowledge, this is the first study to include emotional abuse and neglect in childhood when examining the relationship between IPV and post-trauma symptoms. Based on previous findings, it was hypothesized that all forms of childhood abuse would be significantly related to PTSD as measured by the PCL. As predicted, the PCL demonstrated significant positive correlations with childhood physical, sexual, emotional, and neglect abuse as well as witnessing family violence in the home. These findings provide further support for the relationship between child abuse and PTSD in adulthood. Further, results showcase the potential impact of cumulative trauma experiences throughout childhood and adulthood. Previous research suggests that violence throughout childhood may exacerbate feelings of fear and terror associated with IPV (Griffing et al., 2006). In other words, the pairing of adult IPV with childhood abuse experiences may increase the likelihood that a woman will develop PTSD. Findings from the current study provide preliminary results for the impact of all forms of childhood abuse and PTSD. Previous research has focused extensively on the impact of sexual and physical abuse in childhood; however, the current findings showcase the importance of assessing emotional abuse, neglect, and witnessing family violence as it relates to psychopathology in adulthood.

4.3.3 Child abuse and IPV
Research suggests an association between childhood abuse experiences and IPV (Seedat et al., 2005). For instance, Seedat and colleagues (2005) found that childhood abuse was a significant predictor for IPV. Based on these findings, it was hypothesized that all forms of IPV, as assessed by the subscales of the CAS, would be correlated with experiences of abuse in childhood. Contrary to these predictions, results showed no statistically significant associations between emotional abuse, physical abuse, and harassment subscales of the CAS and childhood abuse. There were significant correlations found between severe combined forms of IPV and childhood sexual abuse, emotional abuse, neglect, and witnessing family violence in the home. Results showed no statistically significant relationship between physical abuse in childhood and severe forms of IPV. Our findings provide support for the notion that more severe forms of IPV are related to experiences of childhood abuse. In this case, severe combined forms of abuse include sexual violence within an intimate relationship as well as more severe forms of physical violence. It may be that individuals who experience childhood abuse are more susceptible to experiencing severe forms of IPV in adulthood. These results add to previous findings by accounting for emotional abuse, neglect, and witnessing family violence in the home as it relates to IPV. Results suggest that individuals who experience such forms of childhood abuse may be more vulnerable to experiencing intimate partner abuse in adulthood. Further research needs to be done in order to better understand the relationship between IPV and childhood abuse experiences.

4.3.4 Relationships among CAS subscales

Researchers suggest that different types of IPV, such as physical and psychological abuse, are inherently intertwined and difficult to separate into unique
constructs (Babcock et al., 2008). For instance, individuals who experience physical abuse are likely experiencing concurrent forms of psychological abuse. Likewise, women who experience sexual violence are at higher risk of experiencing concurrent physical violence within an intimate relationship (Garcia-Linares et al., 2005). In addition, research indicates that severity of physical violence often escalates for women who are experiencing sexual forms of IPV (Garcia-Linares et al., 2005). These findings suggest that dissecting abuse into independent categories is likely misrepresenting a woman’s experience with IPV. A study by Becker and colleagues (2010) found high multicollinearity between psychological, physical, and sexual forms of IPV. They concluded that there is a high overlap between different types of IPV and were unable to investigate the unique impact of abuse subscales and PTSD. Due to the above findings, it was predicted that all abuse subscales, as measured by the CAS, would be significantly correlated with one another. As hypothesized, significant correlations were found between all abuse subscales of the CAS. This suggests that there is a positive relationship between emotional, physical, harassment, and severe combined forms of abuse; hence, if a woman is experiencing any one form of abuse she is at risk of experiencing subsequent forms of abuse. Findings indicate that IPV includes a combination of different forms of abuse and that studying independent types of abuse may not be an adequate representation of women’s experiences.

Of particular interest are the strong relationships found between severe combined forms of abuse and other types of abuse measured by the CAS. The largest correlation coefficient was found between severe combined and physical abuse subscales of the CAS. This is not surprising given the previous findings by Garcia-Linares and
colleagues (2005) demonstrating that women who experience sexual violence are at higher risk of experiencing physical abuse. Within the current study, the severe combined forms of abuse include both sexual violence as well as more severe forms of physical violence and so it is not surprising that these constructs showed strong correlations. A strong correlation coefficient was also found between severe combined and emotional abuse subscales of the CAS. This finding suggests that women who are experiencing sexual and severe combined forms of abuse are likely to experience concurrent emotional abuse within the relationship. Once again, this finding showcases the importance of studying all forms of abuse when investigating the impacts of IPV on women’s mental health. It is extremely difficult to decipher between forms of abuse when all types of abuse are inherently related and tend to occur simultaneously. Future research should continue investigating the effects of combined forms of abuse when studying the effects of IPV.

4.4 Predictors of PTSD

Extant research findings demonstrate the relationship between sexual violence by an intimate partner and various mental health disorders (e.g. Bonomi et al., 2007). Previous findings suggest that women who experience concurrent physical and sexual violence report higher rates of mental health concerns when compared to women experiencing only physical abuse (Martinez et al., 2004). These results suggest that a combination of physical and sexual abuse puts women at increased risk of developing psychopathology. Based on these findings, it was hypothesized that severe combined forms of abuse would predict PTSD symptoms over and above the effects of emotional, physical, and harassment abuse by an intimate partner. It was expected that severe
combined forms of abuse would remain the best predictor of PTSD after accounting for experiences of childhood abuse and potential intervening variables as measured by demographic characteristics. A stepwise hierarchical multiple regression was employed to determine the model that best predicts PTSD.

When abuse subscales, measured by the CAS, were analyzed independent of associated constructs, only severe combined abuse proved to be a statistically significant predictor of PTSD. Severe combined abuse explained 11.7% of the total variance in PTSD. In summary, emotional, physical, severe combined, and harassment abuse were all significantly correlated with PTSD; however, when entered into the multiple regression, only severe combined abuse proved to be a significant predictor of PTSD. Findings suggest that severe combined forms of abuse put women at higher risk of developing post-trauma symptoms when compared to all other forms of abuse assessed within the current study. Non-significant regression findings for emotional, physical, and harassment abuse may be a result of high co-occurrence between all forms of abuse as measured by subscales of the CAS. In fact, by studying a combination of more severe forms of abuse within one category, we may be capturing the multifaceted nature of IPV. By breaking abuse into distinct categories, such as physical and emotional abuse, we may be falsely identifying a woman’s experience with IPV. Thus, the severe combined forms of abuse category utilized within the current study may be a better predictor of PTSD because we are better accounting for a woman’s experience with multiple forms of abuse. Future studies should continue investigating more cohesive and all-encompassing forms of abuse as a better representation of what these women are likely to experience on a day to day basis.
When all constructs of interest (i.e. CAS subscales, childhood abuse experiences, employment status, age, level of education, children living in the home) were entered into the final step of the hierarchical multiple regression, only severe combined abuse, childhood emotional abuse, and level of education demonstrated predictive utility. This final model demonstrated a statistically significant contribution and explained 19.5% of the overall variance in PTSD. Findings suggest that while all forms of childhood abuse (physical, sexual, emotional, neglect, witnessed family violence) were significantly correlated with PTSD, only childhood emotional abuse was a significant predictor of PTSD within the regression model. Results indicate that experiencing emotional abuse throughout childhood may be particularly distressing and places women at increased risk for developing PTSD within a sample of women who have experienced IPV. It is important to note that childhood abuse experiences were measured through multiple response categorical variables; hence, individuals who reported experiencing emotional abuse may also have reported experiencing other forms of child abuse. Regardless, these discoveries provide further evidence for the notion that cumulative trauma throughout childhood and adulthood places women at greater risk for psychopathology. As mentioned previously, women who experience multiple forms of victimization throughout their lives are more susceptible to trauma related symptoms (e.g. Campbell et al., 2008; Follette, Polusny, Bechtle, & Naugle, 1996; Krupnick et al., 2004). Researchers argue that episodes of IPV may exacerbate previous feelings of fear and terror associated with childhood abuse (Griffing et al., 2006). Although previous findings have postulated the potential relationship between all forms of childhood abuse and PTSD, no previous studies to date have assessed the impact of emotional abuse and
neglect within childhood. The current study adds to these findings by providing initial results on the potential impact of childhood emotional abuse for women who have experienced IPV. Further, these results highlight the need for future research studies to include emotional abuse when investigating the relationship between childhood experiences of abuse, IPV, and PTSD.

The above results suggest a negative association between level of education and PTSD; in other words, women with lower levels of education may be at increased risk of developing post-trauma symptoms. These findings are consistent with previous research reporting that higher education may serve as a protective factor and increases resiliency for women who have survived IPV (Coker et al., 2005). Results are also congruent with previous research stating that women with lower levels of education tend to report greater rates of psychological symptoms when compared to women with higher levels of education (Humphreys et al., 2001).

5.0 STRENGTHS, LIMITATIONS, AND FUTURE DIRECTIONS

There were several strengths of this study that are worthy of mention. This was the first study to include a combination of sexual and severe combined forms of abuse when examining the relationship between IPV and PTSD. These findings provide evidence for the notion that combined forms of abuse predict the development of PTSD; further, use of more comprehensive categories of abuse are more representative of the multifaceted nature of IPV and a woman’s experiences within an abusive relationship. This study utilized the CAS as a more comprehensive measure of abuse than is typically used in the literature. The CAS allowed us to explore the potential links between emotional, physical, harassment, and severe combined forms of abuse and PTSD.
Previous studies have failed to address the potential associations between harassment abuse by an intimate partner and PTSD. Intimate partner harassment and stalking are relatively new areas of research and warrant further investigation. The current study provides preliminary evidence for the notion that harassment abuse is positively correlated with PTSD symptomatology. Future research should continue to include harassment abuse when examining the effects of IPV on women’s mental health.

The current study explored a more comprehensive and representative list of childhood abuse experiences than is typically used in the literature. Previous studies have focused specifically on the impacts of sexual and physical abuse in childhood when examining the relationships between IPV and PTSD (e.g. Astin et al., 1995; Krause et al., 2008); however, no studies to date have addressed the potential links between emotional abuse and neglect within a sample of women experiencing IPV. This was the first study to include five categories of abuse (physical, sexual, emotional, neglect, witnessing family violence), as a more inclusive measure of childhood victimization. Results from the current study provide evidence for the relationship between emotional abuse, neglect, and development of PTSD in adulthood. When entered into the hierarchical multiple regression, emotional abuse in childhood remained a significant predictor of PTSD. These results exemplify the importance of including such variables when assessing the tremendous impacts of childhood abuse and the subsequent development of psychopathology in adulthood. Based on these findings, it is critical for future studies to include emotional abuse and neglect as constructs of childhood abuse when examining covariates of intimate partner abuse and PTSD.
This was the first study to investigate PTSD within a community sample of Saskatchewan women experiencing IPV. It is vital for researchers to continue exploring the impacts of IPV within a diverse Canadian framework. Future research should continue examining the impacts of IPV and mental health within rural and northern communities across Canada. Women living within rural and northern communities have limited access to community and clinical resources, may lack social supports, and are more susceptible to extreme isolation on behalf of the abuser. Future research should investigate these variables as they relate to PTSD.

While findings from this study provide valuable information on the impacts of IPV, there are a number of limitations that should be addressed. The first limitation is the use of self-report instruments as a means of diagnosing PTSD. Although a number of women within this sample met criteria for PTSD, as measured by the PCL, these findings should be interpreted with caution as they have not been verified via psychological assessments conducted by a psychologist. Future studies should conduct more comprehensive psychological assessments in order to fully understand the relationship between IPV and PTSD. Second, findings on childhood abuse experiences are limited because of the retrospective nature of these reports. More specifically, adult reports of childhood abuse experiences should be interpreted with caution as researchers suggest that such accounts may be subject to memory biases (Becker et al., 2010).

A third limitation is that childhood abuse was measured in a categorical fashion as to whether or not the woman reported experiencing physical abuse, sexual abuse, emotional abuse, neglect, or witnessing family violence in childhood. The current study did not take into account the severity or frequency of childhood abuse experiences.
Future studies should address this limitation by investigating the impacts of both frequency and severity of childhood abuse in relation to IPV and PTSD. Due to the categorical nature of the childhood abuse questions, all reports are subject to multiple responses. It should be noted that these variables are limited in their scope because individuals could report multiple abuse experiences throughout childhood; hence, individuals reporting emotional abuse in childhood may also have reported experiencing physical and sexual abuse.

A fourth limitation is that results from the current study are based on male violence towards their female partners; therefore, findings cannot be generalized beyond heterosexual relationships. Likewise, findings cannot be generalized to female violence towards their male partners. Fifth, IPV and PTSD symptoms were measured simultaneously; hence, we are not able to draw causal inferences based on the data. Sixth, the variables studied within the current analysis only accounted for 19.5% of the total variance in PTSD. It is likely that additional variables, that were not included in this study, are contributing to the development of PTSD. For instance, variables such as social support, coping strategies, personality characteristics, and length of time in the violent relationship may contribute to the development of PTSD. Future studies should address social support as a potential mediating factor between IPV and PTSD. Likewise, future studies should investigate whether length of time in an abusive relationship has an effect on the development of post-trauma symptoms.

The sixth limitation of the current study is the absence of a control group. Future research may wish to use a comparison group of women who have only experienced childhood abuse or experienced some form of sexual violence outside of an intimate
relationship. Use of a control group would allow us to examine the unique contribution of IPV in comparison with other forms of violence and abuse on the development of PTSD. The final limitation of this study is that it did not address issues of ethnicity in relation to IPV and PTSD. Ethnicity is an important factor and should be addressed in future research investigating the association between intimate partner abuse and post-trauma symptoms.

6.0 SCIENTIFIC AND CLINICAL IMPLICATIONS

Results from the current study add to the empirical body of literature investigating the mental health consequences of intimate partner abuse. Findings from the current study provide further evidence for the relationship between all forms of IPV and PTSD. Previous research posits that severity and frequency of IPV play a critical role in the development of psychopathology. Findings from the current analysis replicate these findings as higher scores on the CAS are indicative of more frequent and severe forms of abuse. Correlations between abuse subscales and PTSD suggest that more frequent forms of abuse, regardless of the type of abuse experienced, places women at increased risk of developing post-trauma symptoms. It is important for future studies to continue addressing frequency and severity of violence in relation to women’s mental health. The current study adds to previous findings by addressing a combination of both sexual and severe combined forms of abuse while also investigating the impacts of harassment and stalking by an intimate partner. Results suggest that severe combined forms of abuse play a critical role in the development of PTSD. It is imperative for future studies to continue examining combined forms of IPV in order to better represent a woman’s experience with abuse. It is also necessary for research to continue
investigating the long-term health consequences associated with partner stalking as literature in this area is extremely scarce.

Findings from this study provide critical knowledge in the area of childhood abuse, IPV and subsequent development of PTSD symptoms. More specifically, analyses revealed positive correlations between all childhood abuse experiences and PTSD. This was the first study to include both emotional abuse and neglect in childhood when examining PTSD within a sample of women who have experienced intimate partner abuse. Results from the multiple regression suggest that severe combined forms of IPV, emotional abuse, and level of education are significant predictors of PTSD. Thus, including both severe combined forms of abuse and emotional abuse as new constructs within this study proved to be significant. These findings add to the empirical literature by showcasing the tremendous impact of emotional abuse in childhood; specifically, within women who are experiencing IPV. It is essential for future research to continue including such constructs as severe combined IPV and emotional abuse in childhood in order to adequately assess the multifaceted nature of violence and abuse.

There are a number of clinical implications that are worthy of note. Findings from this study suggest that all forms of IPV are related to the development of PTSD. As such, clinicians and mental health allies should be aware of the immense impacts associated with all forms of abuse including psychological and harassment abuse by an intimate partner. Although services are available for women who have experienced IPV, it is critical that further resources and services be implemented for women who have experienced psychological and harassment abuse by intimate partners. In the past, these forms of abuse have not been taken as seriously as physical and sexual violence. It is
important that moving forward, all service providers recognize the inherent risks associated with these forms of abuse and act accordingly.

Psychological treatments and interventions for PTSD should be altered for women who have or are experiencing intimate partner abuse. Women who experience abuse within a relationship are subject to both chronic threats and injuries as a result of ongoing violence (Woods, 2000). Likewise, they are exposed to repeated episodes of acute trauma through physical, sexual, psychological, and harassment forms of abuse (Woods, 2000). As mentioned previously, Goldberg and colleagues (1990) argue that PTSD is an appropriate response for women in an abusive relationship as they are dealing with abnormally high levels of trauma and stress. These women should not be viewed as having prior mental health disorders; rather, they are having a normal response to situations involving intense fear, threats, violence, and danger (Goldberg et al., 2000). As such, a diagnosis of PTSD should be handled differently for women within an abusive relationship. Specifically, interventions need to be tailored for women who have yet to leave an abusive relationship but are seeking out counselling or psychological services. For women in these situations, the threat of future violence is real as opposed to imagined. Thus, reduction of symptoms may be impossible when the fear of further violence is continuing. It is important for clinicians to develop a treatment approach specific to the needs of women living in an abusive relationship.

Results from the current study also indicate a relationship between all forms of childhood abuse and PTSD. It is important for mental health professionals to adequately assess previous history of childhood abuse when working with women who are experiencing IPV. Those women who are experiencing IPV, and have a history of
childhood abuse, are at increased risk of developing PTSD. Specifically, emotional abuse in childhood seems to be extremely distressing and predictive of later development of PTSD for women who report IPV in adulthood. Once again, this finding showcases the impact of emotional and psychological abuse throughout the lifespan. It is imperative that emotional abuse be taken as seriously as other forms of abuse in childhood. Appropriate measures should be taken to ensure the safety of all children being subjected to emotional forms of abuse. In addition, unique services and resources should be provided for women who have experienced cumulative forms of trauma and abuse throughout their lives. Results showcase the long-term mental health consequences of IPV for women living within Saskatchewan. As such, there is a need for increased services and resources available for women within this province.

In summary, this study provides further information on the immediate and residual effects of IPV. Specifically, this study provides evidence for the notion that all forms of childhood abuse and intimate partner abuse are related to subsequent development of PTSD. Findings suggest that severe combined forms of IPV put women at greatest risk of experiencing PTSD. Further, the effects of cumulative trauma experienced throughout childhood (e.g. emotional abuse) may exacerbate feelings of fear and terror associated with IPV. Women who experience multiple forms of victimization throughout the lifespan may be more susceptible to trauma related symptoms in adulthood. Results highlight the need for future studies to include severe combined forms of abuse as a more comprehensive measure of IPV. Future research should continue investigating the impacts of cumulative trauma and the subsequent implications for women’s mental and physical health.
References


Appendix A

University of Regina Ethics Approval

UNIVERSITY OF
REGINA

OFFICE OF RESEARCH SERVICES

MEMORANDUM

DATE: July 14, 2009
TO: Dr. Mary Hampton
    Luther College
FROM: Dr. Bruce Plouffe
      Research Ethics Board
RE: Annual Research Status Report

Thank you for submitting the required Annual Research Status Report on your project entitled, "The Healing Journey: A Longitudinal Study of Women Affected by Intimate Partner Violence." File # 01R0506.

This memo confirms ethical clearance for an additional 12 months, beginning August 15, 2009.

Sincerely,

Dr. Bruce Plouffe
Research Ethics Board

Research and Innovation Centre, Room 109
Phone: (306) 585-4775
Fax: (306) 585-4893
www.uregina.ca/research
Appendix B
University of Saskatchewan Ethics Approval

University of Saskatchewan
Behavioural Research Ethics Board (Beh-REB)

Certificate of Approval
Study Revisions

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>DEPARTMENT</th>
<th>BEH#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephanie (Lin) L. Martin</td>
<td>Educational Psychology and Special Education</td>
<td>Beh 05-207</td>
</tr>
</tbody>
</table>

INSTITUTION(S) WHERE RESEARCH WILL BE CONDUCTED (STUDY SITE)

SPONSOR
SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL OF CANADA (SSHRC)

TITLE
The Healing Journey: A Longitudinal Study of Women Affected by Intimate Partner Violence

CURRENT APPROVAL DATE: 27-Sep-2005
CURRENT RENEWAL DATE: 01-Sep-2006
CERTIFICATION UPDATE: APPROVED ON 10-Apr-2006
Revised Questionnaires

CERTIFICATION

The University of Saskatchewan Behavioural Research Ethics Board has reviewed the proposed revisions to your study. The revisions were found to be acceptable on ethical grounds.

The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol or consent process or documents.

Any significant changes to your proposed method, or your consent and recruitment procedures should be reported to the Chair for Research Ethics Board consideration in advance of its implementation.

ONGOING REVIEW REQUIREMENTS

The term of this approval is five years, but the approval must be renewed on an annual basis. In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month of the current expiry date each year the study remains open, and upon study completion. Please refer to the following website for further instructions:

http://www.usask.ca/research/ethical.shtml

APPROVED.

Valerie Thompson, Chair
Behavioural Research Ethics Board
University of Saskatchewan

Please send all correspondence to:

Ethics Office
University of Saskatchewan
Room 306, Kirk Hall, 117 Science Place
Saskatoon, SK S7N 5C9
Phone: (306) 966-2084 Fax: (306) 966-2099
Appendix C
Form of Consent and Confidentiality

The Healing Journey: A Long-Term Study of Women Affected by Intimate Partner Violence

PURPOSE OF THE STUDY: This fall community agencies like (name of agency recruited from) and researchers from the University of Regina will be doing a long-term study of women who have experienced violence in their intimate partner relationship. We are interested in women’s health, wellbeing, support, self perceptions, parenting issues and service utilization of women who have experienced violence by an intimate partner. This study will help to inform services providers and policy makers about effective programming and gaps in services for these women. It will also help us to understand the factors involved in women's survival and healing from partner violence.

ROLE OF THE PARTICIPANTS: Participation involves a 2 hour interview twice a year over a period of 3 1/2 years. However, the first interview might be somewhat longer, about 2 1/2 hours. Two different interviews will be done, each given once a year. The first interview will take place in the fall/winter of 2005. It will consist of questions about your employment, occupation, history of abuse, the services you have used and your satisfaction with them, your sources of support, coping strategies, and your perceptions of yourself and your life. The second interview will be conducted in the winter/spring of 2006. It will consist of questions on various aspects of physical and mental health, parenting issues, and an update on some of the questions asked in the first interview. Interviews will rotate along this pattern with questions on demography, revictimization
in new relationships, service utilization, coping strategies, and support being done in the fall/winter of each year and the health and parenting questions being done in the winter/spring of each year until 2008. Brief update questions on the previous set of interview questions will be done at each interview. Some of the women will also be chosen to participate in more open interviews that would take place at the beginning of the study and again at the end of the study. In these interviews we would ask you general questions about your experiences with intimate partner violence, its effect on your life and your journey in dealing with these experiences. Each interview would take about 2 hours. We would tape record these interviews to make sure we record your responses accurately without having to interrupt you as you talk. If you think you might be interested in participating in these more open interviews, you can indicate your interest at the end of this form. Not everyone who is interested will be chosen to take part in these interviews. We are looking for about 20 women from Saskatchewan. Also just because you indicate that you are interested, does not mean that you can’t change your mind. If we contact you to take part in the interview, you can always decide not to do it.

POTTENTIAL BENEFITS: You will be getting a $50 honorarium for every interview.

POTTENTIAL RISKS AND DISCOMFORT: Your participation is voluntary, so you may choose not to participate without any effect on the services you receive from any shelter or service provider agency.

CONFIDENTIALITY OF THE DATA: The information in the interviews is personal. All of this information will be kept very confidential and your name will not be placed on your interviews. The interviews are number coded and placed in a computer file.
under a number code rather than your name. All of the taped open interviews will be transcribed into a locked computer file and these interviews will also be number coded. In the transcriptions we will remove any references to names so anyone reading the transcript will not be able to identify the person by any names they mention. The tapes will be securely locked at the University of Regina offices. They will be sent to our colleagues in Alberta and Manitoba for analysis. We will send them via courier and they will be securely stored at the offices of our colleagues. These colleagues are situated at universities in these provinces and have to abide by the same ethical standards as we have so all the information will be kept very confidential. When they have completed their analysis, the tapes will be returned to the University of Regina where they will be kept locked in a cabinet and then destroyed at the end of the study along with the other interviews.

Other than the sharing of tapes of the open interviews with colleagues in other provinces, the information you give will be kept locked in a cabinet at the University of Regina offices and the interviews will be stored separately from this consent form. Service providers/probation officers will never have access to your specific responses. Tapes of open interviews will only be shared with academic colleagues and never with service providers in any of the provinces. We will also be asking you for the best method and procedure for contacting you. The contact information you have given us will also be kept in a locked computer file and only myself, the principal investigator and the person supervising my interviews will have access to this information. The interviews, tapes of the open interviews and contact information will be destroyed about 4 months after the end of the project. The tapes and interviews will be shredded and thus completely
destroyed. This will be in August 2009 unless funding for the continuation of the study is obtained. If we do obtain funding but you do not want to continue with the project then your interviews and contact information will be destroyed in August 2009.

*Please note that we are required by law to report current and past unreported child abuse or situations dangerous to children to the legal authorities. Also if you reveal to us that you are planning to harm yourself someone else we are obligated to report this to the authorities as well.*

You are volunteering to participate so you may stop at any time and you are free not to answer any questions you don't want to.

**WITHDRAWAL FROM THE STUDY:** Your decision to participate in this research is completely voluntary. You are free to withdraw your consent at any time. If you have any reservations at all about participating in this research process, please feel free to withdraw from the study. Furthermore, you are free to refrain from answering any questions.

**OFFER TO ANSWER QUESTIONS:** This consent form may contain words or phrases that you do not understand. Please ask a member of the research team to explain the information that is not clear to you. If you have any questions regarding this research, the procedures and/or goals of this study, please feel free to ask before or during the interview. If you have any concerns or inquiries after the interview, please contact any of the research team members. After each interview period, research reports and presentations will be prepared, but your name will never be attached to any piece of information. If you like we will send you a copy of these progress reports and invitations to community presentations and conferences. If you do want the progress
reports, we will be asking you about your preferred methods of obtaining this information and making notes of any changes to these instructions over time.

Information about the study will be put into progress reports. Progress reports will be available about three to four months after each time we interview you. All of your preferred methods of contact including contact between interviews will be respected.

*This project was approved by the Research Ethics Board, University of Regina. If research subjects have any questions or concerns about their rights or treatment as subjects, they may contact the Chair of the Research Ethics Board at 585-4775 or by e-mail: research.ethics@uregina.ca.*

**Researchers:**  Drs. Mary Hampton (University of Regina ph: 585-4826), Darlene Juschka (University of Regina, 585-5280), Wendee Kubik (University of Regina, 585-4668); Bonnie Jeffery (University of Regina,), Stephanie Martin (University of Saskatchewan)

If you agree to participate in this interview, please place your name and signature in the appropriate spaces below.

I ________________________________ (print name) understand what the interview is about and what I will have to do and the signature below means that I agree to participate.

_______________________________  _______________________
(Signature)  (Date)
I would like a copy of the progress report ______Yes ______No

I would like to receive the report in the following way:

I would like to be considered for the open interviews. ______Yes ______No
Appendix D

Demographic Information

1. How old are you?

2. Are you currently working?
   1. Yes, full-time
   2. Yes, part-time
   3. Yes, casual
   4. No [If no, skip to 12]
*updated at Wave 2

3. What is the highest level of education you have completed?

*updated at Wave 2

4. Were you abused as a child or adolescent? (Check ALL that apply)
   1. Physical abuse
   2. Sexual abuse
   3. Emotional/psychological/verbal abuse
   4. Witnessed violence between parents or other family members
   5. Neglect
   6. Not abused
##Appendix E

###Composite Abuse Scale

I would like to know if you experienced any of the actions/threats below and how often it happened in the last 12 months that you were with your abusive ex/partner. The following items are worded as if you were directly responding to them. Please indicate the number that matches the frequency over the 12 month period.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Only Once</th>
<th>Several times</th>
<th>Once a month</th>
<th>Once a week</th>
<th>Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Told me that I wasn’t good enough.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9.</td>
<td>Kept me from medical care.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10.</td>
<td>Followed me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11.</td>
<td>Tried to turn my family, friends and children against me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12.</td>
<td>Locked me in the bedroom.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13.</td>
<td>Slapped me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14.</td>
<td>Raped me. (definition: physically forced sexual act)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15.</td>
<td>Told me that I was ugly.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16.</td>
<td>Tried to keep me from seeing or talking to my family.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17.</td>
<td>Threw me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18.</td>
<td>Hung around outside my house.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19.</td>
<td>Blamed me for causing their violent behaviour.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20.</td>
<td>Harassed me over the telephone.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21.</td>
<td>Shook me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22.</td>
<td>Tried to rape me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Never</td>
<td>Only Once</td>
<td>Several Times</td>
<td>Once a Month</td>
<td>Once a Week</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------</td>
<td>-------</td>
<td>-----------</td>
<td>---------------</td>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>23.</td>
<td>Harassed me at work.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24.</td>
<td>Pushed, grabbed or shoved me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25.</td>
<td>Used a knife or gun or other weapon.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26.</td>
<td>Became upset if dinner/housework wasn’t done when they thought it should be.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27.</td>
<td>Told me I was crazy.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>28.</td>
<td>Told me no one would ever want me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29.</td>
<td>Took my wallet and left me stranded.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>30.</td>
<td>Hit or tried to hit me with something.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>31.</td>
<td>Did not want me to socialize with my female friends.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>32.</td>
<td>Put foreign objects in my vagina.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>33.</td>
<td>Refused to let me work outside the home.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>34.</td>
<td>Kicked me, bit me or hit me with a fist.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>35.</td>
<td>Tried to convince my family, friends, or children that I was crazy.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>36.</td>
<td>Told me that I was stupid.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>37.</td>
<td>Beat me up.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Appendix F

PTSD Checklist

I will read a list of problems or difficulties that people sometimes have in response to stressful life experiences, such as being assaulted or abused. Please answer using the following 5-point scale with 0 being ‘Not at all’ and 4 being ‘Extremely’.

( Interviewer, use Scale Package #1-HP )

| 0 – Not at all | 1 - A little bit | 2 – Moderately | 3 - Quite a bit | 4 - Extremely |

In the past month how much have you . . . . . . . .

60. Been bothered by repeated, disturbing memories, thoughts, or images of abuse or violence?

61. Been bothered by repeated disturbing dreams about abuse?

62. Suddenly acted or felt as if abuse was happening again [as if you were reliving it]? Been bothered by feeling very upset when something reminded you of abuse?

In the past month how much have you . . . .

63. Been bothered by having physical reactions when something reminded you of abuse, (e.g., your heart pounding, trouble breathing, sweating)?

64. Avoided thinking about or talking about abuse?

65. Avoided activities or situations because they reminded you of abuse?

66. Had trouble remembering important parts of abuse?

67. Felt a loss of interest in activities that you used to enjoy?

In the past month how much have you . . . .

68. Experienced feeling distant or cut off from other people?

69. Felt emotionally numb or unable to have loving feelings for those close to you?

70. Experienced feeling as if your future will somehow be cut short?

71. Had trouble falling asleep or staying asleep?

72. Experienced feeling irritable or having angry outbursts?
In the past month how much have you . . . .
73. Had difficulty concentrating?

74. Experienced being “super-alert” or watchful or on guard?

75. Felt jumpy or easily startled?
Appendix G

Recruitment Form

Criteria

All participants must meet the following criteria to be considered for the study.

☐ You experienced intimate partner violence and the last incident happened since January 2000.

☐ The last incident happened before 3 months ago and you don't feel like you are in crisis.

☐ You are willing to stay in the study for the next 3 1/2 years.

☐ You are not getting any treatment or on any medication that you feel might interfere with your ability to do a two-hour interview.

Interest in Participating

If you are interested in participating in the study please print your name, a phone number and a time we can call you in the spaces below and return this form to agency staff or mail to the address listed below. If you would prefer we contact you some other way, please tell us how you would like to be contacted. Please print clearly.

__________________________
(print name)

_____________________________________________________________________
(phone number or other form of contact)

_____________________________________________________________________
(day and time when you can be reached)

_____________________________________________________________________
(agency where you heard about the project)

Mail to:

Dr. Mary Hampton
Professor of Psychology
Luther College, University of Regina
Regina, SK S4S OA2

Or call: 337-2629

Your participation is voluntary, so you may choose not to participate without any effect on the services you receive from any shelter or service provider agency. If you have any reservations at all about participating in this research process, please feel free to withdraw from the study. Furthermore, you are free to refrain from answering any questions.
Appendix H

Bar Graph Depicting Childhood Abuse Experiences

Note. $N = 183$
Appendix I

Breakdown of Current Study and Healing Journey Project

Healing Journey Project Timeline and Questionnaires

<table>
<thead>
<tr>
<th>Wave 1 (September 2005; 665 participants)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demography and History</td>
</tr>
<tr>
<td>General Functioning and Service Utilization</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wave 2 (April 2006; 595 participants)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update of Demography and History</td>
</tr>
<tr>
<td>Update of General Functioning and Service Utilization</td>
</tr>
<tr>
<td>Health and Parenting</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wave 3 (November 2006; 504 participants)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update of Demography and History</td>
</tr>
<tr>
<td>Update of Health and Parenting</td>
</tr>
<tr>
<td>General Functioning and Service Utilization</td>
</tr>
<tr>
<td>Health and Parenting</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wave 4 (May 2007; 485 participants)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update of Demography and History</td>
</tr>
<tr>
<td>Update of General Functioning and Service Utilization</td>
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<tr>
<td>Health and Parenting</td>
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</table>

<table>
<thead>
<tr>
<th>Wave 5 (November 2007; 453 participants)</th>
</tr>
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<tbody>
<tr>
<td>Update of Demography and History</td>
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<td>Update of Health and Parenting</td>
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<tr>
<td>General Functioning and Service Utilization</td>
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<tr>
<td>Health and Parenting</td>
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</table>

<table>
<thead>
<tr>
<th>Wave 6 (May 2008; 419 participants)</th>
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</thead>
<tbody>
<tr>
<td>Update of Demography and History</td>
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<tr>
<td>Update of General Functioning and Service Utilization</td>
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<tr>
<td>Health and Parenting</td>
</tr>
<tr>
<td>Labour Market Questionnaire</td>
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<table>
<thead>
<tr>
<th>Wave 7 (November 2008; 380 participants)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update of Demography and History</td>
</tr>
<tr>
<td>Update of Health and Parenting</td>
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<tr>
<td>General Functioning and Service Utilization</td>
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Waves and Data Accessed for Current Study (Only SK Data)

<table>
<thead>
<tr>
<th>Wave 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, childhood abuse, employment, education, children in the home</td>
</tr>
<tr>
<td>Composite Abuse Scale</td>
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</table>

<table>
<thead>
<tr>
<th>Wave 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update on Demography and History (employment, education level, children in the home, Composite Abuse Scale)</td>
</tr>
<tr>
<td>Health and Parenting (PTSD symptoms)</td>
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</table>

<table>
<thead>
<tr>
<th>Wave 3</th>
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<tbody>
<tr>
<td>Not relevant to the current study</td>
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<table>
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<th>Wave 4</th>
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</table>

<table>
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<tr>
<th>Wave 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not relevant to the current study</td>
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<table>
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<tr>
<th>Wave 6</th>
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</thead>
<tbody>
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<td>Not relevant to the current study</td>
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</table>

<table>
<thead>
<tr>
<th>Wave 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not relevant to the current study</td>
</tr>
</tbody>
</table>

Structure of the current study in relation to the Healing Journey Project

Note. Questionnaires (e.g., Demography and History) are groups of questions and measures by topic; Updates focus on limited portion of larger questionnaire