

RISK, RESPONSIVITY, AND THE TREATMENT PROCESS IN AN
INTIMATE PARTNER VIOLENCE GROUP PROGRAM

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ABSTRACT

High attrition and recidivism rates are particularly common among intimate partner violence (IPV) offenders (Stith, Smith, Penn, Ward, & Tritt, 2004; Jewell & Wormith, 2010). This is problematic given that IPV is prolific and harmful to individuals, families, and societies (García-Moreno et al., 2013). Drawing upon theories of change and rehabilitation (e.g., Bonta & Andrews, 2017; Burrows & Needs, 2009; Ward, Day, Howells, & Birgden, 2004), this project examined the role of static and dynamic offender characteristics as well as treatment processes within an IPV group program. This research sought to improve what is currently known about promoting program engagement and retention, reducing and managing IPV risk, and preventing and predicting recidivism.

The study used a mixed-model, repeated-measures design. Participants included 88 men who attended a community-based IPV group program. Risk was measured using the ODARA and the SARA-V3. Participant demographic and legal history information were collected from the community agency's files. Self-report questionnaires served to measure dynamic specific responsivity factors (DRFs; i.e., motivation for treatment, readiness to change IPV, confidence in treatment effectiveness, and self-efficacy) and three treatment process variables (TPVs; i.e., treatment satisfaction, therapeutic alliance, and group cohesiveness). Program engagement served as both a process variable and an outcome measure, which was rated by facilitators. Other outcome measures included attendance, the achievement of short-term treatment targets, changes in risk, and recidivism.

The findings suggested that the program examined in the current study was effective in reducing risk and preventing recidivism. As well, many specific responsivity factors and TPVs were found to be interrelated and dynamic. Most DRFs and TPVs were important for building program engagement, which in turn was associated with the achievement of short-term treatment targets. Various individual characteristics (legal history, risk, specific responsivity factors) and TPVs were also associated with treatment outcomes, which carry implications for assessment, intervention, and case management. For instance, changes in risk on the SARA-V3 was shown to predict recidivism. Overall, the current findings may provide guidance regarding how interventions may be tailored to the often-changing expression of specific responsivity factors and offender responses to IPV group programming. Further research on external factors that may impact program retention and effectiveness is recommended.

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DEDICATION

This dissertation is dedicated to my mentor, Steve.

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CHAPTER 1: LITERATURE REVIEW AND THEORETICAL RATIONALE

1.1 Introduction

The World Health Organization has identified intimate partner violence (IPV) as an internationally widespread human rights and public health issue (García-Moreno et al., 2013). Internationally, nearly one third of ever-partnered women have experienced physical or sexual IPV (García-Moreno et al., 2013). In Canada, IPV accounted for over a quarter of all police-reported violent crime, having generated over 92,000 victims in the year 2015 (Burczycka & Conroy, 2017). In a nationally-representative sample of 530 American men, 19.2% admitted that they had perpetrated IPV at some point in their life (Singh, Tolman, Walton, Chermack, & Cunningham, 2014). Such a prolific problem is troubling, for victims of IPV not only suffer from direct physical injury, but long-term health issues (i.e., chronic pain, brain injury) as well (Campbell, 2002). Moreover, IPV has been associated with increased odds (OR = 2.16) of miscarriage/induced abortion (García-Moreno et al., 2013) and children commonly incur incidental injuries as a result of IPV (Plichta, 2004); furthermore, a multitude of research has demonstrated that childhood exposure to IPV negatively impacts behavioural and emotional development (Stover, 2005). IPV is also life-threatening, for it accounts for approximately 45% to 60% of homicides of North American women (Campbell, 2002). Suicide is also more common (OR = 4.54) among women who have experienced IPV (García-Moreno et al., 2013). Furthermore, at least 40% of women who have suffered from physical IPV have also suffered sexual IPV according to a study by McCauley and colleagues (1995); it is therefore not surprising that long-term and consistent gynaecological issues are remarkably common among victims of IPV in comparison to non-victims (Campbell, 2002). What is more, many studies have highlighted an association between being a victim to IPV and the development of a mental disorder, with victims of IPV suffering from higher rates of depression, anxiety, post-traumatic stress disorder, and alcohol use disorders (García-Moreno et al., 2013; Golding, 1999). The human costs associated with IPV are clear.

There is a considerable economic impact associated with IPV as well. In Canada, the total cost of spousal violence (only including common-law, married, ex-common-law or ex-married couples) was over \$7.4 billion in 2009 alone (Zhang, Hoddenbagh, McDonald, & Scrim,

2012). The majority of costs were associated with victims (i.e., health care, mental health services), valuing almost \$6 billion, while the remainder included criminal and civil justice system costs as well as third-party costs (i.e., funeral expenses, social services operating costs, negative impact on children exposed to the violence; Zhang et al., 2012). More recent data from 2015 suggest that the economic impact of IPV is considerably more, for dating violence (not included in the above estimate) accounted for over half of all police-reported IPV in Canada (Burczycka & Conroy, 2017). Evidently, IPV is prominent, harmful, and costly. Given the severity of this issue, effective intervention for men who have used IPV is invaluable.

In general, correctional treatment that follows principles of effective correctional intervention (see Bonta & Andrews, 2017) can reduce recidivism rates by approximately 50% in comparison to recidivism rates of offenders who receive inappropriate treatment or criminal sanctions alone (Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen 1990a). Disappointingly, a meta-analysis showed that offenders who attended IPV treatment were only five percent less likely to reoffend against an intimate partner than those who did not attend treatment (Babcock, Green, & Robie, 2004). What is presently known about effective correctional intervention is not exhaustive and its successful implementation appears to be lacking in IPV treatment. As stated by Wormith and colleagues (2007), “there is a great deal of latitude for offender services to vary within the parameters of these...principles” (of effective correctional intervention; p. 882). Furthering knowledge on what accounts for the variability in the effectiveness of correctional programming might be gained by researching the processes of in-group treatment (i.e., factors related to program engagement, group dynamics, and attrition), in addition to improving the successful implementation of programs based upon the principles of effective correctional intervention (Wormith et al., 2007). Efforts have been made to facilitate service providers’ abilities to implement programs that adhere to principles of effective correctional intervention (see Gendreau & Andrews, 2001) although there remains a gap in the literature regarding the processes that occur within the black box of correctional group programming.

The degree to which offender rehabilitation is successful depends upon complex processes of change. The current research intended to ameliorate current knowledge by studying factors that affect the process of change in IPV correctional programming. Factors that relate to in-group treatment processes as well static and dynamic offender characteristics were explored in

order to better understand how they relate to program attrition, achievement of treatment targets, changes in risk, and recidivism. This research sought to contribute to the development of more effective correctional programming. This might allow for more offenders to make positive personal and relational changes, thus reducing recidivism. Crime will decrease as reoffending diminishes, which in effect places less of a demand on the resources of the criminal justice system and reduces the human and societal costs associated with IPV.

1.2 Risk-Need-Responsivity Model

The risk-need-responsivity (RNR) model of effective correctional intervention provides clear direction for the development of best practices in offender rehabilitation. The RNR model offers a framework for correctional treatment and case management that has shown to improve the effectiveness of correctional treatment by significantly reducing recidivism (Andrews, Bonta, & Hoge, 1990b; Andrews & Dowden, 2006). The RNR model posits that rehabilitative efforts will be most effective when matched to an offender's risk level, when criminogenic needs (dynamic risk factors) are targeted, and when responsivity factors are addressed (Andrews et al., 1990b).

The risk principle asserts, and studies have shown, that the level of intensity of a program is most effective at reducing recidivism if it is matched to the risk level of the offender (Bourgon & Armstrong, 2005; Lowenkamp, Latessa, & Holsinger, 2006). Thus, higher risk offenders should receive the most intensive and a higher dose of treatment (Bonta & Andrews, 2017). Low risk offenders require only minimal or no intervention. Although there is generally a small positive effect for low risk offenders, correctional intervention has at times increased their risk (Bonta & Andrews, 2017; Andrews & Dowden, 2006).

The need principle indicates that intervention must focus on areas that have been shown to contribute to criminal behaviour; these are referred to as dynamic risk factors or criminogenic needs (Bonta & Andrews, 2017). Upon reviewing a number of meta-analyses, Bonta and Andrews (2017) identified eight criminogenic needs that consistently predict criminal behaviour. These “central eight” include: history of antisocial behaviour, antisocial personality pattern, antisocial cognition and attitudes, negative associates, substance abuse, quality of family/marital relationships and circumstances, performance and involvement in work or school, as well as

satisfaction and involvement in leisure and recreational activities (Bonta & Andrews, 2017). A recent study suggested that the central eight may be more prevalent among IPV offenders (Hilton & Radatz, 2018), although risk factors that have been found to be particularly salient for IPV are reviewed in a following section.

The responsivity principle relates to the manner in which service is provided, of which there are two components. The general responsivity component states that cognitive-behavioural and social learning strategies should be used when providing correctional intervention, given their well-established effectiveness (Bonta & Andrews, 2017). Specific responsivity requires that the intervention is provided in a way that matches the learning styles and abilities of the offenders, while also taking into consideration specific offender attributes and circumstances that may impact their ability to benefit from treatment (Andrews et al., 1990b; Kennedy, 2000). The current research sought to enhance knowledge on specific responsivity by examining potential dynamic specific responsivity factors (DRFs), such as offender self-efficacy and motivation, as well as static specific responsivity factors, such as offender demographics. This examination took place in order to better understand the manner in which correctional intervention can more effectively assist offenders in making prosocial changes; thus, theories of change are reviewed in the proceeding sections to further supplement the RNR model.

1.3 Transtheoretical (Stages of Change) Model

Historically, there has been much emphasis on change as a step-by-step procedure, as per Prochaska and DiClemente's (1982) well-researched Transtheoretical (Stages of Change) Model. The Transtheoretical Model describes the change process as a progression through various stages of change, with individuals displaying increasing levels of motivation and change behaviours as they advance through the stages. This model has highlighted the dynamic nature of motivation, in contrast to earlier views that motivation was state-based, in that it was either fully present or completely absent (Serin & Kennedy, 1997). Other research has shown that determining an offender's stage of change is useful for the assessment of risk (e.g., Olver, Wong, Nicholaichuk, & Gordon, 2007). The Transtheoretical Model has also provided guidance on how therapists should work with clients differently depending upon on their stage of change (i.e., level of motivation; Prochaska & DiClemente, 1982).

Despite this model's contributions, its suitability has been questioned for understanding the complex processes of change in an offender context (Mossière & Serin, 2014). In an analysis of IPV intervention literature, Gondolf (2011) reported that among men who had a history of perpetrating IPV, their pre-treatment stage of change was not predictive of program completion in three different studies (Alexander & Morris, 2008; Brodeur, Rondeau, Brochu, Lindsay, & Phelps, 2008; Eckhardt, Holtzworth-Munroe, Norlander, Sibley, & Cahill, 2008). The Transtheoretical Model has also been critiqued for its arguable inflexibility (Drieschner, Lammers, & Van Der Staak, 2004) and questioned as to whether genuine stages do indeed exist (West, 2005; Gondolf, 2011). In fact, an analysis of 87 studies on the Transtheoretical Model found that the stages are not mutually exclusive and that individuals often do not move through the stages sequentially (Budd & Rollnick, 1996). There seems to be a theoretical shifting towards conceptualizing change as an interactive, multidimensional, and ongoing process, as evidenced by a number of recent models of offender change.

1.4 Models of Offender Change

1.4.1 Multifactor Offender Readiness Model

Ward, Day, Howells, and Birgden's (2004) Multifactor Offender Readiness Model (MORM) entails a multidimensional conceptualization of treatment readiness, with the emphasis on preconditions for change. Ward and colleagues (2004) explained that treatment readiness encompasses both personal/internal factors, as well as contextual/external factors, that ideally interact to form an environment conducive to therapeutic engagement (Ward et al., 2004).

The personal/internal factors consist of cognitive, affective, volitional, personal identity, and behavioural factors. The MORM maintains that treatment readiness is affected by cognitive factors, such as cynical beliefs, self-efficacy, and resistance, as well as client perceptions of treatment, the therapist, and expected outcomes. Affective factors are also incorporated into the model, such as initial level of distress or feelings related to the offence, as well as volitional factors, such as motivation and intention to achieve goals. The model also lists behavioural factors, which include the cognitive abilities and skills that influence whether individuals are able to partake in the therapeutic process. Ward and colleagues (2004) stated that an offender's

beliefs surrounding the appropriateness of his or her behaviour is a behavioural factor, yet this seems to be more appropriately categorized as a cognitive or volitional factor.

There are also several external factors included in the MORM, which if possible, create a therapeutic environment for offender rehabilitation. For instance, the model takes into consideration offender circumstances, such as whether the treatment is mandated or voluntary; however, it is proposed here that examining the level of motivation may be more informative than focusing on whether an offender is mandated or not, for an offender can be legally mandated but also motivated. Ward and colleagues (2004) acknowledged that subjective coercion or motivation cannot be assumed based on legal status or whether treatment is mandated (Farabee, Shen, & Sanches, 2000; Prendergast, Farabee, Cartier, & Henkin, 2002); they therefore propose that considering an offender's mandated versus voluntary status is more relevant when the offender in question has high levels of perceived coercion. Other contextual/external factors identified by the MORM include the location of the treatment (i.e. custody or community) and the nature of interpersonal or social support (i.e., family, correctional officers, probation officer). The model also includes factors such as program resources (i.e., quality of treatment, trained and qualified staff) and opportunity for treatment (i.e., availability of the program). Finally, the MORM includes programmatic/timing factors, which consist of the offender's perception of whether the proposed treatment program is an effective means to the intended goals (i.e., desistance from crime) and whether the offender feels he or she is ready to start treatment (Ward et al., 2004). All in all, this model provides an interesting conceptual framework when considering preconditions for change.

1.4.2 Readiness for Change Framework

Bearing certain similarities to the MORM, Burrowes and Needs' (2009) Readiness for Change Framework combines the Context of Change Model (CCM) with the Barriers to Change Model (BCM). The CCM is comprised of three components: the individual's internal context, catalysts, and the environment of change. An individual's internal context consists of personal characteristics such as demographics, self-concept, and personal goals (Burrowes & Needs, 2009). Catalysts are factors that contribute to the momentum towards change, such as a correctional program or a relationship (Burrowes & Needs, 2009). The extent to which a catalyst affects an individual may depend upon the specific environment in which it occurs; for

example, a correctional program's effectiveness will depend upon its treatment goals, its length, and therapist characteristics (Burrowes & Needs, 2009). The third component is the greater environment in which the change takes place, which may consist of opinions and support from family and friends regarding the intended change, as well as the institutional climate (Burrowes & Needs, 2009). Finally, the economic, social, political, and cultural context is theorized to influence change from a macro level, such as government funding for rehabilitation programs (Burrowes & Needs, 2009).

The BCM includes primarily cognitive factors that relate to the individual's perception of whether change is important, needed, beneficial, urgent, or costly (Burrowes & Needs, 2009). Barriers also include the individual's perception of whether he or she is personally responsible for change, whether he or she has the ability to change and maintain that change, whether the suggested change is realistic, and whether the suggested means of change (i.e. a correctional program) is suitable to achieve that change (Burrowes & Needs, 2009). The Readiness for Change Framework assumes that readiness is not solely a state that occurs prior to treatment, and that factors related to readiness are influenced throughout the change process (Burrowes & Needs, 2009). This theory that these internal states may change over the course of an intervention was incorporated into the current study design.

1.4.3 TCU Treatment Process Model

The Texas Christian University's (TCU) Treatment Process Model assumes an interactive and multifaceted perspective of change (Simpson, 2004). This model posits that client attributes such as readiness for treatment, motivation for change, problem severity, and individual needs, interact with program attributes such as resources, policy, staff skills, client satisfaction with treatment, and the treatment climate. The interaction between client and program attributes influences the development of the therapeutic relationship and the degree to which clients participate and engage in programming (Simpson, 2004). This model states that the interaction between the therapeutic relationship and the client's engagement in the program determines the client's potential for personal change, program retention, and post-treatment outcomes (Simpson, 2004). This model also acknowledges that these processes occur within the context of the program's treatment curriculum, which is a primary factor in post-treatment outcomes (Simpson, 2004). Although this model has thus far been applied to addictions treatment and substance-

abusing offenders (Simpson, Knight, & Dansereau, 2004), the dynamic and complex nature of this model may be relevant to IPV intervention as well.

1.5 Organizational Change Theory

Organizational psychology offers two theories that may enhance understanding of the processes and context of change among offenders in treatment.

1.5.1 A Process Model of Organizational Change

Stevens (2013) proposed a process model that is specific to organizational change, yet its concepts may also inform the change process in correctional programming. Similar to other theories, Stevens (2013) suggested that change is a process, and that it should holistically consider an individual's context and environment over time, along with the individual's cognitive and affective evaluations of the intended change. If this theory were to be applied to an IPV program, the environmental and contextual aspects, such as the program facilitator and other participants in programming, would contribute to a particular environment that affects how the participant responds to the proposed change in treatment. Similarly, prior experiences in programming might also affect the participant's expectations, and thus affect his or her pre-treatment attitudes.

1.5.2 Necessary Precursors for Change: A Cognitive Perspective

Armenakis and Harris (2009) developed a theory regarding the necessary precursors for change in organizational settings from a primarily cognitive perspective. They asserted that change is based upon beliefs, attitudes, and intentions regarding change (Armenakis & Harris, 2009). For instance, individuals who are contemplating change must determine whether change is desirable and needed, and also whether the proposed method of change is appropriate and effective. As well, they suggested that individuals must believe that change can be implemented successfully (Armenakis & Harris, 2009). Individuals will also look to see if others (i.e., other participants in a group program) are supportive of the change (Armenakis & Harris, 2009). These factors can be influenced by the change agent (Armenakis & Harris, 2009); in the context of correctional programming, change agents are most obviously program facilitators, but they could also include case managers and parole/probation officers.

1.6 Intimate Partner Violence

Research literature in the areas of risk and intervention for IPV fits well within the interactive, multidimensional, and processed-based theories of change described above.

1.6.1 IPV and Risk

1.6.1.1 The nested ecological framework. The nested ecological framework offers an etiological theory for IPV that has been used to guide the study and assessment of risk for the perpetration of IPV (Bennett, Stoops, Call, & Flett, 2007; Dutton, 1995; Stith, Smith, Penn, Ward, & Tritt, 2004). The nested ecological framework maintains that there are four ecological levels that contribute to the perpetration of IPV (Dutton, 1995). The broadest level is the macrosystem, which includes general cultural values and beliefs, such as patriarchy. Within the macrosystem, the exosystem exists, which consists of the offender's formal and informal social structures, such as employment and friendships. The microsystem is more specific in that it refers to the context in which IPV occurs, such as relationship dynamics, family structure, and antecedents to violence. Finally, the ontogenetic level is the most specific. It consists of individual characteristics, which include learned behaviours, cognitions, and emotional expression, such as substance abuse, attitudes condoning violence, and communication skills. Factors on the ontogenetic level are assumed to be resultant from an offender's developmental and relationship history as per social learning theory (Bandura, 1979; Dutton, 1995). Thus, theory regarding the etiology and risk factors for IPV is based upon interacting systems including factors internal to the individual, as well as broader relational, social, cultural, and societal influences.

1.6.1.2 Risk factors for the perpetration of IPV. Guided by the nested ecological framework, Stith and colleagues (2004) conducted a meta-analysis with 85 studies that examined risk factors for the perpetration of physical abuse among heterosexual and married or cohabitating couples. The focus was primarily upon ontogenetic and microsystemic factors. The meta-analysis revealed large effect sizes for a history of perpetrating emotional abuse and forced sex, illicit drug use, attitudes condoning marital violence, and marital dissatisfaction (Stith et al., 2004). Moderate effect sizes were found for traditional sex-role ideology, anger/hostility, history of partner abuse, alcohol use, depression, and career/life stress (Stith et

al., 2004). A later meta-analysis conducted by Stith, Green, Smith, and Ward (2008) found that marital discord was moderately associated with IPV, especially when the individual who used IPV was male and the victim was female. Other meta-analyses have explored some of these variables with couples that included unmarried and non-cohabitating couples; consistent with Stith and colleagues' (2004) findings, two meta-analyses found that anger, hostility, and internalizing negative emotions were moderately associated with the perpetration of IPV, and that these variables became more relevant as the severity of IPV increased (Birkley & Eckhardt, 2015; Norlander & Eckhardt, 2005; Stith et al., 2004). Also complementary to Stith and colleagues' findings (2004), a meta-analysis by Foran and O'Leary (2008) found that alcohol use had a moderate effect size in predicting male-to-female IPV and that alcohol use was a stronger predictor in clinical samples and as the severity of alcohol problems increased. Weaker yet significant predictors of IPV recidivism included jealousy, unemployment, young age, as well as low education and income (Stith et al., 2004).

Research on risk factors for IPV continues to grow. There is increasing evidence that lower education and/or employment problems (Franklin & Kercher, 2012), younger age (Franklin & Kercher, 2012), being unmarried, (Franklin & Kercher, 2012), poverty (Bair-Merritt et al., 2008), patriarchal or traditional gender role attributions (Santana, Raj, Decker, Marche, & Silverman, 2006), attitudes that condone violence (Franklin & Kercher, 2012; Santana et al., 2006), and affect disturbance (Swogger, Walsh, & Kosson, 2007) are associated with IPV recidivism. Other research shows that antisocial personality pattern is a predictor of IPV (Hanson Cadski, Harris, & Lalonde, 1997; Harris, Hilton, & Rice, 2011; Hilton & Harris, 2005; Magdol et al., 1997). This substantial body of literature on IPV risk factors has been used in the assessment and measurement of risk.

1.6.1.3 Risk measurement and the prediction of recidivism. The area of forensic risk assessment has developed considerably over the last three decades, with more recent “generations” of risk assessment incorporating criminogenic needs as risk factors that are dynamic and changeable in nature (Andrews, Bonta, & Wormith, 2006). This concept of dynamic risk carries the implication that risk for recidivism may be reduced using targeted correctional interventions. There have since been many studies that have examined the predictive utility of risk measures that utilize both static and dynamic risk factors. Yet, as

highlighted by Douglas, Otto, Desmarais, and Borum (2012), comparably fewer studies have examined the predictive validity of changes in risk. Research to date has demonstrated support for the utility of risk change scores in the prediction general recidivism (e.g., Cohen, Lowenkamp, & VanBenschoten, 2016; Labrecque, Smith, Lovins, & Latessa, 2014; Vose, Smith, & Cullen, 2013), general violence (e.g., De Vries Robbe, de Vogel, Douglas, & Nijman, 2015; Lewis, Olver, & Wong, 2013), and sexual violence (e.g., Olver et al., 2007; Olver & Wong, 2011).

To date, no study has examined the predictive utility of change on IPV-specific risk tools. A meta-analysis by Hanson, Bourgon, and Helmus (2007) found that risk assessment tools designed to predict general violence and IPV recidivism both demonstrated moderate predictive accuracy on average. The current research used the Ontario Domestic Assault Risk Assessment (ODARA), an actuarial measure of static risk, as well as the Spousal Assault Risk Assessment Guide – Version 3 (SARA -V3), a structured professional judgment measure that measures both static/stable and dynamic risk/need areas. The use of both measures in the assessment of IPV offenders is supported by a recent study by Olver and Jung (2017), which found that a modified SARA-V2 and the ODARA both demonstrated incremental predictive validity of general recidivism; the ODARA demonstrated greater incremental predictive accuracy of general violence and the SARA-V2 demonstrated greater incremental predictive accuracy of IPV recidivism. The current study examined the predictive validity of changes in risk as measured by the SARA-V3.

1.6.1.4 Risk factors for attrition from IPV treatment. The factors that put offenders at risk of attrition from IPV treatment are also worthy of investigation, given the association between program attrition and recidivism (Gordon & Moriarty, 2003; McMurrin & Theodosi, 2007). A 30-study meta-analysis by Jewell and Wormith (2010) found that individuals who were employed, older, and court-mandated to attend treatment were more likely to complete IPV programming successfully than their unemployed, younger, and self-referred counterparts. Modest predictors of program attrition included having a previous history of IPV, having lower levels of income and education, being unmarried, being an ethnic minority, having a more significant criminal history, as well as struggling with drug and alcohol use (Jewell & Wormith,

2010). Therefore, there is some overlap between variables that predict recidivism and attrition, although there are differences in the strength of these predictors.

Certain predictors of attrition may be moderated by the treatment curriculum and theoretical basis of the intervention in question; Jewell and Wormith's (2010) findings displayed that program retention depends upon an interaction between the theoretical orientation of treatment and the individual characteristics of the participants. Specifically, individuals with higher levels of education and who were court-mandated to attend treatment were more likely to complete feminist psychoeducational programs; in contrast, individuals who were older were more likely to complete cognitive-behavioural programs (Jewell & Wormith, 2010). Such findings support the need for further exploration of specific responsivity factors and programmatic or treatment variables that may affect program effectiveness and retention, which in turn predict recidivism (Jewell & Wormith, 2010). Generally, certain demographic factors and other individual characteristics may act as specific responsivity factors, and treatment effectiveness is reduced when these responsivity considerations are not addressed in the treatment design and delivery process (Serin & Kennedy, 1997). It is proposed here that certain individual characteristics may affect factors relevant to the in-group treatment processes, which in turn affect the manner in which participants benefit from treatment. For example, a participant with low motivation may not be engaged in treatment, thus leading that individual to benefit very little from treatment and ultimately reoffend. Should the treatment program build motivation, engagement would perhaps increase, as would that client's ability to benefit from the program.

1.6.2 Intervention

Many of the risk factors for IPV are dynamic in nature and thus amenable to change through rehabilitative efforts. As alluded to above, there are two general approaches that have been used most frequently in the treatment of IPV offenders: the Duluth model and cognitive-behavioural therapy (CBT). The Duluth model is guided by a feminist psychoeducational approach (Babcock et al., 2004). CBT-based interventions target skill development and anger management techniques to provide participants with alternatives to violence; as well, attitudes, values, and emotional components relevant to the perpetration of IPV are often addressed (Babcock et al., 2004; Dunford, 2000). Nonetheless, these two models have some similarities and often tend to overlap in practice (Babcock et al., 2004).

A meta-analysis that included 22 studies of experimental or quasi-experimental designs found that offenders who attended IPV treatment were five percent less likely to reoffend than offenders who did not attend treatment (Babcock et al., 2004). The overall effect size of treatment was found to be small, with no statistically significant differences between the effectiveness of program's following the Duluth model (Cohen's $d = 0.35$) and CBT-based programs (Cohen's $d = 0.29$). Even with small effect sizes, such reductions in recidivism translate into thousands fewer victims per year (Babcock et al., 2004). Nonetheless, there is clearly ample opportunity to improve the effectiveness correctional interventions for IPV.

The effectiveness of correctional intervention in general has been found to vary considerably, depending on the degree to which programs follow principles of risk, need, and responsivity (Bonta & Andrews, 2017; Wormith et al., 2007). There are certain programmatic structures that are known to be ineffective and potentially counterproductive in correctional intervention, generally (Andrews et al., 1990a). Unstructured, peer-oriented group counselling, permissive relationship-oriented, and deterrence-based approaches have shown to be ineffective with offenders (Andrews et al., 1990a). As such, program characteristics ought to be considered when assessing the effectiveness and processes in correctional programs.

1.6.3 Qualitative Models and Understandings of Change

Many qualitative studies have examined the experiences of men who have used IPV. The following studies provide an enhanced understanding of dynamics that may lead to desistance from abusive behaviours in intimate partner relationships.

Walker, Bowen, Brown, and Sleath (2015) provide perhaps the most detailed conceptual model of the process of desistance from IPV. This model was created using thematic analysis of interviews conducted with men who have used IPV (including persisters and desisters), female survivors of IPV, and IPV program facilitators. Change was found to be a dynamic, non-linear process (Walker et al., 2015). Those who desisted from IPV shifted to a new lifestyle and self-concept that did not condone IPV (Walker et al., 2015; Walker, Bowen, Brown, & Sleath, 2017, 2018). The process of change included moving away from their old way of being, which included justifying violence, poorly managing triggers, and using violence (Walker et al., 2015, 2017, 2018). The authors found that desisters took ownership of IPV behaviours and came to an

autonomous decision to change after a progressive accumulation of catalysts for change (Walker et al., 2015, 2017, 2018), which shares a conceptual overlap with Burrowes and Needs' (2009) CCM. The catalysts included negative consequences of IPV (e.g., impact on family, criminal justice system involvement, ending of a relationship) and negative emotional responses following IPV (i.e., guilt, fear, shock, acknowledgement of shame; Walker et al., 2015, 2017, 2018). The process of change to a nonviolent new way of being resulted from learning to “manage antecedents and triggers to violence” (i.e., building cognitive-behavioural and relapse prevention skills) and establishing a “permission to be nonviolent” (i.e., recognizing and internalizing responsibility for abusive behaviours, identifying the self as the agent of change, reconceptualizing the self as nonviolent) while relying upon “external support and input” (i.e., group-level influences and external systems of support and encouragement; Walker et al., 2015, 2017, 2018). In sum, desistance was related to interactions between external events and internal states such as personal agency, motivations, and beliefs; which are consistent with the theories of readiness and change described above.

Other qualitative studies of men who desisted from IPV or who successfully completed IPV treatment similarly found support for the importance of taking personal responsibility for abusive behaviours (Gondolf & Hanneken, 1987; Scott & Wolfe, 2000; Pandya & Gingerich, 2002), improving empathy (Gondolf & Hanneken, 1987; Scott & Wolfe, 2000), and applying skills learned in treatment (e.g., communication skills: Scott & Wolfe, 2000; Pandya & Gingerich, 2002). Similar to Walker and colleagues' (2015, 2017, 2018) finding that change resulted in part from the development of a new self-concept and way of being, Gondolf and Hanneken (1987) found that desisters from IPV viewed the change process as “long-term personal growth” which resulted in the redefinition of masculinity (away from a macho ideal; p. 187). Desisters in Gondolf and Hanneken's (1987) study likewise viewed treatment as a mechanism that facilitated their own intentions to change and grow.

As described previously, the nested ecological framework has been used to explain the etiology and risk factors of IPV, and Silvergleid and Mankowski (2006) found that this theory was also useful in understanding the process of change among men who have perpetrated IPV. Their study examined accounts of program facilitators of IPV intervention programs, as well as testimonies from successful program completers who were perceived by facilitators to have

made significant changes (Silvergleid & Mankowski, 2006). The findings were consistent with ecological and systems models of change in IPV treatment in that the program participants and facilitators reported that there were various contributors to the change process. These included community and extratherapeutic influences (i.e., the judicial system, family), organizational influences (i.e., qualities of the facilitators), group-level processes (i.e., a balance of support and confrontation in group, sharing and hearing stories, mentoring, "resocialization of manhood"), as well as individual psychological development (i.e., new skills, self-awareness, deciding to change). In particular, "group-level dynamics were the most strongly emphasized source of change identified by the facilitators and participants" (Silvergleid & Mankowski, 2006, p. 154). The sharing of stories, modeling, and mentoring enhanced trust and respect among program participants and facilitators, which allowed for a greater sense of commonality and less isolation or fear; this created a safe environment for both support and mutual confrontation (Silvergleid & Mankowski, 2006).

Dynamic understandings of change as per qualitative studies and the multidimensional models of change, rehabilitation, and desistance, reviewed above, guided the current research in identifying which factors may account for variability in the effectiveness of IPV correctional interventions. Specifically, factors relevant to the treatment process, responsivity, risk, and program integrity were explored.

1.7 Treatment Process Variables

The treatment process has been broadly defined as "the operations, procedures, and conditions underlying treatment" that encompass "individual differences in perceptions and experiences within the larger context of the treatment program" (Broome, Knight, Hiller, & Simpson, 1996, p. 488). Consistent with this definition, treatment process variables have been referred to as factors that arise from an interaction between attributes of the client, context, and therapist, which have an impact on therapeutic progress despite being separate from the actual treatment curriculum (Marshall et al., 2003; Simpson, 2004; Taft Murphy, King, Musser, & DeDeyn 2003). Such a relationship between client-specific factors and external factors are common in the theories and models of change reviewed above, despite the term "treatment process" not being overtly used (Armenakis & Harris, 2009; Burrowes & Needs, 2009; Simpson, 2004; Stevens, 2013; Walker et al., 2015; Ward et al., 2004). In order to more specifically

operationalize this construct for use in the context of correctional group programming, the researcher drew from these theories of change and the RNR model. In the current project, a treatment process variable is defined as a factor that results from an interaction between internal responsivity factors and external responsivity factors. Internal responsivity factors are the characteristics specific to the individual client, such as motivation, self-efficacy, and demographic factors (Serin & Kennedy, 1997). In contrast, external responsivity factors are the characteristics specific to the therapist or service provider, and the treatment setting (Serin & Kennedy, 1997). Thus, the interaction between these internal, client-specific factors and external responsivity factors affect the manner in which treatment progresses. Variables relevant to the treatment process are derived from such an interaction, which is of interest, for it is hypothesized that treatment process variables affect the degree to which offenders engage in, complete, and benefit from treatment.

A review of research literature and theories of change suggests that pertinent treatment process variables include program engagement, therapeutic alliance, group cohesiveness, and treatment satisfaction. The following sections will also describe two important measures that will be used to measure and operationalize certain components of the treatment process.

1.7.1 Program Engagement

As per the TCU's Treatment Process Model, program engagement is thought to enhance a client's potential to benefit from treatment, complete treatment, and have favorable post-treatment outcomes (Simpson, 2004). This model highlights the complexity of engagement, suggesting that program engagement results from an interaction between client participation and the therapeutic alliance. Client participation is theorized to be affected by a number of client characteristics, while the therapeutic alliance is theorized to be affected by a number of program attributes (Simpson, 2004). This model fits well within the current researcher's operationalization of treatment process variable, for program engagement is a primary component to the treatment process.

There has been little consistency to the manner in which program or treatment engagement has been defined in correctional research literature (Holdsworth, Bowen, Brown, & Howat, 2014). For example, engagement has at times been defined as the number of sessions

attended (e.g., Ting, Jordan-Green, Murphy, & Pitts, 2009), whether homework is completed (e.g., McCarthy & Duggan, 2010), the amount of participation in group activities (e.g., Sowards, O'Boyle, & Weissman, 2006), and scores based on various measures of engagement (Holdsworth et al., 2014). Although treatment engagement may refer to both individual and group treatment, the focus of the current research is upon client engagement in a group treatment setting, which will henceforth be referred to as program engagement.

The current research defines program engagement in a multifaceted manner, as per the seven dimensions of the facilitator-rated Group Engagement Measure (GEM); these dimensions include attendance, contributing, relating to the worker, relating with other members, contracting, working on one's own problems, and working on other members' problems (Macgowan, 1997; Macgowan, 2006). Attendance does not refer directly to the number of sessions attended, but instead refers to participant tendencies to arrive late or leave early from the program (Macgowan, 1997). Contributing entails the degree to which participants engage verbally and participate in group activities (Macgowan, 1997). Relating to the worker reflects how participants support the program facilitator(s) and relating with other members reflect prosocial interactions with others in the group (Macgowan, 1997). Contracting examines the degree to which participants agree with the policies, activities, and norms of the group (i.e., the expression of disapproval regarding the number of meetings; Macgowan, 1997). Working on one's own problems refers to the amount of effort participants put into addressing and acknowledging their own problems. Working on other members' problems entails encouraging others in the group to find solutions to their issues and attain treatment goals (Macgowan, 1997; Macgowan, 2006).

The GEM-27 (a shortened 27-item version of the original 37-item GEM) has previously been used to assess engagement in an IPV treatment program. Chovanec (2012) used the GEM-27 to assess engagement among 95 men attending an 18-week IPV intervention program. In this study, engagement scores increased significantly between early-treatment and mid-treatment, as well as between early-treatment and late-treatment (Chovanec, 2012). The median score for individuals who completed treatment was higher than the median score for those who dropped out of the program, although this difference was not statistically significant (Chovanec, 2012). These findings suggest that engagement is a dynamic phenomenon.

The current research assessed program engagement, the number of sessions attended, and attrition as three separate constructs, although research suggests that they are indeed related. A meta-analysis by Olver, Stockdale, and Wormith (2011) found that higher levels of program engagement predicted the successful completion of a variety of correctional intervention programs. While most research seems to examine correctional program engagement in relation to program retention/attrition, Drieschner and Verschuur (2010) also found it to be related to making risk-relevant changes in treatment. Despite the limited research on the relationship between program engagement and treatment outcomes, program engagement's relationship with attrition is of consequence, for two meta-analyses demonstrated that correctional program attrition is significantly associated with reoffending, including programs that target IPV (McMurran & Theodosi, 2007; Olver et al., 2011). Likewise, the number of program sessions attended predicted future rearrest among men who have a history of IPV (Gordon & Moriarty, 2003). Other research has found that higher risk offenders are more likely to drop out of treatment (Olver et al., 2011; Wormith & Olver, 2002), and meta-analyses have demonstrated that there are particularly high attrition rates in IPV programs (Jewell & Wormith, 2010; Olver et al., 2011). Given this information, it is apparent that examining factors that enhance program engagement and retention among IPV offenders could improve treatment effectiveness.

1.7.2 Group Cohesiveness

The treatment climate, or the context in which change takes place, has repeatedly been identified in change theory as an influential factor for change itself (Armenakis & Harris, 2009; Burrowes & Needs, 2009; Simpson, 2004; Walker et al., 2015, 2017, 2018). Accordingly, researchers and clinicians have suggested that group cohesiveness, a component of the treatment climate, is relevant to the overall effectiveness of group treatment (Marshall & Burton, 2010; Moos, 1986). Group cohesiveness reflects the degree to which program participants support each other and work together (Marshall & Burton, 2010).

Some research has explored the role of group cohesiveness in sexual offender, addictions, IPV, and general correctional programming. Beech and Fordham (1997) examined differences in group climate among 12 sexual offending outpatient and residential treatment programs; the participants that attended groups with supportive facilitators and high levels of group cohesion achieved the most therapeutic change. As well, Beech and Hamilton-Giachritsis (2005) found

that incarcerated sexual offenders benefitted more from treatment groups that had higher levels of cohesiveness, as participants in more cohesive groups experienced greater reductions in procriminal attitudes. Group cohesiveness has also been shown to predict program participation and homework completion among sexual offenders (Clark & Erooga, 1994). Likewise, peer support in residential addictions treatment was found to negatively correlate with rearrest in a sample of offenders (Broome et al., 1996). In terms of IPV treatment, a study by Rondeau, Brodeur, Brochu, and Lemire (2001) found that group cohesiveness did not distinguish between men that completed versus dropped out of programming. Such a finding is not to say that group cohesiveness is unimportant in IPV correctional programming; Taft et al. (2003) found that group cohesion, defined as group members' care and concern for one another, correlated positively with the strength of the therapeutic alliance, session attendance, homework completion, and less physically abusive behaviours six months post-treatment.

A number of qualitative studies echo the importance of the group environment and support between group members in IPV intervention. Wangsgaard (2001) found that offenders reported that the emotionally safe therapeutic environment, fostered from respect and mutual support among group members, facilitated their ability to gain insight and take responsibility for their abusive behaviours. Another study found that a climate characterized by commonality, trust, and respect allowed for balance between support and confrontation amongst group members, and between group members and program facilitators (Silvergleid & Mankowski, 2006). Men in another IPV intervention program found that they became more engaged in treatment upon experiencing group cohesion, a feeling of universality, and information-sharing with other group members (Roy, Châteauevert, & Richard, 2013). Studies conducted interviews with men following IPV group treatment; these interviews revealed that the participants perceived that having support and/or receiving feedback from fellow group members facilitated their abilities to acknowledge and change their abusive behaviours (Rosenberg, 2003; Walker et al., 2015, 2017, 2018). Similarly, Portnoy and Murphy (2017) found that men who reoffended following IPV treatment identified not having a safe space that enabled sharing inhibited the effectiveness of treatment.

Despite these intriguing findings, a quantitative examination of the degree to which group cohesiveness among IPV offenders affects the treatment process and subsequent outcomes is

sparse. Research on the therapeutic alliance, which is also theorized to contribute to the treatment climate, is more prevalent.

1.7.3 Therapeutic Alliance

Carl Rogers (1957) is the psychotherapist who was perhaps most influential in promoting the importance of the therapeutic alliance in treatment. The therapeutic alliance has been identified as a noteworthy component in the treatment of offenders as well. The RNR model highlights a “dual set” approach that consists of establishing a therapeutic alliance while also structuring treatment, in order to create an ideal therapeutic environment for offender rehabilitation (Andrews, Bonta, & Wormith, 2011). According to the MORM, therapist skills and qualifications are external factors that shape the context in which treatment takes place, which in turn interacts with client characteristics, thus influencing therapeutic engagement (Ward et al., 2004). Similarly, the TCU’s Treatment Process Model posits that the therapeutic alliance interacts with client participation in treatment, which contributes to varying levels of program engagement, which then influences program retention and post-treatment outcomes (Simpson, 2004). Additionally, the Readiness for Change Framework indicates that in order for a correctional program to be an effective catalyst for change, the therapist must have adequate training and skills (Burrowes & Needs, 2009).

Not only is the therapeutic alliance discussed in theory, it has shown to be effective in improving outcomes in both individual and group treatment, and there is growing evidence that it is also relevant to offender rehabilitation (Horvath & Symonds, 1991; Martin, Garske, Davis, 2000; Marshall & Burton, 2010; Taft & Murphy, 2007). Even in a sample of high-risk, psychopathic, violent offenders, Polaschek and Ross (2010) found that the therapeutic alliance increased significantly over 26 weeks of treatment programming, and that those with the greatest increases in therapeutic alliance demonstrated the greatest reductions in risk (Polaschek & Ross, 2010). Interestingly, the original ratings of the therapeutic relationship were unrelated to changes in risk, thus suggesting that it was the actual change in this relationship that was important (Polaschek & Ross, 2010). These findings suggest that the alliance between offender and therapist is dynamic and that it carries implications for risk reduction.

The exact role the therapeutic alliance plays in the process of change for IPV offenders is still unclear, although research to date has demonstrated that it is of consequence. Three studies conducted interviews with perpetrators of IPV regarding their experiences in treatment; in each study, the participants reported that a strong relationship with the program facilitators was amongst the most helpful aspects in their change process (Rosenberg, 2003; Roy, Châteauevert, & Richard, 2013; Wangsgaard, 2001). Specifically, many participants from Roy and colleagues' (2013) study reported that their relationships with the program facilitator enhanced their engagement in the program and their willingness to reflect on their abusive behaviours. The therapeutic alliance has also been found to be associated with participants' perceptions of the program's helpfulness in terms of resolving IPV-related problems and improving communication skills (Boira, del Castillo, Carbajosa, & Marcuello, 2013). Another study of men who have used IPV found that early-treatment ratings of the therapeutic alliance predicted homework completion (Taft et al., 2003). As well, facilitator-rated, late-treatment measures of the therapeutic alliance predicted partner reports of psychological/emotional and physical abuse six months post-treatment, with more favorable therapeutic alliance scores correlating with less abuse; offender-rated measures of therapeutic alliance did not significantly predict outcomes, although the trend was in a similar direction (Taft et al., 2003). Similarly, Brown and O'Leary (2000) found that a stronger therapeutic alliance in group treatment for perpetrators of IPV predicted less psychological abuse and physical abuse. A study by Rondeau and colleagues (2001) found that IPV program completers had a stronger therapeutic alliance than noncompleters. Overall, research to date suggests that the therapeutic alliance in IPV intervention programs may facilitate the change process, increase program engagement, increase confidence in program effectiveness, enhance the ability of offenders to benefit from treatment, improve program retention, and reduce reoffending among IPV offenders.

1.7.4 Satisfaction with Treatment

Satisfaction with treatment may be operationalized in a number of ways and it may apply to both individual and group treatment. For the purpose of the current research, this construct was defined as per the Treatment Satisfaction scale from the Criminal Justice Client Evaluation of Self and Treatment (CJCEST), which is a measure that is based upon the TCU's Treatment Process Model (Joe, Broome, Rowan-Szal, & Simpson, 2002; Simpson, 2004). The Treatment

Satisfaction scale measures an offender's general satisfaction with the program, as well as satisfaction with the time schedule and location of the program, the organization of the program, the efficiency of staff, and the amount of treatment received (Garner et al., 2007). The TCU's Treatment Process Model views satisfaction with treatment as a program attribute that interacts with client attributes, which then affects program engagement and the therapeutic relationship (Simpson, 2004).

Both the RNR model and the MORM refer to certain concepts that are measured by the CJCEST's Treatment Satisfaction scale. The responsivity principle encourages consideration of offender circumstances when delivering treatment in order to enhance the offender's ability to benefit from treatment; as such, an offender's satisfaction with the time and location of programming, which are relevant factors to his or her circumstances, would have responsivity implications. Similarly, the MORM considers an offender's opportunity to attend programming, which also reflects factors related to the time and location of treatment. The MORM also considers staff qualifications as an important precondition for change, and correspondingly, the Treatment Satisfaction scale measures the offender's perspective of whether the program is organized well and whether program facilitators and other staff members are efficient.

Research suggests that satisfaction with treatment is important among substance-abusing populations. Among individuals attending methadone treatment, satisfaction with treatment has shown to be related to treatment retention (Villafranca, McKellar, Trafton & Humphreys, 2005) and less heroin use (Joe, Simpson, Dansereau & Rowan-Szal, 2001). More generally, Carlson and Gabriel (2001) found that satisfaction with addictions treatment was associated with abstaining from substances one year later. There is limited research that examines how offender satisfaction with treatment relates to change and rehabilitation in correctional intervention.

This gap in the literature may be attributable to the fact that many offenders are often mandated to attend treatment, which might encourage assumptions that offenders will be generally dissatisfied or resistant. However, a study by Prendergast and colleagues (2002) found that there were no significant differences between mandated and voluntary offenders attending a residential addictions treatment program in terms of their desire for treatment and problem recognition. As well, a meta-analysis of 129 studies found that even if an offender experiences some degree of coercion to attend a treatment program, programs that take place in the

community can still be effective in reducing recidivism (Parhar, Wormith, Derkzen, & Beauregard, 2008). Given this information, it is likely not reasonable to assume offenders will be indiscriminately dissatisfied with treatment. Despite the limited research in this area, one study assessed treatment satisfaction in a sample of sexual offenders (Levenson, Macgowan, Morin & Cotter, 2008). It was found that the participants' overall satisfaction with the program, satisfaction with the program facilitator, and satisfaction with the program's policies and procedures were associated with their engagement in the program, as defined by the Group Engagement Measure (Levenson et al., 2008). Therefore, there is justification to further examine this construct.

1.8 Specific Responsivity Factors

Specific responsivity factors will be explored in order to better understand the process in which offenders engage in and benefit from treatment. Demographic and legal history variables (some of which are specific responsivity factors) and dynamic specific responsivity factors (DRFs; including self-efficacy, motivation, readiness, and confidence in treatment effectiveness) will be discussed in the following sections.

1.8.1 Demographic and Legal History Information

Static specific responsivity factors do not change or they change very slowly over time. Several studies have examined how static specific responsivity factors and other demographic/legal history variables relate to attrition and post-treatment outcomes (Olver et al., 2011; Sung, Belenko, Feng, & Kings, 2001; Wormith & Olver, 2002). Young age, lower intelligence, poor education, unemployment, being an ethnic minority, being single, having a low income, and early involvement in the criminal justice system correlate with correctional treatment attrition and negative post-treatment outcomes (Anglin & Hser, 1990; Jewell & Wormith, 2010; Olver, et al., 2011; Simpson, Joe, & Rowan-Szal, 1997; Wormith & Olver, 2002).

Some research has explored how demographic and legal history information relate to the treatment process and certain DRFs. One study found that being employed and having higher levels of education were associated with more participation in correctional treatment (Jackson & Innes, 2000). A study of IPV offenders found that pre-treatment motivation or readiness to

change IPV behaviours was unrelated to a number of demographic and legal characteristics, including arrest history, age, education, occupation, income, employment status, marital status, and ethnicity (Taft, Murphy, Musser, & Remington, 2004). However, Taft and colleagues (2004) found that late-treatment ratings of the therapeutic alliance were positively correlated with age, income, and being married (in contrast to being unmarried) in a sample of IPV offenders. It is unclear how ethnicity relates to the therapeutic alliance, although one meta-analysis examined the role of ethnicity “matching” between client and therapist in individual psychotherapy sessions (Cabral & Smith, 2011). It was found that when clients and therapists were of the same ethnicity, clients report moderately better ratings of the therapeutic alliance, although the matching of ethnicity between client and therapist had no impact on treatment effectiveness (Cabral & Smith, 2011). Likewise, there were heterogeneous findings among the different studies in this meta-analysis, suggesting that ethnicity may have a varying impact on the therapeutic alliance depending upon the cultural or ethnic group in question (Cabral & Smith, 2011). Another study examined differences between inmates with and without a mental disorder (Wolff et al., 2011). Inmates with mental disorders experienced higher levels of hopelessness than inmates without mental disorders (Wolff et al., 2011). Individuals who feel hopeless will likely have low levels of self-efficacy, which is a potential dynamic specific responsivity factor; as such, it is suggested that self-efficacy may be a pertinent responsivity factor for mentally disordered offenders. Although some studies have begun to explore static specific responsivity factors, further research is required in order to better understand the relationships between static specific responsivity factors, DRFs, and treatment process variables, and how such relationships correspond with treatment outcomes.

1.8.2 Dynamic Specific Responsivity Factors

Theoretically, DRFs can change over time. The potential DRFs reviewed in this section include self-efficacy, motivation for treatment, readiness to change IPV behaviours, and confidence in treatment effectiveness.

1.8.2.1 Self-efficacy. Self-efficacy is an integral component to behaviour change. Bandura (1977, 1982) defined self-efficacy as one’s personal conviction or belief in his or her abilities. This conviction or belief is important to the change process, for individuals seek to avoid failure; therefore, if they possess low self-efficacy in a particular domain, they will avoid

such situations that test those particular abilities (Bandura, 1977, 1982). Alternatively, if they are forced into such a situation, they will not put forth much effort (demonstrate low motivation) in order to avoid feelings of defeat related to their predicted failure (Bandura, 1977, 1982). In a thorough analysis of research literature, Bandura and Locke (2003) found that self-efficacy and personal goals enhanced both motivation and performance.

The concept of self-efficacy is apparent in many of the multidimensional, process-based, and dynamic theories of change reviewed above. The MORM acknowledges self-efficacy is a cognitive factor that contributes to treatment readiness or change (Ward et al., 2004). The Readiness for Change Framework views low self-efficacy as a potential barrier to change, since the individual's belief in his or her ability to change and maintain that change is theorized to influence the change outcome. Similarly, Armenakis and Harris's (2009) cognitive theory of necessary precursors to change suggest that one's belief that change can be implemented successfully is crucial. Empirical evidence extends Bandura and Locke's (2003) findings to offenders as well.

Offenders with high self-efficacy or confidence in their criminal abilities tend to be less willing to desist from a criminal lifestyle (Brezina & Topalli, 2012). Thus, should offenders feel competent or comfortable living a criminal lifestyle, they are more likely to continue to do so. If offenders also doubt their abilities to live prosocially, Bandura's theory (1977, 1982) suggests that they will avoid situations that facilitate the change process or disengage if forced into a situation that promotes prosocial change. For example, an offender with low self-efficacy may not put forth effort in a correctional program to avoid feelings of failure or defeat.

Various research studies support the importance of self-efficacy in the change process among both offenders and individuals suffering from substance use disorders. A qualitative study by Davis, Bahr, Harris, Fisher and Armstrong (2010) found that "self-efficacy differentiated the successful from the unsuccessful parolees" (p. 685). Parolees who had stronger beliefs in their ability to stay away from crime, and who had family or peer support, were more successful three years following their release from custody (Davis et al., 2010). As well, two studies asked participants who had completed residential substance abuse treatment about their degree of confidence in their ability to remain sober for a full year (Ilgen, McKellar & Tiet, 2005; Ludwig, Tadayon-Manssuri, Strik, & Moggi, 2013). Both studies found that the

participants' reported confidence significantly predicted their abstinence one year later (Ilgen et al., 2005; Ludwig et al., 2013). Similarly, both motivation/commitment to change and self-efficacy were found to be associated with moderate and controlled drinking among individuals with substance use disorders (Kuerbis, Armeli, Muench & Morgenstern, 2013). Stefanakis (2000) encountered similar results: a group of 20 men who had been violence-free for two years identified feelings of personal agency as essential in their ability to reform. Self-efficacy, according to Bandura and Locke's (2003) findings, is causally related and intertwined with motivation.

1.8.2.2 Motivation and readiness to change. There is consensus in research literature that motivation and readiness are important responsibility factors in the provision of correctional interventions (Bonta & Andrews, 2017).

1.8.2.2.3 Conceptual analysis. Motivation and readiness are likewise prevalent within theories and models of change, including: the Transtheoretical Model, the MORM, the TCU Treatment Process Model, and the Readiness for Change Framework. However, as described by Mossière and Serin (2014), many terms are used to describe this construct (e.g., treatment readiness, readiness to change, motivation to change, etc.) and these terms are often used interchangeably. There thus exists considerable confusion regarding the meanings and definitions of these terms (Drieschner et al., 2004; Keijsers, Schaap, Hoogduin, Hoogsteyns, & de Kemp, 1999; Mossière & Serin, 2014).

Drieschner and colleagues (2004) found that most definitions of motivation share a common core, consistent with its etymology, in that it has been described as "an internal force that 'moves' an organism to engage in a particular behavior" (p. 1117). As such, motivation is not solely a desire for one's circumstances to be different; instead, the subject of motivation must include a behavioural component, whether it be to attend or engage in treatment or another type of behavioural modification (Drieschner et al., 2004). Although motivation itself must have a behavioural goal or intention, defining motivation through an individual's behaviour is problematic (Bandura, 1986; Drieschner et al., 2004). Operationalizing motivation as the intended behaviour results in defining that behaviour as both the driving force and the outcome of the behaviour in question (i.e., both the cause and the effect; Bandura, 1986; Drieschner et al., 2004). As well, behavioural definitions of motivation disregard the role of other factors that

affect an individual's ability to engage in the change behaviour, such as contextual influences (e.g., resources) or other factors over which the individual does not have control (e.g., intellectual ability; Drieschner et al., 2004). Therefore, for the purpose of the current research, a distinction is drawn between motivation as an individual's internal context, in contrast to the external or behavioural displays of motivation, such as program engagement.

As highlighted previously, the term "readiness" is sometimes used to summarize greater conceptualizations or models of offender rehabilitation (e.g., the MORM, the Readiness to Change Framework), which consider both internal and external factors. Often, readiness refers to both motivation for treatment and motivation to desist from criminal activity simultaneously, given their apparent overlap and relatedness. Drieschner and colleagues' (2004) definition of motivation was assumed for the current research, so it was necessary to define the intended or target behaviour. The current study thus examined 1) motivation for treatment and 2) motivation to desist from IPV. The latter will be referred to as readiness to change IPV.

1.8.2.2.4 Impact. Despite the confusion and inconsistencies surrounding the constructs of motivation and readiness, research studies have demonstrated that motivation and readiness tend to be associated with positive treatment outcomes. A meta-analysis of 96 studies found that higher levels of motivation (target behaviour not specified) among offenders predicted the successful completion of correctional programs (Olver et al., 2011). As well, as study by Casey, Day, Howells and Ward (2007) examined the degree to which three different measures of readiness and motivation for change predicted engagement in a cognitive skills-based correctional program; they found that the Corrections Victoria Treatment Readiness Questionnaire (which includes change-relevant factors outlined in the MORM) and the Serin Treatment Readiness Scale each significantly and uniquely predicted program engagement, although the Readiness to Change Questionnaire (based on the Stages of Change Model) did not.

Some research specified that their construct of interest was readiness to change criminal activity, which may or may not include elements of motivation for treatment. Among offenders attending IPV programs, higher readiness to change IPV was found to be associated with higher ratings of the therapeutic alliance (Taft et al., 2004) and to predict program completion (Bennett et al., 2007). Increases in readiness to change IPV over the course of IPV programming was also found to be associated with superior achievement of treatment targets; it was suggested by the

authors that motivation contributed to offender engagement, which in turn allowed for success in treatment (Connors et al., 2012). Indeed, increases in treatment readiness over the course of treatment was found predict less reoffending among a sample of sexual offenders (Sowden, 2013). Qualitative studies have similarly found that high levels of readiness to change IPV behaviours were more common among successful desisters of IPV (Gondolf & Hanneken, 1987; Silvergleid & Mankowski, 2006; Walker et al., 2015, 2017, 2018). Another qualitative study found that offenders who successfully desisted from crime identified motivation to change criminal behaviour and social support for the intended change as the two most influential contributors to their success (Davis, Bahr & Ward, 2013).

Some research has specifically examined the role of motivation for treatment, although only one study was specific to IPV treatment. Specifically, Sevene, Edlund, and Easton (2017) found that participants with a perceived need for IPV treatment reported significantly less violence during the course of the IPV-specific individual therapy. Similarly, Simpson et al. (1997) found that higher motivation for treatment predicted a longer stay at treatment, less drug use, and less criminal activity in a sample of patients attending methadone treatment. Garner and colleagues (2007) found that low motivation for treatment was associated with more criminal thinking. Another study examined the effects of adding a motivational enhancement component to IPV treatment for participants who demonstrated both low readiness to change IPV and low motivation for treatment; the findings revealed that participants who attended the motivational enhancement component had higher completion rates than those who attended treatment as usual (Scott, King, McGinn, Hosseini, 2011). This finding suggests that motivation to attend treatment and to desist from IPV may be influenced by targeted interventions.

Indeed, motivational interviewing, a therapeutic approach that is designed to enhance self-efficacy and motivate clients, has shown to be effective in enhancing motivation for change, improving program retention, and reducing reoffending in general offender populations (Miller & Rollnick, 2012; McMurrin, 2009). A meta-analysis that assessed the effectiveness (i.e., impact on recidivism) of IPV programs found that an IPV program that incorporated motivational interviewing techniques had the greatest effect size (Taft, Murphy, Elliot, & Morrel, 2001). Likewise, a review of IPV interventions by Eckhardt and colleagues (2013) suggested optimistic results of motivational interviewing on IPV treatment outcomes. For example, a study

by Murphy, Linehan, Reyner, Musser and Taft (2012) found that two motivational interviewing sessions prior to a CBT-based IPV program led to more positive post-treatment outcomes, including stronger collaborative working alliance, better attendance, and less partner assault following treatment. The evidence for the use of motivational interviewing strategies continues to grow, as a recent randomized clinical study similarly found better IPV treatment outcomes when incorporating individualized motivational plans (Lila, Gracia, Catalá-Miñana, 2018).

More generally, Polaschek and Ross (2010) found that, among violent offenders high in psychopathy, higher pre-treatment motivation (behavioural target not specified) was associated with better treatment retention but not reductions in risk. As well, a study by Wormith and Olver (2002) found that “attitude toward treatment” and “motivation/effort” predicted program retention; it was noted that these variables, among other treatment performance and behavioural variables, were highly intercorrelated. It was only attitude toward treatment, improvement in treatment, and risk level that ultimately predicted program retention over and above the other variables (Wormith & Olver, 2002). Attitude toward treatment may be a measure of motivation for treatment; yet, attitude towards treatment may be also encompass other factors, such as the individual’s confidence in the treatment’s effectiveness.

1.8.2.3 Confidence in treatment effectiveness. When offenders enter the criminal justice system, they are typically asked to make personal changes to their lives. The means to make those changes are also often prescribed (e.g., attend a correctional program). It is suggested here that an offender’s perception of the efficacy of the proposed means will have an impact upon his or her beliefs and behaviours surrounding the proposed change. Surprisingly, this concept has been given little attention in research in the field of corrections thus far (Day, Tucker, & Howells, 2004), although there is some reference to it in theories of change. The MORM (Ward et al., 2004), Armenakis and Harris’ (2009) cognitive theory of necessary precursors to change, as well as the Readiness to Change Framework (Burrowes & Needs, 2009) state that individuals presented with the prospect of change will be affected by the degree to which they believe the proposed method of change is appropriate and effective for the intended change-related goal(s). In the context of offender rehabilitation, the proposed method of change is typically the correctional program in question.

Some research shows that confidence in treatment effectiveness or confidence in the competence of the change agent (i.e., counsellor, program facilitator) is associated with treatment retention and less recidivism (Broome, Simpson, & Joe, 1999; Broome, Knight, Hiller, & Simpson, 1996). In drug abuse treatment, Fiorentine, Nakashima, Anglin and Douglas (1999) found that participants' perception of treatment utility predicted engagement in session. A similar phenomenon has also been observed in the medical field regarding treatment (i.e., medication) adherence. For example, confidence in the effectiveness of HIV treatment and chemotherapy has been found to be negatively correlated with treatment adherence (Ballester, Campos, Garcia, & Reinoso, 2001; Saratsiotou et al., 2010).

Based on the theories of change and literature reviewed in this document, it is suggested here that confidence in treatment effectiveness may be related to an individual's initial motivation for change, engagement in programming, program attendance, and willingness to work with and develop a relationship with program facilitators.

1.9 Integrated Findings

There are at least two studies that examine the interaction between DRFs and treatment process variables.

The Drug Abuse Treatment Outcome Studies (DATOS) collected data from 10,010 patients who were attending 96 drug treatment programs in the United States (Broome, Simpson, & Joe, 1999; Joe, Simpson & Broome, 1999). A number of factors related to change in the context of addictions treatment were explored. Patients who felt as if they had similar needs to other patients (i.e., an aspect of group cohesiveness) demonstrated more commitment to recovery (similar to readiness to change; Broome et al., 1999). Furthermore, initial levels of motivation for treatment were associated with patient ratings of confidence in treatment effectiveness three months into treatment (Broome et al., 1999). In turn, patients who had higher ratings of commitment to recovery and confidence in treatment effectiveness displayed better rapport with counsellors and attended counselling sessions more frequently (Broome et al., 1999), which are variables that were found to predict treatment retention (Joe et al., 1999). It is clear that the results of DATOS fit well within models of change that incorporate a dynamic and interactive conceptualization of change, which takes into consideration both patient and program attributes.

Semiatin, Murphy, and Elliott (2013) explored the dynamic nature of certain treatment process variables and specific responsivity factors, and how they relate to displays of prosocial change within the context of an IPV group program. In particular, they examined early- and late-treatment measures of the therapeutic alliance, readiness to change IPV, and homework compliance (Semiatin et al., 2013). They assessed the degree to which each of those measures correlated with protherapeutic group behaviours, which included statements of taking responsibility (versus denial), positive interactions with other group members, and expressions of their perceived value of treatment (Semiatin et al., 2013). Early- and late-treatment ratings of therapist-reported therapeutic alliance were associated with both early- and late-treatment displays of protherapeutic group behaviours (Semiatin et al., 2013). When the therapeutic alliance was rated by participants, it was only associated with late-treatment protherapeutic behaviours (Semiatin et al., 2013). As well, pre-, early- and late-treatment ratings of readiness to change IPV were associated with protherapeutic behaviours both early and late in treatment. Lastly, only late-treatment homework compliance was associated with late-treatment protherapeutic group behaviours (Semiatin et al., 2013). This study demonstrated that the therapeutic alliance and readiness to change IPV are important predictors of participation and prosocial change in group treatment.

1.10 Forensic Assessment and Community Services Spousal Violence Program

Forensic Assessment and Community Services (FACS) is an Edmonton agency that is run by Alberta Health Services, and it provides a variety of correctional intervention and assessment services. The FACS Spousal Violence Program is offered in a community setting to men that are being supervised on community supervision orders (e.g., Probation Orders).

1.10.1 Policies and Procedures

FACS receives referrals from probation officers, which include: a FACS referral form, a criminal record, and a summary of the index offence. Participants first attend an assessment with a FACS psychologist or clinical social worker. In order to be eligible for the program, participants must have been charged with an offence related to abuse in an intimate partner relationship and sign a document outlining their commitment to the group. Participants attend one pre-group interview with the two program facilitators. The program facilitators use this

interview to explain what the participant may expect from the program and to answer any questions.

The program is semi-structured. The exact manner in which it is delivered depends upon the style of the program facilitators and the characteristics/needs of the specific participants in each group, although specific treatment content areas are outlined in order to address particular treatment targets. The program's treatment targets include improving communication skills (i.e., assertiveness training), reducing patriarchal beliefs by increasing knowledge of gender role stereotypes, increasing knowledge of intergenerational family violence (reflecting on their family of origin and learning how their violence may impact their children), improving emotion management skills (i.e., anger, jealousy, shame), reducing criminal thinking and attitudes (i.e., increasing personal accountability and victim empathy), as well as learning characteristics of healthy relationships versus unhealthy relationships and abuse. Also, each participant develops an individualized family violence relapse prevention plan, which includes the identification of triggers, high risk situations, and positive supports. This program targets risk factors identified in research literature (i.e., Birkley & Eckhardt, 2015; Norlander & Eckhardt, 2005; Stith et al., 2004) and contains aspects of both the Duluth model and CBT.

The program generally includes group discussion, psychoeducational components, role-playing, movie clips, and homework. At week five, the program has an individual session in lieu of a group session. The group sessions run until week 15, and participants attend a final individual session for week 16. According to the program coordinator, participants may only miss one session if they wish to complete the program successfully. See Appendix A for the program logical model, which was developed in consultation with the program coordinator.

1.11 Program Integrity

Program integrity may be broadly defined as the degree to which a program is implemented and delivered in the manner in which it was intended (Melde, Esbensen & Tusinski, 2006). Program integrity has many elements, such as providing the appropriate intensity of programming, sufficiently accessing the target population, employing qualified and interpersonally-skilled staff, providing the program in its intended delivery style, and following the intended curriculum (Ross & Fabiano, 1985; Serin & Preston, 2001). However, in order for

program integrity to exist, the program must first have a logical program theory, which is the assumed or theorized causal linkages between the program's resources and participants, interventions, and attainment of desired outcomes (Day, Chung, O'Leary, & Carson, 2009; Rossi, Lipsey, & Freeman, 2003). The implementation of a program as intended preserves the program theory by maintaining the predicted causal pathway from intervention to desired outcome. As detailed above, correctional program theory should be guided by principles of effective correctional intervention (Andrews et al., 1990b; Bonta & Andrews, 2017). However, the effectiveness of an RNR-based program is dependent upon the degree to which it is implemented as intended. This position is derived from a meta-analysis conducted by Andrews and Dowden (2006) that found that among RNR-based programs, those with more integrity were more effective in reducing recidivism.

The validity and quality of program-based research can be enhanced through the assessment of program integrity by screening for what Scanlon et al. (1977) described as Type III error. Type III error occurs when the program is not being implemented as intended but outcomes are nevertheless evaluated, which results in an inaccurate evaluation of the effectiveness of the intended (yet not implemented) program theory (Dobson & Cook, 1980; Scanlon et al., 1977). Thus, in order for a program's outcomes to be measured and its effectiveness to be accurately interpreted, the program must be implemented in a manner consistent with its stated aims and structure (Vanstone, 2010). In addition to evaluative analyses, other research questions require that programs have sufficient program integrity in order for research findings to be generalizable. For instance, should program facilitators vary considerably in the degree to which they follow the program's intended curriculum, the variability in content covered in sessions may act as a confounding variable that renders research findings less valid. A well-controlled study, and therefore well-controlled program, can be more confidently generalized to other samples, hence increasing the value of the research findings.

1.12 The Current Study

This research was guided by the RNR model and other multidimensional, process-based theories of change. A number of factors were hypothesized to influence the effectiveness of group treatment for men who have used violence against their intimate partners (see Table 1.1). Data were collected from the FACS Spousal Violence Program in Edmonton, Alberta.

1.12.1 Research Objectives and Hypotheses

Overall, this research sought to improve current knowledge regarding static and dynamic individual offender characteristics as well as the interpersonal dynamics between group members and program facilitators with the intention to improve retention in IPV programs, more effectively reduce and manage IPV risk, and prevent and predict recidivism.

1.12.1.1 Program integrity. In order to improve confidence in the validity of the research findings, program integrity was assessed by examining the degree to which the program was implemented as intended. Specifically, the amount each group deviated from one another and from the preferred curriculum was measured. Among RNR-based programs, less program integrity has been found to be associated with recidivism (Andrews & Dowden, 2006). Therefore, it was hypothesized that better program integrity (i.e., better adherence to the program curriculum) would predict reductions in risk and less recidivism.

1.12.1.2 Risk and program effectiveness. The predictive validity of pre-treatment risk, post-treatment risk, and changes in risk in relation to general and violent recidivism was examined. The current research furthermore evaluated program effectiveness by exploring the degree to which program attendance prevented recidivism.

Correctional intervention that is delivered in a manner consistent with RNR principles can be effective in reducing risk and preventing recidivism (Bonta & Andrews, 2017; Andrews et al., 1990a). Given that the FACS Spousal Violence program targeted criminogenic needs, it was anticipated that the program would be effective. It was also noted that participants who are higher risk tend to have higher attrition rates (Bonta & Andrews, 2017; Wormith & Olver, 2002; Olver et al., 2011). Given this information, it was hypothesized that:

1. Risk would decrease significantly from pre- to post-treatment.
2. Higher pre-treatment risk would predict fewer sessions attended and higher attrition rates.
3. Higher pre- and post-treatment risk would predict recidivism.
4. Risk reduction would predict less recidivism, even when controlling for pre-treatment risk (e.g., De Vries Robbe et al., 2015; Lewis et al., 2013).
5. Participants who did not complete the program successfully or who attended fewer sessions would have higher recidivism rates, even when controlling for pre-treatment risk.

Table 1.1

Summary of Variables and Data Collection

Category	Construct	Data Collection Method	Timepoint
Offender Characteristics	Demographic and Legal History Information	File Information	Pre-treatment
Risk	Risk for IPV	ODARA – File Information	Pre-treatment
		SARA V3 – File information & participant questionnaire	Pre-treatment & Post-treatment
Dynamic Specific Responsivity Factors	Motivation for Treatment	ACT – Motivation/Perceived Need of Treatment subscale	Pre-treatment & Post-treatment
	Readiness to Change IPV	OSRC	
	Self-efficacy	Scaling Question	
	Confidence in Treatment Effectiveness	ACT - Optimism/Pessimism subscale	
Treatment Process Variables	Therapeutic Alliance	CJ CEST – Counselling Rapport scale	Early-treatment, Mid-treatment, & Post-treatment
	Group Cohesiveness	CJ CEST– Peer Support scale	
	Satisfaction with Treatment	CJ CEST – Treatment Satisfaction scale	
	Program Engagement	GEM-27	Early/mid-treatment & Post-treatment
Program Integrity	Type III Error	Content Tracking Log	Throughout treatment
Outcome	Attrition and Attendance	File Information	Post-treatment
	Program-phase recidivism	JOIN (charges between first and last scheduled group session)	
	Short-term treatment targets	Distorted Attitudes about IPV (facilitator-rated) Relationship Problems (item on participant questionnaire)	
	Risk Change on the SARA-V3	Pre-treatment scores, short-term reoffence data, participant questionnaire, & facilitator-rated items	
	Recidivism	JOIN (type of and time to new charge)	12-21 months post-treatment

1.12.1.3 Dynamic specific responsivity factors. The present study examined the extent to which DRFs were dynamic and intercorrelated. The relationships between DRFs and TPVs, program attendance, attrition, risk reduction, and recidivism were also explored.

The effectiveness of offender rehabilitation and correctional intervention is improved when service providers consider specific responsivity factors and adjusts the delivery of treatment accordingly (Bonta & Andrews, 2017; Andrews, et al., 1990b; Serin & Kennedy, 1997). Moreover, research and theory suggest that higher levels of self-efficacy, motivation for treatment, readiness to change IPV, and confidence in treatment effectiveness are dynamic in nature and associated with program retention, treatment gains, and resultantly less recidivism (i.e., Armenakis & Harris, 2009; Bandura & Locke, 2003; Bennett et al., 2007; Broome et al., 1996; Broome et al., 1999; Connors et al., 2012; Burrowes & Needs, 2009; Illgen et al., 2004; Kuerbis et al., 2013; Ludwig et al., 2013; Olver et al., 2011; Polaschek & Ross, 2010; Sevene et al., 2017; Stefanakis, 2000; Taft et al., 2004; Ward et al., 2004; Wormith & Olver, 2002). Given this information, the following hypotheses were offered:

1. Participants would demonstrate significant increases in self-efficacy, motivation for treatment, readiness to change IPV, and confidence in treatment effectiveness.
2. Self-efficacy, motivation for treatment, readiness to change IPV, and confidence in treatment effectiveness would be positively intercorrelated (Armenakis & Harris, 2009; Bandura, 1977, 1982; Bandura & Locke, 2003; Broome, et al., 1999; Burrowes & Needs, 2009; Ward et al., 2004).
3. Pre-treatment self-efficacy, motivation for treatment, readiness to change IPV, and confidence in treatment effectiveness would be positively correlated with the number of sessions attended and program completion.
4. Increases in self-efficacy, motivation for treatment, readiness to change IPV, and confidence in treatment effectiveness would be associated with reductions in risk.
5. Post-treatment self-efficacy, motivation for treatment, readiness to change IPV, and confidence in treatment effectiveness would be negatively correlated with recidivism.
6. Increases in self-efficacy, motivation for treatment, readiness to change IPV, and confidence in treatment effectiveness would be negatively correlated with recidivism.

1.12.1.4 Treatment process variables. The current study explored the degree to which in-group treatment processes were intercorrelated and associated with program engagement, program attendance, attrition, risk reduction, and recidivism.

Several theories of change and related research studies have highlighted the dynamic nature of the treatment process (i.e., Burrowes & Needs, 2009; Chovanec, 2012; Polaschek & Ross, 2010; Roy et al., 2013; Silvergleid & Mankowski, 2006; Simpson, 2004; Stevens, 2013). Furthermore, research to date has demonstrated how post-treatment outcomes are associated with group cohesiveness (i.e., Beech & Fordham, 1997; Beech & Hamilton-Giachritsis, 2005; Broome et al., 1996; Moos, 1986; Marshall & Burton, 2010; Wangsgaard, 2001), the therapeutic alliance (i.e., Brown & O’Leary, 2000; Horvath & Symonds, 1991; Martin et al., 2000; Marshall & Burton, 2010; Rogers, 1957; Taft et al., 2003; Taft & Murphy, 2007), and treatment satisfaction (i.e., Villfanca et al., 2005; Joe et al., 2001; Carlson & Gabriel, 2001). The hypotheses detailed below were developed upon reviewing such theories of change in conjunction with specific research findings in the areas of offender rehabilitation and related fields:

1. Treatment satisfaction, the therapeutic alliance, group cohesiveness, and program engagement would increase significantly over the course of the program.
2. Treatment satisfaction, the therapeutic alliance, and group cohesiveness would be positively intercorrelated (Boira et al., 2013; Silvergleid & Mankowski, 2006; Simpson, 2004; Taft et al., 2003).
3. Early- and mid-treatment treatment satisfaction, therapeutic alliance, and group cohesiveness would be positively correlated with the number of sessions attended and program completion.
4. Higher mid-treatment ratings of treatment satisfaction, the therapeutic alliance, and group cohesiveness would be associated with risk reduction.
5. Increases in treatment satisfaction, therapeutic alliance, and group cohesiveness would be associated with risk reduction.
6. Mid- and post-treatment ratings of treatment satisfaction, the therapeutic alliance, and group cohesiveness would be negatively correlated with recidivism.
7. Increases in treatment satisfaction, the therapeutic alliance, and group cohesiveness would be negatively correlated with recidivism.

The current research sought to explore the relationships between and among DRFs and TPVs. While there is a lack of research in this area, certain studies have guided the development of the following hypotheses:

8. Mid-treatment and post-treatment group cohesiveness would be positively correlated with post-treatment readiness to change IPV (Broome et al., 1999).
9. Early-, mid-, and post-treatment therapeutic alliance, as well as increases in the therapeutic alliance, would be positively correlated with the corresponding confidence in treatment effectiveness scores (Broome et al., 1999; Boira et al., 2013).

1.12.1.5 Program engagement, the treatment process, and dynamic specific responsivity. It was hypothesized that when DRFs and TPVs are properly addressed and supported in treatment, they converge to promote high program engagement, which in turn allows the participant to benefit from the program, thus reducing risk and recidivism. Specifically, higher motivation, readiness to change IPV, self-efficacy, confidence in treatment effectiveness, group cohesiveness, the therapeutic alliance, and treatment satisfaction were theorized to improve treatment outcomes by facilitating program engagement, which is supported by research literature and theory (Bandura, 1977, 1982; Connors et al., 2012; Levenson et al., 2008; Roy et al., 2013; Semiatin et al., 2013; Simpson, 2004; Ward et al., 2004). Given this information, the following hypotheses were provided:

1. Higher pre-treatment DRFs and early-treatment TPVs would predict higher early-treatment program engagement.
2. Pre-treatment DRFs and mid-treatment TPVs would predict higher late-treatment program engagement.
3. Post-treatment DRFs and TPVs would be positively correlated with late-treatment program engagement.

As mentioned above, program engagement was theorized to be important to the effectiveness interventions that target risk. It was thus hypothesized that:

4. Higher levels of program engagement would improve the quality of the participant's experience in treatment and thus predict better reductions in risk and in turn less recidivism.

Finally, program engagement underwent a detailed examination by exploring the different components of the GEM in terms of their relative impact on post-treatment outcomes. While research to date has demonstrated how favourable post-treatment outcomes are related to better program engagement (i.e., McMurrin & Theodosi, 2007; Olver et al., 2011), an inconsistent definition of program engagement has been used across studies (Holdsworth et al., 2014) and there is a lack of research available regarding specific aspects of program engagement; these limitations prevented the formulation of hypotheses regarding the specific program engagement domains as represented by GEM subscales.

1.12.1.6 Offender characteristics. This project sought to examine whether any relationships existed between offender characteristics (i.e., risk, demographic and legal characteristics) and DRFs, TPVs, and treatment outcomes. These findings may build upon current knowledge of how individual differences impact the treatment process and the successful rehabilitation of men who have used violence in their intimate relationships.

While several studies have examined how offender characteristics relate to program attrition, there is a lack of research regarding how risk, legal history, and demographic information relate to TPVs and DRFs. Based on theory and research literature to date, the following hypotheses were offered:

1. Participants who were younger, of an ethnic/cultural minority, less educated, unemployed, unmarried, and who had a previous history of IPV would have higher attrition rates and attend fewer sessions (see Jewell & Wormith, 2010; Olver, et al., 2011; Simpson, et al., 1997; Wormith & Olver, 2002).
2. Participants with a mental disorder would have lower self-efficacy scores at pre- and post-treatment (Wolff et al., 2011).
3. Pre-treatment readiness to change IPV would not correlate with offence history, age, education, employment status, marital status, or ethnicity/culture (Taft et al., 2004).
4. Being employed and having a higher education would be positively correlated with early- and post-treatment program engagement (Jackson & Innes, 2000).
5. Classification as an ethnic/cultural minority would be negatively correlated with early-treatment therapeutic alliance (Cabral & Smith, 2011).

CHAPTER 2: METHODOLOGY

2.1 Participants

All participants were adult, male, and mandated to attend the FACS Spousal Violence program in Edmonton, Alberta. Individuals with severe mental disorders or severe cognitive impairment were ineligible for the program and were therefore not included in the study.

2.2 Research Design

The current study included an evaluation of the program in that recidivism outcomes were compared between participants who successfully and unsuccessfully completed the program. This comparison was quasi-experimental in design due to practical limitations and ethical considerations (see the limitations section for more information).

The study also used a mixed-model, repeated measures design. Some variables acted as both independent and dependent variables. Independent, single-measure variables included demographic and legal history information, group information, program integrity, attendance, and attrition rates. Independent, repeated-measures variables included measures of participant risk, DRFs, and TPVs. Dependent variables included program engagement (a TPV), achievement of short-term treatment targets (i.e., distorted attitudes about IPV, relationship problems), changes in risk, program attendance, program-phase recidivism, as well as general and violent recidivism.

2.3 Measures

The present study collected information related to demographics, legal history, and group characteristics as well as measures of DRFs (motivation for treatment, readiness to change IPV, self-efficacy, and confidence in treatment effectiveness), TPVs (treatment satisfaction, group cohesiveness, therapeutic alliance, and program engagement), program integrity, short-term treatment targets, risk, program attendance, program-phase recidivism, and recidivism.

2.3.1 Offender Characteristics

Offender characteristics encompassed both legal history and demographic information, which was collected from FACS patient files. The files typically included a criminal record,

community supervision order, a summary of the participant's index offence (e.g., police report), an intake psychological or psychosocial assessment, and a FACS referral form.

Demographic information included age, ethnicity, presence/type of mental disorder, education, employment status, and relationship status. Legal history information included the most serious index offence, disposition type (e.g., Probation, Peace Bond, Probation and custody), length of disposition/sentence, age at first offence, IPV history (official or any indication of IPV) as well as the number of previous offences (total), violent offences, and IPV-related offences. The Uniform Crime Reporting Incident-Based Survey User Manual was used to determine the most serious offence (Canadian Centre for Justice Statistics, 2013). Specifically, offences were ranked according to the maximum penalty permitted by Canadian law except all "crimes against the person" were ranked as more severe than those that were not (Canadian Centre for Justice Statistics, 2013, p. 181). Legal and demographic information was recorded on the Offender Characteristics and Group Information Form (see Appendix B).

2.3.2 Group Information

Group information included the start date of each group and whether the group was offered during the day or in the evening. This information was collected from the participants' FACS files and recorded on the Offender Characteristics and Group Information Form (see Appendix B).

2.3.3 Dynamic Specific Responsivity Factors

The DRFs included motivation for treatment, readiness to change IPV, confidence in treatment effectiveness, and self-efficacy.

2.3.3.1 Attitudes Toward Correctional Treatment scale (ACT). The ACT was normed on 1,433 male inmates from the Rideau Correctional and Treatment Centre, a provincial minimum-security facility in Ontario, Canada (Baxter, Burchill & Tweedale, 1992). Two subscales from ACT were used in the current research (see Appendix C). Motivation was measured using the Motivation/Perceived Need of Treatment subscale, which assesses desire for treatment, commitment to treatment, and problem recognition. Confidence in treatment effectiveness was measured using the Optimism/Pessimism subscale, which measures participants' faith in the program's ability to bring about its intended changes. The

Motivation/Perceived Need of Treatment subscale has nine items and the Optimism/Pessimism subscale has eight items, two of which overlap, to form a total of 15 items. Higher scores represent more positive and favorable attitudes. The overlapping items may reflect an overlap between the constructs of motivation and confidence in treatment effectiveness; for instance, confidence in treatment effectiveness may be an important component for desire for treatment and commitment to change (i.e., motivation). One item from the Motivation/Perceived Need of Treatment subscale was modified so that it was appropriate for a community-based intervention rather than a custody-based intervention. Specifically, the item that reads “I am pretty much satisfied with my life except for being in jail” was changed to “I am pretty much satisfied with my life except for except for being on Probation.” Past research has shown that both subscales have acceptable internal consistency and test-retest reliability (Baxter, Marion, & Goguen, 1995). As well, they have shown to be sensitive to change over the course of treatment and to have good predictive validity; namely, the pre-treatment and change scores for both subscales were found to significantly predict treatment progress and participation in a correctional sample (Baxter et al., 1995).

2.3.3.2 Offenders’ self-rated readiness to change (OSRC) question. Readiness to change IPV was measured using the offenders’ self-rated readiness to change (OSRC) question, which was developed by Correctional Services Canada in 2001 (as cited in Connors et al., 2012, 2013). This question reads as follows: “My violence against my partner is: 1) not a problem, 2) a problem, but I’m not sure what to do about it, 3) a problem and I intend to take steps to deal with it, and 4) a problem for me and I am currently dealing with it by making change in me and my life.” The definition of violence was also provided with this question to protect against possible cognitive distortions relating what constitutes violence (Connors et al., 2012, p. 15; Connors et al., 2013, p. 1183). The OSRC demonstrated sensitivity to change over the course of treatment and was found to correlate with treatment target improvement in IPV correctional programming (Connors et al., 2012, 2013).

2.3.3.3 Self-efficacy. Self-efficacy was defined as the amount of confidence participants had in their ability to cease their use of violence in intimate partner relationships. A single, scaling question was asked: “On a scale from 1 to 10, how confident are you that you will not use any violent or aggressive behaviours in your romantic relationship (or future relationship if

currently single) over the next 1 year?” (see Appendix D). Scaling questions that measure the belief in one’s ability to make intended treatment changes has been used in other studies. Particularly, two studies asked participants, after completing substance abuse treatment, about their confidence in their ability remain sober, as follows: “How confident are you that you will be completely abstinent in 1 year, on a scale from 1 to 10?” (Ilgen et al., 2005; Ludwig et al., 2013). Similarly, a single, scaled question (from 0 to 10) was also used to assess sexual offenders’ confidence in their ability to perform a task in treatment (Segal & Marshall, 1986).

2.3.4 Treatment Process Variables

Treatment process variables explain that which occurs in the therapeutic setting and reflect the therapeutic climate. The variables described here measure processes that result from the interaction between internal/client-specific and external/program-specific factors.

2.3.4.1 Criminal Justice Client Evaluation of Self and Treatment (CJCEST). The Texas Christian University’s CJCEST is a measure that was created to inform treatment planning and assist with the monitoring of participant experiences throughout programming (Joe et al., 2002). Three scales from the CJCEST were used to measure group cohesiveness, the therapeutic alliance, and treatment satisfaction. Group cohesiveness was measured using the Peer Support scale, which measures participants’ perceived support from and cohesiveness with other group members (Garner, Knight, Flynn, Morey, & Simpson, 2007). The therapeutic alliance was measured using the Counseling Rapport scale (Garner et al., 2007). The Treatment Satisfaction scale measured the participants’ satisfaction with the program in terms of its convenience, organization, efficiency, and amount of treatment available (Garner et al., 2007). These three scales are comprised of 25 items that are self-reported on a 5-point Likert-type scale (see Appendix E; Garner et al., 2007). Confirmatory Factor Analysis demonstrated that all three scales have good construct validity, and they have also been found to have good internal consistency (Peer Support $\alpha = .77$, Counseling Rapport $\alpha = .93$, Treatment Satisfaction $\alpha = .79$) and high test-retest reliability (Peer Support $r = .75$, Counseling Rapport $r = .85$, Treatment Satisfaction $r = .82$; Garner et al., 2007).

2.3.4.2 Groupwork Engagement Measure (GEM). The GEM measures participant engagement in group programming from a multidimensional perspective (Holdsworth et al.,

2014). The therapist-rated version of the measure was used in this study. The original GEM includes 37 items that form seven subscales that each measure a different aspect of participant engagement (Macgowan, 1997). The seven subscales may also be combined to create a measure of overall engagement (Macgowan, 1997). The seven subscales include attending, contributing, relating to the program facilitator, relating with group members, contracting, working on one's own problems, and working on other members' problems (see Appendix F; Macgowan, 1997).

Each item is scored on a 5-point Likert-type scale, with higher scores reflecting more engagement (Macgowan, 1997). The GEM was found to be reliable and internally consistent with a small measurement error (Macgowan 1997, 2000; Macgowan & Levenson, 2003). It was also found to have good construct validity with the Group Attitude Scale (Evans & Jarvis, 1986) and good predictive validity for treatment outcomes (Macgowan 1997, 2000). The GEM maintained its psychometric properties when used with a forensic sample (Macgowan & Levenson, 2003) and when administered at different times throughout a group program (Macgowan, 2000). A confirmatory factor analysis supported the structure of the GEM's seven factors (Macgowan & Newman, 2005). The confirmatory factor analysis also identified the strongest-loading items; this led to the creation of a shortened version of the GEM, which maintained a good fit (Macgowan, 2006). The GEM-27 has only 27 items and it is therefore more practical for clinical practice and applied research (Macgowan, 2006). It also demonstrated excellent internal consistency ($\alpha = .91$) in a sample of men attending IPV programming (Chovanec, 2012). The facilitator-rated GEM-27 was used in the current study (see Appendix F), and it will be referred to as the GEM henceforth.

2.3.5 Program Integrity

This study screened for Type III error, which occurs when the program is not being implemented as intended, but outcomes are nevertheless evaluated (Scanlon et al., 1977). The FACS Spousal Violence Program is not manualized. However, the program contains treatment content areas (TCAs) that are expected to be covered throughout its course. In the study, the program facilitators recorded the amount of time spent on each TCA after each session (see Appendix G for the Content Tracking Log). After each group, the total amount of time spent on each TCA was calculated. Program integrity was measured by examining how many TCAs were covered by each group and how many groups covered each TCA (i.e., the program curriculum).

The extent to which each group differed from one another, based on the amount of time spent on each TCA, was also explored. Tracking program content to ensure program validity is not novel in the evaluation IPV correctional programming (Bowen, Gilchrist, & Beech, 2008).

As well, prior to data collection, each program facilitator provided their preferred or ideal number of hours for each TCA; these responses were then used to create a “preferred curriculum” based on the mean number of preferred hours for each TCA. Following data collection, the actual time spent on each TCA was then compared to the preferred time. It was expected and accepted that there would be some degree of variability, for a balance between the integrity of the program and its flexibility/adaptability was desired (Melde, Esbensen, & Tusinski, 2006).

2.3.6 Measurement of Risk

Two IPV-specific risk measures were used. The Ontario Domestic Assault Risk Assessment (ODARA) provided a pre-treatment risk estimate and the Spousal Assault Risk Assessment Guide – Third Edition (SARA-V3) provided pre-treatment and post-treatment risk estimates.

2.3.6.1 Ontario Domestic Assault Risk Assessment (ODARA). The ODARA is an actuarial risk assessment tool used to predict domestic violence recidivism (Hilton, Harris, & Rice, 2010). The construction sample included 589 Canadian men who had assaulted a female domestic partner according to police records (Hilton et al., 2010). The ODARA’s 13 items are scored dichotomously (0 or 1) and summed, with higher scores representing a higher risk for domestic violence recidivism (Hilton et al., 2010). The ODARA has demonstrated excellent interrater reliability in both field simulation ($ICC = .95$) and research contexts ($ICC = .90$; Hilton et al., 2004), and it can be scored reliably using police reports and criminal records (Hilton et al., 2010). The ODARA has likewise demonstrated good convergent validity with other IPV risk assessment tools (Hilton et al., 2004). Finally, it demonstrated strong predictive validity ($AUC = 0.71$) for domestic violence recidivism across three studies and over 1420 participants (Hilton et al., 2010). Each item added incrementally to the measure’s predictive accuracy (Hilton et al., 2010). What is more, ODARA scores were found to correlate significantly with the severity of new offences, time to reoffending, and frequency of reoffending (Hilton et al., 2010).

2.3.6.2 Spousal Assault Risk Assessment Guide (SARA). The SARA uses structured professional judgment to assess static and dynamic risk factors for IPV (Kropp, Hart, Webster, & Eaves, 1999). Structured professional judgment entails assessing risk with the use of a standardized information base, yet without fixed or explicit rules (Kropp & Hart, 2000). The SARA-V2 consists of 20 items, ten of which are specific to IPV risk, while the other ten are relevant to general violence (Kropp & Hart, 2000). Each item is scored as absent, partially/possibly present, or present. For research purposes, items may be scored numerically (0, 1, or 2) from which a total risk score can be calculated with higher scores reflecting a higher proportion of endorsed risk factors (Kropp et al., 1999). Although the SARA-V2 was not created using actuarial methods, its total scores have demonstrated moderate predictive accuracy for recidivism, good interrater reliability, and good convergent validity with several other risk measures (Helmus & Bourgon, 2011; Messing & Thaller, 2013).

The newest version of the SARA (the SARA-V3) has also demonstrated good interrater reliability (ICC = .95) and convergent validity with other IPV risk measures (Ryan, 2016). In the current study, the SARA-V3 was used to measure pre-treatment and post-treatment risk. The SARA-V3 was used because it incorporates recent research into its structure. Most of the item content from the SARA-V2 was preserved yet reorganized in the SARA-V3 to reduce redundancies (Kropp & Hart, 2015). The SARA-V3 has three domains. The Nature of IPV domain (eight items) assesses the overall seriousness of IPV behaviours by measuring the diversity, chronicity, and escalation of IPV in addition to the perpetrator's compliance with IPV-related supervision. The Perpetrator Risk Factors domain (10 items) measures perpetrators' relevant "problems with social, interpersonal, and psychological adjustment" (Kropp & Hart, 2015, p. 32). The Victim Vulnerability Factors domain (six items) measures victims' ability, opportunity or motivation to protect themselves; this latter domain was not included in the current project, as the necessary data were unavailable. Personal communication with one of the authors (S. Hart, March 16, 2016) confirmed that information for the Victim Vulnerability domain is not always available and one may proceed without it.

Distorted attitudes about IPV and Relationship Problems are two items from the Perpetrator Risk Factors domain that were examined as short-term treatment targets and specific indicators of treatment change, consistent with the program logic model in Appendix A.

2.3.7 Program Attendance

Attrition was defined as premature termination from the program after attending the first group session. The FACS Spousal Violence Program rules permitted participants to miss up to one session before they were no longer welcome to return, so perfect attendance was not assumed for those who successfully completed the program. The number of sessions attended was recorded as well.

2.3.8 Recidivism

Recidivism was defined as new charges incurred in the follow-up period, which began the day after the last group sessions and ranged from 12 to 21 months. Recidivism data were collected through Justice Online Information Network (JOIN), which is a Court database for the province of Alberta. Data included 1) whether participants incurred any new charges (dichotomous scoring, yes/no), 2) whether participants incurred any new violent charges (dichotomous scoring, yes/no), 3) the number of new charges incurred in the follow-up period, 4) the number of new violent charges incurred in the follow-up period, 5) the specific criminal code charge, and 6) time to recidivate.

Program-phase recidivism data, defined as any new charge incurred between the date of the first group session and the last scheduled group session, was also collected.

2.4 Procedure

The researcher met with program facilitators prior to the study in order to acquire their informed written consent for their participation. The researcher then attended the first group sessions in order to introduce and explain the current research to program participants to acquire informed written consent (see Appendix H for the program facilitator and participant consent forms). Data were collected from the eight Spousal Violence Program groups that ran between May 2016 and June 2017.

2.4.1 Pre-treatment

2.4.1.1 Legal history and demographic information. Prior to treatment, the researcher reviewed participant FACS files for legal, demographic, and group information using the Offender Characteristics and Group Information Form (See Appendix B)

2.4.1.2 Risk. Risk was scored by reviewing participant FACS files. The ODARA was scored as per formal scoring instructions (see Appendix I for the ODARA score sheet), while the scoring of the SARA-V3 warrants a more detailed description.

FACS clinicians typically administered the SARA-V2 or the SARA-V3 as part of their initial assessments of program participants as per FACS protocol. FACS began transitioning from using the SARA-V2 to the SARA-V3 while data collection was underway. Most files had a SARA-V2 on file. According to Kropp and Hart (2015), the majority of the SARA-V2 content was preserved and merely reorganized in the SARA-V3 to reduce redundancy. When there was a SARA-V2 or no SARA on file, file information and pre-treatment participant questionnaires (created by the researcher; see Appendix J) were used to score the SARA-V3. Some of the relevant file information included criminal records, police reports, Family Violence Investigation Reports (FVIR), Probation Orders, presentence reports, case notes, psychological or psychosocial history assessments, and the facilitator-rated SARA when available. The participant questionnaires were used to collect recent information on dynamic items (items P1 Intimate Relationships, P2 Non-Intimate Relationships, P3 Employment/Finances, P8 Substance Use, P9 Violent/Suicidal Ideation, and P10 Distorted Thinking About IPV) and/or information that was not available on the SARA-V2 (i.e., item P2 Non-Intimate Relationships). Participant questionnaires provided the most up-to-date information, as they were administered at the onset of the first group session. If information from the participant questionnaires was inconsistent with file information, an average of the two ratings were derived; when whole numbers could not be derived,¹ the higher risk rating was used. One exception is that the participant-reported employment rating was given more weight, because of the particularly dynamic nature of this item. The scoring manuals of both the SARA-V2 and the SARA-V3 were closely examined in order to match pertinent SARA-V2 items to each SARA-V3 item; items were often similar in content with slightly different scoring instructions. Therefore, the SARA-V3 manual was used to guide the integration of all file information and participant questionnaires; the researcher likewise created a pre-treatment SARA-V3 scoring guide to bolster reliability (see Appendix K).

¹ Decimals were not used, because the 0, 1, or 2 ratings reflect qualitative descriptors of absent (0), partially/possibly present (1), and present (2).

Less interpretation was required for participants who had been assessed by program facilitators using the SARA-V3. However, the SARA-V3 prompts the rater to score each item twice, based on the recent (over the past year) and historical (prior to one year) presence of the risk factor. Due to the pre-post nature of the current research design and limited information available, each item was given one rating (similar to the SARA-V2), so a modified score sheet was used (see Appendix L). The SARA-V3 manual was used to guide judgment regarding the relevance and weight of historical versus recent risk-relevant information for each item. Specifically, the Nature of IPV domain is meant to identify “recent and past patterns of IPV” and it consists of predominantly static risk factors (Kropp & Hart, 2015, p. 31). Therefore, this domain was scored having combined both historical and recent risk-relevant information. Certain items in the Perpetrator Risk Factors domain are also static and/or stable (P4 Trauma/Victimization, P5 General Antisocial Conduct, P7 Personality Disorder), so those items were scored having considered both historical and recent information. However, many risk factors comprising the Perpetrator Risk Factors domain are dynamic. Therefore, the following items were scored with greater consideration of recent risk-relevant information: P1 Intimate Relationships, P2 Non-Intimate Relationships, P3 Employment/Finances, P6 Major Mental Disorder, P8 Substance Use, P9 Violent/Suicidal Ideation, and P10 Distorted Thinking About IPV. While the SARA-V3 manual regards recent risk information to be over the past year, the current project focused particularly upon dynamic risk in the past month, given the pre-post research design.

2.4.1.3 DRFs. Questionnaires were used to measure motivation for treatment, readiness to change IPV, confidence in treatment effectiveness, and self-efficacy before the first group session. The ACT Motivation/Perceived Need of Treatment subscale, the ACT Optimism/Pessimism subscale, the OSRC question, and a self-efficacy scaling question were administered. At the beginning of the first group session, each participant received an envelope with blank questionnaires. They were asked to write their name on the outside of the envelope. Once participants completed the questionnaires, they put the questionnaires back into the envelope; this prevented identifying information from being written directly on the questionnaires.

2.4.2 Early-Treatment

Early-treatment ratings of group cohesiveness, treatment satisfaction, and therapeutic alliance were measured immediately following the first group session. The CJCEST's Peer Support scale, Treatment Satisfaction scale, and Counselling Rapport scale were administered by the researcher. Once completed, participant put their questionnaires in their personalized envelopes that were provided at pre-treatment. Unique participant identifiers were later assigned and used to label each respective questionnaire. The envelopes were then confidentially shredded.

2.4.3 Early/Mid-Treatment

The GEM was rated by program facilitators in order to measure participants' levels of program engagement throughout the first quarter of the program. This occurred between the fourth and fifth group sessions, although they were administered after the fifth group session on one occasion.

2.4.4 Mid-Treatment

Treatment process data on group cohesiveness, treatment satisfaction, and therapeutic alliance were again collected using the CJCEST's Peer Support scale, Treatment Satisfaction scale, and Counselling Rapport scale. These data were collected following the seventh group session (week eight).

Due to logistical constraints, the program facilitators administered these questionnaires. Each participant received a large envelope with their name on it with questionnaires on the inside, labeled with their unique participant identifier. Once participants completed the questionnaires, they put them back in the envelope and sealed it. The program facilitators were therefore unable to see participant responses before returning them to the researcher.

2.4.5 Throughout Treatment

In order to measure program integrity, program facilitators logged the amount of time spent on each treatment content area (TCA) after each session. Following data collection, the amount of time spent on each TCA was calculated for each group.

Certain TCAs listed on the content tracking log were combined following data collection; specifically, the “time outs” category was added to “emotion management,” and the “conflict resolution” category was added to “communication skills.” These areas were combined in order to reduce differences in how program facilitators may have interpreted similar or related TCAs. As well, an earlier version of the content tracking log was provided to program facilitators in error, so two TCAs (values and substance use) were not listed as options. However, program facilitators had the option to add any TCAs that were not listed as options (under the label “other”). The TCAs values and substance use were therefore added to the “other” category for the purpose of analyses. Other areas that program facilitators recorded in the “other” category included: introductions and group guidelines, the relationship house, check-ins, and group closing activities.

2.4.6 Post-Treatment

All measures, except the ODARA, were readministered post-treatment. Due to operational constraints, the program facilitators were unable to rescore the full SARA post-treatment. Therefore, the researcher scored the SARA-V3 using participant questionnaires (see Appendix J) and two facilitator-rated questions that reflect two SARA-V2 items used to assess distorted attitudes about IPV (see Appendix M). These two items were then averaged to score the single item on the SARA-V3 that measures distorted attitudes about IPV. The SARA-V2 items/questions were used at post-treatment because not all facilitators were familiar with the SARA-V3. The SARA-V3 Nature of IPV domain was scored using program-phase recidivism data (i.e., charges between the first and last scheduled group sessions). Offences were ranked ordinally, based on severity, using Statistics Canada’s Uniform Crime Reporting guidelines to improve the reliability of scoring items such as N5 Severe IPV and N7 Escalation of IPV. Data were unavailable for four items from the Perpetrator Risk Factor domain given that they could not be assessed using a participant self-report questionnaire; these items were predominantly static or stable and included: P4 Trauma/Victimization, P5 General Antisocial Conduct, P6 Major Mental Disorder, P7 Personality Disorder. A post-treatment SARA-V3 scoring guide was developed to increase reliability (see Appendix N).

Program facilitators administered the participant questionnaires at the end of their last group sessions, including the CJCEST’s Peer Support scale, Treatment Satisfaction scale, and

Counselling Rapport scale; ACT's Motivation/Perceived Need of Treatment subscale and Optimism/Pessimism subscale; the OSRC question, the self-efficacy scaling question; and the SARA participant questionnaire. The participants placed their completed questionnaires in a sealed envelope to ensure their responses remained confidential. Each participant received a chocolate bar and a package of gum as tokens of appreciation. Because participants were unable to attend the last group session, or due to facilitator error, certain participants completed their post-treatment questionnaire package at their final individual session (one week following the last group session). Following treatment, program facilitators rated the GEM and the two SARA-V2 questions.

Recidivism information was collected from the Justice Online Information Network (JOIN) 12 months following the final group session of the last group. The Alberta Ministry of Justice and Solicitor General provided a report detailing recidivism information for participants.

2.5 Analyses

2.5.1 Data Preparation

Data were prepared by screening for outliers and testing assumptions for the statistical analyses used. Regarding missing data, missing items on the ACT and CJCEST scales were corrected by averaging the available items and then replacing the missing item(s) with that average. If more than 50% of the items on a scale were missing, that scale was not used for the participant in question. Given that self-efficacy and readiness to change were one-item measures, missing items could not be estimated. There were no missing items on the GEM. The Estimation Maximization method was used to predict missing pre-treatment and post-treatment items on the SARA-V3. At both timepoints, the predicted item means for participants with missing data were not significantly different from those without missing data; likewise, the Missing Completely at Random (MCAR) test found that errors were randomly distributed.² Missing items on the ODARA were corrected for by pro-rating scores as per instructions found in the ODARA coding manual. While the $p < .05$ alpha value was set the cutoff for statistical significance, analyses that were significant at $p < .10$ were identified for the reader's ease.

² The MCAR test was nonsignificant at pre-treatment $\chi^2(98) = 106.99, p = .25$ and post-treatment $\chi^2(185) = 186.00, p = .47$, signifying errors were randomly distributed.

2.5.2 Sample and Program

2.5.2.1 Sample and group characteristics. Descriptive statistics (i.e., mean scores, standard deviations, ranges, and percentages) were used to describe participants' demographic and legal history information. Descriptive statistics provided an overview of the number of groups that comprise the sample. Differences in demographic, legal, and risk characteristics between day and evening groups were examined using *t*-tests and chi-square analyses.

2.5.2.2 Program integrity. Descriptive statistics provided an overview of the amount of time spent on each TCA, using means, standard deviations, and ranges. Program integrity was measured by examining the extent to which each group deviated from the preferred program curriculum. First, the number of hours each individual group spent on each TCA was calculated and compared to the corresponding preferred number of hours for each TCA using the absolute mean difference. An absolute mean difference score for each group was then calculated. Higher absolute mean difference scores represented less program integrity.

The degree to which groups collectively strayed from the preferred curriculum was examined by calculating the mean difference between the preferred and actual amount of time spent on each TCA.

2.5.3 Dynamic Specific Responsivity Factors and CJCEST Treatment Process Variables

The collection of measures used to examine the TPVs and DRFs were applied in this context for the first time; therefore, a detailed examination of their psychometric properties was conducted. The psychometric properties of changes in CJCEST TPVs and DRFs were explored using mean change scores, standard deviations of the change scores, and correlations. Correlation analyses were conducted between and among all CJCEST TPVs and DRFs, including the available pre- or early-treatment, mid-treatment, post-treatment and change scores. *T*-tests were used to examine pre- to post-treatment changes in DRFs and repeated-measures ANOVAs were used to examine changes in CJCEST TPVs (from early- to mid-treatment, mid- to post-treatment, and early- to post-treatment).

2.5.4 Program Engagement

Program engagement was measured using the Group Engagement Measure, which is composed of seven subscales. The psychometric properties of the GEM total score and its subscales were examined using means and standard deviations. Correlations were also conducted between all subscales to measure internal consistency. *T*-tests were used to examine early- to late-treatment changes in the GEM total and subscales scores.

Program engagement was then explored as a treatment process outcome. Correlation analyses were conducted between program engagement and DRFs and CJCEST TPVs at different timepoints. Two standard multiple regressions were then used to explore the predictive value of the DRFs and CJCEST TPVs that were significantly correlated with program engagement at early- and late-treatment.

2.5.5 Outcome Descriptive Statistics and Psychometrics

2.5.5.1 Short term treatment targets. Mean scores and standard deviations were calculated for distorted attitudes about IPV (measured as a continuous variable). Percentages were calculated for relationship problems. Two repeated-measures, paired sample *t*-tests examined pre- to post-treatment changes in distorted attitudes about IPV and relationship problems.

2.5.5.2 Risk. Mean risk scores, standard deviations, and ranges were reported for the ODARA as well as the SARA-V3 and its two domains. Intercorrelations between these risk measures were conducted to assess convergent validity. Repeated measures, paired-sample *t*-tests examined differences between pre- and post-treatment risk on the SARA-V3 and its Perpetrator Risk Factors domain.

2.5.5.3 Program Attendance. The attrition rate as well as the mean, median, and mode number of sessions attended were calculated. The number of sessions attended was compared to whether the participants had successfully or unsuccessfully completed the program.

2.5.5.4 Program-phase recidivism. The percentage of participants who incurred new charges between the date of their first group session and last scheduled group session was calculated.

2.5.5.5 Recidivism. Descriptive statistics examined general and violent recidivism. Percentages described the proportion of participants who incurred at least one new charge or new violent charge in the follow-up period, whereas means and standard deviations summarized the time-to-recidivate. Means and standard deviations were also used to describe follow-up time as well as the number of new charges and new violent charges. The types of new charges were also reported and described using percentages and sample base rates.

2.5.6 Prediction of Outcomes

2.5.6.1 Demographics and outcomes. Demographic information was examined in relation to DRFs, TPVs, and program attendance.

2.5.6.1.1 Dynamic specific responsivity factors and treatment process variables.

Correlations and point-biserial correlations explored how demographic characteristics related to DRFs and TPVs at different timepoints. Semipartial correlations were used to examine the relationship between demographic characteristics and the change scores of DRFs and TPVs, while controlling for each respective pre-treatment DRF and early- or mid-treatment TPV. One-way ANOVAs examined differences in DRFs and TPVs for categorical demographic variables.

2.5.6.1.2 Program attendance. Correlations, point-biserial correlations, Receiver Operating Characteristics (ROCs), *t*-tests, ANOVAs, and chi-square tests examined differences in attrition and the number of sessions attended based on demographic characteristics.

2.5.6.2 Legal information and outcomes. Legal history information was examined in relation to DRFs, TPVs, program attendance, risk, program-phase recidivism, and recidivism.

2.5.6.2.1 Dynamic specific responsivity factors and treatment process variables.

Correlations and point-biserial correlations explored how legal history information related to DRFs and TPVs at different timepoints. Semipartial correlations were used to examine the relationship between legal history information and the change scores of DRFs and TPVs, while controlling for each respective pre-treatment DRF and early- or mid-treatment TPV. One-way ANOVAs were used to examine differences in DRFs and TPVs for categorical legal history variables.

2.5.6.2.2 Program attendance. Correlations, ROCs, *t*-tests and chi-square tests examined differences in attrition and the number of sessions attended based on legal history information.

2.5.6.2.4 Risk and recidivism. A series of correlations, semipartial correlations, point-biserial correlations, ROCs, chi-square analyses, ANOVAs, and ANCOVAs were conducted to examine relationships between legal history information and measures of risk, risk change (controlling for pre-treatment risk), program-phase recidivism, and recidivism.

2.5.6.3 Risk and outcomes. Risk was examined in relation to DRFs, TPVs, program attendance, program-phase recidivism, and recidivism.

2.5.6.3.1 Dynamic specific responsivity factors and treatment process variables. A series of correlations was used to examine how pre- and post-treatment measures of risk related to pre- and post-treatment DRFs, as well as 2) early-, mid-, and post/late-treatment TPVs (including program engagement). Semipartial correlations examined relationships between pre-treatment risk and DRF and TPV change scores, while controlling for the respective pre-treatment DRF and early- or mid-treatment TPV.

2.5.6.3.2 Program attendance. *T*-tests examined differences in pre-treatment risk between participants who successfully completed the program and those who did not. Logistic and standard regressions examined the predictive strength of pre-treatment risk on attrition and the number of sessions attended, respectively.

2.5.6.3.3 Program-phase recidivism. Logistic regressions examined the extent to which pre-treatment measures of risk predicted program-phase recidivism.

2.5.6.3.4 Recidivism. A series of Cox regression survival analyses were conducted to examine the degree to which pre-treatment, post-treatment, and changes in risk predicted general and violent recidivism (measured as binary variables). ROCs also examined the predictive validity of pre- and post-treatment risk in relation to binary measures of general and violent recidivism. Hierarchical multiple regressions examined the degree to which pre-treatment risk and changes in risk predicted the total number of new charges and new violent charges incurred in the follow-up period. Follow-up time was controlled by entering it into the first block. Pre-treatment risk was also controlled when examining the predictive validity of changes in risk.

Change-based analyses were only conducted with the SARA-V3 and its Perpetrator Risk Factors domain given that the ODARA and the Nature of IPV domain are stable in nature.

2.5.6.4 Program Attendance and outcomes. Program attendance was examined in relation to program-phase recidivism and recidivism.

2.5.6.4.1 Program-phase recidivism. Fisher's exact test explored whether there were differences in attrition rates between participants who reoffended during the group's timeframe in comparison to those who did not. Point-biserial correlations and ROCs also explored whether the number of sessions attended related to program-phase recidivism.

2.5.6.4.2 Recidivism. The degree to which attrition and the number of sessions attended predicted general and violent recidivism was analyzed using hierarchical Cox regression survival analyses, controlling for pre-treatment risk.

2.5.6.5 Adherence to the program curriculum and outcomes. A semipartial correlation and hierarchical multiple regression was conducted to determine whether adherence to the program curriculum was related to changes in risk, while controlling for pre-treatment risk. Two Cox regression survival analyses were also conducted to examine the degree to which adherence to the program curriculum predicted general and violent recidivism.

2.5.6.6 Dynamic specific responsivity factors, treatment process variables, and outcomes. DRFs and TPVs were examined in relation to program attendance, short-term treatment targets, changes in risk, program-phase recidivism, and recidivism.

2.5.6.6.1 Program attendance. A series of correlations, point-biserial correlations, and ROCs examined how pre-treatment DRFs and early-treatment CJCEST TPVs related to the number of sessions attended and attrition. Semipartial correlations were also used to examine the relationship between early- to- mid-treatment changes in CJCEST TPVs and the program attendance variables.

2.5.6.6.2 Short-term treatment targets. Hierarchical multiple regression analyses were used to examine whether DRFs (pre-treatment and change scores), CJCEST TPVs (early-treatment, mid-treatment, and change scores) predicted changes in distorted attitudes about IPV. Pre-treatment distorted attitudes about IPV was controlled in the first block. For analyses that

used DRF or CJCEST TPV change scores, the respective pre-, early, or mid-treatment scores were also controlled.

Since the relationship problems variable was coded dichotomously, there was very little variance in its change scores. As such, hierarchical logistic regression was used to examine the degree to which DRFs (pre-treatment and change scores), CJCEST TPVs (early-treatment, mid-treatment, and change scores) predicted changes in relationship problems. This was examined entering pre-treatment relationship problems into the first block, the predictor variable (i.e., the DRF or CJCEST TPV) into the second block, and post-treatment relationship problems as the dependent variable. For analyses that used DRF or CJCEST TPV change scores as the predictor variable, their respective pre-, early, or mid-treatment scores were also controlled.

2.5.6.6.3 Risk change. Hierarchical multiple regression analyses were conducted to examine the extent to which DRFs (pre-treatment and change scores) and CJCEST TPVs (early-treatment, mid-treatment, and change scores) predicted changes on the SARA-V3 while controlling for the SARA-V3 at pre-treatment. For analyses that used DRF or CJCEST TPV change scores as the predictor variable, their respective pre-, early, or mid-treatment scores were also controlled.

2.5.6.6.4 Program-phase recidivism. Point-biserial correlations and ROCs examined how pre-treatment DRFs and early-treatment CJCEST TPVs related to program-phase recidivism.

2.5.6.6.5 Recidivism. Correlations, point-biserial correlations, and ROCs were used to examine how pre- and post-treatment DRFs as well as early-, mid-, and post-treatment CJCEST TPVs related to general and violent recidivism. The relationship between recidivism and DRF and CJCEST TPV change scores were also examined using semipartial correlations while controlling for their respective pre-, early-, or mid-treatment scores.

2.5.6.7 Program engagement and outcomes. Program engagement was examined in relation to program attendance, short-term treatment targets, changes in risk, and recidivism.

2.5.6.7.1 Program attendance. Correlations, point-biserial correlations, and ROCs examined the degree to which early program engagement related to attrition and the number of sessions attended.

2.5.6.7.2 Short-term treatment targets. Hierarchical multiple regressions examined the extent to which program engagement (early-treatment, late-treatment, and change scores) predicted changes in distorted attitudes about IPV, while controlling for pre-treatment distorted attitudes about IPV. When program engagement change scores was the predictor variable, early-program engagement was also controlled.

Hierarchical logistic regressions were used to measure the extent to which program engagement (early-treatment, late-treatment, and change scores) predicted reductions in relationship problems. Pre-treatment relationship problems were controlling in the first block, the measure of program engagement (i.e., the predictor) was entered in the second block, and post-treatment relationship problems (measured dichotomously) was entered as the dependent variable. When program engagement change scores was the predictor variable, early-program engagement was also controlled.

2.5.6.7.3 Risk change. Hierarchical multiple regression analyses were conducted to examine the extent to which program engagement (early-treatment, late-treatment, and change scores) predicted changes on the SARA-V3, while controlling for the SARA-V3 at pre-treatment. For analyses that used program engagement change scores as the predictor variable, early-treatment program engagement was controlled as well. Semipartial correlations also examined the relationship between the GEM subscales and changes on the SARA-V3, while controlling for pre-treatment SARA-V3 scores.

2.5.6.7.4 Recidivism. A series of Cox regression survival analyses examined the degree to which early- and late-treatment program engagement predicted general and violent recidivism, while controlling for the SARA-V3 and the ODARA. Hierarchical multiple regressions, controlling pre-treatment risk and follow-up time, were conducted to examine the extent to which early and late program engagement predicted the number of new charges and new violent charges incurred in the follow-up period. Exploratory correlation analyses further examined the degree to which the GEM subscales related to recidivism.

CHAPTER 3: RESULTS

3.1 Sample and Program

3.1.1 Sample Characteristics

The sample consisted of 88 male participants who attended an intimate partner violence program at FACS. Program data were collected from eight, 16-week groups that ran between May 2016 and June 2017.

3.1.1.1 Demographic information. Participants' mean age was 37 years, ranging from 20 to 63 years ($SD = 10.9$). Most participants were born in Canada and non-Indigenous (83%), although some participants were Indigenous-Canadian (8%) or immigrated to Canada (8%). Participants were most likely to be divorced/separated/widowed (33%) or in a married/cohabitating relationship (31%). It was less common for participants to be divorced/separated and in a new relationship (16%), single (13%), or in a dating relationship (8%). Overall, 55% of participants were in a relationship and 46% were not. Almost half of the sample (48%) had less than a Grade 12 education, about a third had a high school education or equivalent (34%), and the remainder had postsecondary education (17%). Education levels ranged from eight to 20 years ($M = 11.5$ years, $SD = 2.01$). Approximately half of the participants were employed full time (53%), almost a third were unemployed (27%), and the remainder were on disability assistance (7%), employed part time (7%), or students (6%). A high proportion of the sample (40%) had file information that provided evidence of a diagnosed mental disorder, most commonly mood disorders (18%) and neurocognitive (e.g., Intellectual Disability) or neurodevelopmental (e.g., Attention Deficit Hyperactivity Disorder) disorders (18%). Diagnosed substance use disorders (13%), trauma-and stressor-related or anxiety disorders (7%), and personality disorders (5%) were less common.

3.1.1.2 Legal history information. Court dispositions received by participants were approximately evenly split between probation orders (35%), peace bonds (35%),³ and a combination of probation and custody (28%). One participant was serving a conditional

³ One participant was not on a court order and was referred by Child and Family Services. He was included under the Peace Bond category for all subsequent analyses.

sentence order. The mean disposition length was 16.1 months ($SD = 5.7$). There was a variety of index offences, which are displayed in Table 3.1, although the most common was assault.

Table 3.1
Frequency of Index Offences

Index Offence	<i>n</i>	%
Unlawful Confinement, Abduction, or Criminal Harassment	4	5
Assault with Weapon or Assault Causing Bodily Harm	9	10
Assault	36	41
Utter Threats, Fear of Injury/Damage, or Forcible Entry	24	27
Fail to Comply	3	3
Common Law Peace Bond or Not Applicable	12	14

Participants' criminal histories were diverse. Age at first official offence ranged from 12 to 58 years old ($M = 24.9$ years, $SD = 9.73$). Twenty-four percent of participants ($n = 21$) were first-time offenders, yet the number of previous offences (not including the index offence) ranged up to 53 ($M = 7.53$, $SD = 11.7$), previous violent offences ranged from zero to 11 ($M = 1.31$, $SD = 2.18$), and previous IPV offences ranged from zero to five ($M = 0.44$, $SD = 0.93$). Only 25% of participants had an official IPV history, defined as an IPV charge for which the courts imposed a disposition.⁴ However, 67% of participant files contained information that suggested a prior history of IPV, be it based on official (e.g., criminal conviction) or unofficial (e.g., participant self-report, partner report) information.

3.1.1.3 Group information. Six groups were offered in the evening ($n = 71$) and two groups were offered during the day ($n = 17$). A series of *t*-tests found no significant differences between day and evening groups in terms of participant age; years of education; pre-treatment risk on the ODARA and the SARA-V3; as well as the number of previous offences, violent offences, and IPV offences (see Table 3.2).

⁴ Peace Bonds were often granted, which do not result in conviction. Thus, any disposition (including Peace Bonds) was used as the criterion for official IPV history, rather than conviction alone.

Table 3.2

T-Tests Comparing of Participant Characteristics between Day and Evening Groups

Characteristics	<i>t</i>	<i>df</i>	<i>d</i>	<i>p</i>
Age ^a	-1.41	19	0.43	.18
Education	1.35	80	0.39	.18
No. offences	0.65	84	0.19	.52
ODARA	0.81	85	0.22	.42
SARA-V3	-.020	85	0.005	.98

Note. No. Offences = Number of previous offences.

^a Equal variances not assumed

Categorical variables were coded dichotomously when possible to increase power for chi-square analyses; as shown in Table 3.3, no significant differences were found regarding mental disorder diagnosis (i.e., present or not); history of IPV, and relationship status (i.e., in a relationship or not in a relationship). As might be expected, there were higher rates of unemployment/disability assistance in the day group (53%) in comparison to the evening group (30%), a difference significant at the $p = .068$ level. Although not statistically significant, the day groups had a higher proportion of participants with a diagnosed mental disorder than evening

Table 3.3

Chi-Square Analyses Comparing of Participant Characteristics between Day and Evening Groups

Characteristics	χ^2	OR	95% CI	<i>p</i>
Mental disorder	1.53	1.95	0.67, 5.67	.22
Neuro. disorder	1.04	1.86	0.56, 6.20	.31
Relationship	1.52	2.01	0.65, 6.14	.22
Employment	3.33	2.68	0.91, 7.89	.068
Any IPV	0.12	1.23	0.39, 3.89	.73

Note. Neuro. = Neurocognitive or neurodevelopmental.
Relationship = Relationship status. Any IPV = Any IPV history noted on file.

group participants (37% and 18%, respectively). Similarly, there was a higher percentage of neurocognitive/neurodevelopmental disorders in the day groups (29%) in comparison to the

evening groups (18%), although this difference was not statistically significant. There was insufficient power to conduct a chi-square analysis to compare different ethnicities in the day and evening groups.

3.1.2 Program Integrity

Program facilitators recorded the amount of time they spent on each TCA after each group session. The mean time spent on each of the 11 TCAs was calculated. The degree to which groups implemented a similar curriculum was then examined. Namely, descriptive statistics were calculated for the number of TCAs covered and number of sessions provided. As well, the degree to which each group deviated from the preferred curriculum was examined by calculating the absolute difference between the actual and preferred amount of time spent on each TCA. Finally, the average amount of time groups deviated from the preferred curriculum for each TCA was calculated. These findings are detailed in Appendix O.

3.2 Dynamic Responsivity and the Treatment Process

3.2.1 Psychometrics of Dynamic Specific Responsivity Factors

3.2.1.1 DRF descriptive statistics. Motivation and confidence in treatment effectiveness were measured using two subscales of the ACT scale. The range of possible scores were nine to 45 for motivation and eight to 40 for confidence in treatment effectiveness. Both motivation for treatment ($\alpha = .76$, $\alpha = .71$) and confidence in treatment effectiveness ($\alpha = .78$, $\alpha = .75$) demonstrated acceptable internal consistency at pre- and post-treatment, respectively. Readiness to change IPV was measured using the OSRC question, which ranged from one (low readiness) to four (high readiness).

Self-efficacy was analyzed as a continuous variable (a scaling question, with 1 signifying low self-efficacy and 10 signifying high self-efficacy), yet it was negatively skewed with modes of 10 at both pre- and post-treatment. Therefore, self-efficacy was also analyzed as a dichotomous variable divided into 1) those who expressed some doubt in their ability to refrain from future violence against an intimate partner (44% at pre-treatment, 53% at post-treatment), and 2) those who were completely confident they would refrain from future violence against an intimate partner (57% at pre-treatment, 46% at post-treatment). The mean pre-treatment and post-treatment scores for each DRF are displayed in Table 3.4.

3.2.1.2 DRF change. Four one-tailed, paired sample *t*-tests were conducted to test the hypothesis that the DRFs would increase from pre- to post-treatment (see Table 3.4). As hypothesized, motivation and confidence in treatment effectiveness increased significantly. However, self-efficacy and readiness to change did not change significantly.

Table 3.4

Dynamic Responsivity Factor Descriptive Statistics and Analysis of Change

	Pre-treatment <i>M (SD)</i>	Post-treatment <i>M (SD)</i>	Change ^a <i>M (SD)</i>	<i>t</i>	<i>df</i>	<i>d</i>	<i>p</i>
Motiv.	30.1 (5.37)	31.6 (4.88)	1.34 (4.99)	2.06	58	0.26	.022
Conf.	30.9 (3.95)	32.0 (4.32)	0.98 (4.43)	1.72	58	0.23	.045
Effic.	8.62 (2.04)	8.69 (1.60)	0.20 (1.83)	-0.76	50	0.11	.22
Readi.	2.18 (1.39)	2.02 (1.34)	0.16 (1.31)	0.87	48	0.12	.19

Note. Motiv. = Motivation for Treatment. Conf. = Confidence in Treatment Effectiveness. Effic. = Self-Efficacy.

^a Mean difference subtracting pre-treatment from post-treatment score.

3.2.1.3 Relationships between DRFs. Correlation analyses tested the hypothesis that DRFs would be intercorrelated (see Table 3.5). Consistent with hypotheses, higher pre-treatment readiness to change was associated with higher motivation at pre-treatment ($p = .001$) and post-treatment ($p = .003$). Higher pre-treatment motivation was associated with greater confidence in treatment effectiveness at pre-treatment ($p < .001$) and post-treatment ($p < .001$). Similarly, post-treatment motivation was associated with post-treatment readiness to change ($p = .007$) and confidence in treatment effectiveness ($p < .001$).

Contrary to hypotheses, pre-treatment self-efficacy was significantly negatively correlated with post-treatment readiness to change IPV when self-efficacy was measured as a binary variable $r_{pb} = -.34$, $p = .016$ (but not when measured as continuous variable; see Table 3.5). Similarly, higher post-treatment self-efficacy was significantly associated with less post-treatment readiness to change ($p = .011$, continuous; $r_{pb} = -.36$, $p = .013$, dichotomous) and motivation ($p = .005$, continuous; $r_{pb} = -.31$, $p = .029$, dichotomous).

Correlations were also conducted between DRF change scores (see Table 3.6). As hypothesized, changes in motivation and confidence in treatment effectiveness were positively correlated ($p < .001$).

Table 3.5

Intercorrelations between Dynamic Responsivity Factors at Pre-Treatment and Post-Treatment

Measure	Pre Read.	Pre Motiv.	Pre Conf.	Pre Effic.	Post Read.	Post Motiv.	Post Conf.
Pre Motiv.	.36**	-					
Pre Conf.	.18	.71***	-				
Pre Effic.	-.22 [†]	-.12	-.025	-			
Post Read.	.52***	.15	.046	-.20	-		
Post Motiv.	.40**	.54***	.18	-.15	.37**	-	
Post Conf.	.17	.45***	.47***	-.19	.14	.51***	-
Post Effic.	-.18	-.071	.042	.46**	-.37*	-.39**	-.017

Note. Pre = Pre-treatment. Motiv. = Motivation for Treatment. Conf. = Confidence in Treatment Effectiveness. Effic. = Self-Efficacy. Post = Post-treatment. Read. = Readiness to Change.
* $p < .05$. ** $p < .01$. *** $p < .001$. [†] $p < .10$.

Table 3.6

Intercorrelations between Dynamic Responsivity Factors Change Scores

Measure	Read.	Motiv.	Conf.
Motiv.	.22	-	
Conf.	.061	.56***	-
Effic.	-0.94	-.26 [†]	.20

Note. Read. = Readiness to Change. Motiv. = Motivation. Conf. = Confidence in Treatment Effectiveness. Effic. = Self-Efficacy.
*** $p < .001$. [†] $p < .10$.

3.2.2 Psychometrics of CJCEST Treatment Process Variables (TPVs)

Treatment satisfaction, therapeutic alliance, and group cohesiveness were measured using the CJCEST, which uses a 5-point Likert-type scale, with higher scores representing more

positive responses. The scoring of the CJCEST converts raw scores to scores that range from 10 to 50, with a score of 30 representing a neutral response.

3.2.2.1 CJCEST TPV descriptive statistics. Mean treatment satisfaction and therapeutic alliance scores were similar to one another across all three timepoints, while group cohesiveness was consistently lower (see Table 3.7). Internal consistency (measured using Cronbach’s alpha) was acceptable for measures treatment satisfaction ($\alpha = .73, \alpha = .76, \alpha = .79$), good for measures of group cohesiveness ($\alpha = .73, \alpha = .84, \alpha = .84$), and excellent for measures therapeutic alliance ($\alpha = .87, \alpha = .91, \alpha = .92$) at early-, mid-, and post-treatment, respectively.

Table 3.7
CJCEST TPV Descriptive Statistics

Measure	Early <i>M (SD)</i>	Mid <i>M (SD)</i>	Post <i>M (SD)</i>
Treatment Satisfaction	35.6 (4.78)	39.7 (5.34)	39.9 (5.61)
Therapeutic Alliance	37.1 (4.10)	41.7 (4.70)	42.3 (4.82)
Group Cohesiveness	26.4 (3.86)	29.7 (5.19)	30.8 (5.22)

Note. CJCEST = Client Evaluation of Self and Treatment. Early = Early-treatment. Mid = Mid-treatment. Post = Post-treatment.

3.2.2.2 CJCEST TPV change. A series of repeated-measures ANOVAs examined changes in treatment satisfaction, therapeutic alliance, and group cohesiveness from early- to mid-treatment, mid- to post-treatment, and early- to post-treatment. All assumptions were met.

Significant main effects detected differences in treatment satisfaction over the course of treatment, $\eta^2_{\text{Partial}} = .25, F(1,104) = 17.7, p < .001$. Planned contrasts revealed significant increases in treatment satisfaction during the first half of the program, $\eta^2_{\text{Partial}} = .32, F(1,52) = 24.8, p < .001$, but not in the latter half $\eta^2_{\text{Partial}} = .009, F(1,52) = 0.46, p = .50$. Tukey’s LSD post hoc test similarly demonstrated significant increases from early-treatment to mid-treatment ($p < .001$) and pre-treatment to post-treatment ($p < .001$), but not from mid-treatment to post-treatment ($p = .50$).

Another ANOVA demonstrated significant differences in therapeutic alliance over the course of treatment, $\eta^2_{\text{Partial}} = .46, F(2,102) = 43.1, p < .001$. Planned contrasts demonstrated

significant increases in the therapeutic alliance during the first half of the program, $\eta^2_{\text{Partial}} = .53$, $F(1,51) = 57.3$, $p < .001$, but not in the latter half $\eta^2_{\text{Partial}} = 0.03$, $F(1,51) = 1.82$, $p = .18$. Tukey's LSD post hoc test also found significant increases from early- to mid-treatment ($p < .001$) and early- to post-treatment ($p < .001$), with no significant changes from mid-treatment to post-treatment ($p = .18$).

Significant main effects were detected differences in group cohesiveness over the course of treatment, $\eta^2_{\text{Partial}} = .31$, $F(2, 102) = 23.2$, $p < .001$. The significant increases in group cohesiveness that occurred during the first half of the program, $\eta^2_{\text{Partial}} = .28$, $F(1,51) = 19.8$, $p < .001$ were more substantial than the significant changes that occurred in the latter half, $\eta^2_{\text{Partial}} = 0.073$, $F(1,51) = 4.04$, $p = .05$. Tukey's LSD post hoc test similarly demonstrated significant increases from early-to mid-treatment ($p < .001$), early- to post-treatment ($p < .001$), and mid- to post-treatment ($p = .05$).

3.2.2.3 Relationships between CJCEST TPVs. Correlation analyses were conducted between measures of the TPVs at early-, mid-, and post-treatment. Consistent with hypotheses, treatment satisfaction, therapeutic alliance, and group cohesiveness were highly intercorrelated at all three timepoints, as displayed in Table 3.8. Correlation analyses were also conducted between CJCEST TPVs change scores (early- to mid-treatment, mid- to post-treatment, and early- to post-treatment). Change scores across all three timepoints were positively intercorrelated as shown in Tables 3.9, 3.10, and 3.11.

3.2.3 Relationships between DRFs and CJCEST TPVs

Correlations analyses were conducted between and amongst all DRFs and CJCEST TPVs, including the pre- or early-treatment, mid-treatment (when applicable), and post-treatment scores (see Table 3.12). These analyses were predominantly exploratory, although it was hypothesized that mid- and post-treatment group cohesiveness would be associated with post-treatment readiness to change IPV. It was also hypothesized that the therapeutic alliance and confidence in treatment effectiveness (and their change scores) would be positively intercorrelated. Significant and pertinent findings are described below.

Table 3.8

Intercorrelations between CJCEST TPVs at Early-Treatment, Mid-Treatment, and Post-Treatment

	Early TS	Early TA	Early GC	Mid TS	Mid TA	Mid GC	Post TS	Post TA
Early TA	.70***	-						
Early GC	.51***	.63***	-					
Mid TS	.47***	.52***	.39**	-				
Mid TA	.31**	.52***	.40**	.81***	-			
Mid GC	.30*	.40***	.52***	.56***	.61***	-		
Post TS	.35**	.34*	.31*	.56***	.64***	.43**	-	
Post TA	.19	.41**	.33*	.42**	.68***	.49***	.76***	-
Post GC	.25 [†]	.43**	.50***	.34*	.51***	.71***	.54***	0.62***

Note. TS =Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. Early = Early-treatment. Mid = Mid-treatment. Post = Post-treatment.

* $p < .05$. ** $p < .01$. *** $p < .001$. [†] $p < .10$

Table 3.9

Intercorrelations between TPV Early- to Mid-Treatment Change Scores

	TS	TA
TA	.66***	-
GC	.45***	.42***

Note. TS =Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness.
*** $p < .001$

Table 3.10

Intercorrelations between TPV Mid- to Post-Treatment Change Scores

	TS	TA
TA	.74***	-
GC	.43**	.43**

Note. TS =Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness.
** $p < .01$. *** $p < .001$

Table 3.11

Intercorrelations between TPV Early- to Post-Treatment Change Scores

	TS	TA
TA	.69***	-
GC	.50***	.44**

Note. TS =Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness.
** $p < .01$. *** $p < .001$

Table 3.12

Correlations between DRFs and TPVs

Measure	Early-treatment			Mid-treatment			Post-treatment		
	TS	TA	GC	TS	TA	GC	TS	TA	GC
Pre-treatment									
Readiness	.10	-.001	-.022	.16	.12	.12	.043	.003	.056
Motivation	.16	.15	.12	.23 [†]	.30*	.29*	.33*	.41**	.36**
Confidence	.20 [†]	.25*	.21 [†]	.22 [†]	.30*	.44**	.30*	.43**	.38**
Effic.	-.18	-.17	-.14	-.28*	-.18	-.12	-.11	-.094	-.11
Post-treatment									
Readiness	-.014	-.062	.053	.090	.085	.27 [†]	.051	.12	.093
Motivation	-.079	-.088	-.088	.031	.11	.12	.25 [†]	.32**	.32*
Confidence	.11	.30*	.16	.35**	.43***	.29*	.36**	.55***	.46***
Effic.	.049	-.002	-.096	-.072	.002	-.18	-.020	-.019	-.22

Note. Motivation = Motivation for Treatment. Confidence = Confidence in Treatment Effectiveness. Effic. = Self-Efficacy. TS =Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. Readiness = Readiness to Change. Early = Early-treatment. Mid = Mid-treatment. Post = Post-treatment.
* $p < .05$. ** $p < .01$. *** $p < .001$ [†] $p < .10$

3.2.3.1 Pre-treatment DRFs to early-, mid-, and post-treatment CJCEST TPVs.

Table 3.12 shows that pre-treatment confidence in treatment effectiveness was positively associated with the therapeutic alliance at early- ($p = .019$), mid- ($p = .011$), and post-treatment

($p = .001$). This confirms the hypothesis that confidence in treatment effectiveness would be associated with therapeutic alliance at each timepoint. Pre-treatment confidence in treatment effectiveness was also significantly correlated with group cohesiveness at mid- ($p < .001$) and post-treatment ($p = .004$), as well as treatment satisfaction at post-treatment ($p = .027$).

Pre-treatment motivation was significantly associated with the therapeutic alliance (at mid-treatment $p = .010$ and post-treatment $p = .002$), group cohesiveness (at mid-treatment $p = .013$ and post-treatment $p = .007$), and treatment satisfaction at post-treatment ($p = .013$).

Lower pre-treatment self-efficacy (measured continuously) was significantly associated with greater treatment satisfaction at mid-treatment ($p = .020$).⁵ Pre-treatment readiness to change was not significantly related to any CJCEST TPV at any timepoint.

3.2.3.2 Early- and mid-treatment CJCEST TPVs to post-treatment DRFs. As shown in Table 3.12, post-treatment confidence in treatment effectiveness was significantly correlated with therapeutic alliance at early-treatment ($p = .022$) and mid-treatment ($p = .001$). Post-treatment confidence in treatment effectiveness was also significantly associated with mid-treatment treatment satisfaction ($p = .009$) and group cohesiveness ($p = .034$). Post-treatment motivation, self-efficacy and readiness to change were not significantly associated with early- or mid-treatment CJCEST TPVs. The hypothesized positive relationship between mid-treatment group cohesiveness and post-treatment readiness to change approached significance ($p = .056$).

3.2.3.3 Post-treatment DRFs and CJCEST TPVs. Post-treatment confidence in treatment effectiveness was positively correlated with post-treatment treatment satisfaction ($p = .007$), therapeutic alliance ($p < .001$), and group cohesiveness ($p < .001$), as detailed in Table 3.12. This further confirms the hypothesis that confidence in treatment effectiveness would be associated with therapeutic alliance. Post-treatment motivation was positively correlated with post-treatment therapeutic alliance ($p = .018$) and post-treatment group cohesiveness ($p = .017$). Post-treatment self-efficacy and readiness to change were not significantly related to any post-treatment CJCEST TPVs.

3.2.3.4 Relationships between DRF and CJCEST TPV change scores. There were no significant relationships between DRF and CJCEST TPV change scores, as shown in Table 3.13.

⁵ This relationship only approached significance when self-efficacy was scored dichotomously $r_{pb} = -.22$, $p = .068$.

Contrary to hypotheses, changes in confidence in treatment effectiveness were not significantly related to changes in the therapeutic alliance. However, the relationship between increases in confidence in treatment effectiveness and increases in group cohesiveness from mid- to post-treatment approached significance ($p = .052$).

Table 3.13

Correlations between DRF and CJCEST TPV Change Scores

Measure	Early to Mid			Mid to Post			Early to Post		
	TS	TA	GC	TS	TA	GC	TS	TA	GC
Readiness	.16	.070	.18	-.033	-.045	-.030	.014	.061	.079
Motivation	-.028	.12	-.018	.14	.070	.19	.055	.15	.13
Confidence	.18	.18	-.13	-.025	.009	.27 [†]	.10	.12	.10
Efficacy	.16	.12	-.11	-.17	-.28	-.089	-.020	-.11	-.19

Note. Readiness = Readiness to Change. Confidence = Confidence in Treatment Effectiveness. Efficacy = Self-Efficacy. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. Readiness = Readiness to Change. Early to Mid = Early- to mid-treatment change. Mid to Post = Mid- to post-treatment change. Early to Post = Early- to post-treatment change.

* $p < .05$. ** $p < .01$. *** $p < .001$ [†] $p < .10$

3.3 Program Engagement

3.3.1 Psychometrics of Program Engagement

Program engagement was measured with the GEM, which uses a 5-point Likert-type scale. Raw scores are converted to scores that range from one to five, with higher scores representing higher levels of engagement. Program facilitators rated the GEM at early-treatment and post-treatment.

3.3.1.1 Program engagement descriptive statistics. The mean early-treatment GEM total score was 3.26 ($SD = 0.70$), while its seven subscale means ranged from 2.06 to 4.80. The mean late-treatment GEM total score was 3.49 ($SD = 0.73$), while its seven subscale means ranged from 2.35 to 4.89. The contracting subscale was not normally distributed and displayed very little variance; as such, this subscale was only included in correlation analyses and as part of the GEM total score. Cronbach's alpha was used to measure the GEM's internal consistency. At both early- and late-treatment, respectively, internal consistency ranged from good to excellent for the total score ($\alpha = .92$, $\alpha = .96$) and the Contributing ($\alpha = .88$, $\alpha = .89$), Relating to Worker

($\alpha = .87$, $\alpha = .89$), Relating to Members ($\alpha = .93$, $\alpha = .94$), Working on Own Problems ($\alpha = .95$, $\alpha = .95$), Working on Others' Problems ($\alpha = .95$, $\alpha = .95$) and Contracting ($\alpha = .82$, $\alpha = .79$) subscales. The Attending subscale's internal consistency was acceptable at early-treatment ($\alpha = .74$) but poor at late-treatment ($\alpha = .45$).

3.3.1.2 Relationships between Group Engagement Measure domains. Each GEM subscale was significantly correlated with the GEM total scores at early- and late-treatment, as shown in Table 3.14. Most subscales were also significantly intercorrelated at both time-points. The Contracting subscale displayed poor convergent validity with other subscales at both early- and late-treatment, which is consistent with its other problematic psychometric properties. The other exception was that the Attending subscale was not significantly correlated with the early-treatment Relating with Members subscale.

Table 3.14

Intercorrelations between the GEM Total Scores and GEM Subscales

	Total	Attend.	Contrib.	Relate Work.	Relate Mem.	Own Prob.	Others Prob.	Contr.
Total	-	.55***	.89***	.80***	.83***	.87***	.89***	.90*
Attend.	.43***	-	.39**	.53***	.25*	.52***	.34**	.27*
Contrib.	.89***	.18	-	.76***	.70***	.67***	.74***	.21 [†]
Relate Work.	.85***	.31**	.78***	-	.58***	.58***	.63***	.24 [†]
Relate Mem.	.78***	.066	.74***	.62***	-	.61***	.83***	.16
Own Prob.	.78***	.42***	.58***	.64***	.43***	-	.71***	.25*
Others Prob.	.88***	.31**	.80***	.66***	.71***	.52***	-	.16
Contr.	.31**	.30**	.17	.19	.13	.15	.24*	-

Note. Values below the diagonal represent early-treatment intercorrelations and values above the diagonal represent late-treatment intercorrelations. Total = GEM Total score. Attend. = Attending. Contrib. = Contributing. Relate Work. = Relating to Worker. Relate Mem. = Relating with Members. Own Prob. = Working on Own Problems. Others Prob. = Working with Others' Problems. Contr. = Contracting. * $p < .05$. ** $p < .01$. *** $p < .001$ [†] $p < .10$.

3.3.1.3 Program engagement change. A series of *t*-tests were conducted to test the hypothesis that program engagement is a dynamic and multifaceted construct. Table 3.15 shows that the GEM total score, Contributing subscale, Relating to Worker subscale, Working on Own Problems subscale, and Working on Others' Problems subscale all increased significantly from

early - to late-treatment, demonstrating small to medium effects. The Attending and Relating with Members subscales did not change significantly from early- to late-treatment.

Table 3.15

Change in Program Engagement from Early- to Late-Treatment

GEM	Early-treatment <i>M (SD; n = 72)</i>	Late-treatment <i>M (SD; n = 63)</i>	Change ^a <i>M (SD; n = 63)</i>	<i>t</i>	<i>d</i>	<i>p</i>
Total	3.26 (0.70)	3.49 (0.73)	0.24 (0.60)	3.18	.40	.002
Attend.	4.56 (0.67)	4.50 (0.64)	-0.048 (0.70)	-0.54	.070	.59
Contrib.	3.34 (0.97)	3.69 (0.91)	0.37 (0.82)	3.61	.46	.001
Relate Work.	3.61 (0.96)	3.86 (0.92)	0.25 (0.81)	2.46	.31	.017
Relate Mem.	2.44 (1.06)	2.65 (1.15)	0.17 (0.85)	1.62	.16	.11
Own Prob.	2.96 (1.02)	3.26 (1.09)	0.33 (0.94)	2.80	.35	.007
Others Prob.	2.06 (0.94)	2.35 (0.99)	0.32 (0.79)	3.24	.41	.002

Note. *df* = 62. Attend = Attending. Contrib = Contributing. Relate Work. = Relating to Worker. Relate Mem. = Relating with Members. Own Prob. = Working on Own Problems. Others Prob. = Working with Others' Problems

^aMean difference of late-treatment scores minus early-treatment scores.

3.3.2 DRFs and CJCEST TPVs with Program Engagement as a Treatment Process

Outcome

Correlation analyses were conducted between program engagement and DRFs (see Table 3.16) and CJCEST TPVs (see Table 3.17) at different timepoints. Standard multiple regressions were then used to test the hypothesis that higher DRFs and CJCEST TPVs would predict greater program engagement. Only the significantly correlated DRFs and CJCEST TPVs were subsequently used in the follow-up standard multiple regression analyses.

3.3.2.1 Early-treatment program engagement. Consistent with hypotheses, early-treatment program engagement was positively associated with pre-treatment readiness to change ($p = .001$), motivation ($p = .026$), and confidence in treatment effectiveness ($p = .029$) as well as early-treatment treatment satisfaction ($p = .001$), therapeutic alliance ($p = .025$), and group cohesiveness ($p = .010$; see Tables 3.16 and 3.17). Contrary to hypotheses, self-efficacy was not significantly associated with program engagement.

Table 3.16

Correlations between Program Engagement and DRFs

Measure	Pre-Treatment				Post-Treatment			
	Readi.	Motiv.	Conf.	Effic.	Readi.	Motiv.	Conf.	Effic.
Early GEM	.41**	.26*	.26*	-.015	.25 [†]	.17	.33*	.059
Post GEM	.40**	.20	.043	.14	.16	.16	.17	.21

Note. Early = Early-treatment. GEM = Program engagement. Post = Post-treatment. Readi. = Readiness to Change. Motiv. = Motivation. Conf. = Confidence in Treatment Effectiveness. Effic. = Self-efficacy.

* $p < .05$. ** $p < .01$ [†] $p < .10$.

Table 3.17

Correlations between Program Engagement and CJCEST TPVs

Measure	Early-Treatment			Mid-Treatment			Post-Treatment		
	TS	TA	GC	TS	TA	GC	TS	TA	GC
Early GEM	.40**	.26*	.30*	.34**	.31*	.19	.24 [†]	.21	.22
Post GEM	.13	.12	.13	.31*	.31*	.12	.089	.042	.15

Note. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. GEM = Group Engagement Measure Total Score. Early = Early-treatment. Post = Post-treatment.

* $p < .05$. ** $p < .01$ [†] $p < .10$.

A standard multiple regression was conducted with early-treatment program engagement as the dependent variable. The significantly correlated pre-treatment DRFs and early-treatment TPVs were the independent variables. All assumptions were met. Consistent with hypotheses, the regression equation was significant $F(6, 59) = 4.92$, $R^2 = .33$, $p < .001$ and the IVs collectively accounted for 33% of variance in early-treatment program engagement. Pre-treatment readiness to change was the only significant unique predictor, accounting for 11% of variance in early-treatment program engagement as shown in Table 3.18.

Additional correlation analyses explored how early-treatment program engagement was related to mid- and post-treatment CJCEST TPVs and post-treatment DRFs (see Table 3.17). Early-treatment program engagement was significantly correlated with mid-treatment treatment satisfaction ($p = .005$) and the therapeutic alliance ($p = .011$) as well as post-treatment confidence in treatment effectiveness ($p = .011$).

Table 3.18

Standard Multiple Regression of Select DRFs and TPVs Predicting Early Program Engagement

Predictor	<i>B</i> (SE)	95% CI for <i>B</i>	β	<i>sr</i> ²	<i>p</i>
Pre Motiv.	-0.006 (0.021)	[-0.048, 0.036]	-.049	.001	.77
Pre Read.	0.19 (0.059)	[0.070, 0.31]	.38	.11	.002
Pre Conf.	0.039 (0.028)	[-0.017, 0.094]	.22	.022	.17
Early TS	0.044 (0.023)	[-0.002, 0.090]	.30	.042	.059
Early TA	-0.006 (0.30)	[-0.066, 0.054]	-.035	.0004	.85
Early GC	0.019 (0.026)	[-0.033, 0.070]	.11	.006	.48

Note. Pre = Pre-treatment. Motiv = Motivation. Read. = Readiness to Change. Conf. = Confidence in Treatment Effectiveness. Early = Early-treatment. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness.

3.3.2.2 Late-treatment program engagement. It was hypothesized that pre-treatment DRFs and mid-treatment TPVs would predict late-treatment program engagement. A series of correlations found that only three of the anticipated variables were correlated with late-treatment program engagement, which included pre-treatment readiness to change ($p = .002$) as well as mid-treatment treatment satisfaction ($p = .015$) and therapeutic alliance ($p = .016$).

Given these findings, a standard multiple regression was conducted with late-treatment program engagement as the dependent variable. Pre-treatment readiness to change as well as mid-treatment treatment satisfaction and therapeutic alliance were the independent variables. All assumptions were met. The regression equation was significant $F(3,51) = 5.15$, $R^2 = .23$, $p = .003$ and the IVs collectively accounted for 23% of variance in late-treatment program engagement. Pre-treatment readiness to change was again the only significant unique predictor, accounting for 13% of unique in late-treatment program engagement, as shown in Table 3.19.

Late-treatment program engagement was not significantly related to any post-treatment DRF or CJCEST TPV, as shown in Tables 3.16 and 3.17.

Table 3.19

Standard Multiple Regression of Selected DRFs and TPVs Predicting Late-Treatment Program Engagement

Predictor	<i>B</i> (SE)	95% CI for <i>B</i>	β	<i>sr</i> ²	<i>p</i>
Pre Read.	0.19 (0.066)	[0.060, 0.32]	.36	.13	.005
Mid TS	0.025 (0.027)	[-0.028, 0.079]	.19	.014	.34
Mid TA	0.020 (0.030)	[-0.041, 0.080]	.13	.007	.51

Note. Pre = Pre-treatment. Read. = Readiness to Change. Mid = Mid-treatment. TS = Treatment Satisfaction. TA = Therapeutic Alliance.

3.4 Outcome Descriptive Statistics and Psychometrics

Treatment outcomes included short-term treatment targets, changes in risk, program attendance, program-phase recidivism, as well as general and violent recidivism.

3.4.1 Short-Term Treatment Targets

Short-term treatment targets represented specific risk factors that were targeted during the program. These included distorted attitudes about IPV and relationship problems, which were measured at pre- and post-treatment. Distorted attitudes about IPV, an item on the SARA-V3, had possible scores of 0, 1, or 2. Relationship problems were measured by asking participants to read a list of possible relationship problems (drawn from the SARA-V3 coding manual) and asked to select all relationship problems they had experienced in the past month.

3.4.1.1 Distorted attitudes about IPV. The mean score for pre-treatment distorted attitudes about IPV was 1.30 ($n = 87$, $SD = 0.67$, Range: 0 – 2). The mean score at post-treatment was 0.43 ($n = 64$, $SD = 0.48$, Range: 0 – 1.5). A repeated-measures, paired sample *t*-test was conducted to test the hypothesis that distorted attitudes about IPV (i.e., risk) would significantly decrease from pre- to post-treatment. Consistent with this hypothesis, the results demonstrated that distorted attitudes about IPV were significantly lower at post-treatment $t(62) = 8.75$, $d = 0.97$, $p < .001$ with very large effects.

3.4.1.2 Relationship problems. At pre-treatment, 58% ($n = 51$) of participants did not endorse any relationship problems, 22% ($n = 19$) endorsed one relationship problem, and 11% ($n = 10$) endorsed two or more relationship problems. At post-treatment, 77% ($n = 41$) of participants did not endorse any relationship problems and 23% ($n = 12$) endorsed one

relationship problem. A paired-sample *t*-test demonstrated a tendency for participants to have fewer relationship problems at post-treatment $t(49) = 1.94$, $d = 0.27$, $p = .059$ with small effects.

3.4.1.3 Relationships between short-term treatment targets. Distorted attitudes about IPV and relationship problems were not significantly correlated, as shown in Table 3.20.

Table 3.20

Correlations between Short-Term Treatment Targets

Measure	Pre Attitude	Pre Rel. Prob.	Post Attitude	Post Rel. Prob.	Attitude Δ
Pre Rel. Prob.	.15	-			
Post Attitude	.28*	.19	-		
Post Rel. Prob.	-.021	.51***	.045	-	
Attitude Δ	-.76***	.046	.39***	.023	-
Rel. Prob. Δ	-.048	-.77***	-.084	.15	.006

Note. Pre= Pre-treatment. Rel. Prob. = Relationship problems. Post = Post-treatment. Attitude = Distorted attitudes about IPV. Attitude Δ = Changes in distorted attitudes about IPV. Rel Prob Δ = Changes in relationship problems.

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

3.4.2 Risk

The ODARA and the SARA-V3 were used to measure risk for recidivism. The ODARA is stable in nature and was therefore only administered pre-treatment. The SARA-V3 was administered at pre- and post-treatment. For the purposes of the current research, the SARA-V3 total score included the Nature of IPV domain and the Perpetrator Risk Factors domain.

Descriptive statistics are displayed in Table 3.21.

Analyses were conducted to examine the intercorrelations between measures of risk at pre- and post-treatment (see Table 3.22). As expected, SARA-V3 was highly correlated with its Nature of IPV domain and Perpetrator Risk Factors domain at pre- and post-treatment. The two domain scores were also positively correlated with one another at both pre-treatment ($p = .003$) and post-treatment ($p = .006$). The ODARA demonstrated very good convergent validity with the SARA-V3 and its two domains at pre-treatment. Pre-treatment and post-treatment measures of risk were highly and significantly correlated as well.

Table 3.21

Risk Measure Descriptive Statistics

Measure	Pre-treatment ^a		Post-treatment ^b	
	<i>M (SD)</i>	Range	<i>M (SD)</i>	Range
ODARA	5.54 (2.39)	0 – 11	-	-
SARA-V3	14.8 (5.24)	6 – 22	10.9 (4.45)	4 – 20
Nature IPV	7.09 (3.12)	2 – 13	6.67 (2.90)	2 – 14
Perpetrator	7.74 (3.34)	1 – 15	4.21 (2.53)	0 – 11

Note. Nature IPV = Nature of IPV domain V3. Perpetrator = Perpetrator Risk Factors.

^a n = 87. ^b n = 63

Table 3.22

Intercorrelations between Measures of Risk at Pre-Treatment and Post-Treatment

Measure	Pre-treatment				Post-treatment	
	ODARA	SARA-V3	Nature	Perpetrator	SARA-V3	Nature
Pre-treatment ^a						
SARA-V3	.59***	-				
Nature	.53***	.80***	-			
Perpetrator	.44***	.83***	.32**	-		
Post-treatment ^b						
SARA-V3	.44***	.93***	.84***	.67***	-	
Nature	.45***	.80***	.998***	.31*	.85***	-
Perpetrator	.26*	.72***	.34**	.82***	.79***	.34**

Note. Nature = Nature of IPV domain. Perpetrator = Perpetrator Risk Factors.

^a n = 87. ^b n = 63

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

3.4.2.1 Risk change. A series of repeated measures, paired-sample *t*-tests were conducted to examine changes in risk from pre- to post-treatment. As hypothesized, risk decreased significantly from pre- to post-treatment as measured by the SARA-V3 $t(62) = 12.5$, $d = 1.57$, $p < .001$ and its Perpetrator Risk Factors domain $t(62) = 12.6$, $d = 1.59$, $p < .001$. The Nature of IPV domain did not differ from pre- to post-treatment $t(62) = -0.65$, $d = 0.018$, $p = .95$, which was expected given that this domain is stable in nature and that, methodologically, points

were only added to the Nature of IPV domain when participants were charged with certain new offences while attending treatment.

3.4.3 Program Attendance

The FACS Spousal Violence program included 14 group sessions and two individual sessions. One group strayed from protocol and provided only 13 group sessions and two individual sessions. On average, participants attended a mean of 12 sessions ($SD = 4.67$), while the median and mode were 15 sessions. Participant attendance ranged of one to 16 sessions.

Overall, 72% of participants ($n = 63$) completed the program successfully. In order to complete the program successfully, FACS rules permit participants to miss one session (thus attending 15 sessions). However, as shown in Table 3.23, several participants were classified as having successfully completed the program despite missing more than one session.

Table 3.23

Number of Participants who Completed Programming by Number of Sessions Attended

No. of Sessions	Unsuccessful	Successful
1 - 11	22	0
12	1	1
13	2	7
14	0	8
15	0	30
16	0	17

3.4.4 Program-Phase Recidivism

Seventeen percent of all participants ($n = 15$) incurred new charges between the date of their first group session and their last scheduled group session. Nine of these participants incurred new charges as a result of failure to comply or failure to attend Court, whereas five of these participants incurred at least one new violent charge.

3.4.5 Recidivism

The recidivism follow-up period began the day after each participant’s last group session and ranged from 12.0 to 21.3 months ($M = 15.4$, $SD = 3.09$). The recidivism outcome variables were highly intercorrelated, as demonstrated in Table 3.24.

Table 3.24

Correlations between Recidivism Outcome Variables

Measure	Any Recidivism	Any Violent	No. of Charges
Any Violent	.67***	-	
No. of Charges	.60***	.62***	-
No. of Violent	.56***	.83***	.78***

Note. Any Violent = Any new violent charges. Any Recidivism = Any new charges. No. of Violent = Number of violent charges.
*** $p < .001$

3.4.5.1 General recidivism. Overall, 26.1% of participants ($n = 23$) recidivated during the follow-up period. Participants incurred new charges ranging from one to 355 days following the last group sessions ($M = 118.1$, $SD = 100.3$). Among recidivists, a mean of 8.74 charges ($SD = 10.3$, ranging from 1 to 42) were incurred during the follow-up period.

3.4.5.2 Violent recidivism. For violent recidivism, 13.6% of participants ($n = 12$) incurred at least one violent charge during the follow-up period. Participants incurred new violent charges ranging from 27 days and 355 days following the last group sessions ($M = 174.8$ days, $SD = 118.6$). Violent recidivists incurred a mean of 2.17 violent charges ($SD = 1.40$, ranging from 1 to 6) over the course of the follow-up period.

3.4.5.3 Offences. Participants incurred charges for a variety of offences,⁶ ranging in severity from Fail to Attend Court to Assault Causing Bodily Harm, as summarized in Table 3.25.

⁶ When more than one charge was incurred at the first reoffense date, the most serious charge was recorded as per 2013 Uniform Crime Reporting Incident-Based Survey - User Manual.

Table 3.25

Type and Frequency of Charges Incurred at First Reoffence

Charges	<i>n</i>	% of Total	% of Recidivists
Assault with Weapon or Assault Causing Bodily Harm	2	2.3	8.7
Assault or Intimidation	4	4.5	17.4
Serious Property Offences ^a or Possession of Illicit Drugs	3	3.4	3.4
Motor Vehicle Offences ^b or Minor Property Crimes ^c	4	4.5	17.4
Failure to Comply/Attend Court	10	11.4	43.5
Not Applicable/None	65	73.9	0.0

Note. % of Total = Percentage of the total sample, N = 88. % of Recidivists = % of participants who recidivated, base rate n = 23.

^a Break and Enter, Possession of Stolen Property over \$5000. ^b Dangerous Operation of a Motor Vehicle, Flight from Peace Officer, Driving while Disqualified. ^c Mischief, Theft.

3.5 Exploring Outcomes

3.5.1 Demographics and Outcomes

3.5.1.1 Demographics, DRFs, and TPVs. A series of analyses examined the association between demographics and 1) DRFs at pre- and post-treatment as well as 2) TPVs at early- mid-, and post-treatment. Correlations were used to explore age and years of education. Point-biserial correlations were used to examine relationship status (i.e., in a relationship or not), employment status (i.e., employed/a student or unemployed/on disability benefits), and presence of mental disorder. One-way ANOVAs were used to examine differences in DRFs and TPVs for specific relationship status (i.e., single, divorced/separated/widowed, divorced/separated and in a new relationship, married/cohabitating relationship, or dating relationship), specific employment status (i.e., full time, part time, student, disability, or unemployed), level of education (i.e., less than Grade 12, Grade 12, or more than Grade 12), and ethnicity (i.e., Indigenous-Canadian, non-Indigenous and born in Canada, or immigrated to Canada). Gabriel's pairwise post hoc test was used due to unequal sample sizes in each ANOVA. All other assumptions were met unless otherwise specified. The current section focuses upon specific hypotheses whereas detailed findings are found in Appendix P.

It was hypothesized that participants with a diagnosed mental disorder would have lower self-efficacy. There was some support for this hypothesis at pre-treatment ($r_{pb} = -.20, p = .062$), although the relationship only approached significance. This hypothesis was not supported for post-treatment self-efficacy ($r_{pb} = -.17, p = .24$).

It was also hypothesized that participants who were ethnic minorities would report lower therapeutic alliance early in treatment. The findings of a one-way ANOVA did not support this hypothesis, $F(2,87) = 0.21, p = .82$.

Consistent with hypotheses, correlations demonstrated that pre-treatment readiness to change IPV was not significantly associated with age $r = .093, p = .41$ and relationship status $r = -.046, p = .69$. An ANOVA showed no differences in readiness to change based on ethnicity $F(2,79) = 0.12, p = .89$. Contrary to hypotheses, pre-treatment readiness to change was associated with being unemployed/on disability assistance $r = .22, p = .048$ and less education $r = -.26, p = .024$.

It was hypothesized that being employed and having a higher education would be associated with higher program engagement. These hypotheses were not supported as per a series of correlations (see Table 3.26) and one-way ANOVAs (see Appendix P).

Table 3.26

Correlations between Demographic Information and Program Engagement

Measure	Education	Unemployed
Early GEM	.042	.066
Late GEM	-.002	.039

3.5.1.2 Demographics and program attendance. A series of analyses explored the association between demographic information and program attendance (i.e., attrition and the number of sessions attended).

3.5.1.2.1 Age. Contrary to hypotheses that younger age would be associated with higher attrition and worse attendance, age was not significantly correlated with the number of sessions attended ($r = -.10, p = .26$) or attrition ($r_{pb} = .072, p = .50$). The corresponding ROC for this

analysis may be found in Appendix Q, along with other ROCs for which there is a single predictor variable and a binary outcome.

3.5.1.2.2 Relationship status. It was hypothesized that participants who were in a relationship would have lower attrition rates and attend more sessions than those who were not in a relationship. Consistent with hypotheses, participants who were in a relationship (29% attrition) had lower attrition rates than those who were not in a relationship (60% attrition); this difference approached significance according to a chi-square test $\chi^2(1, N = 88) = 2.98$, OR = 0.44 95% CI [0.17, .13], $p = .084$. However, a t -test found no significant differences in the number of sessions attended between participants who were in a relationship and those who were not $t(72.9) = -1.20$, $p = .24$.⁷

3.5.1.2.3 Education. As hypothesized, participants with fewer years of education were less likely to complete the program successfully $r_{pb} = -.22$, $p = .044$.⁸ Yet, years of education were not significantly associated with the number of sessions attended ($r = .17$, $p = .14$) and a one-way ANOVA demonstrated no differences based on level of education (i.e., less than Grade 12, Grade 12, or more than Grade 12), $F(2,84) = 1.20$, $p = .31$.

3.5.1.2.4 Employment. It was hypothesized that participants who were employed would have lower attrition rates and attend more sessions than those who were unemployed. As hypothesized, a chi-square test revealed that participants who were unemployed or on disability benefits had significantly higher attrition rates than those who were employed or students,⁹ $\chi^2(1, N = 88) = 4.99$, OR = 2.93, 95% CI [0.12, 7.67], $p = .026$. As well, a t -test showed that participants who were employed or students ($M = 13.0$, $SD = 4.01$) attended more sessions than participants who were unemployed or on disability benefits ($M = 11.0$, $SD = 5.57$),¹⁰ a difference that approached significance $t(45.01) = 1.78$, $d = 0.42$, $p = .082$.

3.5.1.2.5 Ethnicity. It was hypothesized that participants who were ethnic minorities would have higher attrition rates and attend fewer sessions. A one-way ANOVA found significant differences in the number of sessions attended based on ethnicity, $\eta^2 = .04$, Welch's

⁷ Equal variances were not assumed due to violation of the homogeneity of variance assumption.

⁸ There was insufficient power for a chi-square test to examine differences in attrition based on level of education.

⁹ There was insufficient power to perform a chi-square test with all five employment statuses, so they were combined to form two groups.

¹⁰ Equal variances were not assumed because the homogeneity of variance assumption was violated.

$F(2, 16) = 8.48, p = .003$. But, contrary to hypotheses, post hoc analyses revealed that participants who were not born in Canada ($M = 15.0, SD = 1.16$) attended significantly more sessions ($p = .001$) than those who were born in Canada and not Indigenous ($M = 12.3, SD = 4.72$).¹¹ A follow-up one-way ANOVA and Tukey's HSD post hoc test showed that participants who were not born in Canada ($M = 13.6$ years, $SD = 2.88$) had significantly higher levels of education ($p = .013$) than Non-Indigenous participants born in Canada ($M = 11.3$ years, $SD = 1.92$), with significant main effects $\eta^2 = .10, F(2, 79) = 4.28, p = .017$. This may be noteworthy given that attrition rates were lower among participants with higher education.

3.5.1.2.6 Mental disorder. No specific hypotheses were offered regarding the relationship between program attendance and mental disorder. A t -test revealed no significant differences in the number of sessions attended between participants with and without a diagnosed mental disorder, $t(86) = 1.02, p = .31$, and a chi-square test also found no significant differences in attrition rates between these two groups $\chi^2(1, n = 88) = 0.99, p = .32$. Further chi-square analyses examined differences in attrition rates for participants with specific mental disorder types. Differences in attrition approached significance for participants with a diagnosed mood disorder (80% attrition) in comparison to those without (32% attrition), $\chi^2(1, n = 88) = 2.86, OR = 1.61$ CI [.63, 4.10], $p = .091$. There were no significant differences in attrition rates for participants with substance use disorders $\chi^2(1, n = 88) = 0.76, p = .38$ and neurocognitive or neurodevelopmental disorders $\chi^2(1, n = 88) = 0.27, p = .60$. Chi-square analyses were not conducted for other mental disorder types due to low base rates.

3.5.2 Legal History Information and Outcomes

3.5.2.1 Legal history information, DRFs, and TPVs. A series of analyses explored the association between legal history characteristics and 1) DRFs at pre- and post-treatment as well as 2) TPVs at early- mid-, and post-treatment. Correlations and point-biserial correlations were used to explore the number of previous IPV, violent, and total offences;¹² age at first offence; disposition/sentence length; official IPV history; and any indication/evidence of IPV history. One-way ANOVAs were used to examine differences in DRFs and TPVs for index offence and

¹¹ The assumption of homogeneity of variance was violated and there were unequal sample sizes, so Welch's F statistic and the Games-Howell post hoc test were used.

¹² Findings were similar when the (continuous) offence history variables underwent square root transformations.

disposition type. Gabriel's pairwise post hoc test was used due to unequal sample sizes in each ANOVA. All other assumptions were met unless otherwise specified. The current section focuses upon specific hypotheses whereas detailed findings are found in Appendix R.

Contrary to hypotheses, pre-treatment readiness to change was associated with a greater number of past IPV ($r = .31, p = .005$), violent ($r = .30, p = .007$), and overall offences ($r = .29, p = .011$).

3.5.2.2 Legal history information and program attendance. Correlations, t -tests and chi-square tests examined differences in attrition and the number of sessions attended based on legal history information. Detailed findings on the relationship between legal history information and program attendance are provided in Appendix S, while the following section addresses specific hypotheses. Specifically, it was hypothesized that participants who have a previous history of IPV would have higher attrition rates and attend fewer sessions.

Attrition rates were significantly higher for participants with an official history of IPV (45% attrition) in comparison to those without (23% attrition), $\chi^2(1, N = 88) = 4.19$, OR = 2.83 CI [1.02, 7.84], $p = .041$, although there were no significant differences in the number of sessions attended according to a t -test, $t(30.9) = 1.27, p = .21$.¹³ Attrition rates for participants with and without (any evidence of) an IPV history did not differ significantly $\chi^2(1, N = 88) = 2.65$, OR = 2.46 CI [.82, 7.43], $p = .10$, although those with (any evidence of) an IPV history attended fewer sessions, with small-medium effects $t(82.3) = 1.97, d = 0.41, p = .052$.¹⁴ These trends support the hypothesis that an IPV history would be associated with higher attrition and less attendance.

3.5.2.3 Legal history information, risk, and recidivism. A series of correlations, semipartial correlations, point-biserial correlations, ROCs, chi-square analyses, ANOVAs, and ANCOVAs were conducted to examine relationships between legal history information and measures of risk and recidivism. Overall, legal history variables were highly correlated with risk at pre- and post-treatment, but they were not significantly related to changes in risk. Certain legal history variables were associated with recidivism. Detailed findings are found in Appendices Q and T.

¹³ Equal variances were not assumed due to violation of the homogeneity of variance assumption.

¹⁴ Equal variances were not assumed due to violation of the homogeneity of variance assumption.

3.5.3 Risk and Outcomes

3.5.3.1 Risk and DRFs. A series of correlations was conducted to examine the relationships between risk and DRFs at pre- and post-treatment. Semipartial correlations were used to explore the relationships between pre-treatment risk and changes in DRFs while controlling for the respective DRF at pre-treatment. Significant and pertinent findings are described below while all findings are detailed in Table 3.27.

Higher pre-treatment readiness to change was associated with higher scores on the ODARA ($p = .002$), SARA-V3 ($p < .001$), Nature of IPV domain ($p = .01$) and Perpetrator Risk Factors domain ($p = .004$) at pre-treatment as well as the SARA-V3 at post-treatment ($p = .016$; see Table 3.27).

Overall, higher risk was associated with less self-efficacy.¹⁵ Namely, participants who were higher risk on Perpetrator Risk Factors domain at pre-treatment reported less self-efficacy at pre-treatment ($p = .047$) and post-treatment ($p = .029$). The SARA-V3 ($p = .043$) and its Perpetrator Risk Factors domain ($p = .028$) at pre-treatment were correlated with decreases in self-efficacy over the course of the program. Consistent with these trends, lower post-treatment self-efficacy was associated with higher post-treatment risk on the SARA-V3 ($p = .056$) and its Perpetrator Risk Factors domain ($p = .007$), although the former only approached significance.

Participants who were higher risk on the SARA-V3 ($p = .011$) and the Nature of IPV domain ($p = .018$) at pre-treatment were more likely to demonstrate increases in motivation over the course of treatment. The Nature of IPV domain at pre-treatment ($p = .011$) as well as the SARA-V3 at pre-treatment ($p = .018$) and post-treatment ($p = .014$) were positively associated with post-treatment motivation.

Risk was not significantly related to confidence in treatment effectiveness at any timepoint or its change scores.

¹⁵ There were fewer significant findings when these analyses were conducted using self-efficacy as a binary variable.

Table 3.27

Correlations between Risk and Dynamic Specific Responsivity Factors

Measure	Pre-treatment				Post-treatment	
	ODARA	SARA-V3	Nature IPV	Perpetrator	SARA-V3	Perpetrator
Pre-treatment						
Readi.	.34**	.42***	.37**	.32**	.32*	.22
Motiv.	.19 [†]	.098	.12	.040	.11	.12
Conf.	.12	-.009	.064	-.074	.016	.043
Effic.	-.071	-.15	-.016	-.22*	.11	-.075
Post-treatment						
Readi.	.20	.018	-.090	.11	.007	.13
Motiv.	.21	.31*	.33*	.18	.32*	.21
Conf.	.13	.064	.16	-.044	.12	.050
Effic.	-.23	-.24 [†]	-.088	-.31*	-.28 [†]	-.38**
Pre-Post Δ ^a						
Readi.	.11	-.13	-.24 [†]	.017	-	-
Motiv.	.13	.28*	.26*	.20	-	-
Conf.	.13	.12	.15	.058	-	-
Effic.	-.18	-.23*	-.14	-.25*	-	-

Note. Readi. = Readiness to Change. Motiv. = Motivation. Conf. = Confidence in Treatment Effectiveness. Effic. = Self-efficacy. Pre-Post Δ = Changes from pre- to post-treatment. Nature IPV = Nature IPV domain. Perpetrator = Perpetrator Risk Factors domain.

^aSemipartial correlations.

* $p < .05$. ** $p < .01$. *** $p < .001$ [†] $p < .10$.

3.5.3.2 Risk and TPVs. A series of correlations was conducted to examine the relationships between risk and TPVs at different timepoints. Semipartial correlations were used to explore the relationships between pre-treatment risk and changes in TPVs while controlling for their respective early- or mid-treatment TPV scores. Significant findings are described below while the results are detailed in Table 3.28.

Higher pre-treatment risk on the Perpetrator Risk Factors domain was associated with lower post-treatment ratings of the therapeutic alliance ($p = .037$) and treatment satisfaction ($p = .010$). In line with these findings, lower pre-treatment risk on the Perpetrator Risk Factors

Table 3.28

Correlations between Measures of Risk and CJCEST TPVs

Measure	Pre-treatment				Post-treatment	
	ODARA	SARA-V3	Nature	Perpetrator	SARA-V3	Perpetrator
Early						
TS	.064	.064	.085	.022	-.034	-.040
TA	-.084	.004	.041	-.033	-.087	.012
GC	-.072	-.078	-.067	-.059	-.10	-.005
GEM	.32**	.24*	.14	.25*	.13	.12
Mid						
TS	.18	-.037	.068	-.12	-.076	-.13
TA	.076	-.16	-.041	-.21 [†]	-.20	-.21
GC	.054	.012	.10	-.076	.048	.046
Post/Late						
TS	.020	-.22	.003	-.34**	-.12	-.20
TA	.040	-.15	.050	-.28*	-.044	-.12
GC	-.041	-.14	.050	-.26	-.033	-.11
GEM	.30*	.14	.14	.10	.056	-.021
Early-Mid Δ^a						
TS	.15	-.071	.054	-.16	-	-
TA	.14	-.15	.010	-.24*	-	-
GC	.066	.029	.15	-.094	-	-
Early-Post/Late Δ^a						
TS	.024	-.20	.009	-.32**	-	-
TA	.14	-.053	.15	-.22 [†]	-	-
GC	.024	-.079	.16	-.27*	-	-
GEM	.090	-.005	.050	-.058	-	-
Mid-Post Δ^a						
TS	-.029	-.099	.050	-.21 [†]	-	-
TA	.091	.091	.21	-.070	-	-
GC	.005	-.074	.021	-.14	-	-

Note. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. Early-Mid Δ = Change from early- to mid-treatment. Early-Post/Late Δ : Change from early-treatment to post- or late-treatment. Nature = Nature of IPV domain. Perpetrator = Perpetrator Risk Factors domain.

^aSemipartial correlations controlling for the respective early- or mid-treatment CJCEST TPV.

* $p < .05$. ** $p < .01$. *** $p < .001$ [†] $p < .10$.

domain was also associated with increases in the therapeutic alliance from early- to mid-treatment ($p = .036$) as well as greater increases in group cohesiveness ($p = .020$) and treatment satisfaction ($p = .009$) from early- to post-treatment. No post-treatment CJCEST TPVs were significantly correlated with post-treatment risk.

As demonstrated in Table 3.28, pre-treatment risk on the ODARA ($p = .006$), the SARA-V3 ($p = .045$), and the Perpetrator Risk Factors domain ($p = .039$) were associated with higher engagement early in treatment. Only those higher risk on the ODARA continued to be more engaged later in treatment ($p = .018$). Pre-treatment risk was not significantly related to changes in program engagement.

3.5.3.3 Pre-treatment risk and program attendance. It was hypothesized that participants who were higher risk at pre-treatment would have higher attrition rates and attend fewer sessions. Four t -tests found that the attrition group was higher risk on the ODARA as well as the SARA-V3 and its two domains, as expected (see Table 3.29). Likewise, attending fewer sessions was associated with higher risk scores on the ODARA $r = -0.30$, $p = .005$, the SARA-V3 $r = -.45$, $p < .001$, the Nature of IPV domain $r = -.29$, $p = .006$, and the Perpetrator Risk Factors domain $r = -.42$, $p < .001$.

Table 3.29

Differences in Pre-treatment Risk between the Attrition and Successful Completion Groups

Measure	Successful <i>M (SD)</i>	Unsuccessful <i>M (SD)</i>	<i>t</i>	<i>df</i>	<i>d</i>	<i>p</i>
ODARA	5.08 (2.26)	6.68 (2.36)	-2.95	85	0.69	.004
SARA-V3	13.4 (4.39)	18.4 (5.54)	-4.46	85	1.00	.001
Nature of IPV ^a	6.61 (2.74)	8.28 (3.69)	-2.04	35.2	0.51	.048
Perpetrator	6.78 (2.88)	10.12 (3.26)	-4.47	85	1.08	.001

Note. Nature of IPV = Nature of IPV domain. Perpetrator = Perpetrator Risk Factors domain.

^aunequal variances.

Logistic regressions were used to test the hypothesis that higher pre-treatment risk would predict attrition. Consistent with hypotheses, both the SARA-V3, Wald $\chi^2(1, n = 87) = 13.4$, $B = .20$, $SE = 0.055$, $e^B = 1.22$, 95% CI [1.10, 1.36], $p < .001$; and the ODARA, Wald $\chi^2(1, n = 87) = 7.32$, $B = .33$, $SE = 0.12$, $e^B = 1.38$, 95% CI [1.09, 1.75], $p = .007$, significantly predicted

attrition. Standard regression analyses similarly found that higher pre-treatment risk on the SARA-V3, $F(1,86) = 21.0$, $R^2 = .20$, $\beta = -.45$, $p < .001$ and the ODARA $F(1,86) = 8.50$, $R^2 = .091$, $\beta = -.30$, $p = .005$ significantly predicted worse attendance.

3.5.3.4 Pre-treatment risk and program-phase recidivism. A series of logistic regression analyses were conducted to examine the extent to which pre-treatment risk predicted program-phase recidivism, defined as any new charge incurred between the first group session and the last scheduled session. Higher scores on the ODARA, SARA-V3, the Perpetrator Risk Factors domain, and the Nature of IPV domain significantly predicted program-phase recidivism (see Table 3.30). For every one-point increase on each respective measure of risk, the likelihood of program-phase recidivism increased by 33% on the ODARA, 23% on the SARA-V3, 31% on the Perpetrator Risk Factors domain, and 31% on the Nature of IPV domain.

Table 3.30

Four Logistic Regressions of Pre-Treatment Risk Predicting Program-Phase Recidivism

Predictor	<i>B</i>	SE	Wald	<i>p</i>	e^B	95% CI for e^B
ODARA	0.29	0.14	4.28	.039	1.33	1.02, 1.75
SARA-V3	0.21	0.062	11.4	.001	1.23	1.09, 1.39
Perpetrator	0.27	0.093	8.50	.004	1.31	1.09, 1.58
Nature IPV	0.27	0.097	7.82	.005	1.31	1.09, 1.59

Note. Positive *B* coefficients denote lower risk scores associated with less recidivism. Perpetrator = Perpetrator Risk Factors domain. Nature IPV = Nature of IPV domain. $n = 87$.

3.5.3.5 Risk and recidivism. A series of Cox regression survival analyses were conducted to test the hypotheses that pre-treatment, post-treatment, and changes in risk would predict general and violent recidivism. Assumptions were met regarding survival experiences over time, proportionality of hazards, and the adequacy of the sample size. There was, however, a small base rate of violent recidivism. Multicollinearity was not an issue. No cases were withdrawn. No issues with normality were detected for risk scores or for time to general recidivism. Time to violent recidivism had a bimodal distribution, although the assumption of normality is not required for Cox regression analyses (yet normality may enhance the power of the analysis; Tabachnick & Fidell, 2013). As such, no transformations were conducted for the variables used in the Cox regression analyses. It is noted, however, that there may be a lack of

power for the Cox regression analyses when violent recidivism is the dependent variable due to the small base rate of violent recidivism and, relatedly, issues with normality. ROC analyses can be found in Appendix Q.

A series of hierarchical multiple regression analyses were also used to test the hypotheses that pre-treatment risk and changes in risk would predict the number of new charges and new violent charges incurred in the follow-up period. Follow-up time was controlled by entering it into the first block for each analysis. Pre-treatment risk was also controlled when examining the predictive validity of changes in risk.¹⁶ The number of new charges and new violent charges were not normally-distributed and scatterplots demonstrated issues with homoscedasticity. Transformations only mildly improved these issues and they may also negatively impact the interpretability of the findings. The findings described below therefore focus on analyses conducted without transformations. Additional analyses were conducted using a square root transformation; these findings are noted in footnotes, although overall the differences in findings between the transformed and untransformed outcome variables were minimal.

Post-treatment risk analyses were only conducted with the SARA-V3 and the Perpetrator Risk Factors domain given that the ODARA and the Nature of IPV domain are stable in nature.

3.5.3.5.1 ODARA and general recidivism. A Cox regression survival analysis found that the ODARA significantly predicted general recidivism (see Table 3.31). For every one-point increase on the ODARA, the likelihood of reoffending increased by 30%. A hierarchical multiple regression analysis also found that the ODARA significantly predicted the number of charges while controlling for follow-up time $\Delta F(1,84) = 4.27, \Delta R^2 = .046, \beta = 0.22, p = .042$.¹⁷ The ODARA accounted for approximately 5% of unique variance in the number of new charges.

¹⁶ The predictive validity of risk change on recidivism was also examined using a different analytic approach whereby post-treatment risk was entered as the predictor variable while controlling follow-up time and pre-treatment risk, as shown in Appendix U. The effect sizes and *p* values were the same as when risk changes scores were used as the predictor variable.

¹⁷ The ODARA similarly predicted the number of new charges (*p* = .007) when this dependent variable underwent a square root transformation.

Table 3.31

Eight Cox Regression Analyses of Risk Predicting General Recidivism

Predictor	<i>B</i>	SE	Wald	<i>p</i>	e^B	95% CI for e^B
Pre-treatment ^a						
ODARA	0.26	.092	8.11	.004	1.30	1.09, 1.56
SARA-V3	0.11	.034	9.66	.002	1.11	1.04, 1.19
Perpetrator	0.14	.056	6.21	.013	1.15	1.03, 1.28
Nature IPV	0.16	.061	7.12	.008	1.18	1.04, 1.33
Post-treatment ^b						
SARA-V3	0.12	.061	3.60	.058	1.12	1.00, 1.27
Perpetrator	0.16	.12	1.73	.19	1.17	0.92, 1.49
Risk Change ^{b,c}						
SARA-V3	0.15	.21	0.49	.48	1.16	0.77, 1.73
Perpetrator	0.17	.25	0.44	.51	1.18	0.72, 1.92

Note. Positive *B* coefficients denote lower risk scores or reductions in risk associated with less recidivism. Perpetrator = Perpetrator Risk Factors domain. Nature IPV = Nature of IPV domain. ^a *n* = 87. ^b *n* = 63 ^ccontrolling for pre-treatment scores.

3.5.3.5.2 ODARA and violent recidivism. A Cox regression survival analysis found that the ODARA did not significantly predict violent recidivism (see Table 3.32, page 94) and a hierarchical multiple regression analysis found that it did not predict the number of violent charges while controlling for follow-up time $\Delta F(1,84) = 1.75, \Delta R^2 = .019, \beta = 0.14, p = .19$.¹⁸

3.5.3.5.3 SARA-V3 and general recidivism. A Cox regression survival analysis found that the SARA-V3 at pre-treatment significantly predicted general recidivism (see Table 3.31, page 92). For every one-point increase on the SARA-V3, the likelihood of reoffending increased by 11%. A hierarchical multiple regression analysis found that the SARA-V3 at pre-treatment significantly predicted the number of charges while controlling for follow-up time, and it accounted for 13% of unique variance in the number of new charges (see Table 3.33, page 94).¹⁹

¹⁸ The ODARA similarly did not predict the number of new violent charges when this dependent variable underwent a square root transformation ($p = .17$).

¹⁹ The SARA-V3 at pre-treatment predicted the number of new charges when this dependent variable underwent a square root transformation ($p < .001$).

A Cox regression survival analysis found that the SARA-V3 at post-treatment approached significance in predicting general recidivism (see Table 3.31, page 92). For every one-point increase on the SARA-V3 at post-treatment, the likelihood of reoffending increased by 12%. A hierarchical multiple regression revealed that the SARA-V3 at post-treatment also significantly predicted the number of new charges when controlling for follow-up time, and it accounted for 12% of unique variance in the number of new charges (see Table 3.34, page 95).²⁰

A Cox regression survival analysis found that SARA-V3 change scores did not significantly predict general recidivism (see Table 3.31, page 92). Yet, a hierarchical multiple regression showed that decreases on the SARA-V3 significantly predicted fewer charges when controlling for follow-up time and pre-treatment SARA-V3 scores (see Table 3.35, page 95). Changes on the SARA-V3 accounted for 14% of unique variance in the number of new charges.

3.5.3.5.4 SARA-V3 and violent recidivism. A Cox regression survival analysis found that the SARA-V3 at pre-treatment approached significance ($p = .059$) in predicting violent recidivism (see Table 3.32, page 94). For every one-point increase on the SARA-V3, the likelihood of violent reoffending increased by 10%. A hierarchical multiple regression analysis demonstrated that the SARA-V3 at pre-treatment significantly predicted the number of new violent charges when controlling for follow-up time, and it accounted for approximately 4% of unique variance in the number of new violent charges (see Table 3.33, page 94).²¹

A Cox regression survival analysis found that the SARA-V3 at post-treatment did not significantly predict violent recidivism (see Table 3.32, page 94). Yet, a hierarchical multiple regression analysis found that the SARA-V3 at post-treatment approached significance ($p = .060$) in predicting the number of new violent charges while controlling for follow-up time, and it accounted for approximately 5% of unique variance in the number of new violent charges (see Table 3.34, page 95).¹⁶

A Cox regression survival analysis found that SARA-V3 change scores did not significantly predict violent recidivism (see Table 3.32, page 94), although a hierarchical

²⁰ The SARA-V3 at post-treatment similarly predicted the number of new charges when this dependent variable underwent a square root transformation ($p = .003$).

²¹ When the number of new violent charges variable underwent a square root transformation, the predictive accuracy of the SARA-V3 was similar at pre-treatment ($p = .044$) but not at post-treatment ($p = .19$).

multiple regression showed that decreases in risk on SARA-V3 significantly predicted fewer violent charges when controlling for follow-up time and pre-treatment SARA-V3 scores (see Table 3.35, page 95). Changes on the SARA-V3 accounted for 8% of unique variance in the number of new violent charges.

Table 3.32

Eight Cox Regression Analyses of Risk Predicting Violent Recidivism

Predictor	<i>B</i>	SE	Wald	<i>p</i>	<i>e^B</i>	95% CI for <i>e^B</i>
Pre-treatment ^a						
ODARA	0.18	.13	1.91	.17	1.19	0.93, 1.53
SARA-V3	0.094	.050	3.58	.059	1.10	1.00, 1.21
Perpetrator	0.097	.080	1.46	.23	1.10	0.94, 1.29
Nature IPV	0.16	.086	3.55	.060	1.18	0.99, 1.39
Post-treatment ^b						
SARA-V3	0.070	.093	0.57	.45	1.07	0.89, 1.29
Perpetrator	0.14	.17	0.66	.42	1.15	0.82, 1.62
Risk Change ^{b, c}						
SARA-V3	0.21	.28	0.56	.46	1.24	0.71, 2.15
Perpetrator	0.30	.35	0.75	.39	1.35	0.68, 2.68

Note. Positive *B* coefficients denote lower risk scores or reductions in risk associated with less recidivism. Perpetrator = Perpetrator Risk Factors domain. Nature IPV = Nature of IPV domain. ^a *n* = 87. ^b *n* = 63 ^ccontrolling for pre-treatment scores.

Table 3.33

Hierarchical Multiple Regressions Predicting the Number of New General and Violent Charges with the SARA-V3 at Pre-treatment

Predictor	General						Violent					
	β	<i>sr</i> ²	<i>p</i>	<i>R</i> ²	ΔR ²	ΔF	β	<i>sr</i> ²	<i>p</i>	<i>R</i> ²	ΔR ²	ΔF
Step 1				.053		4.78				.086		8.05
Follow-up	0.23	.053	.032				0.29	.086	.006			
Step 2				.19	.14	13.9				.13	.044	4.28
Follow-up	0.20	.038	.051				0.27	.074	.009			
Pre SARA	0.37	.13	.001				0.21	.044	.042			

Note. Follow-up = Follow-up time. Pre SARA = Pre-treatment SARA-V3. General = General Recidivism. Violent = Violent Recidivism.

Table 3.34

Hierarchical Multiple Regressions Predicting the Number of New General and Violent Charges with the SARA-V3 at Post-treatment

Predictor	General						Violent					
	β	sr^2	p	R^2	ΔR^2	ΔF	β	sr^2	p	R^2	ΔR^2	ΔF
Step 1				.12		8.09				.15		10.9
Follow-up	0.34	.12	.006				0.39	.15	.002			
Step 2				.24	0.12	9.23				.20	.049	3.67
Follow-up	0.33	.11	.005				0.38	.14	.002			
Post SARA	0.34	.12	.004				0.22	.048	.060			

Note. Follow-up = Follow-up time. Post SARA = Post-treatment SARA-V3. General = General Recidivism. Violent = Violent Recidivism.

Table 3.35

Hierarchical Multiple Regressions with Predicting the Number of New General and Violent Charges with Changes on the SARA-V3

Predictor	General						Violent					
	β	sr^2	p	R^2	ΔR^2	ΔF	β	sr^2	p	R^2	ΔR^2	ΔF
Step 1				.12		8.09				.15		10.9
Follow-up	0.34	.12	.006				0.39	.15	.002			
Step 2				.17	.050	3.64				.17	.016	1.17
Follow-up	0.32	.10	.009				0.38	.14	.002			
Pre	0.23	.051	.061				0.13	.016	.28			
Step 3				.55	.14	11.6				.25	.080	6.24
Follow-up	0.38	.14	.001				0.42	.17	.001			
Pre	0.36	.11	.003				0.23	.046	.062			
Change	0.40	.14	.001				0.30	.080	.015			

Note. Follow-up = Follow-up time. Pre = Pre-treatment SARA-V3. Change = Change on the SARA-V3. General = General Recidivism. Violent = Violent Recidivism

3.5.3.5.5 The Perpetrator Risk Factors domain and general recidivism. A Cox regression survival analysis found that the Perpetrator Risk Factors domain at pre-treatment significantly predicted general recidivism (see Table 3.31, page 92). For every one-point

increase on the Perpetrator Risk Factors domain at pre-treatment, the likelihood of reoffending increased by 15%. A hierarchical multiple regression analysis also found that the Perpetrator Risk Factors domain at pre-treatment significantly predicted the number of new charges while controlling for follow-up time, and it accounted for approximately 5% of unique variance in the number of new charges. (see Table 3.36).²²

Table 3.36

Hierarchical Multiple Regressions Predicting the Number of New General and Violent Charges with the SARA-V3 Perpetrator Risk Factors Domain at Pre-treatment

Predictor	General						Violent					
	β	sr^2	p	R^2	ΔR^2	ΔF	β	sr^2	p	R^2	ΔR^2	ΔF
Step 1				.053		4.78				.086		8.05
Follow-up	0.23	.053	.032				0.29	.086	.006			
Step 2				.10	.51	4.80				.11	.019	1.79
Follow-up	0.22	.047	.038				0.29	.082	.007			
Pre Perp.	0.23	.051	.031				0.14	.019	.19			

Note. Pre Perp. = Pre-treatment Perpetrator Risk Factors domain. Follow-up = Follow-up time. General = General Recidivism. Violent = Violent Recidivism

Another Cox regression survival analysis found that the Perpetrator Risk Factors domain at post-treatment did not significantly predict general recidivism (see Table 3.32, page 94). However, as shown in Table 3.37 (page 97), a hierarchical multiple regression analysis found that the Perpetrator Risk Factors domain at post-treatment significantly predicted the number of new charges while controlling for follow-up time, and it accounted for 11% of unique variance in the number of new charges.²³

A Cox regression survival analysis found that changes on the Perpetrator Risk Factors domain did not significantly predict general recidivism (see Table 3.32, page 94), although a hierarchical multiple regression showed that decreases in risk on the Perpetrator Risk Factors domain significantly predicted fewer charges when controlling for its pre-treatment scores and

²² The SARA-V3 Perpetrator Risk Factors domain at pre-treatment similarly predicted the number of new charges when this dependent variable underwent a square root transformation ($p = .005$).

²³ The SARA-V3 Perpetrator Risk Factors domain at post-treatment similarly predicted the number of new charges when this dependent variable underwent a square root transformation ($p = .011$).

for follow-up time (see Table 3.38 below). Changes on the Perpetrator Risk Factors domain accounted for 17% of unique variance in the number of new charges.

Table 3.37

Hierarchical Multiple Regressions Predicting the Number of New General and Violent Charges with the SARA-V3 Perpetrator Risk Factors Domain at Post-treatment

Predictor	General						Violent					
	β	sr^2	p	R^2	ΔR^2	ΔF	β	sr^2	p	R^2	ΔR^2	ΔF
Step 1				.12		8.09				.15		10.9
Follow-up	0.34	.12	.006				0.39	.15	.002			
Step 2				.23	.11	8.71				.22	.065	5.01
Follow-up	.34	.11	.004				0.39	.15	.001			
Post Perp.	.33	.11	.005				0.26	.066	.029			

Note. Post Perp. = Post-treatment Perpetrator Risk Factors domain. Follow-up = Follow-up time. General = General Recidivism. Violent = Violent Recidivism

Table 3.38

Hierarchical Multiple Regression Predicting the Number of New Violent Charges with Changes on the SARA-V3 Perpetrator Risk Factors Domain

Predictor	General						Violent					
	β	sr^2	p	R^2	ΔR^2	ΔF	β	sr^2	p	R^2	ΔR^2	ΔF
Step 1				.12		8.09				.15		10.9
Follow-up	0.34	.12	.006				0.39	.15	.002			
Step 2				.13	.015	1.03				.16	.007	0.49
Follow-up	0.32	.10	.009				0.38	.14	.002			
Pre Perp.	0.12	.015	.31				0.083	.007	.49			
Step 3				.30	.17	14.3				.27	.11	8.80
Follow-up	0.39	.15	.001				0.43	.18	.001			
Pre Perp.	0.38	.10	.005				0.29	.059	.033			
Change Perp.	0.49	.17	.001				0.40	.11	.004			

Note. Follow-up = Follow-up time. Pre Perp. = Pre-treatment Perpetrator Risk Factors domain. Change Perp. = Change on the Perpetrator Risk Factors domain.

3.5.3.5.6 The Perpetrator Risk Factors domain and violent recidivism. A Cox regression survival analysis found that the Perpetrator Risk Factors domain at pre-treatment domain did not significantly predict violent recidivism (see Table 3.32, page 94). A hierarchical multiple regression analysis similarly found that it did not significantly predict the number of new violent charges while controlling for follow-up time, as demonstrated in Table 3.36.²⁴

A Cox regression survival analysis found that the Perpetrator Risk Factors domain at post-treatment did not predict violent recidivism (see Table 3.32, page 94). Yet, a hierarchical multiple regression analysis found that it significantly predicted the number of new violent charges while controlling for follow-up time,²⁵ and it accounted for approximately 7% of unique variance in the number of new violent charges (see Table 3.37, page 97).

A Cox regression survival analysis found that change scores on the Perpetrator Risk Factors domain did not significantly predict violent recidivism (see Table 3.32, page 94), although a hierarchical multiple regression showed that decreases in risk on the Perpetrator Risk Factors domain significantly predicted fewer violent charges when controlling for follow-up time and its pre-treatment scores (see Table 3.38, page 97). Changes on the Perpetrator Risk Factors domain accounted for 11% of unique variance in the number of new violent charges.

3.5.3.5.7 The Nature of IPV domain and general recidivism. A Cox regression survival analysis found that the Nature of IPV domain at pre-treatment significantly predicted general recidivism (see Table 3.31, page 92). For every one-point increase on the Nature of IPV domain at pre-treatment, the likelihood of reoffending increased by 18%. A hierarchical multiple regression analysis found that the Nature of IPV domain at pre-treatment significantly predicted the number of new charges while controlling for follow-up time $\Delta F(1,84) = 14.6, \Delta R^2 = .14, \beta = 0.38, p < .001$, and it accounted for 14% of unique variance in the number of new charges.²⁶

3.5.3.5.8 The Nature of IPV domain and violent recidivism. A Cox regression survival analysis found that the Nature of IPV domain approached significance in predicting violent

²⁴ The SARA-V3 Perpetrator Risk Factors domain at pre-treatment similarly predicted the number of new violent charges when this dependent variable underwent a square root transformation ($p = .19$).

²⁵ In contrast, the SARA-V3 Perpetrator Risk Factors domain at post-treatment did not significantly predict the number of new violent charges when this dependent variable underwent a square root transformation ($p = .12$).

²⁶ The SARA-V3 Nature of IPV domain at pre-treatment similarly predicted the number of new charges when this dependent variable underwent a square root transformation ($p < .001$).

recidivism (see Table 3.32, page 94). A hierarchical multiple regression analysis furthermore found that the pre-treatment Nature of IPV domain significantly predicted the number of new violent charges while controlling for follow-up time $\Delta F(1,84) = 4.08$, $\Delta R^2 = .042$, $\beta = 0.21$, $p = .047$ and it accounted for approximately 4% of unique variance in the number of new violent charges.²⁷

3.5.4 Program Attendance and Outcome

3.5.4.1 Program-phase recidivism. Program-phase recidivism was defined as any new charge incurred between the first group session and the last scheduled session. A point-biserial correlation demonstrated that attending fewer sessions was significantly associated with program-phase recidivism $r_{pb} = .50$, $p < .001$. Fisher's exact test similarly found significantly higher attrition rates among participants who incurred new charges during this timeframe ($p < .001$) with medium to large effects, Cramer's V = .45. More specifically, 11 out of the 15 participants (i.e., 73%) who incurred charges during this timeframe failed to complete treatment successfully. In contrast, 14 of the 73 participants (i.e., 19.2%) who did not incur charges during this timeframe failed to complete treatment successfully. Put differently, 14 out of the 25 participants (44%) who failed to complete treatment successfully had incurred a new charge during this timeframe.

3.5.4.2 Program effect on recidivism. The program's effectiveness in reducing recidivism was examined by exploring the degree to which attrition and the number of sessions attended predicted general and violent recidivism. Four hierarchical Cox regression survival analyses were conducted; pre-treatment risk, as measured by the SARA-V3 and the ODARA, were controlled in the first block of each analysis.

Program completion significantly predicted less general recidivism, Wald $\chi^2(1) = 4.57$, $B = -1.02$, $SE = 0.48$, $e^B = 0.36$, 95% CI [0.14, 0.92], $p = .032$. Successful completion of the program reduced the likelihood of general recidivism by 64% even when controlling for pre-treatment risk. Similarly, better program attendance significantly predicted less general

²⁷ The SARA-V3 Nature of IPV domain at post-treatment similarly predicted the number of new charges when this dependent variable underwent a square root transformation ($p = .050$).

recidivism, Wald $\chi^2(1) = 5.87$, $B = -0.11$, $SE = 0.043$, $e^B = 0.90$, 95% CI [0.83, 0.98], $p = .015$. The likelihood of general recidivism decreased by 10% with every session attended.

Program completion did not significantly predict violent recidivism Wald $\chi^2(1) = 2.45$, $B = -1.04$, $SE = 0.66$, $e^B = 0.35$, 95% CI [0.069, 1.30], $p = .12$. On the other hand, the number of sessions attended significantly predicted less violent recidivism Wald $\chi^2(1) = 4.22$, $B = -0.12$, $SE = 0.058$, $e^B = 0.89$, 95% CI [0.79, 1.00], $p = .040$, and the likelihood of violent recidivism decreased by 11% with every session attended.

3.5.5 Adherence to Program Curriculum and Outcome

Analyses examined the degree to which adhering to the preferred program curriculum predicted changes in risk and recidivism.

3.5.5.1 Adherence to the program curriculum and risk change. A hierarchical multiple regression examined the degree to which adherence to the program curriculum related to decreases in risk on the SARA-V3, while controlling for the SARA-V3 at pre-treatment. All assumptions were met. Adherence to the program curriculum did not significantly relate to changes in risk on the SARA-V3 $\Delta F(1,60) = 0.13$, $\Delta R^2 = .002$, $\beta = 0.043$, $sr = .017$, $p = .73$.

3.5.5.2 Adherence to the program curriculum and recidivism. Correlations and point-biserial correlations explored the degree to which adherence to the program curriculum related to general and violent recidivism. Adherence to the program curriculum was not significantly related to the number of new charges ($r = .050$, $p = .64$), the number of new violent charges ($r = .064$, $p = .55$), any general recidivism ($r_{pb} = .039$, $p = .72$), or any violent recidivism ($r_{pb} = .063$, $p = .56$).

Planned Cox regression analyses explored the predictive value of adherence to the program curriculum. Assumptions were met regarding the adequacy of the sample size, survival experiences over time, and proportionality of hazards. There was only one covariate (i.e., predictor) in each analysis, so multicollinearity was not an issue. No cases were withdrawn. Violent recidivism had a low base rate and time to violent recidivism had a bimodal distribution. However, the assumption of normality is not required for Cox regression analyses (yet normality may enhance the power of the analysis; Tabachnick & Fidell, 2013). Adherence to the preferred program curriculum did not significantly predict general recidivism, Wald $\chi^2(1, n = 88) = 0.088$,

$B = 0.32$, $SE = 1.07$, $e^b = 1.38$, 95% CI [0.17, 11.29], $p = .77$; or violent recidivism Wald $\chi^2(1, n = 88) = 0.26$, $B = 0.74$, $SE = 1.47$, $e^b = 2.10$, 95% CI [0.12, 37.40], $p = .61$.

3.5.6 DRFs and Outcome

3.5.6.1 DRFs and program attendance. A series of correlations and a chi-square analysis were conducted to test the hypothesis that pre-treatment DRFs would be positively related to the number of sessions attended and negatively related to attrition. Given that self-efficacy was not normally distributed, analyses were conducted with self-efficacy as both a continuous and binary variable.

Contrary to hypotheses, attrition and the number of sessions attended were not significantly related to motivation ($p = .95$, $p = .94$) confidence in treatment effectiveness ($p = .47$, $p = .75$), or self-efficacy ($p = .10$, $p = .50$)²⁸ as shown in Table 3.39. Furthermore, attrition

Table 3.39

Correlations between Pre-treatment DRFs and Program Attendance

Measure	Readi.	Motiv.	Conf.	Effic.
Attrition ^a	.27*	.008	-.079	.18
Sessions	-.32**	-.008	.035	.074

Note. Sessions = Number of sessions attended. Readi. = Readiness to change. Motiv. = Motivation. Conf. = Confidence in Treatment Effectiveness. Effic. = Self-efficacy.

^aPoint-biserial correlations.

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

and attendance were significantly correlated with pre-treatment readiness to change in the directions opposite to what was hypothesized. Specifically, participants with higher pre-treatment readiness to change had higher attrition rates ($p = .016$) and attended fewer sessions ($p = .004$). Because readiness to change was positively correlated with risk, partial correlations were conducted to control for pre-treatment risk. The relationship between pre-treatment readiness to change and attendance was of a similar but lesser magnitude when controlling for the ODARA $r = -.25$, $p = .027$, but it was not significant when controlling for the SARA-V3 $r = -$

²⁸ When measured as a binary variable, self-efficacy was not significantly related to the number of sessions attended $r_{pb} = .072$, $p = .51$ or attrition $\chi^2(1, n = 85) = 0.57$, OR = 1.44, 95% CI [0.56, 3.72], $p = .45$.

.17, $p = .13$. This is consistent with the finding (reported below) that the SARA-V3 was more strongly correlated with attrition than the ODARA.

3.5.6.2 DRFs and short-term treatment targets. Analyses tested the hypothesis that increases in DRFs would predict reductions in risk/the achievement of treatment targets (i.e., distorted attitudes about IPV and relationship problems).

Hierarchical multiple regressions examined the degree to which DRF change scores predicted changes in distorted attitudes; pre-treatment DRFs and pre-treatment distorted attitudes about IPV were controlled by entering them in the first block, whereas DRF change scores were entered in the second block to predict changes in distorted attitudes about IPV. All assumptions were met. Increases in motivation and confidence in treatment effectiveness approached significance ($p = .078$, $p = .064$) in predicting decreases in distorted attitudes about IPV (see Table 3.40).

Table 3.40

Hierarchical Multiple Regression Analyses of Changes in DRFs Predicting Changes in Treatment Targets (Distorted Attitudes about IPV and Relationship Problems)

Predictor	Distorted Attitudes about IPV ^a					Relationship Problems ^b						
	ΔF	β	ΔR^2	p	df	B	SE	Wald	e^b	95% CI ^c	p	n
Readi.	2.20	-.16	.019	.15	1,43	.097	.31	0.094	1.10	0.60, 2.04	.76	47
Motiv.	3.24	-.19	.023	.078	1,51	.14	.10	1.81	1.15	0.94, 1.41	.18	48
Confid.	3.59	-.18	.023	.064	1,51	.064	.094	0.46	1.07	0.89, 1.28	.50	48
Effic.	0.002	.006	<.001	.96	1,44	-0.98	-.88	.48	0.41	0.16, 1.05	.064	44

Note. Each IV represents a different hierarchical regression analysis with each respective pre-treatment DRF controlled in Block 1. Readi. = Readiness to change. Motiv. = Motivation. Confid. = Confidence in treatment effectiveness. Effic. = Self-efficacy.

^aHierarchical multiple regression with pre-treatment distorted attitudes controlled in Block 1. ^bHierarchical logistic regression with pre-treatment relationship problems controlled in Block 1. Positive B coefficients denote reductions in relationship problems (i.e., positive changes) associated with less recidivism. ^c for e^b .

Since relationship problems was coded as a binary variable, there was very little variance in its change scores. As such, change in relationship problems was analyzed using hierarchical logistic regression with post-treatment relationship problems as the dependent variable, pre-treatment relationship problems and the respective pre-treatment DRF in the first block, and the DRF change score as the predictor (see Table 3.40). No DRF change score significantly

predicted changes in relationship problems. However, increases in self-efficacy approached significance ($p = .064$) in predicting decreases in relationship problems. For every one-point increase in self-efficacy, the likelihood of reported relationship problems decreased by 59%.

No pre-treatment DRF predicted significant changes in short-term treatment targets; these findings are detailed in Appendix V.

3.5.6.3 DRFs and risk change. As shown in Table 3.41, hierarchical multiple regressions were used to examine how pre-treatment DRFs and changes in DRFs predicted reductions in risk on the SARA-V3, while controlling pre-treatment risk. For analyses that examined DRF change scores, pre-treatment DRFs were also controlled in the first block. All assumptions were met, except pre-treatment self-efficacy was negatively skewed (thus not fully meeting the assumption of normality). Contrary to hypotheses, lower pre-treatment confidence in treatment effectiveness significantly predicted reductions in risk on the SARA-V3.

Table 3.41

Hierarchical Multiple Regressions of DRFs Predicting Changes in Risk on the SARA-V3

Predictor	ΔF	β	ΔR^2	p	df
Pre-treatment					
Readi.	0.004	.009	.001	.95	1, 55
Motiv.	2.69	.20	.038	.11	1, 60
Confid.	9.10	.34	.12	.004	1, 60
Effic.	0.45	.081	.007	.51	1, 58
Pre-Post Δ^a					
Readi.	0.027	-.027	.001	.87	1, 43
Motiv.	0.040	-.033	.001	.84	1, 52
Confid.	0.025	-.022	.001	.88	1, 53
Effic.	2.40	-.28	.043	.13	1, 44

Note. Each IV represents a different hierarchical regression analysis.

Readi. = Readiness to change. Motiv. = Motivation. Confid. = Confidence in treatment effectiveness. Effic. = Self-efficacy.

^aSemipartial correlations controlling pre-treatment risk and each respective pre-treatment DRF.

3.5.6.4 DRFs and program-phase recidivism. Point-biserial correlations were conducted to examine the relationships between pre-treatment DRFs and program-phase recidivism. Motivation ($r_{pb} = .79, p = .47$), confidence in treatment effectiveness ($r_{pb} = .13, p = .25$), and self-efficacy ($r_{pb} = -.067, p = .55$) were not significantly associated with program-phase recidivism. However, readiness to change was significantly positively correlated with program-phase recidivism ($r_{pb} = .29, p = .009$). Given that this relationship is in the direction opposite to what would be expected, a follow-up semipartial point-biserial correlation was conducted to control for the relationship between pre-treatment risk on the ODARA and SARA-V3. When controlling for pre-treatment risk, readiness to change was not significantly related to program-phase recidivism ($r_{pb} = .18, p = .13$).

3.5.6.5 DRFs and recidivism. Correlations and semipartial correlations were used to examine how pre- and post-treatment DRFs and DRF change scores related to general and violent recidivism. It was hypothesized that recidivism would be negatively correlated with 1) post-treatment DRF scores, and 2) increases in DRFs. A summary of the findings is presented in Table 3.42 and the significant findings are described below.

Consistent with hypotheses, lower self-efficacy at post-treatment was significantly related to more charges overall ($p = .021$), more violent charges ($p = .008$), and violent recidivism ($p = .003$). Similarly, decreases in self-efficacy were significantly related to more charges overall ($p = .003$), more violent charges ($p = .008$), and violent recidivism ($p = .003$; see Table 3.42).

Contrary to hypotheses, more violent charges were associated with higher pre-treatment confidence in treatment effectiveness ($p = 0.29$) and higher post-treatment readiness to change ($p = .040$). The relationship between post-treatment readiness to change and violent charges only approached significance when controlling for pre-treatment risk on the ODARA and SARA-V3 using a semipartial correlation ($sr = .26, p = .063$). As well, higher post-treatment motivation was significantly related to general recidivism ($p = .009$; see Table 3.42).

Table 3.42

Correlations between DRFs and General and Violent Recidivism

Measure	No. Charges	No. Violent	Any Recid.	Any Violent
Pre-treatment				
Readi.	.22 [†]	.16	.073	.062
Motiv.	.034	.20 [†]	.16	.18 [†]
Conf.	.15	.23*	.12	.16
Effic.	-.017	-.046	-.057	-.058
Post-treatment				
Readi.	.22	.29*	.074	.21
Motiv.	.17	.22 [†]	.34**	.22 [†]
Conf.	.072	.16	.11	.17
Effic.	-.32*	-.36**	-.20	-.40**
Pre-Post Δ^a				
Readi.	.098	.20	.023	.19
Motiv.	.097	.091	.17	.048
Conf.	-.052	.019	.016	.048
Effic.	-.41**	-.43**	-.18	-.41**

Note. Readi. = Readiness to change. Motiv. = Motivation. Confid. = Confidence in treatment effectiveness. Effic. = Self-efficacy. No. of Charges = Number of new charges incurred in the follow-up period. No. of Violent = Number of new violent charges incurred in the follow-up period. Any Recidivism = Any new charges (binary). Any Violent = Any violent charges (binary).

^aSemipartial correlations, controlling for each respective pre-treatment DRF.

* $p < .05$. ** $p < .01$. [†] $p < .10$

3.5.7 CJCEST TPVs and Outcome

3.5.7.1 CJCEST TPVs and program attendance. Correlation analyses explored the relationship between early- and mid-treatment CJCEST TPVs and program attendance (i.e., attrition and the number of sessions attended). Semipartial correlations were also used to examine the relationship between early- to- mid-treatment changes in CJCEST TPVs and program attendance. It was hypothesized that early- and -mid-treatment group cohesiveness, therapeutic alliance, treatment satisfaction would be positively correlated with the number of sessions attended and negatively correlated with attrition. There was limited power for mid-

treatment and change score analyses given that only 10 participants left treatment following its midpoint.

As displayed in Table 3.43, no early- or mid-treatment CJCEST TPVs were significantly correlated with the number of sessions attended or attrition, although the relationship between mid-treatment therapeutic alliance and the number of sessions attended approached significance ($p = .060$). In line with this finding, increases in the therapeutic alliance were significantly positively correlated with the number of sessions attended ($p = .023$).

Table 3.43

Correlations between CJCEST TPVs and Attrition and Attendance

Measure	Early-treatment			Mid-treatment			Early-Mid Δ ^b		
	TS	TA	GC	TS	TA	GC	TS	TA	GC
Attrition ^a	.060	.053	.041	.031	-.042	.089	-.074	-.076	.023
Sessions	.007	-.046	.033	.097	.22 [†]	.053	.20	.27*	.12

Note. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. Early-mid Δ = early- to mid-treatment change.

^aPoint-Biserial Correlations. ^bSemi-partial correlations controlling for each respective early-treatment score.

* $p < .05$. [†] $p < .10$

3.5.7.2 CJCEST TPVs and short-term treatment targets. Analyses tested the hypothesis that mid-treatment CJCEST TPVs and increases in CJCEST TPVs would predict reductions in risk/treatment targets (i.e., distorted attitudes about IPV and relationship problems).

Hierarchical multiple regression analyses examined the extent to which mid-treatment CJCEST TPVs predicted changes in distorted attitudes about IPV while controlling for pre-treatment distorted attitudes about IPV. The degree to which changes in CJCEST TPVs predicted changes in distorted attitudes about IPV were also explored using hierarchical multiple regression, controlling for pre-treatment distorted attitudes about IPV and the respective early- or mid-treatment CJCEST TPV. All assumptions were met. As shown in Table 3.44, higher mid-treatment therapeutic alliance and increases in the therapeutic alliance from early- to mid-treatment significantly predicted reductions in distorted attitudes about IPV. No other findings were significant.

Table 3.44

Hierarchical Regression Analyses of CJCEST TPVs Predicting Changes in Treatment Targets

Predictor	Distorted Attitudes about IPV ^c					Relationship Problems ^d						
	ΔF	β	ΔR^2	p	df	B	SE	Wald	e^B	95% CI ^e	p	n
Mid												
TS	1.91	-.12	.014	.17	1,57	-.15	.089	2.72	0.86	0.73, 1.03	.10	47
TA	4.01	-.18	.029	.05	1,57	-.81	.089	0.82	0.92	0.77, 1.10	.36	47
GC	0.009	-.009	<.001	.93	1,57	.010	.072	0.18	1.01	0.88, 1.16	.89	47
Early-Mid Δ ^a												
TS	2.22	-.14	.017	.14	1,56	-.11	.099	1.33	0.89	0.74, 1.08	.25	47
TA	7.56	-.25	.052	.008	1,56	-.15	.12	1.58	0.87	0.69, 1.09	.21	47
GC	0.020	.014	<.001	.89	1,56	.040	.082	0.23	1.04	0.89, 1.22	.63	47
Mid-Post Δ ^b												
TS	0.005	.007	<.001	.95	1,46	-.019	.10	0.038	0.98	0.81, 1.19	.85	46
TA	0.18	.041	.001	.67	1,45	.21	.16	1.72	1.23	0.90, 1.68	.19	45
GC	0.010	.010	<.001	.92	1,45	-.083	.11	.17	0.92	0.74, 1.14	.45	45
Early-Post Δ ^a												
TS	0.001	-.003	<.001	.98	1,49	-.079	.076	1.09	0.92	0.80, 1.07	.30	48
TA	0.96	-.090	.007	.33	1,48	-.018	.091	0.038	0.98	0.82, 1.18	.85	47
GC	0.098	.029	.001	.76	1,47	-.028	.10	0.074	0.97	0.80, 1.19	.79	47

Note. Each IV represents a different hierarchical regression analysis. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. Early-Mid Δ = Changes from early- to mid-treatment. Mid-Post Δ = Changes from mid- to post-treatment. Early-Post Δ = Changes from early- to post-treatment. ^aControlling for each respective early-treatment CJCEST TPV. ^bControlling for each respective mid-treatment CJCEST TPV. ^cHierarchical multiple regression controlling for pre-treatment distorted attitudes. ^dHierarchical logistic regression controlling for pre-treatment relationship problems. ^e95% CI for e^b .

Since the relationship problems variable was coded dichotomously, there was very little variance in its change scores. As such, change was examined using hierarchical logistic regression; pre-treatment relationship problems was controlled in the first block, the predictor variable (i.e., the CJCEST TPV) was entered into the second block, and post-treatment relationship problems (yes/no) was entered as the dependent variable. When CJCEST TPV change scores were used as the predictor variable, the respective CJCEST TPV early- or mid-

treatment score was also controlled in the first block. There were no significant findings, as shown in Table 3.44. Appendix V shows the degree to which the pre-treatment CJCEST TPVs predicted changes in short-term treatment targets.

3.5.7.3 CJCEST TPVs and risk. Hierarchical multiple regression analyses tested the hypothesis mid-treatment CJCEST TPVs and increases in CJCEST TPVs would predict reductions in risk, while controlling for pre-treatment risk. For analyses that used CJCEST TPV change scores as the predictor variable, the respective early- or mid-treatment CJCEST TPV was also controlled in the first block. All assumptions were met. The only significant findings were in the direction opposite to what was hypothesized, as shown in Table 3.45.

Table 3.45

Hierarchical Multiple Regression Analyses of TPVs Predicting Changes on the SARA-V3

Predictor	ΔF	β	ΔR^2	p	df
Mid-treatment					
TS	1.89	.17	.029	.18	1, 57
TA	1.40	.15	.022	.24	1, 57
GC	6.25	.30	.090	.015	1, 57
Early-Mid Δ					
TS	1.62	.17	.025	.21	1, 56
TA	0.11	.045	.002	.74	1, 56
GC	7.55	.34	.11	.008	1, 56
Mid-Post Δ					
TS	1.22	.16	.021	.28	1, 47
TA	4.09	.29	.069	.049	1, 46
GC	0.39	.086	.006	.54	1, 46
Early-Post Δ					
TS	4.28	.29	.067	.044	1, 50
TA	3.49	.26	.056	.068	1, 49
GC	7.14	.36	.11	.010	1, 48

Note. Each IV represents a different hierarchical multiple regression analysis with pre-treatment risk controlled in Block 1. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. Early-Mid Δ = Early- to mid-treatment change. Early-Post Δ = Early- to post-treatment change.

Namely, decreased risk on the SARA-V3 was associated with lower mid-treatment group cohesiveness, decreases in group cohesiveness from early- to mid-treatment and early- to post-treatment, decreases in the therapeutic alliance from mid- to post-treatment, and decreases in treatment satisfaction from early- to post-treatment.

Appendix V shows the degree to which the early-treatment CJCEST TPVs predicted reductions in risk on the SARA-V3.

3.5.7.4 CJCEST TPVs and program-phase recidivism. Point-biserial correlations were conducted to examine the relationship between early-treatment CJCEST TPVs and program-phase recidivism. Early-treatment treatment satisfaction $r_{pb} = -.12, p = .27$, therapeutic alliance $r_{pb} = .006, p = .96$, and group cohesiveness $r_{pb} = -.13, p = .25$ were not significantly correlated with program-phase recidivism.

3.5.7.5 CJCEST TPVs and recidivism. It was hypothesized the CJCEST TPVs (early-treatment, mid-treatment, and positive change scores) would be associated with less recidivism. Correlations were used to analyze relationships between recidivism and CJCEST TPVs at mid- and post-treatment. Semipartial correlations were used to analyze CJCEST TPV change scores while controlling for the relationship between early- or mid-treatment scores and recidivism. The findings are summarized below and detailed in Table 3.46.

Higher mid-treatment treatment satisfaction was associated with fewer charges ($p = .030$) and fewer violent charges ($p = .019$) with small to medium effects. Similarly, increases in treatment satisfaction from early-to mid-treatment were associated with fewer charges ($p = .026$) and fewer violent charges ($p = .051$), although the latter only approached significance. In contrast, increases in treatment satisfaction from mid- to post-treatment were associated with more charges ($p = .002$) and more violent charges ($p = .006$) with medium to large effects.

Table 3.46 shows that a better therapeutic alliance at mid-treatment was associated fewer charges ($p = .045$) and fewer violent charges ($p = .047$) with small to medium effects. Similarly, increases in the therapeutic alliance from early- to mid-treatment were associated with fewer charges ($p = .059$), although this relationship only approached significance.

Table 3.46

Correlations between CJCEST TPVs and General and Violent Recidivism

Measure	No. of charges	No. of violent	Any recidivism ^c	Any violent ^c
Early-treatment				
TS	-.029	-.040	.034	-.052
TA	.070	-.025	.091	.029
GC	.008	-.15	.048	-.16
Mid-treatment				
TS	-.26*	-.28*	.073	-.18
TA	-.24*	-.24*	-.030	-.15
GC	.045	.017	.083	-.038
Post-treatment				
TS	.025	.054	-.045	.023
TA	.14	.17	.030	.093
GC	.14	.14	.11	.12
Early-Mid Δ ^a				
TS	-.27*	-.23 [†]	-.008	-.14
TA	-.23 [†]	-.18	-.095	-.11
GC	.11	.11	.017	.046
Early-Post Δ ^a				
TS	.073	.10	-.026	.090
TA	.25 [†]	.26 [†]	.10	.17
GC	.22	.24	.18	.22
Mid-Post Δ ^a				
TS	.42**	.37**	.085	.23
TA	.58***	.54***	.34*	.39**
GC	.13	.14	.15	.11

Note. TS =Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. Early-Mid Δ = Changes from early- to mid-treatment. Early-Post Δ = Changes from early- to post-treatment. Mid-Post Δ = Changes from mid- to post-treatment. No. of Charges = Number of new charges. No. of Violent = Number of new violent charges. Any Violent = Any violent charges.

^a Semipartial correlations controlling for the respective early-treatment CJCEST TPV. ^b Semipartial correlations controlling for the respective mid-treatment CJCEST TPV. ^c Point-biserial correlations. * $p < .05$. ** $p < .01$. *** $p < .001$ [†] $p < .10$

Contrary to hypotheses, increases in the therapeutic alliance from mid- to post-treatment was significantly correlated with general recidivism ($p = .014$), more charges ($p < .001$), violent recidivism ($p = .005$), and more violent charges ($p < .001$). This unanticipated trend was also observed in that increases in the therapeutic alliance from early- to post-treatment was associated with more charges ($p = .060$) and more violent charges ($p = .053$). No early- or post-treatment CJCEST TPV was significantly correlated with any measure of recidivism.

3.5.8 Program Engagement and Outcome

3.5.8.1 Program engagement and program attendance. Fourteen of the 24 participants who did not successfully complete the program left prior to being rated on program engagement, which resulted in reduced power when analyzing the relationship between program engagement and attrition ($n = 10$). This lack of power may in part be related to the finding that program engagement was not significantly correlated with attrition ($r_{pb} = -.13, p = .29$) or the number of sessions attended ($r = .13, p = .27$).

3.5.8.2 Program engagement and short-term treatment targets. A series of analyses tested the hypothesis that program engagement would relate to reductions in risk/treatment targets (i.e., distorted attitudes about IPV and relationship problems).

3.5.8.2.1 Distorted attitudes about IPV. Hierarchical multiple regression analyses were used to examine whether program engagement at early- and late-treatment predicted changes in distorted attitudes about IPV while controlling for pre-treatment distorted attitudes about IPV.

Early-treatment program engagement significantly predicted reductions in distorted attitudes about IPV, $\Delta F(1,60) = 10.6, \Delta R^2 = .064, \beta = -.25, p = .002$. A follow-up hierarchical multiple regression was conducted with the GEM subscales as predictor variables. Overall, the six subscales contributed significantly to the regression equation, $\Delta F(6,55) = 5.79, \Delta R^2 = 0.16, p < .001$. Together, the six GEM subscales accounted for 16% of variance in reductions in distorted thinking about IPV. The only subscale with a significant regression coefficient was the Working on Own Problems subscale, $\beta = -.38, p = .001, sr^2 = .057$, which accounted for 6% of unique variance in reductions in distorted thinking about IPV.

Late-treatment program engagement was significantly related to reductions in distorted attitudes about IPV, $\Delta F(1,59) = 20.9, \Delta R^2 = 0.11, \beta = -.34, p < .001$. A follow-up hierarchical

multiple regression was conducted with the GEM subscales as predictor variables. Overall, the six subscales contributed significantly to the regression equation, $\Delta F(6,54) = 6.03$, $\Delta R^2 = 0.17$, $p < .001$. Together, the six GEM subscales accounted for 17% of variance in reductions distorted thinking about IPV. As with the early-treatment program engagement, the only subscale with a significant regression coefficient was the Working on Own Problems subscale, $\beta = -.36$, $p = .002$, $sr^2 = .047$, which accounted for 5% of unique variance in reductions in distorted thinking about IPV.

When controlling pre-treatment distorted attitudes about IPV and early-treatment program engagement, increases in program engagement were significantly related to reductions in distorted attitudes about IPV, $\Delta F(1,58) = 8.83$, $\Delta R^2 = 0.047$, $\beta = -.24$, $p = .004$. A follow-up hierarchical multiple regression with the GEM subscales as predictors was not conducted due to a lack of power.

3.5.8.2.2 Relationship problems. Since relationship problems was coded dichotomously, change on this variable was examined using hierarchical logistic regression with pre-treatment relationship problems (yes/no) entered in the first block, the predictor variable(s) (i.e., the measure of program engagement) into the second block, and post-treatment relationship problems (yes/no) as the dependent variable.

Early program engagement significantly predicted a reduction in relationship problems from pre- to post-treatment, Wald $\chi^2(1, n = 49) = 3.92$, $B = -1.27$, $SE = 0.64$, $e^B = 0.28$, 95% CI [0.079, 0.99], $p = .048$. There was insufficient power to conduct a follow-up regression analysis using all six GEM subscales as predictors. Therefore, semipartial point-biserial correlations were conducted, controlling for pre-treatment relationship problems. The Contributing ($r_{pb} = -.30$, $p = .020$), Relating with Members ($r_{pb} = -.29$, $p = .023$), and Working on Others' Problems ($r_{pb} = -.26$, $p = .043$) subscales at pre-treatment were significantly related to reductions in relationship problems. The Attending, ($r_{pb} = .040$, $p = .76$), Relating to Worker ($r_{pb} = -.15$, $p = .27$), and Working on Own Problems ($r_{pb} = -.18$, $p = .17$) subscales were not.

Another hierarchical logistic regression demonstrated that late program engagement did not significantly relate to reductions in relationship problems, Wald $\chi^2(1, n = 48) = 0.99$, $B = -0.55$, $SE = 0.56$, $e^B = 0.58$, 95% CI [0.19, 1.71], $p = .32$. Follow-up semipartial point-biserial

correlations were conducted with each subscale, controlling for pre-treatment relationship problems. Consistent with the results of the logistic regression, no GEM subscales were significantly related to reduced relationship problems, including the Attending, ($r_{pb} = -.066, p = .63$), Contributing ($r_{pb} = -.005, p = .97$), Relating To Worker ($r_{pb} = -.061, p = .65$), Relating with Members ($r_{pb} = -.20, p = .14$), Working On Own Problems ($r_{pb} = -.11, p = .42$), and Working On Others' Problems ($r_{pb} = -.19, p = .15$) subscales.

When controlling pre-treatment relationship problems and early-treatment program engagement, increases in program engagement did not significantly predict reductions in relationship problems, Wald $\chi^2(1, n = 48) = 0.35, B = 0.47, SE = 0.80, e^B = 1.60, 95\% CI [0.33, 7.66], p = .56$. The large standard error and wide confidence intervals around the hazard ratio suggest that the nonsignificant finding may be related to the low base rate of endorsed relationship problems at post-treatment ($n = 12$) and thus a lack of power.

3.5.8.3 Program engagement and risk. As shown in Tables 3.47 and 3.48, semipartial correlations, controlling for pre-treatment risk, were conducted to examine whether different components of early- and late-treatment program engagement were related to changes in risk on the SARA-V3. There was a tendency for higher early-treatment scores on the Working on Own Problems subscale to correlate with decreases in risk ($p = .057$) with small effects. There was also a tendency for decreases in risk to be positively correlated with higher late-treatment scores on the Relating with Members ($p = .058$), Working on Own Problems ($p = .095$), and Working with Others' Problems ($p = .067$) subscales.

Table 3.47

Semipartial Correlations Demonstrating Relationships between Early Program Engagement and Changes in Risk on the SARA-V3

	Total	Attend.	Contrib.	Relate Work.	Relate Mem.	Own Prob.	Others Prob.
SARA-V3 Δ	-.13	.071	-.065	-.13	-.022	-.19 [†]	.13

Note. Controlling for pre-treatment risk on the SARA-V3. Attend. = Attending. Contrib. = Contributing. Relate Work. = Relating to Worker. Relate Mem. = Relating with Members. Own Prob. = Working on Own Problems. Others Prob. = Working with Others' Problems.

[†] $p < .10$

Table 3.48

Semipartial Correlations Demonstrating Relationships between Late Program Engagement and Changes in Risk on the SARA-V3

	Total	Attend.	Contrib.	Relate Work.	Relate Mem.	Own Prob.	Others Prob.
SARA-V3 Δ	-.18	-.013	-.11	-.079	-.23 [†]	-.20 [†]	-.22 [†]

Note. Controlling for pre-treatment risk on the SARA-V3. Attend. = Attending. Contrib. = Contributing. Relate Work. = Relating to Worker. Relate Mem. = Relating with Members. Own Prob. = Working on Own Problems. Others Prob. = Working with Others' Problems.

[†] $p < .10$

Semipartial correlations also examined whether program engagement change scores related to changes in risk on the SARA-V3, while controlling for pre-treatment risk and the respective early-treatment GEM subscale. As shown in Table 3.49, increases on the Relating with Members subscale was significantly associated with decreases in risk ($p = .023$).

Table 3.49

Semipartial Correlations Demonstrating Relationships between Changes Program Engagement and Changes in Risk on the SARA-V3

	Total	Attend.	Contrib.	Relate Work.	Relate Mem.	Own Prob.	Others Prob.
SARA-V3 Δ	-.14	-.014	-.079	-.008	-.27*	-.13	-.18

Note. Controlling for pre-treatment risk on the SARA-V3 and each respective early-treatment subscale. Attend. = Attending. Contrib. = Contributing. Relate Work. = Relating to Worker. Relate Mem. = Relating with Members. Own Prob. = Working on Own Problems. Others Prob. = Working with Others' Problems.

* $p < .05$

Hierarchical multiple regressions tested the hypothesis that program engagement would predict reductions in risk, while controlling for pre-treatment risk (on the SARA-V3). Early-treatment program engagement was also controlled when early- to late-treatment change in program engagement was the predictor. Contrary to hypotheses, early program engagement $\Delta F(1,59) = 1.09$, $\Delta R^2 = .016$, $\beta = -0.13$, $p = .30$, late program engagement $\Delta F(1,57) = 2.31$, $\Delta R^2 = .033$, $\beta = -0.18$, $p = .13$, and changes in program engagement $\Delta F(1,56) = 1.30$, $\Delta R^2 = .019$, $\beta = -0.15$, $p = .26$, did not significantly predict changes in risk.

3.5.8.4 Program engagement and recidivism.

3.5.8.4.1 Correlations. Exploratory correlations and point-biserial correlations examined the relationships between different components of program engagement (i.e., the GEM subscales) and recidivism, as shown in Tables 3.50 and 3.51.

Table 3.50

Correlations between Early Program Engagement and Recidivism

Measure	Total	Attend.	Contrib.	Relate Work.	Relate Mem.	Own Prob.	Others Prob.
Any General ^a	-.014	-.13	.047	.079	.026	-.10	-.002
Any Violent ^a	-.11	.080	-.15	-.11	-.097	-.056	-.15
No. of Charges	-.087	-.098	-.12	.010	-.024	-.058	-.11
No. of Violent	-.12	.079	-.16	-.10	-.14	-.053	-.16

Note. Any General = Any new charges. Any Violent = Any violent charges. No. of Charges = Number of new charges. No. of Violent = Number of new violent charges. Attend. = Attending. Contrib = Contributing. Relate Work. = Relating to Worker. Relate Mem. = Relating with Members. Own Prob. = Working on Own Problems. Others Prob. = Working with Others' Problems.

^a Point-biserial correlations.

Table 3.51

Correlations between Late Program Engagement and Recidivism

Measure	Total	Attend.	Contrib.	Relate Work.	Relate Mem.	Own Prob.	Others Prob.
Any General ^a	-.028	-.23 [†]	.058	.056	.066	-.13	-.034
Any Violent ^a	-.18	-.16	-.067	-.064	-.12	-.28*	-.16
No. of Charges	-.035	-.24 [†]	.12	.10	-.014	-.14	-.068
No. of Violent	-.13	-.20	.018	-.046	-.095	-.22 [†]	-.13

Note. Any General = Any new charges. Any Violent = Any violent charges. No. of Charges = Number of new charges. No. of Violent = Number of new violent charges. Attend. = Attending. Contrib = Contributing. Relate Work. = Relating to Worker. Relate Mem. = Relating with Members. Own Prob. = Working on Own Problems. Others Prob. = Working with Others' Problems.

^a Point-biserial correlations. ^a Point-biserial correlations.

* $p < .05$ [†] $p < .10$

Early-treatment program engagement was not significantly associated with recidivism. For late-treatment program engagement, the Working on Own Problems subscale was related to violent recidivism ($p = .027$) and the number of new violent charges ($p = .082$), although this latter relationship only approached significance. The Attending subscale was related to general recidivism ($p = .074$) and the number of new charges ($p = .055$), although these correlations only approached significance.

3.5.8.4.2 Regressions. It was hypothesized that lower program engagement would predict recidivism. A series of Cox regression survival analyses were conducted to measure the extent to which early-treatment, late-treatment, and changes in program engagement predicted general and violent recidivism, while controlling for the effects of pre-treatment risk on the SARA-V3 and the ODARA. For analyses that examined changes in program engagement, the effects of early-treatment program engagement were also controlled. Assumptions were met regarding the adequacy of the sample size, survival experiences over time, multicollinearity, and proportionality of hazards. No issues with normality were detected for program engagement (i.e., GEM total scores) or for time to general recidivism. Time to violent recidivism had a bimodal distribution, although the assumption of normality is not required for Cox regression analyses even though normality may enhance the power of the analysis (Tabachnick & Fidell, 2013). As such, no transformations were conducted for the variables used in the Cox regression analyses.

A number of hierarchical multiple regressions, controlling pre-treatment risk and follow-up time, were also conducted to examine the extent to which early-treatment, late-treatment, and changes in program engagement predicted the number of new charges and new violent charges incurred in the follow-up period. For analyses that examined changes in program engagement, the effects of early-treatment program engagement were also controlled. These outcome variables (i.e., number of new charges and new violent charges) were not normally distributed and scatterplots demonstrated issues with homoscedasticity. Transformed scores were not used as they can negatively impact the interpretation of findings and transformed scores only minimally improved issues with normality and homoscedasticity. The results were thus interpreted with caution.

When controlling for pre-treatment risk, early program engagement did not predict general recidivism Wald $\chi^2(1, n = 71) = 0.68$, $B = -0.34$, $SE = 0.41$, $e^B = 0.71$, 95% CI [0.32, 1.59], $p = .41$, or the number of new charges $\Delta F(1,66) = 0.002$, $\Delta R^2 < .001$, $\beta = 0.005$, $p = .97$. Similarly, when controlling for pre-treatment risk, late-treatment program engagement did not predict general recidivism Wald $\chi^2(1, n = 62) = 0.70$, $B = -0.38$, $SE = 0.45$, $e^B = 0.69$, 95% CI [0.28, 1.66], $p = .40$, or the number of new charges $\Delta F(1,57) = 0.066$, $\Delta R^2 = .001$, $\beta = -0.033$, $p = .80$. When controlling for pre-treatment risk and early program engagement, changes in program engagement did not predict general recidivism Wald $\chi^2(1, n = 62) = 2.35$, $B = -1.09$, $SE = 0.71$, $e^B = 0.34$, 95% CI [0.083, 1.36], $p = .13$, or the number of new charges $\Delta F(1,56) = 0.90$, $\Delta R^2 = .001$, $\beta = -0.04$, $p = .77$.

When controlling for pre-treatment risk, early program engagement did not predict violent recidivism Wald $\chi^2(1, n = 71) = 1.82$, $B = -0.86$, $SE = 0.64$, $e^B = 0.42$, 95% CI [0.12, 1.48], $p = .18$, or the number of new violent charges $\Delta F(1,66) = 0.45$, $\Delta R^2 = .006$, $\beta = -0.081$, $p = .50$. However, late-treatment program engagement approached significance in predicting violent recidivism while controlling for pre-treatment risk, Wald $\chi^2(1, n = 62) = 3.35$, $B = -1.39$, $SE = 0.76$, $e^B = 0.25$, 95% CI [0.056, 1.10], $p = .067$. But, late program engagement did not significantly predict the number of new violent charges when controlling for pre-treatment risk, $\Delta F(1,57) = 0.63$, $\Delta R^2 = .009$, $\beta = -0.10$, $p = .43$. When controlling for pre-treatment risk and early program engagement, changes in program engagement did not predict violent recidivism Wald $\chi^2(1, n = 62) = 2.49$, $B = -1.07$, $SE = 0.68$, $e^B = 0.34$, 95% CI [0.090, 1.30], $p = .12$, or the number of new violent charges $\Delta F(1,56) = 0.16$, $\Delta R^2 = .002$, $\beta = -0.054$, $p = .69$.

CHAPTER 4: DISCUSSION

4.1 Account of Participant Characteristics

4.1.1 Background Information

The following findings are based upon data collected from 88 male participants who attended a 16-week community-based IPV program at Forensic Assessment and Community Services in Edmonton, Alberta. The participants were predominantly non-Indigenous and born in Canada, ranging in age from 20 to 63 years. Participants were approximately evenly split in terms of whether they had completed high school, were in an intimate relationship, and/or were employed.

Forty percent of participant files contained information that provided strong evidence that the participant in question had a diagnosed mental disorder; most prevalent, approximately one fifth of the sample had a mood disorder (18%) and/or a neurocognitive/neurodevelopmental disorder (18%). In comparison, a similar IPV study found a 32.6% base rate of mental disorders (Chovanec, 2012). The higher base rate of mental disorders in the current sample may be in part because FACS has psychiatrists and registered psychologists available for consultation and follow-up, which may have facilitated the assessment and detection of psychiatric concerns. Even so, the base rate for mental disorders among inmates in Canadian federal custody and Alberta provincial custody were both over 70% (Beaudette, Power, & Stewart, 2015; Bland, Newman, Thompson, & Dyck, 1998); the most notable discrepancies were that diagnosed substance use disorders and personality disorders were much lower in the current sample. These differences may reflect an overall higher prevalence rate of mental disorders in custody and it may also be related to the more systematic and thorough screening for mental disorders in Beaudette and colleagues' (2015) and in Bland and colleagues' (1998) studies. As well, research has found that men with a history IPV are more likely to have untreated mental health and substance use concerns (Easton & Crane, 2016; Lipsky, Caetano, & Roy-Byrne, 2011). Overall, these findings suggest that IPV offenders who are referred for assessment or treatment should be screened for mental health and substance use difficulties.

Participants were diverse in their criminal histories. The most common index offence was Assault, although offences ranged in severity from Fail to Comply to Assault Causing

Bodily Harm or Unlawful Confinement. While almost a quarter of the participants were first-time offenders, offence histories ranged upwards to as many as 53 prior offences, 11 prior violent offences, and/or five prior IPV-related offences. One quarter of the sample had an official IPV history, yet two thirds of participant files contained official or unofficial (e.g., self- or partner-report) information that suggested a prior history of IPV; this difference was not surprising given that a large proportion IPV is not reported or prosecuted (Boxall, Rosevear, & Payne, 2015; Gracia, 2004). This finding furthermore suggests that practitioners should not rely solely upon official information when assessing IPV history. Given the sample's range in the severity and extent of past criminal offending, it followed suit that risk scores were similarly diverse.

4.1.2 Description of Participant Risk

The mean ODARA score was 5.54 out of a possible 13 points. According to ODARA normative data, 53% percent of men with a score of five or six assaulted a female intimate partner within an average of 4.9 years following their index offence; this is considerably higher than the ODARA's normative base rate of 30% recidivism over the same timeframe (Hilton et al., 2010). Indeed, a score of five or six was higher than 80% of men in the studies that comprise the ODARA's normative data, which suggests that the current sample was relatively high risk (Hilton et al., 2010).

Actuarial data were not available for the SARA-V3, because there is presently limited research on this version of the measure, the Victim Vulnerability domain was excluded in the current study, and it is a structured professional judgment tool that lends to different ways of quantifying scores for research purposes. In the present study, the mean SARA-V3 score at pre-treatment was 14.8 out of a possible 36 points. The two domain scores were significantly intercorrelated at pre- and post-treatment ($p < .01$).

Overall, the ODARA and the SARA-V3 demonstrated good convergent validity, consistent with past research (Ryan, 2016). The ODARA was highly correlated with the SARA-V3 and the SARA-V3 domains with large effects at pre-treatment ($p < .001$). The ODARA (scored only at pre-treatment) continued to be highly correlated with the SARA-V3 and its Nature of IPV domain at post-treatment ($p < .001$). The relationship between the ODARA and the Perpetrator Risk Factors domain demonstrated only a small- to- medium effect size ($p < .05$)

at post-treatment. The ODARA is a measure of static/stable risk factors, so it stands to reason that it became less strongly associated with the SARA-V3's more dynamic domain over time and following a targeted correctional intervention.

4.2 A Process and Outcome Evaluation of the FACS Spousal Violence Program

4.2.1 Adherence to the Program Curriculum

The FACS Spousal Violence Program is an IPV correctional program that used an integrative treatment approach (e.g., CBT, the Duluth Model). There were eleven predefined treatment content areas (TCAs) that aligned well with the IPV risk factors identified in a meta-analysis by Stith and colleagues (2004). Most of the TCAs were addressed in each group (see Appendix O for details), demonstrating fair adherence to the preferred program curriculum. The day groups covered fewer TCAs than the evening groups. It is possible that fewer TCAs were covered in the day groups because the program facilitators tailored treatment to the specific needs of the day group participants. For instance, as would be anticipated, a higher proportion of participants were unemployed or on disability assistance in the day groups ($p = .068$). As well, there were more participants in the day groups with mental disorders, including neurocognitive or neurodevelopmental disorders (e.g., ADHD). Regardless, there were no statistically significant differences in demographic characteristics, legal history information, or risk level between the day and evening groups.

In comparison to the preferred program curriculum, groups spent slightly less time on violence in the family of origin, emotion management, and the “other” category (e.g., group introductions, values, substance use) in practice. Slightly more time was spent on consequences for partners/children, jealousy and trust, defining violence and abuse, and analysis of the offence. Altogether, the groups deviated from the preferred amount of time designated to each TCA by approximately 35 minutes (see Table O4).

Previous research has found that RNR-based programs with more program integrity are more effective in preventing recidivism (Andrews & Dowden, 2006). Discrepantly, adherence to the preferred program curriculum was not significantly associated with changes in risk or recidivism in the current research. This may, in part, be because the groups strayed only minimally from the preferred curriculum. It may also reflect adherence to the need and

responsivity principles whereby program facilitators may have tailored the amount of time spent on each TCA to the specific needs of the participants in each group. Finally, adherence to the program curriculum is but one of several indicators of program integrity (e.g., reaching the target population, appropriate delivery style; Ross & Fabiano, 1985; Serin & Preston, 2001), which may explain why it was not associated with risk change or recidivism.

4.2.2 Program Attendance

The FACS Spousal Violence Program includes 14 group sessions and two individual sessions. The current study had an attrition rate of 28%, which is low relative to a meta-analysis that reported a mean attrition rate of 37.8% across 35 IPV correctional programs (Olver et al., 2011). This lower attrition rate is consistent with a meta-analysis that found that participants who were court-mandated had lower attrition rates (Jewell & Wormith, 2010).

The lower attrition rate may also be related to the observed flexibility in the designation of successful program completion. At the onset of the study, FACS personnel informed that participants were only permitted one absence (i.e., a minimum of 15 sessions). However, in practice, a quarter of the successful completers attended only 12, 13, or 14 sessions (rather than 15 or 16). One of the eight groups offered only 15 rather than 16 sessions, thus systematically lowering the mean. Such flexibility may have been helpful in retaining participants who would have otherwise been asked to leave the program and consequently attend far fewer sessions. This flexible approach may be advisable to other IPV programs as it arguably tailors services to the specific characteristics and circumstances of the offender, thus adhering to the RNR's responsivity principle and Motivational Interviewing practices (Miller & Rollnick, 2012).²⁹ Similarly, a qualitative study found that men who recidivated following IPV treatment identified a lack of flexibility in the treatment approach to be a key area for improvement (Portnoy & Murphy, 2017).

It is noteworthy however that the likelihood of general and violent reoffending increased by 10% and 11%, respectively, for each missed session. These findings highlight the importance of both retaining participants in treatment and bolstering their attendance. It is recommended

²⁹ Several studies have demonstrated that Motivational Interviewing and/or Motivational Enhancement Treatment are effective when included in IPV interventions (Eckhardt et al., 2013).

that program facilitators offer make-up sessions or refer participants for additional services post-treatment should flexibility/discretion be used when deciding the number of acceptable absences. It is notable that higher pre-treatment risk was associated with attrition and more missed sessions in both the current study and past research (Bonta & Andrews, 2017; Wormith & Olver, 2002; Olver et al., 2011), so maintaining an adequate dose of treatment for higher risk participants (as per RNR's risk principle) may be challenging. Replacing missed group sessions with individual make-up sessions is an option, yet it should not be overused given that a recent randomized clinical trial found IPV treatment was more effective when provided in a group rather than individual format (Murphy, Eckhardt, Clifford, Lamotte, & Meis, 2017). As well, this strategy may not always be possible should participants incur a new charge and be reincarcerated. Indeed, the current findings demonstrated that a high proportion (44%) of participants who left the program prematurely incurred at least one new charge.

4.2.3 Treatment Outcome

Treatment outcomes included short-term treatment targets, changes in risk, and recidivism.

Distorted attitudes about IPV and relationship problems were the short-term treatment targets. Distorted attitudes about IPV decreased significantly ($p < .001$) with very large effects. Relationship problems followed a similar trend, but the difference only approached statistical significance ($p = .059$) with small effects. There are a few possible reasons why the magnitude of change was different between these two treatment targets. First, it is possible that these differences reflect what was more strongly emphasized in treatment (i.e., focusing more so the development of insight than of behavioural relationship skills). Alternatively, consistent with the program logic model (see Appendix A), changes in distorted attitudes about IPV are perhaps a prerequisite to more noteworthy reductions in relationship problems. Methodological factors may also explain these differences. Specifically, program facilitators rated distorted attitudes about IPV; it is thus possible that program facilitators were impacted by demand characteristics or bias that contributed to more favourable ratings post-treatment. In contrast, relationship problems were measured as per participant self-report; their responses may have been impacted by positive impression management given that the data were collected within the context of a mandated correctional program. If participants minimized the number or extent of their

relationship problems, it may have contributed to a floor effect. Thus, measurement error may have favoured opposite trends (i.e., a high versus low magnitude of change) for distorted attitudes and relationship problems, respectively.

To our knowledge, the present study was the first to use the SARA-V3 as a dynamic indicator of risk change. Consistent with hypotheses, risk decreased significantly with very large effects ($d = 1.57, p < .001$). The Nature of IPV domain scores remained consistent over time, as might be expected given that it is rather static or stable. Thus, changes in risk on the SARA-V3 were driven by reductions on the Perpetrator Risk Factors domain ($d = 1.59, p < .001$). These findings offer preliminary support that the SARA-V3 is sensitive to detecting changes in risk; the section below titled IPV Risk and the Prediction of Recidivism speaks to the predictive validity of these changes.

Finally, program effectiveness was also evaluated by examining recidivism data. As per the quasi-experimental nature of the current research design, the attrition group was compared to the treated group. Pre-treatment risk, a strong confounding variable, was controlled. Attrition predicted general recidivism but not violent recidivism. Yet, the effect sizes were similar for both types of recidivism and the results suggested that successful program completion reduced the likelihood of general and violent recidivism by approximately 64% and 65% respectively. In light of these large effect sizes, attrition may not have been a statistically significant predictor of violent recidivism due to a lack of power. Indeed, the base rate of violent recidivism (13.6%) was about one half of general recidivism (26.1%). As well, the number of sessions attended significantly predicted both general and violent recidivism; the use of this continuous variable as a measure of program attendance seems to have afforded additional variance, thus providing sufficient power to detect significant effects. Overall, a causal linkage between program attendance and the prevention of recidivism could not be confidently surmised given that the current research study was not a true experimental design or randomized controlled trial. However, there is strong evidence to suggest that the FACS Spousal Violence Program was effective in preventing recidivism.

4.3 IPV Risk and the Prediction of Recidivism

In the following section, certain analyses had more power to detect statistical significance than others (as alluded to above). Specifically, analyses that examined pre-treatment risk had a

larger sample size ($n = 87$) and thus more power than those that examined post-treatment risk or risk change scores ($n = 63$). Furthermore, there was less variance and consequently less power when recidivism was measured as a binary rather than continuous variable. Finally, violent recidivism had a lower base rate and thus offered less power than general recidivism. The following findings of statistical significance follow these trends. Effect sizes were therefore used to supplement the interpretation of findings.

Specifically, squared semipartial correlations were used when recidivism was measured as a continuous variable (i.e., the number of new charges). Squared semipartial correlations represent the proportion of variance in the DV (i.e., number of new charges) that is accounted for by the IV (risk). Hazard ratios were used to examine the degree to which pre-treatment, post-treatment and changes in risk scores predicted any recidivism over time. Hazard ratios represent the likelihood of reoffending for every one-point difference on the risk measure in question; for instance, if the hazard ratio is 1.30, the likelihood of reoffending increases by 30% for every one-point increase on the measure of risk. AUCs were used for pre- and post-treatment measures of risk and were incorporated in order to compare the current findings to other studies. In contrast to hazard ratios, AUCs examine the binary outcome (i.e., any general/violent recidivism) at one point in time and represent the measure's ability to differentiate recidivists from nonrecidivists. According to Rice and Harris (2005), an AUC of .56 is considered small, an AUC of .64 is considered medium, and an AUC of .71 is considered large.

4.3.1 Pre-treatment

At pre-treatment, the ODARA, the SARA-V3, the Nature of IPV domain, and the Perpetrator Risk Factors domain all significantly predicted program-phase recidivism and general recidivism. The SARA-V3 approached significance in the prediction of violent recidivism, yet its Nature of IPV domain significantly predicted violent recidivism when recidivism was measured as a continuous variable, conceivably, the more sensitive indicator of outcome.

When considering effect sizes, the ODARA demonstrated good predictive validity of general recidivism (binary: $AUC = .72$, $e^B = 1.30$; continuous: $sr^2 = .046$) and moderate (although not significant) predictive validity for violent recidivism (binary: $AUC = .63$, $e^B = 1.19$; continuous: $sr^2 = .019$), which are consistent with past research findings. Messing and

Thaller (2013) found an average weighted AUC of .67 for violent recidivism across five studies on the ODARA. As well, two recent studies in Alberta, Canada (i.e., the same geographic location as the present study) examined the ODARA's predictive validity. Similar to the current findings, Jung and Buro (2017) found an AUC of .73 for any new charges and an AUC of .67 for any new violent charges. Olver and Jung's (2017) study's AUCs and hazard ratios were similar for any new convictions (AUC = .75; $e^B = 1.28$) and substantially higher for any new violent convictions (AUC = .73; $e^B = 1.39$) over a mean follow-up of 3.30 years.

As noted above, the SARA-V3 at pre-treatment demonstrated good predictive validity of general recidivism (binary: AUC = .75, $e^B = 1.11$; continuous: $sr^2 = .13$) and moderate (although not significant) predictive validity of violent recidivism (binary: AUC = .68, $e^B = 1.10$; continuous: $sr^2 = .044$). These findings are slightly higher than those from a research review by Messing and Thaller (2013), which found an average weighted AUC of .63 for violent recidivism across six studies that examined the SARA. More recent studies in Alberta, Canada similarly found effect sizes that were higher than Messing and Thaller's (2013) review. Jung and Buro's (2017) findings were nearly identical to those of the current study, with an AUC of .75 for any new charges and an AUC of .66 for any new violent charges (a modified, 14-item SARA-V2 was used). Olver and Jung's (2017) study again found AUCs and hazard ratios that were similar for any new convictions (AUC = .78; $e^B = 1.13$) and considerably higher for any new violent convictions (AUC = .74; $e^B = 1.15$; a modified, 17-item SARA-V2 was used).

It is unclear why the ODARA and the SARA demonstrated better predictive validity in Olver and Jung's (2017) study. It may be that their assessments of risk were more accurate or that they had greater variability in terms of participant characteristics (i.e., on account of their larger sample size) and recidivism data (i.e., the longer follow-up time).

4.3.2 Post-treatment

The SARA-V3 and the Perpetrator Risk Factors domain at post-treatment demonstrated better predictive validity when the number of new charges and time-to-recidivate were taken into account. That is, most semipartial correlations (i.e., in relation to the number of new charges) were statistically significant. As well, hazard ratios (i.e., that consider time-to-recidivate) were slightly more impressive than the AUCs, although they were not statistically significant.

Consistent with pre-treatment findings, the SARA-V3 at post-treatment demonstrated better predictive validity of general recidivism (binary: $AUC = .68$, $e^B = 1.12$; continuous: $sr^2 = .12$, $p = .004$) than of violent recidivism (binary: $AUC = .57$, $e^B = 1.07$; continuous: $sr^2 = .048$, $p = .060$). Similarly, the Perpetrator Risk Factors domain demonstrated better predictive validity of general recidivism (binary: $AUC = .58$, $e^B = 1.17$; continuous: $sr^2 = .11$, $p = .005$) than of violent recidivism (binary: $AUC = .54$, $e^B = 1.15$; continuous: $sr^2 = .066$, $p = .029$).

Interestingly, AUCs were lower at post-treatment than at pre-treatment. However, hazard ratios were higher at post-treatment than at pre-treatment, despite the finding that they were only statistically significant at pre-treatment. These differences suggest that power may have impacted the detection of statistical significance given the smaller sample size at post-treatment. These findings also suggest that considering time-to-recidivate increased the predictive accuracy of post-treatment measures of risk in comparison to pre-treatment measures.

4.3.3 Risk Change

This study examined the predictive utility of changes scores on the SARA-V3, and the findings are promising. Reductions in risk on the SARA-V3 ($sr^2 = .14$, $p < .001$) and its Perpetrator Risk Factors domain ($sr^2 = .17$, $p < .001$) significantly predicted fewer new charges when controlling for pre-treatment risk. Changes on the SARA-V3 and its Perpetrator Risk Factors domain did not significantly predict general recidivism when it was measured as a binary outcome, although their respective hazard ratios ($e^B = 1.16$ and $e^B = 1.18$) were higher than their statistically significant hazard ratios observed at pre-treatment ($e^B = 1.11$ and $e^B = 1.15$).

Furthermore, reductions in risk on the SARA-V3 ($sr^2 = .080$, $p = .015$) and the Perpetrator Risk Factors domain ($sr^2 = .11$, $p = .004$) significantly predicted fewer new violent charges when controlling for pre-treatment risk. Changes on the SARA-V3 and its Perpetrator Risk Factors domain again did not significantly predict violent recidivism when it was measured as a binary outcome, although their respective effect sizes were substantial ($e^B = 1.24$ and $e^B = 1.35$). These findings carry implications for monitoring changes in risk and predicting recidivism.

4.3.4 Summary and Implications

Consistent with past findings (Hanson et al., 2007; Messing & Thaller, 2018), both the ODARA and the SARA-V3 demonstrated utility in the prediction of general and violent recidivism. The present findings furthermore offered support for the use of these tools in the prediction of program-phase recidivism. Overall, there is support for the continued use of both measures in the assessment of risk of IPV offenders, especially given past findings that these two measures add incremental predictive validity of general and intimate partner violence (Olver & Jung, 2017).

The present findings add to what is currently known about how the SARA-V3 may be used and applied. In particular, the current findings suggest that the SARA-V3 may sensitively detect meaningful changes in risk over the course of group IPV interventions. The authors of the SARA have long-since argued its efficacy as a tool to assist with the case and risk management of IPV offenders (Kropp & Hart; 2000, 2015). The results of the current study support the use of the SARA-V3 in tracking and monitoring changes in risk, as such changes were found to predict general and violent recidivism. Indeed, changes in risk on the SARA-V3 demonstrated larger effect sizes on average than measures of the SARA-V3 at pre- or post-treatment. This suggests that assessing response to treatment may improve predictive accuracy when considered in conjunction with the risk level of the offender. Yet, replication of the current findings in other IPV studies is required before more definitive conclusions can be made. In the interim, the SARA-V3's Perpetrator Risk Factors domain, comprised primarily of dynamic items, may prove particularly useful to practitioners who wish to measure treatment gains and/or assess whether additional interventions are required. In particular, the SARA-V3 may be used to guide the application of RNR principles by assisting practitioners in determining whether the treatment dose (i.e., risk), targets (i.e., need), and approach (i.e., responsivity) were sufficient for each case.

4.4 Responsivity and the Black Box of the Treatment Process

4.4.1 Dynamic Specific Responsivity Factors

Motivation for treatment, confidence in treatment effectiveness, self-efficacy, and readiness to change IPV are factors common to many different dynamic theories of change, desistance, and offender rehabilitation (e.g., Bonta & Andrews, 2017; Burrowes & Needs, 2009;

Ward et al., 2004). Despite their prevalence in theory, few studies have examined the extent to which these factors are interrelated and/or dynamic within the context of IPV group interventions. The current research sought to fill this gap.

Participants reported, on average, positive (i.e., greater than neutral) responses on measures of motivation for treatment and confidence in treatment effectiveness at both pre- and post-treatment. These two variables increased significantly and their change scores were intercorrelated. Given this information, service providers may wish to share information with participants that may increase their confidence in treatment (e.g., positive findings from a program evaluation) should they struggle with low motivation for treatment.

Self-efficacy was measured using a scaling question (from 1 to 10) that asked about participants' confidence in their ability to refrain from using IPV during the next one year (see Appendix D). Participants were very confident at both pre- and post-treatment, with modes of 10. Indeed, the pre- and post-treatment means were almost identical ($M = 8.62$ and $M = 8.69$, respectively). While change was not statistically significant, this finding does not disconfirm the hypothesis that self-efficacy is dynamic in this context. Change was assessed by comparing pre- and post-treatment means; as such, some scores may have increased and some may have decreased, with the means remaining similar at both timepoints. As well, the limitations of one-item measures (e.g., lack of variance, ceiling effects, limited validity) may have contributed to a lack of sensitivity to detect change.

Readiness to change IPV did not change significantly from pre- to post-treatment, averaging approximately a two out of four possible points at both timepoints. This is contrary to previous studies that found significant increases in readiness to change IPV (using the same measure: the OSRC) over the course of IPV group programming for both moderate and high risk offenders (Connors et al., 2012; 2013). Although unclear, it is possible that readiness to change IPV was not targeted as actively in the current program as in the programs studied by Connors and colleagues (2012, 2013). This discrepancy may also be related to the setting in which the programs took place. Specifically, the studies by Connors and colleagues (2012, 2013) occurred within the context of federal institutions whereas the current participants were in the community. As insight (presumably) builds over the course of IPV programming, perhaps the negative

consequences of IPV are more salient when in custody and hoping to be released, which may contribute to greater increases in readiness to change IPV.

Consistent with hypotheses, many of the DRFs were intercorrelated. Motivation for treatment was significantly associated with confidence in treatment effectiveness (consistent with Broome et al., 1999) and readiness to change IPV. These findings are conceptually sound given that those who recognize IPV is problematic and wish to change those behaviours (i.e., who have high readiness to change IPV) would likely be more motivated for treatment should they believe that the recommended treatment will be worthwhile (i.e., have high confidence in treatment effectiveness).

Contrary to hypotheses, self-efficacy was negatively associated with both motivation for treatment and readiness to change IPV at post-treatment. Theory and research on behaviour change more generally suggest that individuals are more motivated to change when they have confidence in their ability to do so (Bandura & Locke, 2003). However, in the current study, it is possible that self-efficacy did not only represent their belief in their ability to desist from IPV but it may have also served as a proxy for problem recognition and/or problem severity. This rationale fits in that participants may have gained a more accurate understanding of their problem with and risk for abusive behaviours while attending treatment. As such, those who reported low self-efficacy post-treatment were perhaps more likely acknowledge IPV as problematic and more motivated to address this problem area with ongoing intervention (hence the relationship between low self-efficacy and higher ratings of motivation for treatment and readiness to change IPV).

The negative association between post-treatment self-efficacy and readiness to change IPV may also be related to the manner in which readiness to change IPV was measured. Certain individuals deemed “weak satisficers” in survey research are susceptible to primacy effects whereby they select the first seemingly-appropriate response (rather than the most appropriate/accurate response; Krosnick & Presser, 2010, p. 279). In this case, participants who reported IPV as “not a problem” were categorized as having low readiness to change (i.e., a score of one, which was listed first) whereas as participants who reported that IPV “is a problem for me and I am currently dealing with it by making change in me and my life” were rated as having high readiness to change IPV (i.e., a score of four, which was listed last). It is possible

that some participants who legitimately reduced their risk and consequently had high self-efficacy in their ability to desist from IPV selected the first option that seemed relevant to them (i.e., that IPV was “not [presently]³⁰ a problem”).

4.4.2 Treatment Process Variables

Treatment satisfaction, the therapeutic alliance, group cohesiveness, and program engagement are prevalent in theories of change and rehabilitation (e.g., Armenakis & Harris, 2009; Burrowes & Needs, 2009; Simpson, 2004; Ward et al., 2004) and in a number of qualitative studies that have examined therapeutic processes in IPV group treatment (e.g., Wangsgaard, 2001; Roy et al., 2013; Walker et al., 2017). Yet, few quantitative studies have examined the extent to which these factors are interrelated and dynamic within the context of an IPV group intervention. The current research therefore sought to build upon past research and contribute to theory development in these areas. Program engagement was examined separately, as it was hypothesized that DRFs and TPVs would converge to promote program engagement.

Overall, treatment satisfaction, the therapeutic alliance, and group cohesiveness were highly intercorrelated at each timepoint as were their respective changes scores. This is consistent with hypotheses and complements past research that has found significant relationships between group cohesiveness and the therapeutic alliance in IPV interventions (Semiatin et al., 2013; Taft et al., 2003).

There were some small differences in the TPVs’ expressions and patterns of change. On average, treatment satisfaction and the therapeutic alliance were rated as slightly above neutral after the first group session (i.e., early-treatment). There was a steep and statistically significant increase in treatment satisfaction and the therapeutic alliance between early- and mid-treatment, which then plateaued between mid- and post-treatment. In comparison, group cohesiveness was, on average, rated as slightly below neutral after the first group session, increasing significantly by mid-treatment. It again increased significantly but with a lesser magnitude between mid- and post-treatment, ending with a mean score that was marginally above neutral. In sum, treatment satisfaction and the therapeutic alliance were more readily established and increased sharply in the first half of the program. In contrast, participants reported only modest ratings of group

³⁰ “Presently” inserted to reflect how some participants may have interpreted the phrase.

cohesiveness over the course of the program on average and increases in group cohesiveness were slower and steadier.

The findings suggest that, should a participant struggle with the therapeutic alliance, group cohesiveness, or treatment satisfaction, it may be worthwhile to target any or all of these three areas given that they were highly intercorrelated and may collectively contribute to the treatment climate (Marshall & Burton, 2010; Moos, 1986). For example, should a participant express dissatisfaction with treatment, targeting the therapeutic alliance and the participant's comfort with other group members may minimize this dissatisfaction; this strategy may be particularly relevant should the participant be dissatisfied with aspects of the program that cannot be easily modified (e.g., location). The current findings also suggest that it is not necessarily cause for concern should participants present as low in any of these process-based areas early on, for there is now evidence to suggest that they are dynamic and may be expected to increase by mid-treatment. Should participants remain low in these areas at mid-treatment, additional interventions and strategies are recommended. It is further noted that group cohesiveness may be rather slow to develop and perhaps challenging to establish in IPV group treatment more generally.

4.4.3 Program Engagement

Inconsistent definitions of program engagement (Holdsworth et al., 2014) have contributed to a limited understanding of its role within the context of IPV group interventions. It seems likely that the multidimensional nature of program engagement has in part contributed to its blurry definition. The Group Engagement Measure was thus used to measure seven dimensions or components of program engagement as well as an overall estimate of the construct. The seven components include attending, contributing, relating to the program facilitator, relating with group members, contracting, working on one's own problems, and working on other members' problems (Macgowan, 2006).

Overall, six of the seven subscales were interrelated; contracting did not correlate significantly with most of the other subscales, which was likely due to its poor psychometric properties (i.e., lack of variance). Program engagement, as a whole, increased significantly over the course of treatment, which was driven by increases on the contributing, relating to worker, working on one's own problems, and working on others' problems subscales. The attending and

relating with members subscales were more stable. The current findings demonstrated that participants tended to experience increases in engagement over the course of the program, although it is possible that participants who left the program prematurely did not.

4.4.4 Relationships between Specific Responsivity Factors and Treatment Processes

TPVs were conceptualized as the result of an interaction between internal responsivity factors (i.e., specific to the individual client) and external responsivity factors (i.e., specific to the service provider, treatment setting, and context; Serin & Kennedy, 1997). While external responsivity factors were not examined in the present research, the role of internal responsivity factors (i.e., DRFs, demographics) were examined in relation to TPVs.

4.4.4.1 Dynamic specific responsivity factors and the treatment process. It was anticipated that participants with greater readiness to change IPV, motivation for treatment, confidence in treatment effectiveness, and self-efficacy would be more satisfied with treatment and have a stronger therapeutic alliance and sense of group cohesiveness. Many DRFs were associated with TPVs in the expected direction across different timepoints, although there were some unexpected findings.

Participants who reported a stronger therapeutic alliance were more confident in the effectiveness of treatment across each timepoint, which is consistent with past research (Boira et al., 2013; Broome et al., 1999). While causation cannot be inferred, it stands to reason that very few participants would be optimistic about treatment should they feel negatively about the individual(s) delivering treatment. In turn, those who began treatment with some level of optimism may have established a therapeutic alliance more readily on account of confirmation bias, or more simply, a more open and accepting demeanor/attitude towards program facilitators. Post-treatment ratings of confidence in treatment effectiveness were also associated with group cohesiveness and treatment satisfaction at mid-treatment and/or posttreatment. These findings suggest that participants who reported more positive experiences in the program overall tended to believe it was more effective.

Similarly, participants with greater motivation for treatment (at both pre- and post-treatment) reported a better therapeutic alliance and a greater sense of group cohesiveness later in treatment. Interestingly, those who began the program as more motivated for treatment ended

the program as more satisfied with treatment. This relationship was not observed for early- or mid-treatment treatment satisfaction, which may be related to differences among participants who left the program prematurely. For instance, perhaps participants who were motivated but not satisfied dropped out of treatment. These findings as they relate to motivation for treatment are novel within the context of IPV treatment and thus require further study.

Participants who began treatment with less self-efficacy reported greater treatment satisfaction at mid-treatment. The lack of research on the relationship between self-efficacy and IPV treatment satisfaction makes it difficult to interpret this relationship. It is possible this is a spurious relationship, yet perhaps participants with less self-efficacy (and perhaps more insight into their problem) were more satisfied with treatment because they viewed it as more personally relevant.

Although many significant relationships were observed between DRFs and TPVs, these variables were not observed to change together. While this finding may seem counterintuitive, it supports the theoretical conceptualization that DRFs and TPVs are related but distinct. Although they tend to be associated with one another at different timepoints, DRFs tend to change together, as do TPVs.

4.4.4.2 Building program engagement. The degree to which DRFs and TPVs converged to promote program engagement was investigated.

Motivation for treatment, confidence in treatment effectiveness, readiness to change IPV, therapeutic alliance, group cohesiveness, and treatment satisfaction collectively accounted for 33% of variance in program engagement early in treatment. Pre-treatment readiness to change as well as mid-treatment therapeutic alliance and treatment satisfaction collectively accounted for 23% of variance in program engagement later in treatment. These findings suggest that a greater range of DRFs and TPVs were pertinent to building engagement early in treatment in comparison to later in treatment. It is possible that self-efficacy was not associated with program engagement due to its lack of variance at pre-treatment.

Notably, pre-treatment readiness to change IPV was the strongest and only unique predictor of both early- and late- program engagement. This is consistent with past research that has shown that readiness to change IPV is associated with participation and positive interactions

with other group members (Semiatin et al., 2013). Given this information, it may be efficacious for program facilitators to not only use pre-group interviews to build motivation for treatment, but to also build readiness to change IPV; this might be accomplished by bolstering motivation to improve the quality and safety of their intimate relationships. Readiness for change/treatment readiness in correctional programming was also shown to predict program engagement in a study by Casey and colleagues (2007), although there is limited research in this area. Motivational interviewing may be effective in strengthening readiness to change IPV and program engagement, as it has shown to be effective in improving program engagement and IPV treatment outcomes more generally (Eckhardt et al., 2013; McMurrin, 2009; Murphy et al., 2012; Taft et al., 2001).

The current study built upon what is known about how treatment processes relate to program engagement. For instance, research that has examined the relationship between the therapeutic alliance and IPV program engagement has been predominantly qualitative (e.g., Rosenberg, 2003; Roy et al., 2013; Semiatin et al., 2013; Wangsgaard, 2001), so the current study provides additional quantitative support of past findings. Moreover, treatment satisfaction has shown to contribute to program engagement in sexual offending interventions (Levenson et al., 2008), and the current research suggests this relationship may be extended to IPV interventions as well. Finally, there has been mixed results in research literature regarding the role of group cohesiveness in promoting program engagement. Namely, Rondeau and colleagues (2001) found that group cohesiveness did not promote IPV program engagement, whereas qualitative research has found that these two constructs were related in IPV programming (Portnoy & Murphy, 2017; Roy et al., 2013), similar to research on interventions for sexual offending (Clark & Erooga, 1994). Taken with the current findings, group cohesiveness seems to play a part in promoting IPV program engagement although it is not sufficient (i.e., it was not a unique predictor).

It was hypothesized that participants low in self-efficacy would be less engaged as per Bandura's (1977, 1982) theory regarding motivation and self-efficacy. This hypothesis was not supported, which suggests that participants may still engage in programming despite lacking confidence in their ability to make changes. It is possible that the other DRFs and TPVs may be particularly important in promoting engagement in such circumstances.

4.4.4.3 Demographic and legal history information, dynamic specific responsivity, and the treatment process. Specific hypotheses were offered regarding how certain demographic and legal history characteristics relate to the DRFs and TPVs examined in the current study.

It was hypothesized that participants with a mental disorder would have lower self-efficacy, given that a previous study by Wolff and colleagues (2011) found that hopelessness among inmates was associated with mental disorders. It seems hopelessness and low self-efficacy are not interchangeable, as there were no significant differences in self-efficacy between participants with and without a diagnosed mental disorder. Yet, differences in self-efficacy between individuals with and without mental disorders approached significance at pre-treatment, so it may be worthwhile to examine whether differences in self-efficacy are more pronounced with specific mental disorder types in future research.³¹

It was hypothesized that age, education, employment status, marital status, ethnicity, and offence history would not be significantly associated with pre-treatment readiness to change IPV (Taft et al., 2004). Not all hypotheses were supported. In particular, participants who were unemployed/on disability assistance and participants who had less education reported higher readiness to change IPV. It is suspected that there is an unknown mediating variable that might explain this relationship. Also contrary to hypotheses, participants with a greater number of past IPV offences, violent offences, and offences overall reported higher readiness to change IPV at pre-treatment. These findings were not anticipated, although perhaps certain participants who have tried and failed repeatedly to desist from crime and/or IPV are more likely to acknowledge that they have a problem and express a desire to address these problems.

It was anticipated that being employed and having a higher education would be positively associated with program engagement (Jackson & Innes, 2000), which was not supported. This finding might imply that the FACS program was provided in a manner that was responsive to different learning and academic skills and abilities.

In light of past findings in general psychotherapy literature (Cabral & Smith, 2011), it was hypothesized that participants who were of cultural/ethnic minorities would take more time

³¹ The sample size did not provide sufficient power to run those analyses in the current research.

to develop a strong therapeutic alliance. This hypothesis was not supported, which may suggest that FACS program facilitators provided treatment in a manner that was sensitive to diversity, thus allowing participants of ethnic/cultural minorities to build a therapeutic alliance similar to participants of the cultural majority. This finding may also be related to FACS' practice of referring participants to alternative culturally-sensitive IPV programs on a case-by-case basis.

4.5 The Intersection between Risk, Responsivity, and Treatment Processes

Exploratory analyses sought to examine how risk might be related to specific responsivity factors and participants' experiences of the treatment process.

The findings demonstrated that certain risk profiles may be related to the manner in which participants experience and engage in treatment. While pre-treatment risk was not associated with early-treatment therapeutic alliance, group cohesiveness, or treatment satisfaction; high pre-treatment risk on the Perpetrator Risk Factors domain was associated with several process-related idiosyncrasies later in treatment. Specifically, these participants were uniquely more likely to report being less satisfied with treatment and to experience a worse therapeutic alliance and less group cohesiveness at post-treatment. Those who were higher risk on the Perpetrator Risk Factors domain also reported less self-efficacy at pre- and post-treatment and demonstrated smaller increases in self-efficacy over the course of programming. Finally, higher scores on the ODARA were associated with greater engagement throughout the program, yet participants with higher scores on the SARA-V3 and its Perpetrator Risk Factors domain were more engaged early in treatment but not later in treatment. Collectively, these findings suggest that a special subgroup of participants (i.e., who are higher risk on many dynamic risk factors for IPV) may exist for whom specific responsivity is particularly important. This subgroup may therefore benefit from additional individual sessions to address any possible difficulties related to dynamic risk factors such as intimate and non-intimate relationship problems, employment/financial difficulties, substance abuse, entrenchment in a criminal lifestyle, mental disorder and/or ongoing difficulties with past trauma, distorted attitudes about IPV, and violent/suicidal ideation (Kropp & Hart, 2015). Past research has similarly highlighted how certain characteristics may serve as both risk and responsivity factors (Bonta & Andrews, 2017; Andrews et al., 2006).

More generally, high pre-treatment risk was associated with higher pre-treatment readiness to change and with greater increases in motivation for treatment. These findings suggest that readiness to change IPV may have preceded motivation for treatment among some high risk participants. Treatment “primers” for high risk participants may thus be particularly helpful to assist them in considering treatment as a possible avenue to address their acknowledged difficulties with IPV (hence building motivation for treatment based on their reported readiness to change IPV).

Post-treatment risk was also associated with lower self-efficacy and higher motivation for treatment. In other words, higher risk participants may be particularly open to attending maintenance programming or interventions, perhaps due to their lack of confidence in their ability to desist from IPV. These implications are promising, because a higher dose of treatment (e.g., primers, maintenance programs) is recommended for higher risk participants as per the RNR model’s risk principle (Bonta & Andrews, 2017).

4.6 Specific Responsivity and Treatment Processes as they Relate to Desired Outcomes

4.6.1 Offender Characteristics

The current study sought to build upon past literature that has examined how demographic characteristics and legal history variables relate to the successful rehabilitation of men who have used violence in their intimate relationships.

4.6.1.1 Program Attendance. Research to date has found that participants who are younger, of an ethnic minority, less educated, unemployed, unmarried, and who have a previous history of IPV have higher attrition rates (Jewell & Wormith, 2010; Olver et al., 2011; Simpson et al., 1997; Wormith & Olver, 2002). Consistent with past findings, the current study found that participants with fewer years of education, a history of IPV (official and/or unofficial), and who were unemployed or on disability support had higher attrition rates. Employed participants also attended more sessions overall. Participants who were in a relationship had lower attrition rates than those who were not, although this difference was not statistically significant.

Contrary to hypotheses, participants who were not born in Canada (i.e., of a cultural minority) had lower attrition rates. This might be explained by their comparably higher levels of education. It is unclear why age was not significantly related to attrition or the number of

sessions attended, as was found in a meta-analysis by Jewell and Wormith (2010), although it is possible that treatment was provided in a manner that was responsive to a wide age range.

A meta-analysis by Olver et al. (2011) found that depression, anxiety, and psychosis were not significantly associated with attrition. Similarly, no significant differences in program attendance were detected between participants with and without a mental disorder in the current research. There was limited power to detect significant differences in attrition based on specific mental disorder types, although participants with mood disorders were more likely (OR = 1.61) to drop out of treatment. The relationship between mental disorders and IPV treatment attrition is unclear. Yet, it has been suggested by others (e.g., Kennedy, 2000; Jewell & Wormith, 2010) that low cognitive ability may be the mechanism underlying the tendency for low education to predict attrition. Thus, future research should examine the role of specific mental disorders (e.g., intellectual disability) on IPV treatment attrition.

4.6.1.2 Risk and Recidivism. Legal history information was examined in relation to measures of risk, risk change, and recidivism. More substantial criminal histories were associated with high risk scores and more recidivism, although they were not associated with changes in risk. These findings are consistent with a plethora of past research (Bonta & Andrews, 2017), which shows that past offending is risk-relevant, yet those with lengthy criminal histories (and who are high risk) are nonetheless responsive to correctional, risk-reducing interventions.

4.6.2 Dynamic Specific Responsivity Factors

The following findings build upon theory that identify motivation for treatment, readiness to change IPV, confidence in treatment effectiveness, and self-efficacy as important to behaviour change, rehabilitation, and/or desistance (e.g., Armenakis & Harris, 2009; Bandura & Locke, 2003; Burrowes & Needs, 2009). To date, few quantitative studies have examined the impact of participant confidence in treatment effectiveness and self-efficacy (specific to IPV desistance). While many studies have examined the role of motivation and readiness within the context of correctional interventions (see Olver et al., 2011), there has been relative confusion and inconsistency in clearly defining the target of behaviour change when these terms are used (Drieschner et al., 2004); for example, studies rarely distinguish between motivation for treatment and motivation to change criminal behaviours. The current study thus examined how

motivation for treatment, readiness to change IPV, confidence in treatment effectiveness, and self-efficacy impact IPV treatment outcomes.

4.6.2.1 Motivation for treatment. The current research supported the hypothesis that motivation for treatment helps promote program engagement. However, motivation for treatment was not positively associated with any other positive treatment outcome. In particular, motivation for treatment was not associated with program attendance, which is inconsistent with past research (Olver et al., 2011; Polaschek & Ross, 2010; Simpson et al., 1997; Wormith & Olver, 2002). These inconsistent findings may be because most studies did not specify the behavioural target of motivation and not all studies were specific to IPV interventions.

Evidently, further research on the impact of motivation for treatment on therapeutic processes and outcomes, within the context of correctional interventions, is required. Yet the current findings suggest that there are likely many factors that promote program retention and positive treatment outcomes beyond motivation. Thus, the current findings contradict more reductionistic understandings of treatment adherence and behaviour change whereby behaviours are viewed to be based entirely upon one's will, ultimately disqualifying other factors that impact behaviour (Drieschner et al., 2004). Indeed, participants who recidivated reported higher motivation for treatment at the end of the program, suggesting a potential gap in services.

4.6.2.2 Readiness to change IPV. Past research has demonstrated that readiness to change criminal behaviour and/or motivation to change (behaviour not specified) were associated with less attrition in correctional programs (Bennett et al., 2007; Olver et al., 2011), achievement of IPV treatment targets (Connors et al., 2012), and less recidivism among sexual offenders (Sowden, 2013). Qualitative studies of IPV have also found that readiness to change IPV was important for desistance from IPV (Gondolf & Hanneken, 1987; Silvergleid & Mankowski, 2006; Walker et al., 2015, 2017, 2018). In contrast, the current study found that higher readiness to change IPV was associated with more attrition, attending fewer sessions, and incurring more violent charges. These findings were in part moderated by the positive association between pre-treatment risk and readiness to change IPV. As well, readiness to change IPV was not associated with changes in short-term treatment targets or changes in risk. Although unanticipated, these findings further support the argument that many factors, over and above a willingness to change, are important for behaviour modification and ultimate desistance

from crime. Indeed, readiness to change IPV uniquely predicted program engagement over and above other factors, although it was not sufficient in retaining participants in the program, reducing risk, or preventing recidivism.

4.6.2.3 Self-efficacy. Past research has found that self-efficacy was important to desistance from IPV (Stefanakis, 2000), desistance from criminal behaviour (Davis et al., 2010), and abstinence from substance use following addictions treatment (Ilgen et al., 2005; Ludwig et al., 2013). Consistent with these findings, participants with higher self-efficacy at post-treatment and whose self-efficacy increased over the course of the program had lower recidivism rates. This trend was not observed for pre-treatment self-efficacy. One possible interpretation is that participants gained insight into their risk for reoffending over the course of programming, which improved problem recognition and ultimately made their personal estimates of recidivism more accurate. Considering this information, service providers should actively screen for high risk participants with low self-efficacy. As mentioned above, they may find that several of these individuals are motivated to continue with ongoing interventions. It is possible that certain offenders will not readily admit that they lack confidence in their ability to desist from IPV given the potential legal consequences.³² Thus, service providers may find that approaching such conversations in a collaborative and rehabilitation-focused manner is effective, which is also supported by forensic clinicians and researchers (e.g., Tafrate & Mitchell, 2013).

Contrary to hypotheses, self-efficacy was not related to attrition, changes in distorted attitudes about IPV, changes in risk, or program-phase recidivism; these hypotheses were primarily based upon theories of change (e.g., Armenakis & Harris, 2009; Ward et al., 2004) given the absence of IPV research in this area. The current study found that improvements in relationship problems were related to increases in self-efficacy (although this was not statistically significant), which suggests that relationship quality may contribute to participants' sense of self-efficacy.

4.6.2.4 Confidence in treatment effectiveness. Hypotheses were based on theories of change (Armenakis & Harris, 2009; Burrowes & Needs, 2009; Day et al., 2004; Ward et al.,

³² However, a study by Kroner, Mills, and Morgan (2008) on offender self-report measures found that socially desirable responding did not impact the construct validity or predictive validity in key areas typically included in forensic risk assessment.

2004) and past research on general recidivism (Broome et al., 1999; Broome et al., 1996). Consistent with hypotheses, increases in confidence in treatment effectiveness were associated with reductions in distorted attitudes about IPV; the broader constructs of antisocial versus prosocial attitudes may underlie the relationship between these two variables. Inconsistent with hypotheses, confidence in treatment effectiveness was not associated with program attendance or improvements in relationship problems.

Certain findings were opposite to what was hypothesized. Specifically, higher pre-treatment confidence in treatment effectiveness predicted smaller reductions in risk and more violent charges. It is possible that certain mediating variables accounted for these unforeseen relationships. For instance, participants with more substantive criminal histories reported greater confidence in treatment effectiveness (perhaps because they have been referred to more interventions in the past and have thus had more positive experiences).

4.6.3 Treatment Process Variables

There is solid empirical support for the importance of the therapeutic alliance to the effectiveness of IPV interventions (e.g., Boira et al., 2013; Brown & O’Leary, 2000; Rosenberg, 2003; Roy et al., 2013; Semiatin et al., 2013; Taft et al., 2003; Wangsgaard, 2001). Yet, research examining the role of group cohesiveness is less common (e.g., Taft et al., 2003; Wangsgaard, 2001; Walker et al., 2018) and research examining the role of treatment satisfaction is essentially nonexistent within the context of IPV interventions. The following findings build upon theories of rehabilitation (e.g., Bonta & Andrews, 2017; Burrowes & Needs, 2009; Simpson, 2004; Ward et al., 2004) and change as well as past research on IPV group processes.

4.6.3.1 Therapeutic alliance. Increases in the therapeutic alliance in the first half of the program were associated with better attendance, reductions in distorted attitudes about IPV, and fewer charges (although the latter only approached significance). The therapeutic alliance at mid-treatment significantly predicted reductions in distorted attitudes about IPV and was associated less general and violent recidivism. In contrast, increases in the therapeutic alliance in the second half of the program were associated with smaller decreases in risk and more general and violent recidivism. As noted previously, higher risk participants were slower to build a therapeutic alliance; this is likely relevant in that it is possible that the higher risk participants

who were slow to establish a therapeutic alliance were also slower to address their risk factors, thus leading to less treatment change and more recidivism.

4.6.3.2 Treatment satisfaction. Contrary to hypotheses, treatment satisfaction was not significantly associated with program attendance, achievement of treatment targets, or reductions in risk. However, participants who demonstrated increases in treatment satisfaction in the first half of treatment and were overall more satisfied with treatment at its mid-point engaged in less general and violent recidivism. Yet, those whose treatment satisfaction increased from early- to post-treatment experienced smaller decreases in risk. Finally, participants whose satisfaction with treatment increased in the latter half of treatment engaged in more general and violent recidivism, similar to trends observed in the therapeutic alliance.

These patterns may suggest that participants who addressed their risk factors early on, or were perhaps in healthier relationships, were more satisfied with treatment in the first few weeks. In contrast, participants who were slower to build the therapeutic alliance and slower to feel satisfied with the intervention were more likely to recidivate.

4.6.3.3 Group cohesiveness. Although group cohesiveness contributed to program engagement, it was not significantly associated with attrition, short-term treatment targets, program-phase recidivism, or recidivism. Furthermore, decreases in group cohesiveness from early- to mid-treatment and lower group cohesiveness at mid-treatment were associated with reductions in risk. While these findings are contrary to hypotheses, few studies have examined the role of group cohesiveness in IPV programming. It is possible that, within the context of group IPV interventions, feeling a sense of connection to group members (i.e., offenders) early on may reflect antisocial identity and a sense of affiliation with antisocial peers. Indeed, participants who began treatment as high risk on the Perpetrator Risk Factors domain reported feeling less of a connection to other group members later in treatment, which may be related to more prosocial group dynamics and attitudes as the program progressed. Given the scarce research in this area, further research on group cohesiveness within the context of IPV interventions is needed before any interpretations can be confidently proclaimed.

4.6.4 Program Engagement

It was anticipated that program engagement would prevent attrition and improve the degree to which participants benefitted from the intervention.

4.6.4.1 Program attendance. Most of the participants who left the program prematurely did so before program engagement was rated by program facilitators. As such, there was limited opportunity to detect a relationship between program engagement and program attendance, which likely contributed to the unanticipated nonsignificant findings. Indeed, the current finding is in contrast to a meta-analysis that found that program engagement significantly predicted successful completion in various correctional programs (Olver et al., 2011). The current findings, however, are consistent with those of Chovanec (2012) who also found that GEM scores were higher among those who successfully completed an IPV correctional program although not statistically significant. It is recommended that future research measure program engagement after each early group session (e.g., the first, second, third, and fourth), so to provide richer information regarding the role of early program engagement in the retention of participants in IPV correctional programs.

4.6.4.2 Short-term treatment targets. Program engagement was found to have a significant impact on short-term treatment targets. Specifically, both early- and late-treatment program engagement (as well as increases in program engagement) significantly predicted reductions in distorted attitudes about IPV. The working on own problems subscale was the strongest component of program engagement in reducing distorted attitudes about IPV. This finding suggests that even if participants demonstrate some degree of program engagement (e.g., arrive on time, engage in discussions), they may not benefit as much as possible unless they address personal difficulties in-session. As such, program facilitators may find it useful to encourage and bolster this particular area of program engagement in order to improve outcomes.

Regarding relationship problems, early-treatment program engagement predicted reductions in relationship problems, although late-treatment program engagement did not. The components of program engagement that were most strongly related to the reduction of relationship problems were contributing to discussion, relating with other group members, and working on others' problems. These are components of program engagement that likely require more sophisticated relational and interpersonal skills (e.g., responding thoughtfully, helping and respectfully challenging other group members), which are skills that may translate to improvements in romantic relationships. Thus, perhaps the capacity to engage in programming is in part determined by interpersonal and communication skills, which are also often treatment

targets. It is difficult to surmise why engagement in these areas later in treatment did not predict improved relationships, although it is possible that participants who only began to demonstrate improved relational skills later in treatment required additional practice, so to speak, before implementing these skills in their romantic relationships. This conceptualization or understanding would be consistent with behavioural therapy and interpersonal therapy theories (Dobson & Dobson, 2009; Teyber & McClure 2011).

Overall, the findings demonstrated that different components of program engagement may prove more or less beneficial depending on the treatment target in question.

4.6.4.3 Risk and recidivism. While program engagement had an appreciable impact on specific risk factors (i.e., short-term treatment targets), it did not predict changes in risk or recidivism, contrary to hypotheses. This may be related to the finding that higher risk participants demonstrated higher levels of program engagement at times.

A more detailed analysis revealed that two of the six components of program engagement stood out. In particular, the working on own problems subscale was negatively associated with the number of violent charges during the follow-up period. As well, increases on the relating with members subscale were associated with overall reductions in risk, which may reflect, as mentioned above, greater development and application of learned interpersonal skills.³³ A qualitative study similarly found that limited opportunities for practicing and applying skills were identified as barriers to effective IPV treatment, according to IPV recidivists (Portnoy & Murphy, 2017). These findings suggest that these two components of program engagement may be particularly relevant in the rehabilitation of IPV offenders.

4.7 General Discussion with Implications for Practitioners

The FACS Spousal Violence program demonstrated good consistency between groups and fair adherence to its intended curriculum, which provided improved confidence in the validity of the remaining research findings. There was evidence to suggest that the current IPV correctional program, which targeted IPV-specific criminogenic needs, was effective in reducing

³³ Relating with members is distinguishable from group cohesiveness in that the former was rated by program facilitated and is based primarily on observable behaviours (e.g., “the member helps and encourages other members”), whereas the latter was self-reported by participants and speak more to cognitions and perceptions (e.g., “you are similar or like other clients of this program, other clients at this program are helpful to you”).

risk and preventing general and violent recidivism. It is noteworthy that the severity and extent of participants' criminal histories were not significantly associated with changes in risk, which implies that even participants with significant criminal records can stand to benefit from IPV interventions. As well, there were no differences in attendance based on participant age and no differences in program engagement based on level of education as has been found in past studies (e.g., Jewell & Wormith, 2010; Jackson & Innes, 2000); as such, these specific responsivity factors may have been successfully addressed in treatment. The responsivity principle was also adhered to by promoting program retention over the strict enforcement of attendance rules, leading to a relatively low attrition rate (see Olver et al., 2011); yet, it is recommended that make-up sessions be offered given that the likelihood of reoffending increased substantially for every missed session.

The present research findings carry implications for the assessment of IPV offenders. First, the ODARA and a shortened version of the SARA-V3 demonstrated good convergent and predictive validity of recidivism. Of importance, the present research examined and subsequently found that reductions in risk on the SARA-V3 predicted general and violent recidivism over and above the effects of pre-treatment risk. As such, the present research further supports the use of the SARA-V3 as a risk prediction and case management tool, especially given the current preliminary evidence that it is sensitive to meaningful changes in risk.

In addition, current and past research have found a high prevalence of mental health and substance use concerns among IPV offenders (e.g., Beaudette et al., 2015; Lipsky et al., 2011) as well as a high prevalence of unadjudicated IPV histories (Boxall et al., 2015; Gracia, 2004). It is therefore recommended that clinicians and other service providers conduct thorough assessments (e.g., use of mental health screening tools, use of both professional and informal collateral contacts) to prevent these areas from being overlooked (Easton & Crane, 2016), for they may be relevant to the assessment of risk and/or carry implications for adherence to the need and responsivity principles. For example, certain more substantive mental health concerns may negatively impact self-efficacy and should therefore be managed and treated accordingly.

The relationships between risk, DRFs, TPVs, and treatment outcomes revealed many implications for better understanding the change process and achieving positive treatment outcomes. A key and overarching finding was that understanding and promoting behaviour

change was more complex than examining a given variable or group of variables at a set timepoint.

For example, participants who reported higher readiness to change IPV tended to be more motivated for treatment, particularly if they were confident in the effectiveness of the treatment program. In turn, greater confidence in the effectiveness of treatment was found to be linked to positive ratings of the treatment climate more generally (i.e., the therapeutic alliance, treatment satisfaction, and group cohesiveness), which suggests that attitude toward treatment may have implications for how the participants relate to and experience therapeutic processes. As well, participants who reported a stronger therapeutic alliance and better group cohesiveness reported more motivation for treatment at the end of the program. As such, stronger alliances to the facilitator and to other group members near the end of treatment may indicate that the participant would be open to additional interventions.

Additionally, participants who reported less self-efficacy at the end of the program tended to report higher motivation for additional treatment and greater readiness to change IPV. Markedly, participants' post-treatment self-assessment of risk (i.e., self-efficacy in their ability to desist from IPV) correlated with their post-treatment risk ratings on the SARA-V3 and their actual incidences of reoffending. It is also noteworthy that higher risk participants and participants who recidivated were more likely to have reported motivation for ongoing treatment. It is thus recommended that clinicians and service providers optimize the higher motivation for ongoing treatment and readiness to change IPV that may accompany participants with low self-efficacy and/or who remain higher risk post-treatment.

Another novel finding was that fluctuations in certain TPVs were associated with different treatment outcomes. For instance, increases in the therapeutic alliance in the first half of treatment were associated with positive treatment outcomes (e.g., better attendance, reductions in distorted attitudes about IPV, and fewer charges). In contrast, participants who experienced increases in the therapeutic alliance and treatment satisfaction in the latter half of treatment tended to be less likely to reduce their risk and more likely to recidivate. These patterns suggest that engagement in positive therapeutic processes early in the program is important for treatment effectiveness.

Of interest, participants who were higher risk on the SARA-V3 Perpetrator Risk Factors domain at pre-treatment presented with unique responsivity needs. Specifically, while most participants reported increasing ratings of treatment satisfaction, the therapeutic alliance, and group cohesiveness over time, this subgroup reported progressively less satisfaction in these areas. What is more, they demonstrated consistently less self-efficacy and fewer increases in self-efficacy over the course of treatment. The Perpetrator Risk Factors domain is characterized by difficulties in dynamic risk-need areas relevant to lifestyle, mental health, and personality characteristics. The findings suggest that individuals who are high risk on this domain may require a specialized approach to maintain a responsive treatment climate. Given that the therapeutic alliance is highly correlated with the other two process variables and is associated with many positive treatment outcomes (in the current study and past research; e.g., Boira et al., 2013; Brown & O’Leary, 2000; Rosenberg, 2003), program facilitators may wish to prioritize the therapeutic alliance for these individuals. As suggested by Morrison and colleagues (2018), coordinated community efforts and services may also be helpful in addressing and supporting IPV offenders who present with multiple need areas.

The role of group cohesiveness in IPV treatment was unclear. While it was shown to be important to building program engagement early in treatment, it was positively associated with risk in the first half of treatment. It is possible that the early sense of cohesiveness with other group members, reported by higher risk participants, may reflect an antisocial identity and a sense of affiliation with antisocial peers, although this area warrants further investigation.

Finally, program engagement was examined as a multifaceted construct. Program engagement predicted the achievement of short-term treatment targets, although it did not predict overall reductions in risk or less recidivism. A closer examination of the components of program engagement revealed that working on one’s own problems in treatment and relating to other group members (perhaps learning and practicing new interpersonal skills), were most strongly associated with the achievement of select treatment targets, risk reduction, and/or less recidivism. It was also notable that most DRFs and all TPVs examined in the current study contributed to early program engagement, whereas fewer variables (i.e., only the therapeutic alliance, treatment satisfaction, and readiness to change IPV) were identified as relevant to program engagement later in treatment. This further supports the overarching finding that there

are multiple interacting and dynamic components to the IPV treatment process and behaviour change.

4.8 Limitations

A number of limitations are relevant to the interpretation and understanding of the current research findings.

First, given the applied nature of the current project, practical limitations impacted the quality of the research design. In particular, it was difficult to recruit a large number of participants given the limited number of groups offered. A larger sample size would have improved the generalizability of the current findings and increased power to reduce Type II error (Tabachnick & Fidell, 2013). As well, while the recidivism follow-up time was substantial given the prospective nature of the study design, a longer follow-up time would have provided further information regarding which factors are important for longer-term desistance from IPV.

Importantly, the current research was designed to accommodate the time constraints placed upon program facilitators within the context of a resource-limited setting. Although it was not a logistical possibility, more frequent measurements of short-term treatment targets, DRFs, and/or TPVs would have provided richer and more specific information regarding the processes of change and prediction of treatment outcomes. Furthermore, it would have been ideal to measure a number of short-term treatment targets that align with the treatment content areas (e.g., communication skills, emotion regulation; see the program logic model in Appendix A). Should FACS wish to continue with program outcome monitoring, the inclusion of a validity measure for self-reported outcomes is recommended (e.g., Paulhus Deception Scale; Paulhus, 1998). Another logistical constraint made it impossible for post-treatment data to be collected for participants who did not successfully complete treatment, aside from recidivism data. This limited the number of comparative analyses between successful and unsuccessful completers.

As well, a true experimental design with a randomized control group would have been ideal, especially since there was a program evaluation component. Differences between the treatment group and the attrition group could not be definitively attributed to treatment effect (Rossi et al., 2003). For example, higher risk participants tend to have higher attrition rates,

which can inflate measures of treatment effectiveness (Dobash & Dobash, 2000). While pre-treatment risk was controlled in many analyses to accommodate possible inflation, it may still have altered the sample and corresponding findings to some degree. Furthermore, misinterpretations of program effectiveness may be impacted by extratherapeutic factors (Lilienfeld, Ritschel, Lynn, Cautin, & Latzman, 2014), such as aging/maturation, engaging in therapeutic activities outside of the group (e.g., couples counselling), or leaving an unhealthy relationship. Despite these limitations, the quasi-experimental nature of the current study design was necessary, as it would have been unethical to withhold or postpone treatment (note the recidivism follow-up period was over 15 months) given that individuals required intervention to reduce the likelihood of IPV recidivism. Similarly, a waitlist control group was not a logistical possibility given that offenders are typically required to complete programming before the termination of their community supervision order.

Measurement error, common to social science research, was another limitation. Many variables were measured using participant self-report, which is vulnerable to demand characteristics, self-deception, and impression management (e.g., social desirability), especially within the context of a mandated correctional program. For example, it is likely that reductions in risk were exaggerated given that participants self-reported several risk-need areas post-treatment. (It is noteworthy that even with this likely exaggeration, reductions in risk demonstrated good predictive validity.) Efforts were made to mitigate measurement error attributed to self-reporting by keeping responses confidential and by emphasizing to participants that the researcher was affiliated with a university and not a criminal justice agency. A self-report validity measure would have improved interpretability, although one was not used due to time constraints. In addition to participant self-report, some measures were rated by program facilitators, which may have been impacted by human error or bias. For example, program facilitators' ratings may have been impacted by selective attention, selective interpretation, and selective memory of participant outcomes (Lilienfeld et al., 2014).

Measurement error is often caused by limitations of the measure itself. Most measures used in the current research demonstrated good reliability and validity in past studies. However, single-item measures were used to assess self-efficacy and readiness to change IPV, which can compromise validity (Carpenter, 2018). Despite this limitation, both measures were shown to be

significantly associated with important constructs of interest (e.g., risk, recidivism). It was suspected that the measure of self-efficacy may have also measured problem severity or problem recognition. While it is ideal to have a pure measure of the construct in question, the suspected relationship between self-efficacy and problem recognition may be clinically relevant and warrants further investigation. It is also possible that the format of the OSRC, which measured readiness to change IPV, left certain respondents vulnerable to primacy effects (i.e., selecting the first option that seems appropriate rather than the best answer), which may have impacted its validity and reliability. Relatedly, past research suggests a benchmark of at least three items per construct/factor promotes content validity (Carpenter, 2018; Comrey & Andrew, 1988). However, two items from the SARA-V3 (i.e., relationship problems and distorted attitudes about IPV), were used as stand-alone measures of treatment targets and did not meet this benchmark either. Finally, the measure of recidivism only captured crime that was both reported to police and that resulted in a criminal code charge. Such a limitation is particularly noteworthy given large dark figure of crime for IPV (Boxall et al., 2015; Gracia, 2004). Efforts were taken to minimize this bias by including charges rather than convictions of IPV as the measure of recidivism. Yet, it cannot be assumed that all charges were founded. Another limitation to the measurement of recidivism was that it was unknown whether new violent charges were against intimate partners. Overall, all measures used were but estimates of the constructs and phenomena of interest.

The generalizability of the present findings is of course limited. Participants were included on a volunteer basis and there are likely differences between participants who chose to volunteer and those who did not. Thus, the current findings are likely biased in that it is unlikely that the sample characteristics are wholly reflective of the true make-up of the population from which the sample was drawn. More broadly, the study's generalizability is limited by the demographic make-up of the study's population and the treatment context. For instance, the population was comprised of males who had been in at least one intimate relationship with a female partner and who were attending treatment in an urban setting. As well, the current sample was predominantly Non-Indigenous and born in Canada. When appropriate, FACS clinicians sought to refer participants to culturally-appropriate interventions, to which the current findings are likely not generalizable. Similarly, an integrative, predominantly CBT- and Duluth-based approach was taken in the current program; different treatment modalities may bear

different findings. In sum, the present research findings may not generalize to other populations on account of differences in culture/ethnicity, geography, treatment modality, participant gender, and whether the offender in question was in a same- or opposite-sex relationship.

4.9 Conclusion and Future Directions

The present research sought to improve the effectiveness of IPV interventions by contributing to what is currently known about how to engage and retain IPV offenders in correctional interventions, reduce risk, and prevent recidivism. Such research is needed given the high attrition and recidivism rates among IPV offenders (Stith et al., 2004; Olver et al., 2011; Wormith & Jewell, 2010), especially since IPV is a prolific social and public health issue that is associated with severe human and societal costs (Burczycka & Conroy, 2017; Campbell, 2002; García-Moreno et al., 2013; Sing et al., 2014; Zhang et al., 2012).

Theories and models of change, rehabilitation, and desistance (e.g., Armenakis & Harris, 2009; Bonta & Andrews, 2017; Burrowes & Needs, 2009; Silvergleid and Mankowski, 2006; Simpson, 2004; Stevens, 2013; Walker et al., 2015; Ward et al., 2004) guided the development of the empirical research questions, the study design, and the interpretation of research findings. Static and dynamic individual characteristics including individual measures of risk, need, and responsivity were examined in relation to treatment processes and, importantly, treatment outcomes. The clinical implications, reviewed above, relate to the assessment of risk, need, responsivity and to the development of a theory-driven yet idiographic approach to IPV interventions and correctional case management.

Indeed, the present research intended to fill the gaps identified by forensic researchers regarding factors that may account for the variability in program effectiveness and how service providers may better apply and implement principles of risk, need, and responsivity (Wormith et al., 2007). The current research found that the magnitude of change in IPV risk (i.e., treatment gains) was relevant to the prediction of recidivism, which is consistent with studies that have examined general, violent, and sexual recidivism (e.g., Cohen et al., 2016; De Vries Robbe et al., 2015; Olver & Wong, 2011). More research into the dynamic nature of the SARA-V3 and its predictive validity of IPV-specific recidivism is required. As well, future studies may wish to examine how the inclusion of the Victim Vulnerability domain might alter the findings.

Many theories of change and rehabilitation highlight the interplay between internal, personal factors and external, contextual factors. In the literature, internal factors were referred to and defined as internal responsivity factors (Bonta & Andrews, 2017; Serin & Kennedy, 1997); criminogenic needs (Bonta & Andrews, 2017); ontogenetic factors (Silvergleid and Mankowski, 2006); cognitive, affective, and behavioural characteristics (Armenakis & Harris; Ward et al., 2004); client attributes (e.g., problem severity; Simpson, 2004); and one's internal context (e.g., self-concept, goals; Burrowes & Needs, 2009). The interaction between internal and external factors were understood to create therapeutic processes and program engagement that in turn impact the degree to which participants benefit from programming.³⁴ Consistent with most theories reviewed for the current research, several DRFs and TPVs promoted program engagement and positive treatment outcomes. Different components of program engagement were shown to be differentially important depending on the treatment target in question. As well, only select components of program engagement (i.e., working on one's own problems, relating with fellow group members) were related to risk reduction and/or the prevention of recidivism. Additional research is required to further examine which aspects of engagement are important for program retention and improving treatment outcomes.

The present research supported the conceptualization that internal factors are distinct from treatment processes. DRFs tended to correlate and change with one another, as did the TPVs. These findings supported a conceptual difference between these two categories, although replication is needed. Some constructs require further conceptual refinement as well. For example, few studies have examined the role of self-efficacy in one's ability to desist from IPV behaviours. The present findings suggest that self-efficacy and the possibly-related construct of problem recognition have important treatment implications and warrant further investigation. As well, motivation for treatment and readiness to change IPV (i.e., motivation to change IPV behaviours) were intercorrelated, but distinct, in that they were associated with different treatment processes and outcomes. Additional research is recommended to better understand the similarities and distinctions between these two constructs.

³⁴ As per the RNR Model, it was assumed that addressing criminogenic needs was required for treatment to be effective, and that improving adherence to the responsivity principle and promoting a more favourable treatment climate would bolster the program retention and the effectiveness of the intervention.

Further investigation into the understudied process-related aspects of IPV intervention is recommended, especially treatment satisfaction, group cohesiveness, and specific aspects of program engagement. Additional research may contribute to a more refined and generalizable understanding of what facilitates behaviour change in IPV interventions. Measuring treatment progress and therapeutic processes more frequently would provide richer data. For example, researchers might consider routinely administering the full CJCEST, the GEM, the Outcome Rating Scale (Duncan, 2012), and the Group Session Rating Scale (Duncan & Miller, 2007).

It is important to note that many external factors, such as program attributes and social support, were not examined in the current research. A study by Harris and colleagues (2011) examined the predictive validity of risk factors at different ecological levels. They found support for a multilevel explanation of IPV and that individual characteristics (especially antisociality) had the greatest impact. Future research should build upon this study and past qualitative studies (e.g., Roy et al., 2013; Silvergleid & Mankowski, 2006) by quantitatively examining the degree to which factors at different ecological levels (Dutton, 1995) impact the degree to which participants benefit from correctional intervention.

Particularly, further exploration of the contributors to IPV treatment attrition and retention is needed. There is presently solid empirical evidence regarding which demographic and legal history factors are associated with attrition from IPV interventions (Jewell & Wormith, 2010). However, among the DRFs and TPVs examined in the current study, only the therapeutic alliance was associated with program retention. Further research into the impact of external factors is required. Some factors may include characteristics of probation/parole officers (e.g., their referral process, use of motivational interviewing, personality characteristics), the treatment setting (e.g., characteristics of the venue, whether refreshments are provided), other social supports (e.g., intimate partner's attitude to towards treatment, employer's level of support/flexibility), access to transportation (e.g., financial means, commuting from a rural area) and/or access to childcare. Relatedly, others have queried whether men who are more socially-integrated and who have more to lose (e.g., relationship, employment) are more likely to complete IPV programming successfully (Babcock & Steiner, 1999; Jewell & Wormith, 2010).

In conclusion, the present research highlighted the complexity of the change process in an IPV correctional program. The findings demonstrate that it is important for clinicians to

regularly revisit their conceptualizations and assessments of IPV offender risk, need, and responsivity over the course of IPV interventions and to acknowledge the dynamic nature of individual characteristics and their interplay with therapeutic processes and treatment progress. This strategy may allow for practitioners to intervene or respond to clients in manner that promotes a more effective IPV intervention for the individuals in question.

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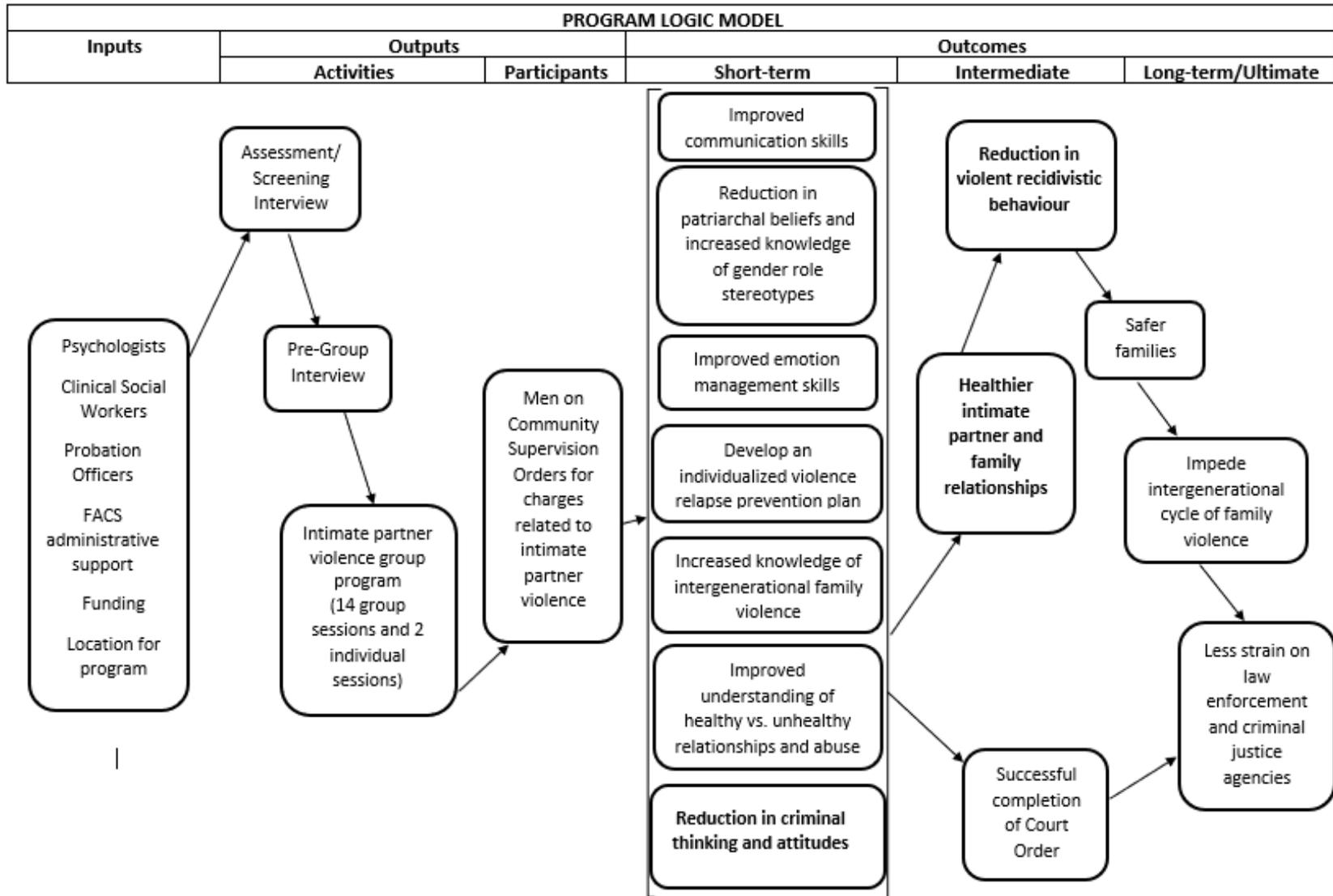
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Appendix A: Program Logic Model



Appendix B: Offender Characteristics and Group Information Form

DEMOGRAPHIC and OTHER INFORMATION

Unique Participant Identifier (Participant Number): _____

Date of Birth (YYYY/MM/DD): _____

Age: _____

Ethnicity: _____

Education (enter total years completed): _____

Employment Status:

- 1) Employed F/T 2) Employed P/T 3) Unemployed 4) Student 5) Other: _____

Relationship Status:

- 1) Single 2) Divorced/Separated 3) Common-law/Married 4) Other Romantic Relationship

Type of Diagnosed Mental Disorder(s): _____

CRIMINAL HISTORY/ INDEX OFFENSE

***Offence defined as any charges that resulted in a disposition**

Index Offence(s): _____

Type and Length Court Order/Disposition: _____

Number of Previous Offences (total): _____

Number of Previous Violent Offences (including weapons & sexual offences, uttering threats): _____

Age at first offence: _____

First Time IPV Offender? YES or NO

Number of previous IPV offences: _____

GROUP INFORMATION

Program Start Date (YYYY/MM/DD): _____

Dosage:

- 1) Dispersed 16-week 2) Condensed 5-Day

Appendix C: Attitudes Towards Correctional Treatment scale

(Baxter, Burchill & Tweedale, 1992)

ACT Scale

Unique Participant Identifier

Date _____

We would like you to tell us whether you **agree** or **disagree** with some statements listed on the following pages. Please write **1, 2, 3, 4, or 5** in the blank next to each statement using the scale below:

Strongly				Strongly
Disagree	Disagree	Uncertain	Agree	Agree
1	2	3	4	5

Give your own opinions about each statement: There are no right or wrong answers on this questionnaire.

Example:

_____ 1. All politicians are crooks.

If you **strongly disagree** with this statement (you think it is completely wrong), you should write "1" in the blank. If you **strongly agree** with the statement, write "5". If you tend to agree or disagree but don't feel quite so certain about your opinion, write in "2" for **disagree** or "4" for **agree**. If you are unable to make up your mind about a statement, or if you have no opinion at all about a statement, write "3".

Strongly

Strongly

Disagree

Disagree

Uncertain

Agree

Agree

1

2

3

4

5

_____ 1. I have one or more problems that I think could be helped by counselling or treatment.

_____ 2. If people would only leave me alone, any problems I have would get better on their own.

_____ 3. There is nothing anyone can do to help me.

_____ 4. Being in a treatment program is only going to make my problems worse.

_____ 5. I don't think I need any treatment because I feel about the same as I always have.

_____ 6. It is usually helpful to talk about your problems to another person.

_____ 7. There are some things about myself that I would really like to change

_____ 8. Almost anyone can learn something from or be helped by therapy.

_____ 9. I don't belong in a treatment centre.

Strongly

Strongly

Disagree

Disagree

Uncertain

Agree

Agree

1

2

3

4

5

_____ 10. I would like to talk to a counsellor (for example, a psychologist or social worker) about something that is bothering me.

_____ 11. If I were to talk about my problems to someone else, it would only make me more upset about things and solve nothing.

_____ 12. I don't believe treatment programs can help me.

_____ 13. I am pretty much satisfied with my life except for being on Probation.

_____ 14. I think most people could benefit from talking to a counsellor about certain things in their lives.

_____ 15. I do not believe a psychologist or social worker can help me with my problems.

Appendix D: Self-Efficacy Scaling Question

On a scale from 1 to 10, how confident are you that you will **not** use any violent or aggressive behaviours in your romantic relationship (or future relationship if currently single) over the next 1 year?

Not at all Confident

Completely Confident

1 2 3 4 5 6 7 8 9 10

CJ Client Evaluation of Self and Treatment (TCU CJ CEST) *Instruction Page*

Indicate how strongly you AGREE or DISAGREE with the statement by filling in the appropriate circle. If you strongly disagree with the statement, fill in the circle under the “Disagree Strongly” column. If you disagree with the statement, but don’t feel strongly about it, fill in the circle under the “Disagree” column. If you don’t know whether you agree or disagree with the statement, fill in the circle below the “Undecided” column. If you agree with the statement, but don’t feel very strongly about it, fill in the circle below the “Agree” column. If you agree with the statement and feel strongly about it, fill in the circle under the “Agree Strongly” column. Please mark only one circle for each statement.

The examples below show how to mark the circles --

For example -- **6**

	Disagree Strongly (1)	Disagree (2)	Uncertain (3)	Agree (4)	Agree Strongly (5)
Person 1. I like chocolate ice cream.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>This person disagrees a little so she probably doesn't like chocolate ice cream.</i>					
Person 2. I like chocolate ice cream.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
<i>This person likes chocolate ice cream a lot.</i>					
Person 3. I like chocolate ice cream.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>This person is not sure if he likes chocolate ice cream or not.</i>					

TCU CJ CEST Survey

PLEASE RESPOND TO EACH OF THE STATEMENTS BELOW BY FILLING IN THE CIRCLE TO INDICATE HOW MUCH YOU AGREE OR DISAGREE WITH EACH ONE. MARK ONLY ONE CHOICE FOR EACH STATEMENT. THANK YOU FOR YOUR PARTICIPATION.

Today's

Date: |_|_| |_|_| |_|_|
 MO DAY YR

Disagree Strongly (1)	Disagree (2)	Uncertain (3)	Agree (4)	Agree Strongly (5)
--------------------------------------	-------------------------	--------------------------	----------------------	-----------------------------------

- | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1. You trust your counselor. | <input type="radio"/> |
| 2. Time schedules for counseling sessions
at this program are convenient for you. | <input type="radio"/> |
| 3. It's always easy to follow or understand
what your counselor is trying to tell you..... | <input type="radio"/> |
| 4. This program expects you to learn
responsibility and self-discipline. | <input type="radio"/> |
| 5. Your counselor is easy to talk to. | <input type="radio"/> |
| 6. This program is organized and
run well. | <input type="radio"/> |
| 7. You are motivated and encouraged
by your counselor. | <input type="radio"/> |
| 8. You are satisfied with this program. | <input type="radio"/> |
| 9. Your counselor recognizes the progress
you make in treatment. | <input type="radio"/> |
| 10. Your counselor is well organized and
prepared for each counseling session. | <input type="radio"/> |

Disagree Strongly (1)	Disagree (2)	Uncertain (3)	Agree (4)	Agree Strongly (5)
--------------------------------------	-------------------------	--------------------------	----------------------	-----------------------------------

- | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 11. Your counselor is sensitive to your situation and problems. | <input type="radio"/> |
| 12. Your counselor makes you feel foolish or ashamed. | <input type="radio"/> |
| 13. Your counselor views your problems and situations realistically. | <input type="radio"/> |
| 14. Other clients at this program care about you and your problems. | <input type="radio"/> |
| 15. Your counselor helps you develop confidence in yourself. | <input type="radio"/> |
| 16. Other clients at this program are helpful to you. | <input type="radio"/> |
| 17. The staff here are efficient at doing their job. | <input type="radio"/> |
| 18. You are similar to (or like) other clients of this program. | <input type="radio"/> |
| 19. Your counselor respects you and your opinions. | <input type="radio"/> |
| 20. You have developed positive trusting friendships while in this program. | <input type="radio"/> |
| 21. You can depend on your counselor's understanding. | <input type="radio"/> |
| 22. There is a sense of family (or community) in this program. | <input type="radio"/> |

Disagree Strongly (1)	Disagree (2)	Uncertain (3)	Agree (4)	Agree Strongly (5)
--------------------------------------	-------------------------	--------------------------	----------------------	-----------------------------------

23. You can get plenty of personal counseling at this program. ☼ ☼ ☼ ☼ ☼
24. This program location is convenient for you. ☼ ☼ ☼ ☼ ☼
25. Your treatment plan has reasonable objectives. ☼ ☼ ☼ ☼ ☼

Appendix F: Group Engagement Measure (GEM-27)

(Macgowan, 2006)

GROUP ENGAGEMENT MEASURE (GEM-27)

Please rate every statement to the best of your recollection—even if you **are** unsure of your choice. If you are stuck in a choice between two points in the rating scale, choose the first that comes to mind—it is often the most accurate. If you find you have no evidence to rate the member on a statement, leave it blank. As a guide, subscales that are missing more than half their items should be discarded.

Leader(s) Name _____

Today's Date: _____ Session Numbers Rated: _____

Please use the following scale to rate each statement

1	2	3	4	5	
Rarely or none of the time	A little of the time	Some of the time	A good part of the time	Most or all of the time	
Statement					Rating (circle)

I. Attending

- (1) The member arrives at or before start time 1 2 3 4 5
- (2) The member stays until the end of sessions or leaves only for important reasons 1 2 3 4 5
- (3) The member does not hurry to leave at the end of sessions 1 2 3 4 5

Attending Score (sum total divided by number of items completed):

II. Contributing

- (4) The member contributes his/her share of talk time (not too much, not too little) 1 2 3 4 5
- (5) The member seems to follow and understand what others are saying 1 2 3 4 5
- (6) The member responds thoughtfully to what **all** others are saying (not just one or two) 1 2 3 4 5
- (7) The member verbally interacts with members on topics related to the group's purpose 1 2 3 4 5
- (8) The member participates in group projects/activities 1 2 3 4 5

Contributing Score (sum total divided by number of items completed):

III. Relating to worker

- (9) The member follows guidance of the worker (e.g., discusses what worker wants group to discuss, is involved in activities suggested by worker) ^a 1 2 3 4 5
- (10) The member shows enthusiasm about contact with worker (e.g., demonstrates interest in the worker, is eager to speak with worker) ^a 1 2 3 4 5
- (11) The member supports work that the worker is doing with other members (e.g., by staying on topic or expanding on discussion) ^a 1 2 3 4 5

Relating to Worker Score (sum total divided by number of items completed):

IV. Relating with members

- | | | | | | |
|--|---|---|---|---|---|
| (12) The member likes and cares for other members | 1 | 2 | 3 | 4 | 5 |
| (13) The member helps other group members to maintain good relations with each other (e.g., by encouraging members to work out interpersonal problems, by stopping unproductive arguments among members, by cheering up members, and so forth) | 1 | 2 | 3 | 4 | 5 |
| (14) The member helps and encourages other members | 1 | 2 | 3 | 4 | 5 |

Relating with Members Score (sum total divided by number of items completed):

V. Contracting

- | | | | | | |
|--|---|---|---|---|---|
| (15) The member expresses continual disapproval about the meeting times ^b | 1 | 2 | 3 | 4 | 5 |
| (16) The member expresses continual disapproval about the number of meetings ^b | 1 | 2 | 3 | 4 | 5 |
| (17) The member expresses continual disapproval about what the group members are doing together ^b | 1 | 2 | 3 | 4 | 5 |

Contracting Score (sum total divided by number of items completed):

VI. Working on own problems

- | | | | | | |
|--|---|---|---|---|---|
| (18) The member partializes problems and works on their parts | 1 | 2 | 3 | 4 | 5 |
| (19) The member makes an effort to achieve his/her particular goals | 1 | 2 | 3 | 4 | 5 |
| (20) The member works on solutions to specific problems | 1 | 2 | 3 | 4 | 5 |
| (21) The member tries to understand the things s/he does | 1 | 2 | 3 | 4 | 5 |
| (22) The member reveals feelings that help in understanding problems | 1 | 2 | 3 | 4 | 5 |

Working on Own Problems Score (sum total divided by number of items completed):

VII. Working with others' problems

- | | | | | | |
|---|---|---|---|---|---|
| (23) The member talks with (encourages) others in ways that help them focus on their problems ^c | 1 | 2 | 3 | 4 | 5 |
| (24) The member talks with (encourages) others in ways that help them partialize or specify their problems ^c | 1 | 2 | 3 | 4 | 5 |
| (25) The member talks with (encourages) others in ways that help them do constructive work on solving their problems ^c | 1 | 2 | 3 | 4 | 5 |
| (26) The member challenges others constructively in their efforts to sort out their problems ^c | 1 | 2 | 3 | 4 | 5 |
| (27) The member helps others achieve the group's purpose ^c | 1 | 2 | 3 | 4 | 5 |

Working with Others' Problems Score (sum total divided by number of items completed):

TOTAL ENGAGEMENT SCORE (OUT OF NUMBER ITEMS COMPLETED):

- ^a Members might sometimes challenge the guidance of the worker. Thoughtful, constructive challenges are alright.
- ^b This statement refers to expressions of disapproval long after the issue has been resolved by other members.
- ^c To score high on this statement, the member's offer of help need not be received. The member should not be held accountable for the behavior of other members.

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Appendix G: Content Tracking Log

Content Tracking Log

Date: _____ Group Start Date: _____

Content Area	Amount of Time Spent (specify if in hours or minutes)
Personal responsibility and reframing shame	
Defining violence and abuse	
Using time-outs	
Gender role stereotypes	
Emotion Management (Total)	
Self-awareness	
Anger/fear/shame/sadness	
Communication skills (Total)	
Listening skills	
Assertiveness/aggression/passivity	
Violence in family of origin	
Consequences of violence for partners and children	
Jealousy and Trust	
Characteristics of healthy vs unhealthy relationships	
Analysis of the Offence	
Other, specify:	

PARTICIPANT CONSENT FORM

Title of Study: Responsivity Factors and the Treatment Process in an Intimate Partner Violence Group Program

Principal Investigators:

Chantal Schafers (306-966-6657) and Dr. Stephen Wormith (306-966-6818)

Why am I being asked to take part in this research study?

The FACS Spousal Violence Program is being used to research how similar programs can be made more effective and worthwhile.

You are being asked to be in this study because you are in the FACS Spousal Violence Program. FACS offers its Spousal Violence Program about eight times per year. This study will ask all program attendees over the course of about one year to be a part of this study. By the end of the study, there will be around 100 to 150 participants.

You are encouraged to ask questions if you feel anything needs to be made clearer. You will be given a copy of this form for your records.

What is the reason for doing the study?

This study will look at participants' attitudes and beliefs about relationships and about the program. We will study how these attitudes and beliefs relate to their experiences in the FACS Spousal Violence Program. We will then look at how the mix of personal characteristics, beliefs, attitudes, and experiences in the program influence how much participants benefit from program.

In order to assess how much participants benefit from the program, we will look at: 1) how engaged participants are at the end of the program, 2) whether participants reduce their risk to reoffend after taking the program, and 3) new charges over the course of one to two years.

Hopefully, this research will help design even better family violence programs. We are doing this study to learn more about what attitudes, beliefs, and experiences in treatment are important for individuals to get as much benefit out of programs as possible.

This study will also compare two versions of the FACS Spousal Violence Program. The study will look to see whether participants in one version of the program have similar experiences and benefit just as much as participants in the other version. This will help other agencies design programs that work well.

What will I be asked to do?

As a participant in the study, you will be asked to let the researchers to access information from your FACS file, including: psychological and risk assessment information, demographic information (i.e., age, ethnicity, and marital status), legal information (i.e., current sentence, criminal record), and information on the specific group you are attending. You will also be asked to let the researchers collect information on the number of sessions you attend, and whether or not you complete the program. As a participant in this study, you will also be asked to allow the researchers to collect official information on whether you are charged with any new offences over the next one to two years.

Participants in this study will be asked to fill out questionnaires four times. If you were to combine all four occasions, the total time spent on the questionnaires is about 35 - 55 minutes. These

questionnaires will ask about your views of treatment and your experiences in the program. The questionnaires will also ask some general questions about your employment, relationship, and emotions.

If you choose to participate, this is how it will work:

- 1) You will be asked to complete one questionnaire (which will take 5-10 minutes) at the beginning of your first group session.
- 2) You will be asked to complete one questionnaire (which will take 5-10 minutes) at the end of your first group session.
- 3) You will be asked to complete one questionnaire (which will take 5-10 minutes) half-way through the program.
- 4) You will be asked to complete one questionnaire (which will take 20-25 minutes) at your individual follow-up session with program facilitators, after the program ends (this follow-up session is part of FACS procedure).

As a participant in this study, the program facilitators will also rate your engagement in the program; both the program facilitators and the researcher will keep this information.

What are the risks and discomforts?

Many people are not used to thinking about the types of things asked on the questionnaires. Therefore, you may feel some discomfort when asked to do so. You may also feel some vulnerability from writing down your personal thoughts.

We hope that you will be more comfortable and assured, knowing that all of your information will be kept confidential and that it will only be seen by the researcher(s).

If we can answer any questions to make you feel more comfortable, please do not hesitate to ask questions right now. You can also contact the primary researcher by email or phone (see above).

If you find the nature of the questionnaires distressing and you would like more support, please contact the following phone numbers, free of charge:

24-hour distress line: 780-482-4357

Mental health helpline: 877-303-2642

Although we do not expect that the questionnaires will be upsetting, you will be offered referrals and options for extra support if we see that you are upset.

It is not possible to know all of the risks that may happen in a study, but the researchers have taken all reasonable safeguards to minimize any known risks to study participants. If we find out anything new during the course of this research which may change your willingness to be in the study, we will tell you about these findings.

What are the benefits to me?

By participating in this study, you might feel satisfaction and pride, because the findings of this study will hopefully make similar treatment programs more worthwhile and effective. As a result, this study may eventually help people who have experienced violence in their relationship or families.

You may also experience some personal benefit by thinking about your time in the program, while doing the questionnaires.

However, you may not get any benefit from being in this research study.

Do I have to take part in the study?

Being in this study is your choice. You will be reminded of this each time you are asked to fill out a questionnaire. If you decide to be in the study, you can change your mind and stop being in the study at any time. It will in no way affect the treatment you are entitled to. If you wish to stop being in the study, contact the researcher or let your program facilitator know. Dropping out of the program does not automatically withdraw your consent to participate in the study. This means that if you leave the program, you would still need to let the researcher or program facilitator know that you do not want your information to be used for research.

There will be no legal consequences if you do not want to participate in this study. If you choose to participate in this study, you do not have to answer questions you are not comfortable answering.

If you choose to drop out of the study, all of the information that was collected from your file will be destroyed. As well, all questionnaires that you fill out, or questionnaires that program facilitators fill out about you, will be destroyed. You may withdraw up to a year following the first group session of your FACS Spousal Violence Program.

Will I be paid to be in the research?

All participants will be provided coffee and a small snack at the start of the study. You will be provided a small gift (valuing \$2.00 - \$5.00) once the program has ended. This will be given to you after your individual follow-up session. If you do not attend that session, you can ask the researchers to mail it to you.

Will my information be kept private?

During the study we will be collecting information about you, which will be kept confidential. After research data collection is complete, we will deidentify any identifying information in our records. The only identifying information that will be kept is your age.

We will do everything we can to make sure that this information is kept private. No information relating to this study that includes your name will be released outside of the researcher's office or published by the researchers. Sometimes, by law, we may have to release your information with your name so we cannot guarantee absolute privacy. However, we will make every legal effort to make sure that your information is kept private. If there is some indication that you or someone else is at risk of imminent, serious personal harm, we may need to take steps to protect you or that person.

By signing this consent form you are saying it is okay for the study team to collect, use and disclose information about you from your personal health records as described above.

What if I have questions?

If you have any questions about the research now or later, please contact Chantal Schafers at chantal.schafers@usask.ca or 306-966-6657.

The study is being sponsored by the Centre for Forensic Behavioural Sciences and Justice Studies. The researcher is getting money from the study sponsor to cover the costs of doing this study. You can ask for any details concerning this compensation from the Principal Investigator.

This research project has been approved on ethical grounds by the University of Saskatchewan Behavioural Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the University of Saskatchewan Research Ethics Office ethics.office@usask.ca (306) 966-2975. Out of town participants may call toll free (888) 966-2975. You can also contact the University of Alberta Health Research Ethics Board at 780-492-2615. This office has no affiliation with the study investigators.

CONSENT

Title of Study: Responsivity Factors and the Treatment Process in an Intimate Partner Violence Group Program

**Principal Investigator(s): Ms Chantal Schafers and Dr. Stephen Wormith
Phone Numbers: 306-966-6657**

	<u>Yes</u>	<u>No</u>
Do you understand that you have been asked to be in a research study?	<input type="checkbox"/>	<input type="checkbox"/>
Have you read and received a copy of the attached Information Sheet?	<input type="checkbox"/>	<input type="checkbox"/>
Do you understand the benefits and risks involved in taking part in this research study?	<input type="checkbox"/>	<input type="checkbox"/>
Have you had an opportunity to ask questions and discuss this study?	<input type="checkbox"/>	<input type="checkbox"/>
Do you understand that you are free to leave the study at any time, without having to give a reason and without affecting your treatment or legal requirements.	<input type="checkbox"/>	<input type="checkbox"/>
Has the issue of confidentiality been explained to you?	<input type="checkbox"/>	<input type="checkbox"/>
Do you understand who will have access to your study records including personally identifiable health information?	<input type="checkbox"/>	<input type="checkbox"/>
Who explained this study to you? _____		
I agree to take part in this study:		
Signature of Research Participant _____		
(Printed Name) _____		
Date: _____		
Signature of Witness _____		
I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.		
Signature of Investigator or Designee _____ Date _____		
THE INFORMATION SHEET MUST BE ATTACHED TO THIS CONSENT FORM AND A COPY GIVEN TO THE RESEARCH PARTICIPANT		

PARTICIPANT CONSENT FORM – Program Facilitator Version

Title of Study: Responsivity Factors and the Treatment Process in an Intimate Partner Violence Group Program

Principal Investigators:

Chantal Schafers (306-966-6657) and Dr. Stephen Wormith (306-966-6818)

Why am I being asked to take part in this research study?

The FACS Spousal Violence Program is being researched to make similar programs more effective and worthwhile.

You are being asked to be in this study because you are a program facilitator of the FACS Spousal Violence program. There is some information that is essential to the research study that is best rated by the program facilitators, rather than through other methods, such as file review or program participant self-report.

You are encouraged to ask questions if you feel anything needs to be made clearer. You will be given a copy of this form for your records.

What is the reason for doing the study?

This study will look at program participants' attitudes and beliefs about relationships and about the program. We will study how these attitudes and beliefs relate to their experiences and engagement in the FACS Spousal Violence Program. We will then look at how the combination of personal characteristics, beliefs, attitudes, and experiences in the program influence how program participants benefit from program.

In order to assess how much program participants benefit from the program, we will look at: 1) how engaged program participants are at the end of the program, 2) whether program participants reduce their risk to reoffend after taking the program, and 3) new charges over the course of one to two years.

We are conducting this study so the scientific community and service providers can know more about what attitudes, beliefs, and experiences in treatment are important for individuals to get as much benefit out of programs as possible. Hopefully, this research will help design even better family violence programs.

This study will also compare the two different versions of the FACS Spousal Violence Program. This study will look to see whether program participants in one version of the program have similar experiences and benefit just as much as program participants in the other version of the program. This research will likely help other agencies design programs that work well.

As well, this study will provide FACS detailed information on their Spousal Violence program.

What will I be asked to do?

Your assistance is requested to measure program integrity, program participant engagement, and program participant risk levels.

To measure program integrity, the degree to which the program curriculum is being implemented consistently across groups will be analyzed. You will be asked to record the amount of time you spend on each treatment content area after each group session. A form will be provided to make this

as easy as possible. It is anticipated this will take approximately one minute after each group session.

With your co-facilitator(s), you will be asked to rate each program participant on levels of program engagement using the *Group Engagement Measure*. You will be asked to rate participants using the *Group Engagement Measure* on two occasions: early/mid-treatment and post-treatment. It is anticipated this will take up to five minutes to rate each program participant.

Post-treatment, you will also be asked to answer two risk-related questions for each program participant. It is anticipated this will take about one minute to rate for each program participant.

What are the risks and discomforts?

This study will place some demand on your time, as detailed above. If we find out anything new during the course of this research which may change your willingness to be in the study, we will tell you about these findings.

What are the benefits to me?

You may experience satisfaction by participating in this study, because the findings of this study will hopefully make the FACS Spousal Violence programs and similar treatment programs more effective. As a result, this study may eventually help people who have experienced violence in their relationship or families.

This study will also provide FACS with information about its Spousal Violence program. It will provide detailed information about its clientele. It will also provide a summary of the program's process-related data (i.e., attendance, program engagement, program integrity) and outcome data (i.e., risk change scores, attrition, recidivism), which FACS may find useful.

You will not be paid to participate in this study.

Do I have to take part in the study?

Participation in this study is your choice. If you decide that you do not want the researcher to use measures that you have rated or forms that you have completed, the researcher will destroy that information. You may withdraw your participation up to a year following the first group session of each FACS Spousal Violence Program. If you choose to participate in the study, you do not have to complete any question you are not comfortable with.

What if I have questions?

If you have any questions about the research now or later, please contact Chantal Schafers at chantal.schafers@usask.ca or 306-966-6657.

The study is being sponsored by the Centre for Forensic Behavioural Sciences and Justice Studies. The researcher is getting money from the study sponsor to cover the costs of doing this study. You can ask for any details concerning this compensation from the Principal Investigator.

This research project has been approved on ethical grounds by the University of Saskatchewan Behavioural Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the University of Saskatchewan Research Ethics Office ethics.office@usask.ca (306) 966-2975. Out of town participants may call toll free (888) 966-2975. You can also contact the University of Alberta Health Research Ethics Board at 780-492-2615. This office has no affiliation with the study investigators.

CONSENT

Title of Study: Responsivity Factors and the Treatment Process in an Intimate Partner Violence Group Program

Principal Investigator(s): Ms Chantal Schafers and Dr. Stephen Wormith

Phone Numbers: 306-966-6657

	<u>Yes</u>	<u>No</u>
Do you understand that you have been asked to be in a research study?	<input type="checkbox"/>	<input type="checkbox"/>
Have you read and received a copy of the attached Information Sheet?	<input type="checkbox"/>	<input type="checkbox"/>
Do you understand the benefits and risks involved in taking part in this research study?	<input type="checkbox"/>	<input type="checkbox"/>
Have you had an opportunity to ask questions and discuss this study?	<input type="checkbox"/>	<input type="checkbox"/>
Do you understand that you are free to leave the study at any time, without having to give a reason and without affecting your treatment or legal requirements?	<input type="checkbox"/>	<input type="checkbox"/>
Has the issue of confidentiality been explained to you?	<input type="checkbox"/>	<input type="checkbox"/>
Do you understand who will have access to your study records?	<input type="checkbox"/>	<input type="checkbox"/>
Who explained this study to you? _____		
I agree to take part in this study:		
Signature of Research Participant _____		
(Printed Name) _____		
Date: _____		
Signature of Witness _____		
I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.		
Signature of Investigator or Designee _____ Date _____		
THE INFORMATION SHEET MUST BE ATTACHED TO THIS CONSENT FORM AND A COPY GIVEN TO THE RESEARCH PARTICIPANT		

Appendix I: ODARA Score Sheet

ODARA Item Summary

Do not use without full scoring instructions as published by the
MHCP Research Department, Penetanguishene, ON Canada,
in collaboration with the Ontario Provincial Police

Score each item 1 or 0

? if missing (available documentation indicates that an item might be present but the information is unclear or incomplete)

- _____ 1. Prior domestic assault (against a partner or the children) in police records
- _____ 2. Prior nondomestic assault (against any person other than a partner or the children) in police records
- _____ 3. Prior sentence for a term of 30 days or more
- _____ 4. Failure on prior conditional release; bail, parole, probation, no-contact order
- _____ 5. Threat to harm or kill anyone during index incident
- _____ 6. Confinement of victim during index incident
- _____ 7. Victim fears (is concerned about) future assault
- _____ 8. More than one child altogether
- _____ 9. Victim has a biological child from a previous partner
- _____ 10. Violence against others (to any person other than a partner or the children)
- _____ 11. More than one indicator of substance abuse problem: alcohol at index, drugs at index, prior drugs or alcohol, increased drugs or alcohol, more angry or violent, prior offence, alcohol problem, drug problem
- _____ 12. Assault on the victim when she was pregnant
- _____ 13. Victim faces at least one barrier to support: children, no phone, no access to transportation, geographical isolation, alcohol/drug consumption or problem
- _____ Raw total (sum of items scored 1)
- _____ Adjusted Score (see Table Adjusted scores for assessments with missing information)

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Appendix J: SARA-V3 Participant Questionnaire & OSRC

1. Which option best describes your employment situation?

- | 1 | 2 | 3 | 4 |
|--|--|--|---|
| I am unemployed and I have not worked much over the past month | I am unemployed right now, but I have worked most of the past month. | I have a stable job, but I have <u>not</u> been working steadily for the past month. | I have a stable job that I like. I have been working steadily for the past month. |

Please explain:

2. Check all that apply. Over the past month, my alcohol or drug use has:

- Given me a bad hangover
- Cost me money that I had planned to save
- Lost me a job
- Caused me health problems
- Led to my arrest
- Led to me being violent
- None of the above

Please explain:

3. In the past month, I have:

- | 1 | 2 | 3 | 4 |
|--------------------------------------|---|--|--------------------------------|
| Thought of ways I might kill myself. | Had thoughts of wanting to die or wanting to kill myself. | Had a brief, fleeting thought of wanting to die. | Not had any suicidal thoughts. |

4. In the past month, I have:

- | 1 | 2 | 3 | 4 |
|--|---|---|--|
| Seriously considered how I might kill someone. | Had thoughts that I wanted to kill someone. | Had a brief thought of wanting to hurt someone. | Had no thoughts of seriously hurting anyone. |

If you are struggling with suicidal thoughts or other strong emotions, please contact the **distress line (780-482-4357)** and/or the **mental health helpline (877-303-2642)** for support.

5. Check all that apply. Over the past month, I have been concerned or upset about my current or most recent romantic relationship because:

- We broke up or were talking about breaking up
- I thought my partner was cheating or unfaithful
- I thought my partner is trying to take my money or my things
- I might lose custody of my children.
- My partner and I have been arguing a lot
- Working out of town has put stress on the relationship
- I haven't been concerned or upset about my romantic relationship

Please explain:

6. When it comes to friendships:

1	2	3	4
I am often arguing with my friends.	I have at least one or two friends, but I don't feel close to them.	I have at least two close friends.	I have very close friends and we get along great.
OR I don't have any good friends.			

7. My violence* against my partner(s) is:

1	2	3	4
Not a problem	A problem, but I'm not sure what to do about it	A problem and I intend to take steps to deal with it	A problem for me and I am currently dealing with it by making change in me and my life

Please explain:

***Definition of violence:** trying to control your partner physically, threatening to hit or throw something at your partner, throwing something at your partner, pushing, grabbing, or shoving your partner, slapping your partner, kicking, biting, or hitting your partner with a fist, choking or strangling your partner, physically forcing your partner to have sex, beating your partner up, threatening your partner with a knife or gun, using a knife or gun on your partner.

Appendix K: Pre-treatment SARA-V3 Questionnaire Scoring Guide

PRE-TREATMENT SARA-V3 QUESTIONNAIRE SCORING GUIDE

See program facilitator ratings (pre-treatment SARA on file) in conjunction with participant self-report and file information, when available. If there is disagreement between facilitator and participant scores, calculate average if possible or use the highest risk rating. However, SARA-V2 items do not always translate directly to the scoring of paired SARA-V3 items; therefore, consult the SARA-V3 manual and pertinent file information for each item.

Nature of IPV Domain

Use file information in conjunction with relevant SARA-V2 items.

SARA-V3 Item	SARA-V2 Item
N1. Intimidation	12 Sexual jealousy
N2. Threats	19 Credible threats of death (index)
N3. Physical harm	11 Past physical assault
N4. Sexual harm	12 Past sexual assault; 18 Sexual assault (index)
N5. Severe IPV	18 Severe assault; 19 Use of weapons (index)
N6. Chronic IPV	N/A
N7. Escalation IPV	14 Recent escalation
N8. IPV-related supervision violations	15 & 20 Violate no contact

Perpetrator Risk Factor Domain

N = Not Present; P = Possibly/ Partially Present; Y = Yes, Present

SARA V3 Item	SARA V2 Item	Questionnaire Item Number	Questionnaire Rating	SARA Rating
P1. Intimate Relationship	4	5	<i>"I haven't been concerned or upset..."</i> is checked off	N*
			One problem item is checked off.	P
			Two or more problem items are checked off	Y
P2. Nonintimate Relationships	N/A	6	3, 4	N
			2	P
			1	Y
P3. Employment	5	1	4	N
			2, 3	P
			1	Y
P4. Trauma/Victimization	6			
P5. General Antisocial Conduct	Consider 2			
P6. Major Mental Disorder	9			
P7. Personality Disorder	10			
P8. Recent Substance Abuse/Dependence	7	2	<i>None of the above</i>	N
			<i>Given me a bad hangover, and/or Cost me money that I had planned to save</i>	P
			<i>Lost me a job, and/or Caused me health problems, and/or Led to my arrest, and/or Led to me being violent</i>	Y
P9. Recent Suicidal or Homicidal Ideation/Intent	8	3, 4	3, 4	N*
			2 on either item	P*
			1 on either item	Y
P10. Distorted Thinking	16 & 17			

*If the questionnaire scores fall into multiple SARA ratings, default to the highest risk rating for that item (Y > P > N)

Appendix L: Modified SARA-V3 Score Sheet

SARA VERSION 3

Unique Participant Identifier: _____

Date: _____

Risk Factor	Yes (2 points)	Possible/Partial (1 point)	No (0 points)
N1 Intimidation			
N2 Threats			
N3 Physical Harm			
N4 Sexual Harm			
N5 Severe IPV			
N6 Chronic IPV			
N7 Escalating IPV			
N8 IPV-Related Supervision Violations			
P1 Intimate Relationships			
P2 Non-Intimate Relationships			
P3 Employment/Finances			
P4 Trauma/Victimization			
P5 General Antisocial Conduct			
P6 Major Mental Disorder			
P7 Personality Disorder			
P8 Substance Use			
P9 Violent/Suicidal Ideation			
P10 Distorted Thinking About IPV			

Total Score: _____

Appendix M: Program Facilitator SARA-V3 Questionnaire
SARA QUESTIONNAIRE: Program Facilitator Version

Please circle the most appropriate option (A, B, or C).

1. This participant:

- A. Explicitly endorses attitudes that support or condone wife/partner assault.
- B. Appears to implicitly endorse attitudes that support or condone wife assault.
- C. Shows no evidence of attitudes that support or condone wife assault.

2. This participant engages in:

- A. Extreme minimization or denial of past assaultive behaviour despite documented evidence to the contrary, by:
 - a. denying many or all past assaults, or
 - b. denying personal responsibility for many or all past assaults, or
 - c. denying serious consequences of many or all past assaults.
- B. Moderate minimization or denial of past assaultive behaviour despite documented evidence to the contrary, by:
 - i. denying some past assaults but admitting to others, or
 - ii. denying personal responsibility for some past assaults but accepting responsibility for others, or
 - iii. denying serious consequences of some past assaults but acknowledging consequences of others
- C. Little or no discrepancy between individual's account of past assaults and documented accounts.

SARA VERSION 3 POSTTREATMENT SCORING KEY

Nature of IPV Domain

Version 3	Use JOIN recidivism information. Consider increasing SARA score if:
N1. Intimidation	During treatment, new charge of criminal harassment.
N2. Threats	During treatment, new charge of uttering threats/threaten with weapon.
N3. Physical harm	During treatment, new charge of: assault, assault with weapon, assault causing bodily harm, aggravated assault, choking, sexual assault, attempted murder, murder, or other similar offence.
N4. Sexual Harm	During treatment, new charge of offence of a sexual nature.
N5. Severe IPV	During treatment, new charge of assault with weapon, assault causing bodily harm, arson to house, aggravated assault, choking, sexual assault, attempted murder, murder, or violent offence of similar severity as per Uniform Crime Reporting Guidelines.
N6. Chronic IPV	Use pretreatment score.
N7. Escalation IPV	During treatment, new charge that is of escalating severity from index offence as per Uniform Crime Reporting Guidelines.
N8. IPV-related supervision violations	During treatment, IPV-related supervision violations.

Perpetrator Risk Factor Domain

N = Not Present; P = Possibly/ Partially Present; Y = Yes, Present

SARA V3 Item	SARA V2 Item	Questionnaire Item Number	Questionnaire Rating	SARA Rating
P1. Intimate Relationship		5	<i>"I haven't been concerned or upset..."</i> is checked off	N*
			One problem item is checked off.	P
			Two or more problem items are checked off	Y
P2. Nonintimate Relationships		6	3, 4	N
			2	P
			1	Y
P3. Employment		1	4	N
			2, 3	P
			1	Y
P4. Trauma/Victimization				
P5. General Antisocial Conduct				
P6. Major Mental Disorder				
P7. Personality Disorder				
P8. Recent Substance Abuse/Dependence		2	<i>None of the above</i>	N
			<i>Given me a bad hangover, and/or Cost me money that I had planned to save</i>	P
			<i>Lost me a job, and/or Caused me health problems, and/or Led to my arrest, and/or Led to me being violent</i>	Y
P9. Recent Suicidal or Homicidal Ideation/Intent		3, 4	3, 4	N*
			2 on either item	P*
			1 on either item	Y
P10. Distorted Thinking**	16 & 17			

*If the questionnaire scores fall into multiple ratings, default to the highest risk rating for that item (Y > P > N)

SARA VERSION 3 - Posttreatment

Unique Participant Identifier: _____

Date: _____

Risk Factor	Yes (2 points)	Possible/Partial (1 point)	No (0 points)
N1 Intimidation			
N2 Threats			
N3 Physical Harm			
N4 Sexual Harm			
N5 Severe IPV			
N6 Chronic IPV Use pretreatment score.			
N7 Escalating IPV			
N8 IPV-Related Supervision Violations			
P1 Intimate Relationships			
P2 Non-Intimate Relationships			
P3 Employment/Finances			
P4 Trauma/Victimization Use pretreatment score.			
P5 General Antisocial Conduct Use pretreatment score.			
P6 Major Mental Disorder Use pretreatment score.			
P7 Personality Disorder Use pretreatment score.			
P8 Substance Use			
P9 Violent/Suicidal Ideation			
P10 Distorted Thinking About IPV Use facilitator rating.			

Nature Score: _____ **Perpetrator Score:** _____ **Total Score:** _____

Appendix O: Program Integrity

Table O1
Mean Time Spent on Treatment Content Areas in Hours

Treatment Content Area	<i>M (SD)</i>	Range
Responsibility and Reframing Shame	1.68 (0.42)	0.92 – 2.19
Defining Violence and Abuse	1.47 (0.49)	0.83 – 2.08
Gender Role Stereotypes	1.35 (0.73)	0 – 2.17
Emotion Management	5.79 (1.16)	3.50 – 7.33
Communication Skills	4.88 (0.67)	3.69 – 5.52
Consequences for Partners/Children	1.52 (0.82)	0 – 2.67
Jealousy and Trust	1.81 (0.71)	0.83 – 2.76
Family of Origin Violence	0.24 (0.36)	0 – 0.92
Healthy and Unhealthy Relationships	1.54 (0.42)	0.92 – 2.08
Analysis of the Offence	2.48 (0.49)	1.84 – 3.5
Other	1.77 (0.79)	0.83 – 3.07
Total	24.5 (0.75)	23.0 – 25.3

The degree to which groups implemented a similar curriculum was examined. Groups varied from one another in the amount of time spent on each treatment content area (TCA) by an average of 38.4 minutes ($M = 0.64$ hours, $SD = 0.24$). Most TCAs were addressed in each group (see Table O2). However, the “family of origin violence” TCA was addressed in only four of the eight groups. The “gender role stereotypes” and “consequences of violence for partners and children” TCAs were addressed in seven of the eight groups. The remaining TCAs were covered in all of the groups.

Each group was also examined with regard to the number of TCAs covered and number of sessions provided (see Table O3). Half of the groups covered all 11 TCAs ($M = 10$ TCAs, $SD = 0.89$, Range 9 -11). The day groups covered fewer TCAs than the evening groups, yet there was insufficient power to determine whether these differences were statistically significantly.

Table O2

Differences in which and how many Treatment Content Areas were Covered in Groups

Treatment Content Area	Included in each Group	Number of Groups
Violence Family of Origin	No	4
Consequences for Partners/Children	No	7
Gender Role Stereotypes	No	7
Analysis of the Offence	Yes	8
Communication Skills	Yes	8
Defining Violence and Abuse	Yes	8
Emotion Management	Yes	8
Healthy and Unhealthy Relationships	Yes	8
Jealousy and Trust	Yes	8
Other	Yes	8
Responsibility and Reframing Shame	Yes	8

Table O3

Program Integrity Descriptive Data for Each Group

Group	Type	Included each TCA	No. of TCAs (out of 11)	No. of group sessions
1	Day	No	9	14
2	Day	No	9	14
3	Eve	No	10	14
4	Eve	Yes	11	14
5	Eve	No	10	13
6	Eve	Yes	11	14
7	Eve	Yes	11	14
8	Eve	Yes	11	14

Note. Eve = Evening Group. Day = Day Group. TCA = Treatment Content Area.

Groups were compared to the preferred curriculum that was outlined by program facilitators prior to data collection. The degree to which each group deviated from the preferred curriculum was examined by calculating the absolute difference between the actual and preferred amount of time spent on each TCA. The mean absolute difference for each group was then calculated (see Table O4).

Table O4

Absolute Mean Difference between Preferred Time and Actual Time Spent on Each Treatment Content Area by Group

Group	Deviation from preferred M (SD) ^a	Range
1	0.74 (0.45)	0.23 – 1.61
2	0.78 (0.35)	0.23 – 1.38
3	0.28 (0.36)	0.020 – 1.09
4	0.93 (0.84)	0.085 – 3.17
5	0.50 (0.29)	0.030 – 1.00
6	0.54 (0.43)	0.040 – 1.47
7	0.46 (0.41)	0.00 – 1.26
8	0.47 (0.29)	0.14 – 1.20
Total M	0.59 (0.21)	0.28 – 0.93

Note. ^a Measured in hours.

The degree to which groups deviated from the preferred curriculum was determined by calculating the average mean difference for each TCA, as shown in Table O5.

Table O5

Mean Differences between Preferred and Actual Time Spent on each Treatment Content Area

Treatment Content Area	<i>M (SD)</i>	Range
Violence Family of Origin	-0.57 (0.36)	-0.81 – 0.11
Consequences for Partners/Children	0.37 (0.82)	-1.15 – 1.52
Gender Role Stereotypes	-0.04 (0.73)	-1.38 – 0.79
Analysis of the Offence	0.18 (0.50)	-0.46 – 1.2
Communication Skills	-0.41 (0.68)	-1.61 – 0.23
Defining Violence and Abuse	0.20 (0.49)	-0.44 – 0.81
Emotion Management	-0.88 (1.16)	-3.17 – 0.66
Healthy and Unhealthy Relationships	0.043 (0.42)	-0.58 – 0.58
Jealousy and Trust	0.31 (0.71)	-0.67 – 1.26
Other	-0.54 (0.79)	-1.47 – 0.77
Responsibility and Reframing Shame	0.07 (0.42)	-0.69 – 0.58

Note. The above values are in hours.

Appendix P: Demographic Information, DRFs and TPVs

Table P1

ANOVAs Examining Differences in DRFs based on Relationship and Employment Status

	Relationship Status				Employment Status			
	<i>F</i>	Welch's <i>F</i>	<i>df</i>	<i>p</i>	<i>F</i>	Welch's <i>F</i>	<i>df</i>	<i>p</i>
Pre-treatment								
Readi.		1.01	4, 25.3	.42	1.40		4, 79	.24
Motiv.	1.17		4, 87	.33		1.34	4, 14.7	.30
Confid.	1.13		4, 87	.28	0.74		4, 87	.57
Effic.	1.78		4, 84	.14	0.22		4, 84	.93
Post-treatment								
Readi. ^a					1.90		4, 51	.13
Motiv.	1.66		4, 58	.17	1.27		4, 58	.29
Confid.	1.52		4, 58	.21	1.95		4, 58	.12
Effic.		5.67	4, 17.1	.004	1.26		4, 51	.30

Note. Readi. = Readiness to Change. Motiv. = Motivation. Conf. = Confidence in Treatment Effectiveness. Effic. = Self-efficacy.

^a ANOVA could not be conducted for relationship status due to lack of variance.

Significant differences in post-treatment self-efficacy based on relationship status were observed. The Games-Howell post hoc test used because the homogeneity of variance assumption was violated and there were unequal sample sizes. The post hoc test showed that participants who were divorced/separated and in a new relationship reported significantly greater self-efficacy at post-treatment than those in a cohabitating or married relationship ($p = .020$).

Table P2

ANOVAs Examining Differences in DRFs based on Ethnicity and Education

	Ethnicity			Level of Education			
	<i>F</i>	<i>df</i>	<i>p</i>	<i>F</i>	Welch's <i>F</i>	<i>df</i>	<i>p</i>
Pre-treatment							
Readi.	0.12	2, 79	.89		1.68	2, 37.4	.20
Motiv.	0.36	2, 87	.70	0.018		2, 86	.98
Confid.	0.34	2, 97	.53	1.39		2, 86	.26
Effic.	0.45	2, 84	.64	0.069		2, 83	.93
Post-treatment							
Readi.	0.57	2, 51	.57	0.026		2, 50	.97
Motiv.	0.31	2, 58	.73	1.74		2, 57	.19
Confid.	1.32	2, 58	.28	0.38		2, 57	.69
Effic.	0.12	2, 51	.89	0.90		2, 51	.41

Note. Readi. = Readiness to Change. Motiv. = Motivation. Conf. = Confidence in Treatment Effectiveness. Effic. = Self-efficacy.

Table P3

Correlations between Demographic Information and DRFs

	Pre-treatment				Post-treatment			
	Readi.	Motiv.	Confid.	Effic.	Readi.	Motiv.	Confid.	Effic.
Age	.093	.076	.015	.16	-.15	.16	-.066	-.11
Rel.	-.046	.070	.018	-.054	.011	.010	.12	-.085
Educ.	-.26*	-.024	.097	.020	-.11	-.10	.16	.27
Unemp. ^a	.22	.027	-.003	.031	.12	-.053	-.14	-.20
MD ^a	.17	-.021	-.046	-.20	.26	-.061	.068	-.17

Note. Rel. = In a relationship. Educ. = Years of Education. Unemp. = Unemployed or on disability services. MD = Mental Disorder. Readi. = Readiness to Change. Motiv. = Motivation. Conf. = Confidence in Treatment Effectiveness. Effic. = Self-efficacy.

^aPoint-biserial correlation.

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

Table P4

ANOVAs Examining Differences TPVs based on Relationship and Employment Status

	Relationship Status				Employment Status			
	<i>F</i>	Welch's <i>F</i> ^a	<i>df</i>	<i>p</i>	<i>F</i>	Welch's <i>F</i>	<i>df</i>	<i>p</i>
Early								
TS	0.36		4, 87	.84	0.44		4, 87	.78
TA	1.13		4, 87	.35	0.83		4, 87	.51
GC	0.27		4, 86	.90	1.34		4, 86	.26
GEM	0.28		4, 71	.89	0.77		4, 71	.55
Mid								
TS	0.89		4, 70	.48	0.56		4, 70	.69
TA	0.68		4, 70	.61	0.37		4, 70	.83
GC	0.61		4, 70	.65	1.71		6.39	.26
Post/Late								
TS	0.18		4, 55	.95	0.57		4, 55	.68
TA	0.28		4, 54	.91	1.10		4, 54	.37
GC		0.34	4, 14.9	.85	0.59		4, 54	.67
GEM	0.45		4, 62	.77	0.13		4, 62	.97

Note. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. Early = Early-treatment. Mid = Mid-treatment. Post = Post-treatment.

Table P5

Correlations between Demographic Information and CJCEST TPVs

	Early-treatment			Mid-treatment			Post-treatment		
	TS	TA	GC	TS	TA	GC	TS	TA	GC
Age	-.23*	-.13	-.065	-.080	-.098	-.006	-.053	-.16	.001
Rel.	-.011	-.12	-.017	-.16	-.14	-.14	.098	.071	.069
Educ.	-.030	-.010	-.070	-.033	.009	-.20	.15	.22	-.090
Unemp. ^a	-.064	-.079	-.19	-.15	-.14	-.033	-.17	-.20	-.095
MD ^a	-.018	.074	-.096	-.022	.037	-.037	.12	.13	.026

Note. Rel. = In a relationship. Educ. = Years of Education. Unemp. = Unemployed or on disability services. MD = Mental Disorder. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness.

^aPoint-biserial correlation.

**p* < .05.

Table P6

ANOVAs Examining Differences in TPVs based on Ethnicity and Level of Education

	Ethnicity			Level of Education			
	<i>F</i>	<i>df</i>	<i>p</i>	<i>F</i>	Welch's <i>F</i>	<i>df</i>	<i>p</i>
Early							
TS	0.031	2, 87	.97	0.67		2, 86	.52
TA	0.21	2, 87	.82	0.42		2, 86	.66
GC	0.56	2, 86	.57	0.023		2, 85	.98
GEM	1.01	2, 71	.37	0.73		2, 70	.49
Mid							
TS	0.80	2, 70	.45	1.49		2, 69	.23
TA	1.02	2, 70	.37	0.53		2, 69	.59
GC	1.01	2, 70	.37		0.72	2, 23.7	.50
Post/Late							
TS	1.10	2, 55	.34		3.30	2, 27.9	.052
TA	2.05	2, 54	.14	1.92		2, 53	.16
GC	0.41	2, 54	.66	0.21		2, 53	.81
GEM	2.23	2, 62	.11	0.25		2, 61	.78

Note. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. Early = Early-treatment. Mid = Mid-treatment. Post = Post-treatment.

Table P7

Correlations between Demographic Information and Program Engagement

Measure	Age	Rel. ^a	Educ.	Unemp. ^a	MD ^a
Early GEM	-.19	.070	.042	.066	.11
Late GEM	-.084	.015	-.002	.039	.003

Note. Rel. = In a relationship. Educ. = Years of Education. Unemp. = Unemployed or on disability assistance MD = Mental Disorder.

Appendix Q: ROC Analyses

Table Q1

AUCs for Demographic and Legal Characteristics in Relation to Binary Outcomes

	Age ^a	Educ ^a	Disp.	No. Off.	No. Viol.	No. IPV	Age Off. ^a
Attrition	.45	.63 [†]	.60	.63 [†]	.66*	.60	.60
P.P. Recid.	.42	.55	.56	.63	.63	.61	.62
Any Recid.	.53	.55	.57	.72**	.63 [†]	.58	.71**
Viol. Recid.	.50	.55	.47	.62	.57	.57	.61

Note. P.P. Recid. = Program phase recidivism. Any Recid. = Any recidivism. Viol. Recid. = Violent recidivism. Educ. = Years of educations. Disp. = Length of disposition/sentence. No. Off. = Number of previous offences. No. Viol. = Number of previous violent offices. No. IPV = Number of previous IPV offences. Age Off. = Age as first offence.

^aThe outcome variables are reversed so to be consistent with the expected outcome: attrition = successful completion, recidivism = nonrecidivism.

*p < .05. **p < .01. †p < .10.

Table Q2

AUCs for DRFs in Relation to Binary Outcomes

	Pre-treatment				Post-treatment			
	Readi.	Motiv.	Conf.	Effic.	Readi.	Motiv.	Conf.	Effic.
Completion	.35*	.49	.54	.58	-	-	-	-
P.P. Nonrecid.	.29*	.42	.43	.56	-	-	-	-
Nonrecid.	.45	.39	.43	.54	.45	.19**	.38	.63
Viol. Nonrecid.	.46	.35 [†]	.40	.58	.30	.23 [†]	.27	.95*

Note. Completion = Successful program completion. P.P. Nonrecid. = Program phase nonrecidivism. Nonrecid. = Nonrecidivism. Viol. Nonrecid. = Violent nonrecidivism. Readi. = Readiness to Change. Motiv = Motivation. Confid = Confidence in treatment effectiveness. Effic = Self-efficacy.

*p < .05. **p < .01. †p < .10.

Table Q3

AUCs for TPVs in Relation to Binary Outcomes

	<u>Early-treatment</u>				<u>Mid-treatment</u>			<u>Late-treatment</u>			
	TS	TA	GC	GEM	TS	TA	GC	TS	TA	GC	GEM
Completion	.46	.44	.48	.39	-	-	-	-	-	-	-
P.P. Nonrecid.	.58	.51	.54	.52	-	-	-	-	-	-	-
Nonrecid.	.50	.43	.49	.50	.41	.50	.45	.54	.48	.39	.50
Viol. Nonrecid.	.56	.45	.62	.60	.63	.62	.52	.48	.49	.32	.65

Note. Completion = Successful completion. P.P. Nonrecid. = Program phase nonrecidivism. Nonrecid. = Nonrecidivism. Viol. Nonrecid. = Violent nonrecidivism. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. GEM = Program Engagement.

Table Q4

AUCs for Risk in Relation to Binary Outcomes

	<u>Pre-treatment</u>				<u>Post-treatment</u>	
	ODARA	SARA-V3	Nature	Perp.	SARA-V3	Perp.
Attrition	.70**	.76***	.64*	.77***	-	-
P.P. Recid.	.69*	.81***	.74**	.72**	-	-
Any Recid.	.72**	.75***	.69**	.69**	.68 [†]	.58
Viol. Recid.	.63	.68*	.67 [†]	.65	.57	.54

Note. P.P. Recid. = Program phase recidivism. Any Recid. = Any recidivism. Viol. Recid. = Violent recidivism. Nature = SARA-V3 Nature of IPV domain. Perp. = Perpetrator Risk Factors domain.

*p < .05. **p < .01. ***p < .001. [†]p < .10.

Table Q5

AUCs for Program Compliance in Relation to Binary Outcomes

	Sessions	Program Integrity
P.P. Nonrecid.	.82***	-
Nonrecid.	.70**	.45
Viol. Nonrecid.	.68*	.42

Note. P.P. Nonrecid. = Program phase nonrecidivism. Nonrecid. = Nonrecidivism. Viol. Nonrecid. = Violent nonrecidivism.

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

Appendix R: Legal History Information, DRFs and TPVs

Table R1

ANOVAs Examining Differences in DRFs based on Index Offence and Disposition Type

	Index Offence			Disposition Type			
	<i>F</i>	Welch's <i>F</i> ^a	<i>df</i>	<i>p</i>	<i>F</i>	<i>df</i>	<i>p</i>
Pre							
Readi. ^a				3.37	2, 79		.040
Motiv.		0.67	5, 11.6	.66	2.19	2, 87	.12
Confid.		0.15	5, 11.8	.98	3.29	2, 87	.042
Effic.	0.85		5, 84	.52	0.88	2,84	.42
Post							
Readi. ^a				0.26	2, 51		.78
Motiv.	1.58		5, 58	.18	0.83	2, 58	.44
Confid.	0.074		5, 58	.996	0.31	2, 58	.74
Effic.	0.63		5, 51	.68	0.62	2, 51	.54

Note. Readi. = Readiness to Change. Motiv. = Motivation. Conf. = Confidence in Treatment Effectiveness. Effic. = Self-efficacy.

^a ANOVA could not be conducted for Index Offence due to lack of variance.

Participants with different disposition types differed significantly in pre-treatment readiness to change IPV. Gabriel's pairwise test revealed that participants who were sentenced to both custody and probation had higher readiness to change at pre-treatment than those who were sentenced to a peace bond ($p = .048$). As well, participants with different disposition types differed significantly in pre-treatment confidence treatment effectiveness. Gabriel's pairwise test found that those sentenced to both custody and probation had more confidence in treatment effectiveness than those sentenced to a probation or conditional sentence order, although this specific difference only approached significance ($p = .060$).

Table R2

ANOVAs Examining Differences in TPVs based on Index Offence and Disposition Type

	Index Offence				Disposition Type		
	<i>F</i>	Welch's <i>F</i> ^a	<i>df</i>	<i>p</i>	<i>F</i>	<i>df</i>	<i>p</i>
Early							
TS	2.16		5, 87		1.32	2, 87	.27
TA	2.66		5, 82	.028	0.59	2, 87	.56
GC		2.42	5, 12.16	.097	1.69	2, 86	.19
GEM	0.61		5, 71	.69	6.50	2, 71	.003
Mid							
TS	2.20		5, 70	.065	1.66	2, 70	.20
TA	1.07		5, 70	.39	1.14	2, 70	.33
GC	1.01		5, 70	.42	2.05	2, 70	.14
Post/Late							
TS	0.94		5, 55	.46	0.88	2, 55	.42
TA	0.63		5, 54	.68	0.84	2, 54	.44
GC	0.45		5, 54	.81	0.020	2, 54	.98
GEM	1.12		5, 62	.36	0.94	2, 62	.40

Note. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. GEM = Group Engagement Measure.

Participants with different index offence types differed in their ratings of the therapeutic alliance early in treatment. Gabriel's pairwise test found that participants whose index offence was failure to comply with conditions reported a stronger therapeutic alliance than those on court orders for 1) unlawful confinement, abduction, or criminal harassment ($p = .048$), and for 2) uttering threats, cause fear of injury or damage, or forcible entry ($p = .020$).

Participants with different disposition types differed significantly in their levels of early-treatment program engagement. Gabriel's pairwise test found that participants sentenced to a combination of custody and probation were rated as significantly more engaged at than those sentenced to a probation or conditional sentence order ($p = .002$).

Table R3

Correlations between Legal History Information and DRFs

	Pre-treatment				Post-treatment			
	Readi.	Motiv.	Confid.	Effic.	Readi.	Motiv.	Confid.	Effic.
Disp.	.067	.15	.030	-.10	-.12	.10	-.084	-.19
No. Off.	.29*	.20**	.29**	.066	.11	.23	.16	-.17
No. Viol.	.30**	.12	.077	-.12	-.053	.30*	.20	-.20
No. IPV	.31**	.16	.068	-.21	-.11	.33*	.21	-.18
Age Off.	-.13	-.22*	-.21	.17	-.29*	-.003	-.12	.18
Of. Hist ^a	.31**	.039	.002	-.12	-.044	.30*	.21	-.15
Any Hist ^a	.25*	.045	-.051	-.031	.012	.22	.046	-.065

Note. Disp. = Length of disposition/sentence. No. Off. = Number of previous offences. No. Viol. = Number of previous violent offences. No. IPV = Number of previous IPV offences. Age Off. = Age as first offence. Of. Hist = Official history of IPV. Any Hist = Any indication of a history of IPV. Readi. = Readiness to Change. Motiv. = Motivation. Conf. = Confidence in Treatment Effectiveness. Effic. = Self-efficacy. Pre-Post Δ = Changes from pre- to post-treatment.

^aPoint-biserial correlation.

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

Table R4

Correlations between Legal History Information and CJCEST TPVs

	Early-treatment			Mid-treatment			Post-treatment		
	TS	TA	GC	TS	TA	GC	TS	TA	GC
Disp.	.17	.10	.082	.20	.046	.049	.093	.016	-.006
No. Off.	.009	-.080	.035	-.094	-.10	.067	.006	.032	-.060
No. Viol.	.049	-.058	.051	.072	-.061	.030	-.001	-.12	-.024
No. IPV	.043	-.085	-.010	.039	-.084	-.060	-.025	-.13	.073
Age Off.	-.23*	-.10	-.16	-.11	-.095	-.27*	.002	-.10	-.16
Of. Hist. ^a	.013	-.037	-.018	.051	-.021	-.016	-.030	-.098	.081
Any Hist. ^a	.006	-.074	-.081	-.097	-.15	-.14	-.092	-.011	-.11

Note. Disp. = Length of disposition/sentence. No. Off. = Number of previous offences. No. Viol. = Number of previous violent offences. No. IPV = Number of previous IPV offences. Age Off. = Age as first offence. Of. Hist. = Official history of IPV. Any Hist. = Any indication of a history of IPV. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness. ^aPoint-biserial correlation.

* $p < .05$.

Table R5

Correlations between Legal History Information and Program Engagement

	Disp.	No. Off	No. Viol.	No. IPV	Age Off.	Of. Hist. ^a	Any Hist. ^a
Early GEM	.18	.22	.30**	.23	-.19	.12	.076
Late GEM	.13	.024	.20	.19	.021	.15	.12

Note. Early GEM = early program engagement. Late GEM = late program engagement. Disp. = Length of disposition/sentence. No. Off. = Number of previous offences. No. Viol. = Number of previous violent offences. No. IPV = Number of previous IPV offences. Age Off. = Age as first offence. Of. Hist. = Official history of IPV. Any Hist. = Any indication of a history of IPV.

^a Point-biserial correlation.

** $p < .01$.

Appendix S: Legal History Information and Program Attendance

Offence History and Disposition

Correlations and point-biserial correlations were used to examine how program attendance relates to offence history variables and disposition length, as shown in Table S1.

Table S1

Correlations between Offence History and Attendance

Measure	Disp.	No. Off.	No. Viol.	No. IPV	Age Off.
Attrition ^a	.12	.22*	.30**	.16	-.16
Sessions	-.16	-.26*	-.28**	-.11	.092

Note. Disp. = Length of disposition/sentence. No. Off. = Number of previous offences. No. Viol. = Number of previous violent offences. No. IPV = Number of previous IPV offences. Age Off. = Age as first offence.

^a Point-Biserial Correlations.

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

A one-way ANOVA showed that the average number of sessions attended did not differ based on disposition type, $F(2, 85) = 0.85, p = .43$. The relationship between attrition and disposition type was not examined, because there was insufficient power for a chi-square test.

Index Offence

Participants with different index offences differed significantly in the number of sessions they attended, $\eta^2 = .06$, Welch's $F(5, 19.5) = 8.48, p = .002$.³⁵ Post hoc analyses showed that participants whose index offence was fail to comply attended about four sessions more than those whose index offence was assault ($p = .002$), and about three sessions more than those whose index offence was utter threats/cause fear of injury or damage/forcible entry ($p = .037$).³⁶

³⁵ The assumption of homogeneity of variance was violated and there were unequal sample sizes, so Welch's F statistic and the Games-Howell post hoc test were used.

³⁶ These findings are interpreted with caution, because only three participants had failed to comply as an index offence. A chi-square test was not completed between attrition and index offence type, because the cell sizes were too small.

Appendix T: Legal History Information, Risk, and Recidivism

Legal History Information and Risk

As shown in Table T1, one-way ANOVAs were conducted to examine whether there were differences in pre-treatment risk based on index offence and disposition type. Significant main effects were detected for differences in pre-treatment risk on the SARA-V3 ($\eta^2 = .21$) and the ODARA ($\eta^2 = .13$) based on index offence type. In post hoc analyses, Gabriel’s pairwise test found that those whose index offences were uttering threats or cause fear of injury/damage were lower risk on the SARA-V3 than those whose index offences were assault with weapon or assault causing bodily harm ($p = .014$) or assault ($p = .021$). Gabriel’s pairwise test did not demonstrate any specific significant differences in risk as measured by the ODARA.

Table T1

ANOVAs Examining Differences in Risk based on Index Offence and Disposition Type

	Index Offence			Disposition Type		
	<i>F</i>	<i>df</i>	<i>p</i>	<i>F</i>	<i>df</i>	<i>p</i>
Pre-treatment						
ODARA	2.35	5, 86	.048	5.56	2, 86	.005
SARA-V3	4.31	5, 86	.002	10.91	2, 86	.001
Change						
SARA-V3 ^a	0.79	5, 63	.56	2.37	2, 63	.10

^a ANCOVA controlling for pre-treatment scores on the SARA-V3.

Significant main effects were also detected for differences in pre-treatment risk on the SARA-V3 ($\eta^2 = .21$) and the ODARA ($\eta^2 = .12$) based on disposition type. In post hoc analyses, Gabriel’s pairwise test demonstrated that those sentenced to both custody and probation were higher risk on the SARA-V3 in comparison to those sentenced to 1) probation or a conditional sentence order ($p = .008$) or 2) a peace bond ($p < .001$). Gabriel’s pairwise test demonstrated that those sentenced to both custody and probation were higher risk on the ODARA in comparison to those sentenced to a peace bond ($p = .004$).

Correlations were also used to examine the relationship between measures of risk and legal history variables, as shown in Table T2.

Table T2

Correlations between Legal History Variables and Risk

Measure	Disp.	No. Off.	No. Viol.	No. IPV	Age Off.	Of. Hist. ^b	Any Hist. ^b
Pre-treatment							
ODARA	.30**	.55***	.56***	.39***	-.36***	.37**	.49***
SARA-V3	.43***	.51***	.61***	.52***	-.18	.48***	.53***
Nature	.35**	.27*	.43***	.39***	.045	.39***	.51***
Perpetrator	.36**	.56***	.56***	.45***	-.32**	.39***	.35**
Change ^a							
SARA-V3	-.009	.14	-.028	-.085	.093	-.098	-.033

Note. Nature = Nature of IPV domain. Perpetrator = Perpetrator Risk Factors domain. Disp. = Length of disposition/sentence. No. Off. = Number of previous offences. No. Viol. = Number of previous violent offences. No. IPV = Number of previous IPV offences. Age Off. = Age as first offence. Of. Hist. = Official history of IPV. Any Hist. = Any indication of a history of IPV.

^aSemipartial correlations controlling for the SARA-V3 at pre-treatment.

^bPoint-Biserial correlations.

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

Legal History Information and Recidivism

One-way ANOVAs were used to examine differences in the number of new charges and new violent charges based on disposition type. There were no significant differences in the number of new charges, $F(2, 85) = 0.95$, $p = .70$ or violent charges,³⁷ Welch's $F(2, 54.7) = 0.78$, $p = .46$. Similarly, chi-square tests found no significant differences in general $\chi^2(2, n = 88) = 1.25$, $p = .54$ or violent recidivism $\chi^2(1, n = 88) = 0.18$, $p = .92$, based on disposition type. There was insufficient power to analyze the relationship between disposition type and program-phase recidivism.

Chi-square tests examined differences in recidivism based on IPV history. Participants with an official history of IPV were more likely to engage in program-phase recidivism $\chi^2(1, n = 88) = 4.53$, $p = .033$, but not general $\chi^2(2, n = 88) = 3.32$, $p = .069$ or violent recidivism $\chi^2(1, n = 88) = 2.06$, $p = .15$. Among participants with any indication of an IPV history, general

³⁷ The assumption of homogeneity of variance was violated, so Welch's F statistic was used.

recidivism $\chi^2(1, n = 88) = 8.29, p = .004$ was more common although there was insufficient power to examine differences in program-phase and violent recidivism.

The relationships between index offence type and all types of recidivism were not examined due to insufficient power. Correlations and point-biserial correlations between legal history variables and recidivism are shown in Table T3.

Table T3
Correlations between Legal History and Recidivism

Measure	Disp.	No. Off.	No. Viol.	No. IPV	Age Off.	Of. Hist.	Any Hist.
P. P. Recid. ^a	.020	.19 [†]	.10	.077	-.14	-	-
No. of Charges	.037	.26*	.11	-.002	-.15	.064	.22*
No. of Violent	-.11	.20	-.035	-.035	-.15	.073	.18
Any Recid. ^a	.087	.28**	.16	.050	-.30**	-	-
Any Violent ^a	-.034	.12	.005	-.011	-.14	-	-

Note. P.P. Recid. = Program-phase recidivism. No. of Charges = Number of new charges incurred in the follow-up period. No. of Violent = Number of new violent charges incurred in the follow-up period. Any Recid. = Any new charges. Any Violent = Any violent charges. Disp. = Length of disposition/sentence. No. Off. = Number of previous offences. No. Viol. = Number of previous violent offences. No. IPV = Number of previous IPV offences. Age Off. = Age as first offence. Of. Hist. = Official history of IPV. Any Hist. = Any indication of a history of IPV.

^aPoint-biserial correlation.

* $p < .05$. ** $p < .01$. [†] $p < .10$

Appendix U: Risk Predicting Recidivism

Table U1

Hierarchical Multiple Regressions Predicting the Number of New Charges with the SARA-V3

Predictors	General						Violent					
	β	sr^2	p	R^2	ΔR^2	ΔF	β	sr^2	p	R^2	ΔR^2	ΔF
Step 1				.12		8.09				.15		10.9
Follow-up	0.34	.12	.006				0.39	.15	.002			
Step 2				.17	.05	3.63				0.17	.016	1.17
Follow-up	0.32	.10	.009				0.38	.14	.002			
Pre SARA	0.23	.051	.061				0.13	.016	.28			
Step 3				.30	.14	11.6				.25	.080	6.24
Follow-up	0.38	.14	.001				0.42	.17	.001			
Pre SARA	-0.73	.069	.018				-0.60	.047	.050			
Post SARA	1.02	.14	.001				0.78	.080	.015			

Note. Pre SARA = Pre-treatment SARA-V3. Post SARA = Post-treatment SARA-V3. n = 63.

Table U2

Hierarchical Multiple Regression Predicting the Number of New Charges with the SARA-V3 Perpetrator Risk Factors Domain

Predictors	General						Violent					
	β	sr^2	p	R^2	ΔR^2	ΔF	β	sr^2	p	R^2	ΔR^2	ΔF
Step 1				.12		8.09				.15		10.9
Follow-up	.34	.12	.006				.39	.15	.002			
Step 2				.13	.015	1.03				.16	.007	.49
Follow-up	.33	.10	.009				.38	.14	.002			
Pre Perp.	.12	.014	.31				.083	.0069	.49			
Step 3				.30	.17	14.3				.27	.11	8.80
Follow-up	.39	.15	.001				.43	.18	<.001			
Pre Perp.	-.48	.072	.016				-.40	.051	.048			
Post Perp.	.73	.17	<.001				.58	.11	.004			

Note. Pre Perp. = Pre-treatment. Perp. = Perpetrator Risk Factors domain. Post. = Post-treatment. n = 63.

Appendix V: Pre-treatment DRFs, Early-treatment CJCEST TPVs, and Risk

Hierarchical multiple regressions were used to examine whether pre-treatment DRFs and early-treatment CJCEST TPVs predicted changes in distorted attitudes about IPV, while controlling pre-treatment distorted attitudes about IPV, as shown in Table V1. All assumptions were met.

Table V1

Hierarchical Multiple Regression Analyses of DRFs and CJCEST TPVs Predicting Changes in Distorted Attitudes about IPV

IV	ΔF	β	ΔR^2	p	df
Pre					
Readi.	2.55	-.14	.019	.12	1,55
Motiv.	0.89	.082	.006	.35	1,60
Confid.	2.49	.13	.017	.12	1,60
Effic.	0.66	-.068	.008	.42	1,58
Early					
TS	0.76	-.073	.005	.39	1,60
TA	0.36	-.051	.003	.55	1,60
GC	0.41	-.055	.003	.53	1,59

Note. Each IV represents a different hierarchical regression analysis. Pre = Pre-treatment. Readi. = Readiness to change. Motiv. = Motivation. Confid. = Confidence in treatment effectiveness. Effic. = Self-efficacy. Early = Early-treatment. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness.

Hierarchical logistic regression was used to examine the degree to which pre-treatment DRFs and early-treatment CJCEST TPVs predicted changes in relationship problems, while controlling for pre-treatment relationship problems (see Table V2). All assumptions were met.

Table V2

Hierarchical Multiple Regression Analyses of DRFs and CJCEST TPVs Predicting Changes in Relationship Problems

IVs	<i>B</i>	SE	Wald	<i>e^b</i>	95% CI ^d	<i>p</i>	<i>n</i>
Pre							
Readi.	-.022	.30	0.006	0.98	0.54, 1.77	.94	50
Motiv.	.004	.077	0.002	1.00	0.86, 1.17	.96	50
Confid.	-.045	.10	0.20	0.96	0.78, 1.17	.65	60
Effic.	.33	.24	1.86	1.39	0.87, 2.25	.17	50
Early							
TS	-.11	.081	1.95	0.89	0.76, 1.05	.16	50
TA	.049	.096	0.26	1.05	0.87, 1.27	.61	50
GC	-.049	.093	0.29	0.95	0.79, 1.14	.59	50

Note. Each IV represents a different hierarchical regression analysis.

.Pre = Pre-treatment. Readi. = Readiness to change. Motiv. = Motivation. Confid. = Confidence in treatment effectiveness. Effic. = Self-efficacy. Early-treatment. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness.

Hierarchical multiple regressions were used to examine whether early-treatment CJCEST TPVs predicted changes risk on the SARA-V3, while controlling pre-treatment risk on the SARA-V3, as shown in Table V3.

Table V3

Hierarchical Multiple Regression Analyses of Early-Treatment CJCEST TPVs Predicting Changes in Risk on the SARA-V3

IV	ΔF	β	ΔR^2	<i>p</i>	<i>df</i>
TS	0.032	.022	<.001	.86	1, 60
TA	1.99	.17	.028	.16	1, 60
GC	0.002	.005	<.001	.97	1, 59

Note. Each IV represents a different hierarchical regression analysis. TS = Treatment Satisfaction. TA = Therapeutic Alliance. GC = Group Cohesiveness.