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WASHINGTON UNIVERSITY IN ST. LOUIS

Brown School of Social Work

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Coping with Intimate Partners' Substance Use and Gambling Problems:
The Role of Intimate Partner Violence (IPV)

by

Megan Meta Petra

A dissertation presented to the
Graduate School of Arts and Sciences
of Washington University in
partial fulfillment of the
requirements for the degree
of Doctor of Philosophy

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ABSTRACT OF THE DISSERTATION

Coping with Intimate Partners' Substance Use and Gambling Problems:

The Role of Intimate Partner Violence (IPV)

by

Megan Meta Petra

Doctor of Philosophy in Social Work

Washington University in St. Louis, 2014

Professor Renee M. Cunningham-Williams, Chair

Intimate partners of the estimated 30.6 million United States residents with substance and/or gambling problems (SGP) experience significant stress, such as disrupted family life, financial trouble, and increased risk for related problems such as intimate partner violence (IPV). This results in considerable distress and physical/mental health problems. Though SGP are often chronic, the treatment rate is low, and there is little help available for intimate partners of those with untreated SGP. Before we can create effective assistance and empowerment programs for intimate partners of people with SGP, we must understand the function of coping and social support in the task of dealing with a partner's SGP, as well as the role of IPV in that process. To this end, 222 female intimate partners of people with SGP were recruited from the community to complete an online survey. IPV was common, with over half of participants reporting experiencing violence/abuse and/or coercive control perpetrated by their partners. Aim 1 analyses investigated relationships between burden of SGP, IPV, coping, social support, psychological distress, and quality of life. Burden of SGP was associated with high psychological distress and low quality of life. For Aim 2, mediation analyses were used to

determine how use of coping strategies and receipt of social support function in the relationship of burden of SGP to psychological distress and quality of life. Specific coping strategies (engaged, tolerant, withdrawal) and types of social support (informal, positive, negative) functioned in different ways, predicting both lessened and increased psychological distress and quality of life. For Aim 3, moderated mediation analyses investigated the function of IPV to the relationship of burden of SGP to psychological distress and quality of life. Here, the two aspects of IPV (violence/abuse and coercive control) had different effects on mediated paths through coping and social support. Implications of results for social work research, practice and policy are discussed.

Chapter 1: Introduction

Problem Statement

Intimate partners of those with substance use and/or gambling problems (SGP) experience significant distress and physical/mental health problems (Dowling, Rodda, Lubman, & Jackson, 2014; Ray, Mertens, & Weisner, 2007; Tepperman, 2009), financial trouble (Gaudia, 1987), and risk for relationship dissolution (Gerstein et al. 1999; Orford et al., 2005). As SGP are often chronic issues, intimate partners may face these related problems over a long time period. Intimate partners of people with SGP are also more likely to experience other problems such as intimate partner violence (IPV), though IPV is not necessarily caused by SGP (Muelleman, DenOtter, Wadman, Tran, & Anderson, 2002). Because IPV is an additional stressor, it may add to the difficulties faced by intimate partners in these already-overburdened partnerships.

Millions of adult individuals must cope with the effects of their partner's SGP: in the U.S. alone, 8.5% of the population has a current substance use disorder (22.2 million; Substance Abuse and Mental Health Services Association [SAMHSA], 2013), while 1.2% meet criteria for gambling disorder (3.8 million; Stucki & Rihs-Middel, 2007) and an estimated 2.2% suffer from sub-clinical gambling problems (Welte, Barnes, Wieczorek, Tidwell, & Parker, 2001). Note that these percentages are not additive, as some people meet criteria for both a substance use disorder and gambling disorder. All cited prevalence studies used the previous Diagnostic and Statistical Manual IV (DSM-IV) diagnostic criteria rather than the current DSM 5 criteria (American Psychiatric Association [APA], 2013). It is estimated that each person with a SGP will affect as many as 10 others including intimate partners (Productivity Commission, 1999). With millions affected by their loved one's SGP, it is clear that the effects of SGP on intimate partners represent a significant public health problem.

Substance use disorders and gambling disorder are chronic disorders, typically lasting years (Dennis, Scott, Funk, & Foss, 2005; Productivity Commission, 1999), and few of those who have current substance use disorders/gambling disorder accessing treatment in any given year (e.g., <13% of people with alcohol use disorders and even fewer with gambling disorder; Hasin et al., 2007; Slutske, 2006). Thus, many intimate partners must face the chronic stressors caused by SGP over a period of time. With the exception of mutual support groups such as Al-Anon and Gam-Anon, programs to help intimate partners cope with the burden of their partner's SGP are rarely available (Copello & Orford, 2002).

IPV is also a severe, often-chronic stressor which results in an estimated \$2.3 – 7.0 billion in yearly mental and physical health costs to (primarily female) victimized partners (Brown, Finkelstein, & Mercy, 2008). Like SGP, IPV is all-too-common: past-year estimates of the prevalence of male-to-female IPV range from 1.3 – 13.6% (Schafer, Caetano, & Clark, 1998; U.S. Department of Justice [DOJ], 2000, 2001), with one national study finding that nearly 30% of U.S. children live in a home in which IPV has occurred in the past year (McDonald, Jouriles, Ramisetty-Mikler, Caetano, & Green, 2006). Moreover, the risk for IPV is as much as 10.5 times higher for female intimate partners of men with a substance use disorder or gambling disorder than female intimate partners of men without substance use disorders/gambling disorder (Muelleman et al., 2002). (Note that, although substance use may increase the risk for IPV in female same-sex intimate relationships, reliable data for rates of IPV in same-sex intimate relationships are not yet available, nor are data addressing the impact of SGP on IPV in same-sex intimate relationships available [West, 2002].) Because programs to help IPV-affected intimate partners (e.g., violence cessation programs for batterers or shelters for intimate partners and

children) do not meet the level of need for them (Goodman, Smyth, Borges, & Singer, 2009), many IPV-affected female intimate partners must cope with the situation over time.

This dissertation will focus on female intimate partners for several reasons. First, because SGP are more common in men than women (Gerstein et al., 1999; Hasin, Stinson, Ogburn, & Grant, 2007), it is expected that there are more female than male intimate partners of people with SGP. Moreover, most of the research on the increased risk for IPV in intimate partners of people with substance use disorders/gambling disorder has documented the scope of this problem with female intimate partners of men with substance use disorders/gambling disorder. Therefore, focusing on female intimate partners will provide knowledge about a large group of people who must cope with a partner's SGP and IPV.

Definitions

This dissertation will study female intimate partners of people with SGP varying in severity from sub-clinical problems to diagnosable substance use disorders and/or gambling disorder. The decision to include intimate partners of people with sub-clinical substance and/or gambling problems in addition to intimate partners of people with diagnosable substance and/or gambling problems was made because problematic gambling or substance use can be stressful for female intimate partners whether or not the SGP meets criteria for a psychiatric diagnosis (Copello, Templeton, & Powell, 2010). Furthermore, typical participant inclusion criteria for current research in the field (Orford, et al., 2005) merely require that the alcohol, drug or gambling behavior is a "major source of distress" for the female intimate partner (p. 69).

Including intimate partners of people with gambling problems as well as intimate partners of people with substance problems reflects the current understanding of SGP, as defined by the

American Society of Addiction Medicine (ASAM): “Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry... This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors” (ASAM, 2012, paragraph 1). Moreover, the APA’s move to classify substance use disorders and gambling disorder together in the Substance Use and Addictive Disorders category for Diagnostic and Statistical Manual 5 (APA, 2013) is another indication that it is appropriate to study intimate partners of people with substance and/or gambling problems in a single dissertation. Thus, for purposes of this dissertation, SGP will consist of substance use disorders, gambling disorder, and sub-clinical problematic substance use or gambling. The female’s intimate partner will be referred to as the person with SGP.

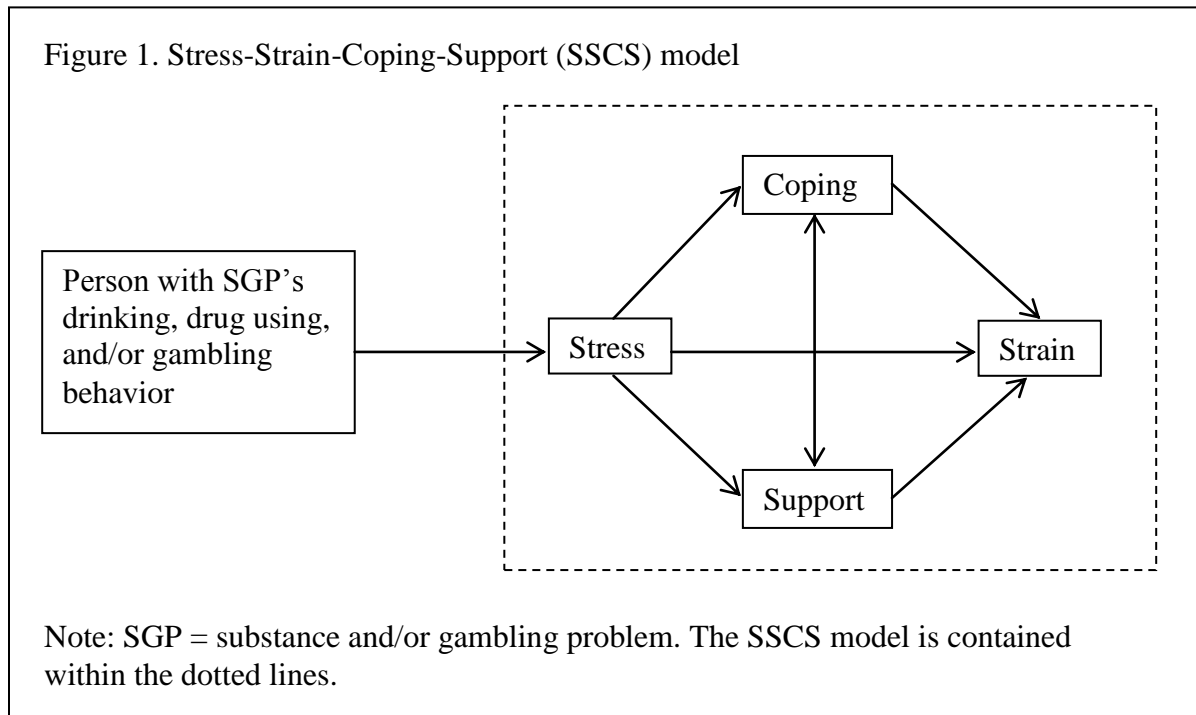
According to the World Health Organization’s (WHO) definition, IPV is “behavior within an intimate relationship that causes physical, sexual or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse and controlling behaviors” (WHO, 2010, p. 11). For purposes of this dissertation, IPV will refer to physical, sexual, or psychological/emotional abuse, and/or coercive control perpetrated by the person with SGP.

Coping with a Partner’s Substance and/or Gambling Problem (SGP)

Stress and coping theory has been used to understand the task of coping with a partner’s SGP. According to classic stress and coping theory (Folkman & Lazarus, 1980), coping is an attempt to deal with situations that are judged to be beyond one’s abilities to handle. Current work in the field focuses on coping with chronic stressors such as providing care for a seriously ill relative. Researchers note that each type of chronic stressor poses unique challenges (Biegel, Milligan, Putnam, & Song, 1994; Northfield & Nebauer, 2010). Furthermore, contextual

elements such as family composition and responsibilities, as well as available resources are relevant to the task of coping with the chronic stressor and achieving quality of life (Lim & Zebrack, 2004; Sabina & Tinsdale, 2008; Sales, 2003; Saunders, 2003).

Similar work into understanding the process of coping with an intimate partner's SGP has resulted in the Stress-Strain-Coping-Support model (SSCS; see Figure 1) (Orford, Copello, Velleman, & Templeton, 2010). According to this model, the behavior of the person with SGP creates a stress or burden on intimate partners, who accordingly experience strain (e.g. psychological distress, poor quality of life, and/or health problems). Use of coping strategies and



receipt of social support may help intimate partners to experience less strain than they would in the absence of social support and coping. Though in general the SSCS model parallels the literature on coping with other chronic stressors, members of Orford's research group have long considered contextual elements other than the availability of social support to be largely

immaterial to the intimate partner's task of coping with the SGP (1998, 2005). However, SSCS theorists have begun to explore contextual elements such as cultural norms (Orford, Velleman, Copello, Templeton, & Ibanga, 2010). Though they now acknowledge that family circumstances and resources may affect the coping process (Orford, Copello, Velleman, & Templeton, 2010), to date their explorations of contextual elements have not directly addressed IPV.

When female intimate partners experience IPV perpetrated by the person with SGP, they must consider the risk of violence when determining how to best cope with the SGP. Moreover, in the rich literature about how women cope with IPV, the importance of context to the coping process (Centers for Disease Control & Prevention [CDC], 2013) is emphasized, and in particular the suggestion that perceived helpfulness of coping strategies may be important to understanding their significance to the coping task is noted (Bauman, Haaga, & Dutton, 2008). Because the risk that a female intimate partner will experience IPV perpetrated by her (male) partner is as much as 50 times higher than in partnerships where no SGP is present (Muelleman et al., 2002), and because IPV is problematic in its own right, it is critical that this contextual element be investigated for female intimate partners of people with SGP.

Research Aims

Improving our understanding of the role of IPV in the process of dealing with a partner's SGP is necessary before effective programs to aid and empower female intimate partners of people with SGP can be designed and implemented. To this end, this dissertation has three research aims (see Figure 2):

Aim 1: to describe the relationships among burden of SGP, IPV, coping, perceived helpfulness of coping, social support, psychological distress, and quality of life for female intimate partners of people with SGP.

H1a: Greater burden of partner's SGP (stress) will be associated with higher levels of IPV among intimate partners.

H1b: Among intimate partners, greater burden of partner's SGP (stress) and higher levels of IPV will be associated with higher psychological distress (strain) and lower quality of life (strain).

H1c: Greater social support will be associated with intimate partners' higher use of all types of coping strategies.

H1d: Greater burden of partner's SGP (stress) will be associated with higher use of total and subscale coping strategies, lower perceived helpfulness of total and subscale coping strategies, and receipt of less total and subscale social support among intimate partners.

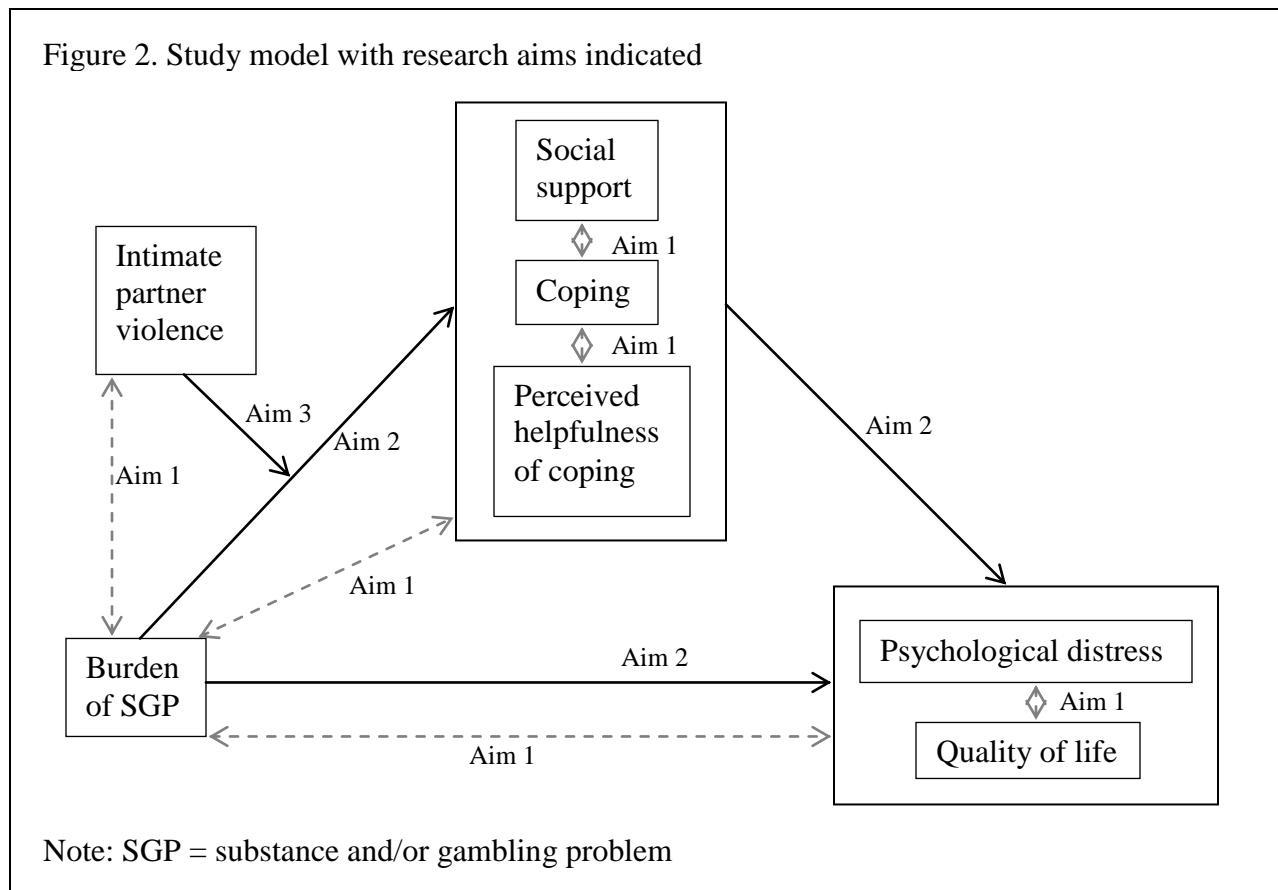
Aim 2: to investigate the functions of coping, perceived helpfulness of coping, and social support in the relationship between burden of SGP (stress) and outcomes (psychological distress [strain] and quality of life [strain]) for female intimate partners of people with SGP.

H2: Among intimate partners, burden of SGP (stress) will indirectly affect psychological distress (strain) and quality of life (strain) via use of total and subscale coping strategies (mediator), receipt of total and subscale social support (mediator), and perceived helpfulness of coping strategies (mediator). (That is, through use of coping strategies, receipt of social support, and greater perceived helpfulness of

coping strategies, the negative effects of burden of SGP on psychological distress and quality of life will be lessened.)

Aim 3: to determine the function of IPV in the relationships between burden of SGP (stress) and outcomes (psychological distress [strain] and quality of life [strain]) for female intimate partners of people with SGP.

H3: There will be a differential indirect effect of SGP (stress) on psychological distress (strain) and quality of life (strain) through total and subscale coping (mediator), dependent on IPV. (That is, IPV will moderate the indirect relationship between burden of SGP and outcomes.)



Significance of Research to Social Work Practice, Policy, and Research

This dissertation is the first step in a program of research into reducing harm related to the interlocking problems of SGP and IPV. This larger program of research is consistent with the National Institute of Drug Abuse's (NIDA) 2010-2014 Strategic Plan, which declares "We must continue to aggressively meet these challenges and work to prevent the often devastating consequences of drug abuse and addiction... which include family disintegration, loss of employment, accidents, failure in school, and domestic violence and other crimes," (NIDA, 2010, p.3) as well as the National Institute on Alcohol Abuse and Alcoholism's (NIAAA) 2009-2014 Strategic Plan to "deliver high-quality care consistent with developmental needs of patients and their families," (NIAAA, 2009, p.9) It is also responsive to the Centers for Disease Control and Prevention's (CDC) National Center for Injury Prevention and Control's 2009-2018 research agenda focusing on "interventions for persons exposed to ... IPV to reduce risk for associated negative health consequences" (CDC, 2009, p. 89).

The goal of this larger program of research will be to inform social work practice, research, and policy so that the needs of female intimate partners of people with SGP are served. Ultimately this early research will help inform creation and dissemination of evidence-based programs aimed to help female intimate partners to effectively cope with both SGP and IPV. In addition, it is anticipated that the greater understanding of both SGP and IPV, along with later research to demonstrate the effectiveness of interventions to reduce harm for intimate partners, will lead to the adoption of policies to make assistance programs available to intimate partners of people with SGP. One way this could occur is via inclusion of harm reduction for intimate partners of people with SGP as a policy priority for the National Institutes of Health.

Finally, though online research has become common with no-cost, easy access to online software such as Survey Monkey, the prime investigator (PI) knows of very little research with intimate partners of SGP that has been conducted online (c.f. Ibanga, 2010). The procedural knowledge of online recruitment and data collection gained through this dissertation will pave the way for further use, and extensions of, online data collection in research.

Chapter 2: Literature Review

Substance and/or Gambling Problems (SGP)

Consequences and related problems such as intimate partner violence (IPV). SGP have serious consequences for female intimate partners. SGP can result in a chaotic, unpredictable home life (Darbyshire, Oster, & Carrig, 2001). Families in which a member has a SGP tend to show high levels of conflict, low cohesion among members, and poor problem-solving skills (Ellis, Zucker, & Fitzgerald, 1997). Family rituals are disrupted (Orford et al., 2005; Steinglass, Bennett, Wolin, & Reiss, 1987), and it is common for contacts with extended family to be weakened, thus isolating intimate partners (Dickson-Swift, James, & Kippen, 2005; Hodgins, Shead, & Makarchuk, 2007; Orford, et al., 2005). Intimate partners find themselves shouldering the bulk of the caregiving for the person with SGP, as well as managing family responsibilities neglected by the person with SGP. Management of these tasks in addition to the intimate partner's usual responsibilities depletes the intimate partner's reserves (Biegel, Ishler, Katz, & Johnson, 2007; de Civita, Dobkin, & Robertson, 2000; Steinhausen, Willms, & Spohr, 1993). As a result of the chronic stresses of the SGP, intimate partners often exhibit emotional distress and poor health (Orford, Velleman, Natera, Templeton, & Copello, 2013), while economic difficulties and marital and other intimate relationship trouble are also common (Dowling et al., 2014). Each of these will be described below.

Intimate partners experience mental and physical health difficulties ranging from mild to severe. Common emotional responses to living with the person with SGP include embarrassment, anger, confusion, stress, shame, anxiety, and depression (Gaudia, 1987; Heineman, 1987; Hodgins, Toneatto, Makarchuk, Skinner, & Vincent, 2007; Lorenz & Yaffee, 1988, 1989; Moos, Finney, & Cronkite, 1990). In one study of female intimate partners of people

with gambling disorder, these emotional difficulties were so severe that 84% considered themselves to be emotionally ill (Lorenz & Shuttlesworth, 1983). These stress-related emotional sequelae may be especially severe if the intimate partners have experienced other adverse life events or are dealing with additional difficulties such as ill children (Moos, Finney, & Cronkite, 1990). Stress-related physical health problems are also widespread in intimate partners (Lorenz & Yaffee, 1988, 1989; Patford, 2009). In one study of members of a large health maintenance organization, family members of people with alcohol use disorders had more physical illnesses and diagnoses than family members of those without an alcohol use disorder. Use of health care, and costs of the care, were higher for those in families with an alcohol use disorder-affected member (Ray, Mertens, & Weisner, 2007, 2009). Physical health problems in intimate partners have also been attributed to a lack of money to pay for essentials such as health care (Gaudia, 1987; Orford et al, 2005).

In addition to forgoing health care, families of people with SGP who are short of money because of the SGP may also lack money to pay for other essentials such as food, transportation, or housing (Gaudia, 1987; Lorenz & Yaffee, 1988). SGP are a financial drain on families not only because money spent on substances or gambling is not available for other necessities, but also because of other associated costs such as loss of jobs, treatment costs, and legal entanglements (Gerstein, Foote, & Ghadialy, 1997; Grinols, 2004). These are among the substance use-related harms to individuals with SGP and their family members which were ranked by Nutt, King, and Phillips (2010) for the United Kingdom. Though there is substantial evidence that SGP are harmful (c.f. Degenhardt et al., 2013; US Burden of Disease Collaborators, 2013; Whiteford et al., 2013), quantifying the harm of SGP which falls on

families is complicated, due in part to the way that such harms are interconnected with social, behavioral, and environmental elements (Rolles & Measham, 2011).

Nonetheless, a number of authors have created estimates of the financial costs of SGP to society and family members of those with SGP. Harwood, Fountain, and Livermore (1999) estimated the social costs of alcohol use (updated by Harwood, 2000). In both publications, the authors noted that the bulk of the societal costs of alcohol use disorders and subclinical problems with alcohol – approximately 45% - are borne by people with alcohol use disorders and their families. Similarly, much of the societal cost of gambling disorder is borne by gamblers and their families. The Gambling Impact and Behavior Study estimated that 31% of the lifetime costs of gambling disorder are borne by gamblers and their families (Gerstein et al., 1999), while Grinols (2004) estimates that 22% of the costs fall on families.

Finally, SGP can have significant impacts on family relationships beyond those attributed to finances (Dowling et al., 2014). Divorce and the dissolution of non-marital relationships are not uncommon in SGP-affected families (Gerstein et al. 1999; Orford et al., 2005), although some intimate partners may remain in the relationship because they lack the money to leave (Dickson-Swift et al., 2005; Lorenz & Shuttlesworth, 1983). Even when neither partner wishes to end the relationship, however, strained spousal relationships are the norm in SGP-affected relationships (Dowling, Smith, & Thomas, 2007; Hodgins et al., 2007; Orford et al., 2005). The strain may include loss of trust (Tepperman, 2009), poor communication (Lorenz & Yaffee, 1986), sexual problems (Orford et al., 2005), and a low level of couple embeddedness (i.e., involvement in each other's lives and social networks; Tepperman, 2009).

In summary, SGP can disrupt family life and the spousal relationship, strain finances, and lead to physical and mental health problems. The cumulative effects of these consequences of

SGP on intimate partners can be understood using Cumulative Risk Theory (Thoits, 2010).

According to Cumulative Risk Theory, experiencing multiple stressors in different aspects of life is more predictive of poor physical or mental health outcomes than is the presence of any one stressor. While the effects of SGP on intimate partners can be substantial, intimate partners may also be at increased risk for other problems, especially IPV (Muelleman et al., 2002). While IPV is not caused by SGP, female intimate partners of people with SGP are nonetheless at increased risk for experiencing IPV, as well as at increased risk that IPV will be more severe if it occurs when their male partner has been using alcohol or drugs (Graham, Benards, Wilsnack, & Gmel, 2011).

While IPV perpetration is predicted by male partners' substance use, especially heavy episodic substance use (Thompson & Kingree, 2006), researchers have found mixed associations between females' alcohol use and IPV victimization (Klostermann & Fals-Stewart, 2006). One reason for the mixed associations may be that it is not uncommon for both partners in a relationship to be using alcohol or substances prior to an incident of IPV (Klostermann & Fals-Stewart, 2006). The mutual use may be a reflection of assortative mating – the tendency to choose a partner whose alcohol or substance use is similar to one's own – and/or spousal influence, the tendency of each partner's alcohol or substance use to influence the other partner's alcohol or substance use (Agrawal et al., 2006; Grant et al., 2007). Moreover, female intimate partners who experience IPV may then begin to use alcohol or substances as a way to cope with the effects of IPV (Temple, Weston, Stuart, & Marshall, 2008). In summary, while researchers have found it difficult to determine whether females' alcohol or substance use has any influence on subsequent IPV victimization, nonetheless researchers note that females' substance use may create vulnerability for being victimized (Temple et al., 2008).

Scope of the problem: prevalence of substance and/or gambling problems (SGP) and magnitude of increase in risk for intimate partner violence (IPV). Thousands of people in the United States and around the world live with a spouse or partner's SGP. In the U.S. alone, 22.2 million people can be classified with a current substance use disorder, 8.5% of the adult population (SAMHSA, 2013). Moreover, 3.8 million adults (1.2% of the adult population) meet diagnostic criteria for gambling disorder (Stucki & Rihs-Middel, 2007), with an additional estimated 1.9% experiencing gambling problems that do not yet meet the diagnostic threshold for gambling disorder. Comorbidity – existence of more than one disorder in the same person during a specified time period (Kushner, Abrams, & Borchardt, 2000) – between substance use disorders and gambling disorder is high, with estimates of prevalence of substance use disorders ranging from 34-73% in those with gambling problems (Gerstein et al., 1999; Kessler et al., 2008; Lorains, Cowlishaw, & Thomas, 2011; Petry, Stinson, & Grant, 2005). Conversely, 2.2% of those with alcohol use disorders and 1.6% of those with drug use disorders can also be classified as problem or pathological gamblers (Petry, Stinson, & Grant, 2005). Comorbidity of mental health disorders such as depression in people with SGP is also common (Grant et al., 2004; Huang et al., 2006; Petry, Stinson, & Grant, 2005).

An implication of the millions of people with SGP is that even larger numbers of others may be affected by a family member's SGP. In the National Longitudinal Alcohol Epidemiologic Survey, a nationally representative study of adult United States residents, Dawson and Grant (1998) found that more than 50% of study participants reported that they had a close relative with an alcohol use disorder. While similar statistics are not available for gambling disorder, estimates are that up to 10 close others, including intimate partners, are affected by

each person with gambling disorder (Productivity Commission, 1999). Yet few people with current SGP (less than 13%) receive treatment in any year, with the result that many intimate partners must face the chronic stresses of SGP (Cunningham, 2005; Hasin et al., 2007; Slutske, 2006).

These chronic stresses of SGP may be compounded by associated problems such as IPV. As stated in the previous section, IPV is associated with both substance and gambling problems (Brasfield et al., 2011; Parrott, Drobles, Saladin, Coffee, & Dansky, 2003). The odds that a female intimate partner will experience IPV are 3-6 times as high for those with a substance use disorder-affected partner than with an unaffected partner (Fals-Stewart, Golden, & Schumacher, 2003; Muelleman et al, 2002). The risk for IPV is higher in female intimate partners of men with gambling disorder (Odds Ratio = 10.5; Muelleman et al, 2002); for female intimate partners of men with comorbid substance use disorders and gambling disorder, the risk for IPV is higher yet (O.R. = 50.4; Muelleman et al, 2002). (Note that, although substance use may increase the risk for IPV in female same-sex intimate relationships, reliable data for rates of IPV in these relationships are not yet available, nor are data addressing the impact of SGP on IPV in same-sex intimate relationships available [West, 2002].) When the increased risk of IPV for intimate partners of people with SGP is combined with estimated past-year rates of male-to-female IPV in the general population of 1.3 – 13.6% (DOJ, 2000, 2001; Schafer, Caetano, & Clark, 1998), it is clear that many female intimate partners of people with SGP must cope with IPV in addition to the SGP. Moreover, the risk for IPV does not necessarily cease with dissolution of the relationship (Holtzworth-Munroe, Beck, & Applegate, 2010).

Availability of help for intimate partners. Little help is available for intimate partners of people with untreated SGP (Copello & Orford, 2002) other than twelve-step mutual-help programs for people affected by a family member's alcohol, drug, or gambling problem (Al-Anon, Nar-Anon, and Gam-Anon, respectively). While private health insurance is mandated to pay for treatment for substance use disorders, this mandate does not provide for treatment for intimate partners of people with substance use disorders in their own right and may not apply to treatment of gambling disorder at all. (As the Affordable Care Act mandates treatment coverage for substance abuse rather than for addictions, policy about coverage for gambling disorder has yet to be clarified.) Though some states, including Missouri, offer free treatment and assistance for gambling disorder and for intimate partners of people with gambling disorder, this is not true in every state and the availability of assistance for intimate partners of people with gambling disorder throughout the United States is simply unknown at this time (K. White, personal communication, June, 2010). (Note that intimate partners may, of course, access private therapy or counseling for other reasons [e.g., depression] that qualify for coverage by their insurance, or may pay privately for therapy for any reason whatsoever.)

When the person with SGP is willing and able to attend treatment, couples-based substance or gambling treatment such as Behavioral Couples Treatment has been shown to be beneficial to intimate partners as well as people with SGP (Fletcher, 2013; O'Farrell & Clements, 2013; Petra, 2010). However, group-based substance or gambling treatment for people with SGP (not including intimate partners) is a much more common treatment model (Copello & Orford, 2002). Family psychoeducation is sometimes available to intimate partners whose loved ones attend group-based substance or gambling treatment (Center for Substance Abuse Treatment, 2004), but this intervention is not evidence-based. Moreover, the majority of intimate

partners do not have access to this resource because their loved ones are not in treatment (Cunningham, 2005; Hasin et al., 2007).

The severity of effects of SGP on intimate partners (especially those who also experience IPV) and the dearth of evidence-based programs available to intimate partners, point to an opportunity and need for the development of such programs. Ideally, programs would parallel those available to family members of people with severe and persistent mental illness (e.g., Journey of Hope, available through the National Alliance for the Mentally Ill), which combine education about the stressor with skills training on effective coping (Glanville & Dixon, 2005). An overview of coping theory as it applies to intimate partners, and of gaps in current knowledge, will illustrate what additional knowledge will need to be generated before such evidence-based programs can be designed, implemented, and evaluated.

Coping

Classic stress and coping theory. Stress and coping theory (Folkman & Lazarus, 1980) provides a basis for understanding the ways in which intimate partners respond to the stress caused by their partner's SGP. Focusing on understanding how people usually cope with distinct stressful situations, Folkman and Lazarus (1980) posited that choice of coping strategies depends on an appraisal of the situation and an evaluation of the utility of different types of coping strategies. In the face of an uncertain situation, people will conduct a primary appraisal to determine if the situation poses a threat to them or their family. If a threat is detected, then a secondary appraisal determines if the person has the skills and resources to deal easily with the situation. Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen (1986) described coping as

behavior that people use to deal with the demands of a stressful situation – that is, one that they have judged to require more skills or resources than they currently possess.

Various coping theorists have grouped or categorized specific coping strategies into typologies. While typologies vary among theorists (c.f. Amirkhan, 1990; Endler & Parker, 1990; Roger, Jarvis, & Najarian, 1993), the following types of coping strategies are most common. Problem-focused coping strategies (also called active, task-focused or instrumental) are those which people use in an attempt to ameliorate the problem at hand (for example, finding and pouring out alcohol hidden by a partner with SGP, scheduling activities including the partner with SGP at times which will preclude their participation in usual drinking or gambling activities, or helping the partner with SGP to enroll in a treatment program). Conversely, instead of attempting to change a situation, people can use emotion-focused coping strategies to regulate their emotions about the situation (Folkman & Lazarus, 1985). When stressors must be dealt with but are judged to be beyond a person's ability to remedy or to tolerate emotionally, people may choose avoidance-focused coping. This kind of coping – putting off dealing with a situation until tomorrow, for example – may give a short respite from active problem- or emotion-focused coping but does not remove the stressor or ameliorate its effects (Amirkhan, 1990; Endler & Parker, 1990). Finally, detachment-focused (disengagement) coping strategies consist of attempting to become independent from the stressor and any emotions associated with it (Roger, Jarvis & Najarian, 1993). This differs from avoidance-focused coping in that detachment-focused coping is an active attempt to remove oneself from the stressor rather than a way to passively tolerate a stressor.

Different types of coping are not viewed as equally useful, though there is not agreement among coping theorists as to which types of coping are useful and which are not useful. Some

theorists view certain types of coping (e.g., problem-focused, detachment-focused) as adaptive, whereas other types (e.g., emotion-focused, avoidance-focused) are considered maladaptive (Roger, Jarvis, & Najarian, 1993). Other theorists do not consider particular coping strategies to be universally helpful or unhelpful, but posit that the usefulness of different types of coping strategies depends on the stressor. For instance, if a stressful situation can be improved then problem-focused coping is more adaptive. However, when a person has very little control over a chronic stressor, emotion-focused coping may be more useful (Auerbach, 1989). Some coping theorists extend this idea to include situational elements beyond the stressor itself. For instance, Sarason, Levine, Basham, and Sarason (1983) found that people who enjoyed high levels of social support were able to cope more effectively with stressful situations than those with lower levels of social support. In summary, though much research has been conducted about coping with stressful situations, there is not yet clarity in the coping field about whether any specific coping strategy can be considered adaptive in a particular stressful situation.

Coping with chronic stressful situations. While early stress and coping researchers focused on understanding how people usually cope with stressful situations encountered in everyday life, more recent stress and coping theory development focuses on unavoidable, chronic stressful situations that cannot necessarily be ameliorated via “usual” means. Instead, specific coping strategies are used to deal with the complex demands of each type of chronic stressor (Biegel et al., 1994; Northfield & Nebauer, 2010). This research into coping with chronic stressors gives a template for similar work which must be done in order to better understand the task of coping with a partner’s SGP. As the literature is especially well-developed for people

who are coping with caregiving for a relative with a chronic illness (e.g., cancer, schizophrenia, or Alzheimer's disease), this literature will be used as an example.

Researchers have identified a number of elements which are essential to the task of coping with providing care for an ill relative. They include: burden, the importance of contextual (situational) features to the coping process, caregiver outcomes, and help for caregivers. As these elements may also apply to intimate partners of people with SGP, each will be described in turn.

The concept of caregiver burden is multidimensional, including the nature of the ill family member's needs for care given their illness, the addition of family responsibilities once carried out by the ill family member, disruptions to the caregiver's work, and the effects of the entire situation on the care provider and the family as a whole (Sales, 2003). Like other aspects of coping with chronic stressors, burden is usually measured via customized scales (Tessler & Gamache, 1993; Zarit, Reever, & Bach-Peterson, 1980). The direct caregiving tasks, including providing physical care and dealing with problematic behaviors or memory deficits, are determined by the nature and severity of the relative's illness. However, aspects of the burden other than the direct care responsibilities are determined by the familial situation (context) (Lim & Zebrack, 2004; Sales, 2003; Saunders, 2003). For example, additional family responsibilities which must be assumed by the caregiver are dependent on family composition (e.g., number and ages of children) and the pre-illness division of household responsibilities between the caregiver and the ill family member. Additionally, disruption of the caregiver's employment may depend on the nature, hours, flexibility, and location of their outside job (Lim & Zebrack, 2004; Sales, 2003; Saunders, 2003).

Not surprisingly, the burden of care can have deleterious effects on the caregiver. One such effect is caregiver distress (e.g., depression or anxiety), which is commonly measured in

studies of caregiving (Lim & Zebrack, 2004; Saunders, 2003). The caregiver's quality of life is also at risk for caregivers with a heavy burden of care (Lim & Zebrack, 2004; Sales, 2003). A multifaceted concept, quality of life encompasses a number of aspects of wellbeing including the stresses of caregiving, the caregiver's health and spirituality, and general outlook on life (Sales, 2003).

Risk for caregiver distress and low quality of life can be lessened via help for caregivers. In contrast to the paucity of interventions created for intimate partners of people with SGP, many interventions for caregivers of people with chronic illnesses have been developed. Though there is still much unmet need for such programs (Dixon, Adams, & Lucksted, 2004), family education programs like those available through the National Alliance for the Mentally Ill help reduce burden felt by caregivers (Glanville & Dixon, 2005).

The National Alliance for the Mentally Ill's Family-to-Family program is a 12-week course which is led by trained facilitators who themselves are caregivers for people with mental illness (Burland, 1998). In a number of studies, Family-to-Family has been shown to impart knowledge about mental illness and the mental health service system, improve caregiver acceptance of the mental illness, empowerment, and caregiving skills, and reduce caregiver psychological distress and burden (Dixon et al., 2004, 2011; Lucksted, Stewart, & Forbes, 2008). Thus, Family-to-Family addresses a number of different aspects of the caregiving experience.

According to Schultz and Martier (2004), effective interventions for caregivers must mirror Family-to-Family in that they should act at several points in the stress-coping process. For instance, a caregiver support group could improve contextual factors via increasing social support, teach better caregiving skills and thus affect initial appraisal of the caregiver's abilities to cope with the situation, and encourage self-care as a way to cope. Attention to elements of the

experience which are specific to the stressor (e.g., stigma experienced by people with mental illnesses and their families, or ambivalence over whether the person with SGP is suffering from a disorder versus choosing to indulge in the SGP) must also be addressed (Tessler & Gamache, 1993).

Similar multifaceted interventions need to be developed and tested for intimate partners of people with SGP. They might teach intimate partners about SGP, provide an opportunity for intimate partners to talk about their experiences, explore coping strategies, and improve social support for intimate partners. In summary, the literature about coping with chronic illness in a family member is salient to research on how intimate partners may effectively cope with their partner's SGP. The chronic stressor is a burden on caregivers, and may differ depending on situational elements. Important caregiver outcomes include psychological distress and quality of life. These and other aspects of the coping process must be assessed via customized measures. Multifaceted interventions to help caregivers of people with chronic illnesses have been developed, and may guide development of programs to help intimate partners of people with SGP. Given this review of the coping literature, the next section will focus on current knowledge about how female intimate partners cope with the SGP.

Coping in Female Intimate Partners of People with Substance and/or Gambling Problems (SGP)

The Stress-Strain-Coping-Support (SSCS) model. There are many parallels between the problem of coping with a partner's SGP and the chronic, stressful situation of caregiving for an ill relative, despite public questions of whether SGP are illnesses or choices (c.f. O'Malley, 2008). SGP constitute a chronic stressor for intimate partners (Cunningham, 2005; Hasin et al.,

2007), with an unpredictable course (Lesieur & Custer, 1984). People with SGP may require caregiving from intimate partners (Biegel et al., 2007), and are likely to exhibit a range of problematic behaviors. Examples of these behaviors are concealing or lying about the extent of the substance use or gambling, using household funds for alcohol, drugs or gambling, being late or absent from family activities, initiating arguments with the intimate partner, driving under the influence, and perpetrating IPV (Krishnan & Orford, 2002; Orford, et al., 2005).

In keeping with the parallels between coping with a person with SGP and coping with other chronic stressors such as caregiving for a chronically ill relative, current knowledge about intimate partners of people with SGP is based on classic stress-and-coping theory. The Stress-Strain-Coping-Support model (SSCS), which applies general stress-and-coping theory to the stresses of living with a person with SGP, is currently the foremost model (Orford et al., 2005). According to the SSCS theory, SGP is a stressor on intimate partners. This stressor results in intimate partners experiencing strain, defined as psychological distress such as depression or anxiety, physical health problems, economic insecurity, and other negative sequelae of SGP. In response to the stress of the addiction, intimate partners use coping strategies and seek out social support. Consequently, use of effective coping strategies and receipt of social support can attenuate the strain experienced by intimate partners of people with SGP.

In an early version of the SSCS model, coping and social support were viewed as moderators of the stress-strain relationship (Orford, 1998; Orford and Dalton, 2005). Because early tests of the SSCS model resulted in equivocal support for the idea that coping and social support moderated the stress-strain relationship, Orford and colleagues (2010) proposed a modification of the SSCS model. Now, coping and social support have been conceptualized as mediators between stress and strain (see Figure 1 in Chapter 1) (Orford et al., 2010). This current

conceptualization of the SSCS model has undergone only preliminary validation (Arcidiacono et al., 2010), which was done without benefit of currently accepted statistical methods of testing for mediation (c.f. Hayes, 2009; MacKinnon, 2008). Therefore, research investigating the current SSCS model is necessary.

Orford and colleagues (1998) focus on coping behaviors that are directed towards the person with SGP:

Our interest centers on the forms of interpersonal interaction that significant others have with excessive drinkers and drug-takers. We are less interested, on the other hand, in the behavioral and mental ways that relatives as individuals deal privately with the stress they are experiencing (p. 1811).

Intimate partners' overall use of coping strategies (number and frequency) is related to severity of the SGP (Orford & Dalton, 2005). Orford, et al. (2005) posit that coping strategies can be classified as one of three types: engaged coping (confronting the person with SGP via assertive, controlling, or emotional tactics), tolerant coping (putting up with the SGP via use of inactive, tolerant, or supportive tactics), and withdrawal coping (withdrawing from the SGP via use of avoiding or independent tactics). These types of coping have been measured with the Coping Questionnaire (Orford, Templeton, Velleman, & Copello, 2005), which includes coping strategies specific to coping with the problem of SGP. In keeping with classic stress and coping theory, Orford et al. (2005) do not consider engaged, tolerant, and withdrawal coping to be equally beneficial to intimate partners; instead, they posit that withdrawal coping is more helpful than engaged or tolerant coping.

The cross-sectional studies which led to this position (Hurcom, Copello & Orford, 1999; Orford et al., 2001) found that use of withdrawal coping strategies was inversely associated with

psychological distress, whereas use of both engaged and tolerant coping strategies was positively associated with psychological distress. On the basis of these studies, Orford and colleagues (Copello, Templeton, Orford, & Velleman, 2010) have created and begun to test an intervention for intimate partners (the Five-Step Method) which has the objective of reducing engaged and tolerant coping strategies. Pilot studies (Copello et al., 2010) have shown that a post-test reduction in use of engaged and tolerant coping strategies is associated with decreased distress in intimate partners. However, since no randomized controlled trials have been conducted to date, it is not possible to know whether intimate partners' reductions in distress are the result of changes in use of coping (Copello et al., 2010), or whether simply having contact with a professional who legitimized their experiences was responsible for the reduction in distress. Therefore, although coping and distress are clearly related, there is insufficient evidence to date for a causal relationship between coping and distress. Longitudinal studies of the function of coping in intimate partners, and controlled studies of the 5-Step Method, will be necessary in order to elucidate the relationship between coping, distress, and other elements of the SSCS model.

In addition to coping, Orford and colleagues (2010) posit that social support mediates the stress-strain relationship. That is, receipt of emotional, informational, instrumental, or companionship support may result in less psychological distress. For instance, Orford, and colleagues (2005) noted that intimate partners report feeling less distressed when friends support their decisions about how to deal with the SGP. However, not all kinds of social interactions are helpful (Orford et al., 1998). Some examples of unhelpful "support" include denying that the person with SGP has a problem, minimizing the effects of the SGP on the intimate partner, or undermining the intimate partner's decisions about how best to cope with the SGP (Orford et al., 1998).

As with coping, measures focusing on social support appropriate for minor everyday stressors do not include many of the specialized social support needs helpful for intimate partners of people with SGP (Petra, 2008). Due to the historical lack of a social support measure appropriate for intimate partners, there is little empirical evidence to date about the role of social support for intimate partners of people with SGP. However, a measure of social support (Alcohol, Drugs and the Family Social Support Scale) has recently been created (Toner & Velleman, 2014). Although it has only undergone initial validation to date, this scale has the advantage of including questions specific to support for the task of coping with a partner's SGP (e.g., expressing disapproval about the partner's problematic gambling or substance use behavior, but refraining from censuring the partner as a person [Krishnan & Orford, 2002]). Reliability, validity, and other psychometrics for this scale are needed so that researchers are able to make an informed decision about using this scale.

Intimate partner violence (IPV) as a situational factor. The SSCS model has many parallels with current knowledge about coping with other chronic stressors, but there are still some gaps in our knowledge about coping with a partner's SGP. One gap concerns the importance of situational elements to coping with a partner's SGP. Although Orford and colleagues (2005) acknowledge the importance of social support to the stress-strain process, they have stated that other situational factors are immaterial to coping: "family members facing drug or alcohol problems share much of the same experience irrespective of the drug, the relationship with the relative (with a parent, partner, or other) and the part of the world in which they live" (p. 170). Nonetheless, there are hints in the literature that factors such as available resources may be related to coping in intimate partners of people with SGP (Dickson-Swift et al., 2005). Perhaps in

reaction to these results, in more recent writings Orford and colleagues acknowledged that family circumstances and resources may affect how intimate partners cope with the SGP (Orford et al., 2010). To date, however, researchers have not determined which other situational factors may be salient to coping in intimate partners of people with SGP.

IPV is one situational factor that has not yet been fully studied in female intimate partners of people with SGP. Because risk that a female intimate partner will experience IPV perpetrated by the person with SGP is much higher than in families with no SGP (Muelleman et al., 2002), and because IPV is problematic in its own right, it is critical that this potentially important situational factor be investigated. Howells and Orford (2006) asked participants in one study whether they had experienced IPV, using a single question of whether the person with SGP was ever physically aggressive. They found that IPV was associated with a pattern of heavy episodic drinking in the people with SGP, and that IPV was also associated with higher distress in intimate partners. No bivariate analyses between IPV and other elements of the SSCS model were reported. Given that the study used a single-question measure of IPV, however, it is possible that a more careful definition of IPV would yield a deeper understanding of the salience of IPV to intimate partners of people with SGP.

Although conceptualizations of IPV has long been inclusive of physical violence, sexual violence, and psychological abuse (c.f. the Revised Conflict Tactics Scale: Straus, Hamby, Boney-McCoy, & Sugarman, 1996), IPV theorists have also noted the importance of coercive control as a motivator for episodes of violence (Stark, 2007; Tanha, Beck, Figueredo, & Raghavan, 2010). Stark (2007, 2009) conceptualizes coercive control as a means by which some people oppress and subjugate their intimate partners, and deny them the core human rights of autonomy and dignity. Although Stark acknowledges the severity of violence experienced by

victims of IPV (2007, 2009), he posits that the denial of liberty is equally damaging to those who experience coercive control.

While Stark's work (2007, 2009) focuses on theorizing about coercive control, Dutton and Goodman (2005) focus on the mechanisms by which violence is used to maintain control over the victim. Coercive control includes a coercive demand (e.g. an abusive partner may not allow or may limit their partner's contact with family members or friends), along with a threat of consequences such as violence if the demand is not met. Surveillance allows the abusive partner to determine whether the demand has been met; if not, violence serves to create the expectation of further consequences if future demands are not met. In this way coercive control may be present even in relationships without current violence, if a past act of violence has been sufficient to create obedience to the abusive partner's demands. Coercive control may also be a better predictor of distress, relationship conflict, and risk of severe injury than level or presence of physical violence (Beck & Raghavan, 2010). Although Dutton and colleagues created a comprehensive measure of coercive control (Dutton, Goodman, & Schmitt, 2006), no brief stand-alone measure exists for coercive control to date. Perhaps for this reason, empirical work on coercive control lags behind the body of work focusing on physical, sexual or psychological IPV.

The rich literature about how females cope with IPV can provide some guidance for designing studies of IPV in intimate relationships where there is a SGP. First, researchers have studied the importance of emotion-focused and problem-focused coping to the well-being of women experiencing IPV (Bauman et al., 2008; Goodman, Dutton, Weinfurt, & Cook, 2003). Moreover, they have also tested the functions of coping and social support for women experiencing IPV (Kocot & Goodman, 2003). In this 2003 study, problem-focused coping

interacted with social support: women who used problem-focused coping without the benefit of social support exhibited high levels of depression and post-traumatic stress disorder. Conversely, women who used problem-focused coping and received social support reported lower levels of depression and post-traumatic stress disorder. Although the cross-sectional nature of the study precludes determination of causality, the results point to the need for a focus on situational elements in the lives of intimate partners of people with SGP.

CDC acknowledges, via its social-ecological model, that situational factors important to the task of coping with IPV can be characterized as existing at a number of levels: individual, relationship/family, neighborhood/community, and society (CDC, 2013). Individual-level contextual factors that influence how a female copes with IPV include ethnicity, physical/mental health, education, employment, and social support (El-Khoury et al., 2004; Meyer, Wagner, & Dutton, 2010; Sabina & Tinsdale, 2008; Yoshihama, 2002). Important relationship- or family-level factors include severity of the violence, family income, and other available resources (Sabina and Tinsdale, 2008). Neighborhood characteristics such as poverty level also affect the task of coping with IPV (Burke et al., 2005), as do cultural/societal factors such as country of birth (Yoshihama, 2002). The socio-ecological model may serve as a guide to investigating situational factors such as IPV in intimate partners of people with SGP. The present study will measure some of these situational factors for descriptive purposes.

When considering which outcomes are pertinent to the task of dealing with a partner's SGP, once again the research on coping with IPV can be used for guidance. Like the literature on coping with caregiving for a chronically ill relative, the IPV coping literature considers psychological distress to be an outcome of interest (Kocot & Goodman, 2003; Krause, Kaltmann, Goodman, & Dutton, 2008). Furthermore, while one study discussed the importance of

considering women's goals or intended outcomes when determining the success of IPV-specific coping strategies (Kocot & Goodman, 2003), inquiring about intended goals/outcomes is not yet common in the IPV literature. Instead, as an interim measure, researchers have simply asked women to rate the perceived helpfulness of specific coping strategies (Bauman et al., 2008; El-Khoury et al., 2004; Yoshihama, 2002). Both psychological distress and perceived helpfulness of coping would be appropriate to include in studies of coping in female intimate partners of people with SGP. Moreover, as suggested in the caregiving literature, quality of life is another outcome of interest to coping researchers.

In summary, the SSCS model (Orford et al., 2010) gives a basis for understanding coping in female partners of people with SGP. Because the current version of the model has not yet been adequately tested, this is a crucial next step for researchers. Moreover, the salience of IPV to the task of coping with a partner's SGP is not yet known. It may simply function as an additional stressor on the intimate partner (e.g. Howells & Orford, 2006). Alternatively, it is possible that intimate partners who experience IPV may choose to use different coping strategies than intimate partners who do not experience IPV in an attempt to avoid further violence. Either of these options, or both, may best describe how IPV functions in intimate partners. Therefore, the purpose of this dissertation is to explore the salience of IPV to the coping process in female intimate partners of people with SGP. To this end, the following research aims and hypotheses are given (see Figure 3):

Aim 1: to describe the relationships among burden of SGP, IPV, coping, perceived helpfulness of coping, social support, psychological distress, and quality of life for female intimate partners of people with SGP.

H1a: Greater burden of partner's SGP (stress) will be associated with higher levels of IPV among intimate partners.

H1b: Among intimate partners, greater burden of partner's SGP (stress) and higher levels of IPV will be associated with higher psychological distress (strain) and lower quality of life (strain).

H1c: Greater social support will be associated with intimate partners' higher use of all types of coping strategies.

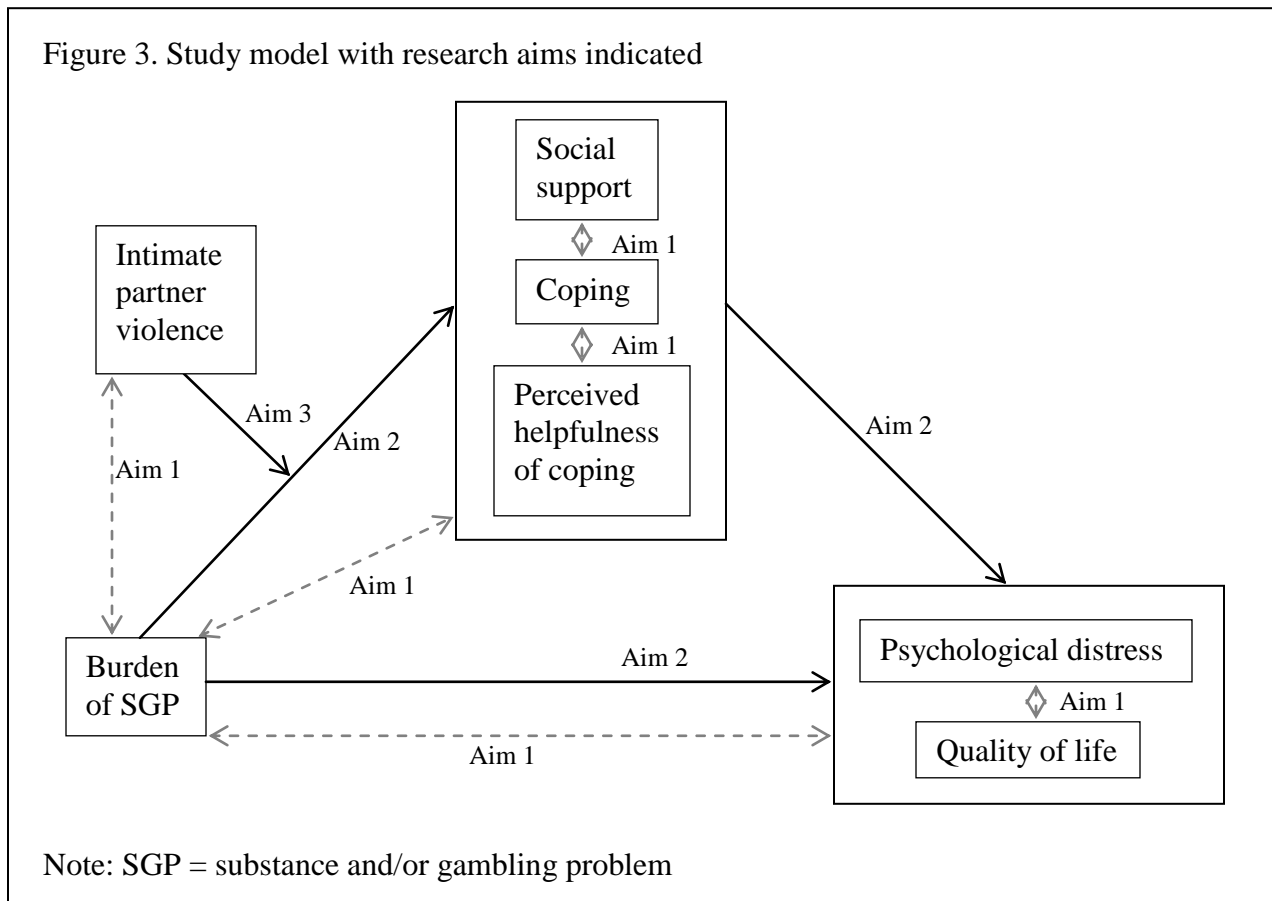
H1d: Greater burden of partner's SGP (stress) will be associated with higher use of total and subscale coping strategies, lower perceived helpfulness of total and subscale coping strategies, and receipt of less total and subscale social support among intimate partners.

Aim 2: to investigate the functions of coping, perceived helpfulness of coping, and social support in the relationship between burden of SGP (stress) and outcomes (psychological distress [strain] and quality of life [strain]) for female intimate partners of people with SGP.

H2: Among intimate partners, burden of SGP (stress) will indirectly affect psychological distress (strain) and quality of life (strain) via use of total and subscale coping strategies (mediator), receipt of total and subscale social support (mediator), and perceived helpfulness of coping strategies (mediator). (That is, through use of coping strategies, receipt of social support, and greater perceived helpfulness of coping strategies, the negative effects of burden of SGP on psychological distress and quality of life will be lessened.)

Aim 3: to determine the function of IPV in the relationships between burden of SGP (stress) and outcomes (psychological distress [strain] and quality of life [strain]) for female intimate partners of people with SGP.

H3: There will be a differential indirect effect of SGP (stress) on psychological distress (strain) and quality of life (strain) through total and subscale coping (mediator), dependent on IPV. (That is, IPV will moderate the indirect relationship between burden of SGP and outcomes.)



Chapter 3: Methods

Overview of Methods

This study used a cross-sectional survey design. To address the aims of this dissertation, female intimate partners of people with SGP, some of whom have experienced IPV perpetrated by the person with SGP, were recruited for the study via use of Washington University's Research Enhancement Core (REC), online notices, and flyers (see Appendix A) posted at St. Louis-area public message boards and agencies. They were directed to the study web site (hosted on the secure Qualtrics survey software web site), which contained information about the study and a consent form. Those who gave consent completed a short screening questionnaire. Intimate partners who qualified for the study continued on to complete a longer survey online. Those who wished to receive remuneration for their participation (\$10 amazon.com electronic gift certificate) provided an email address and social security number. Electronic gift certificates for Amazon.com were emailed to intimate partners on a rolling basis. Study methods were approved by the Washington University Institutional Review Board. To protect participants experiencing IPV, whenever possible study methods conformed to best-practices recommend by Hellmuth and Leonard (2013): anonymity, use of secure server for data storage to protect confidentiality, and provision of community resources to participants.

Participants

Description of participants. Participants were adult 24- to 65-year-old women who reported that their partner has a problem with gambling, alcohol, or drugs (use of illegal drugs or misuse of prescription medicine). The intimate relationship had to be of at least six months duration, and was either a current relationship or one that had ended within the 12 months prior

to participation in the study. Potential participants who were currently in an intimate relationship with someone with a SGP were directed to refer to that relationship. Those not currently in an intimate relationship but who reported ending an intimate relationship with someone with a SGP within the past 12 months were directed to refer to this past relationship. Additional inclusion criteria were access to the internet for survey completion, an email address for receipt of remuneration if desired, sufficient familiarity and ability with computers to complete the online survey, and an ability to read and understand English. Note that female intimate partners younger than 24 and older than 65 years of age (e.g., young adults and older adults) were excluded from participation in this study, in order to avoid potential confounds of these different life stages on study results. That is, college-age young adults are different from non-college-age adults in that the former group's substance use tends to be higher (SAMHSA, 2013), and they may be shielded from some of the financial and other consequences of SGP through assistance from parents. Conversely, financial consequences of SGP for older adults of retirement age may be particularly severe because of reduced income in retirement. These and other potential confounds were avoided via exclusion of younger and older adults from participation in this dissertation study.

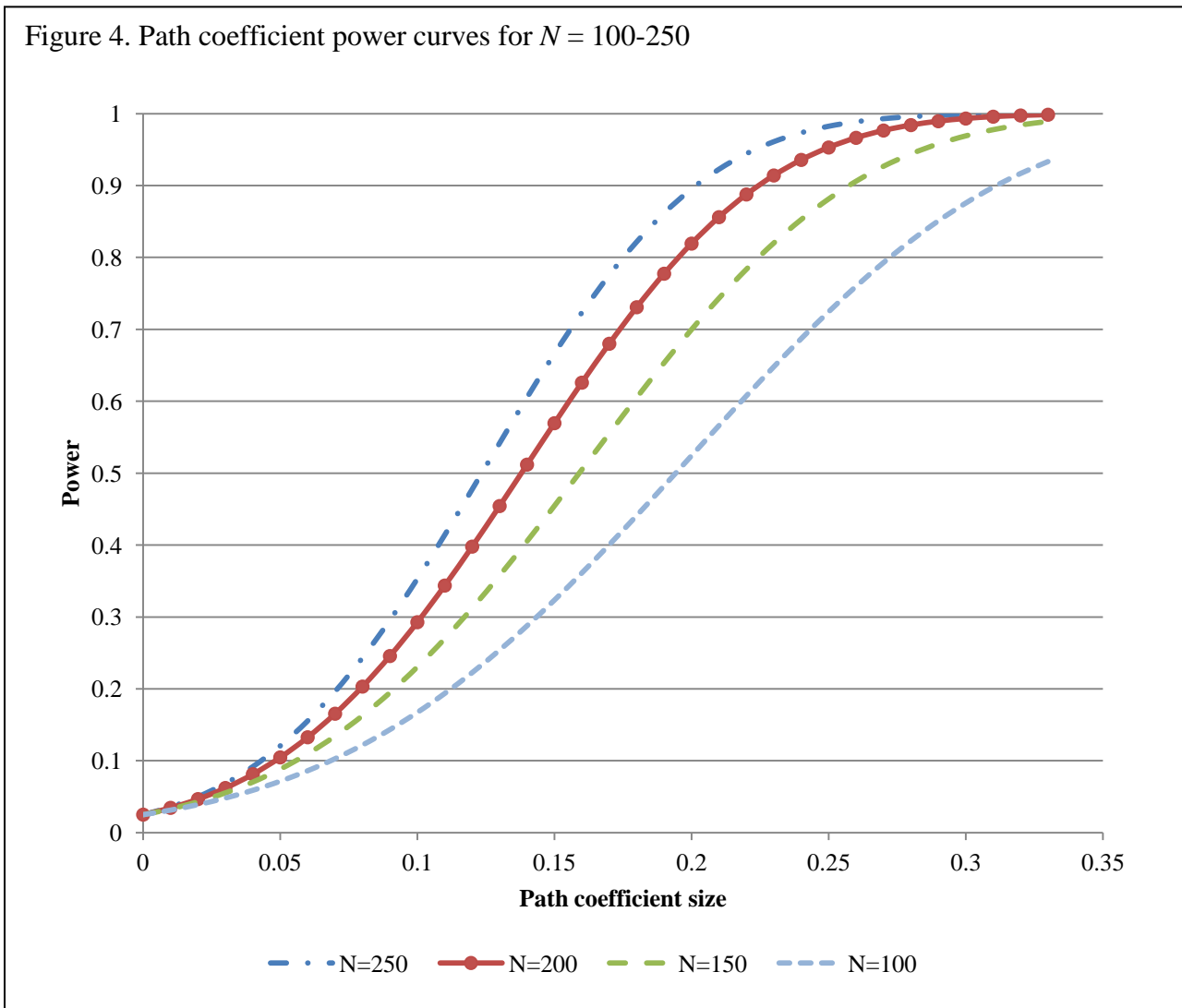
To facilitate studying the effects of IPV on coping with an intimate partner's SGP, participants were screened for lifetime occurrence of IPV perpetrated by their partner. Recruitment goals were that at least 30% of intimate partners would report experiencing IPV perpetrated by their partner.

Power analysis. For this study, sufficient power (0.80) was required for two purposes: to test for mediation as predicted by the SSCS model, and to investigate the salience of IPV to the experience of coping with a partner's SGP (that is, to determine whether IPV moderates the

indirect relationships of burden of SGP to psychological distress and quality of life). Calculations of sufficient power to test the modified SSCS model (see Figures 1 and 3) drew on the single published article to address the current SSCS model to date (Arcidiacono et al., 2010). Though they did not conduct a formal test of mediation as recommended by MacKinnon (2008), they provided correlations between stress, strain, and coping, as well as the partial correlation between stress and strain while controlling for coping. Stress was positively correlated with strain ($r = 0.35$); when tolerant coping was partialled out, the partial correlation between stress and strain dropped ($r = 0.14$) and became non-significant. This information was used to calculate estimated power for a range of sample sizes. Partial correlations are analogous to path coefficients; for any given N , power to detect a range of path coefficients can be calculated. First a z-score is calculated by subtracting 1.96 from the noncentrality parameter for a specified path coefficient and sample size. The area under the normal curve corresponding to the z-score constitutes the predicted power to detect the path coefficient given the sample size (see Figure 4). Although path coefficients of 0.30 are considered desirable (E. Spitznagel, personal communication, April 30, 2012), given the scant evidence for the modified SSCS model, it was deemed prudent to ensure adequate power to detect smaller effects (path coefficients of 0.20). As can be seen from Figure 5, this required 200 participants.

The mediation test conducted by Arcidiacono and colleagues (2010) is analogous to that outlined by Baron and Kenny (1986). Although the Baron and Kenny procedure was state-of-the-art for many years, current standards for mediation require directly testing the indirect path (MacKinnon, 2008). MacKinnon, Lockwood, Hoffman, West, & Sheets (2002) discussed a number of methods for testing the significance of an indirect effect (e.g., the 1986 Baron and Kenny method, distribution of the product methods, and resampling methods), which were then

evaluated by MacKinnon, Lockwood and Williams (2004). They recommended using a bias-corrected bootstrap resampling method because it provides accurate confidence intervals for the asymmetrically-distributed distribution of the indirect term. Because this dissertation will use MacKinnon’s resampling method to test for significant mediation, it would be prudent to conduct



a power analysis for this method. No effect sizes have been published for the indirect effect, but specific estimates of power for a test of mediation were given in Fritz and MacKinnon (2007) for any combination of four effect sizes for the indirect effect’s constituent paths (small = 0.14, medium = 0.39, large = 0.59, and an additional effect size halfway between small and medium

[H] = 0.26). Using a bias-corrected bootstrap resampling method, they estimated that fewer than 200 participants would be necessary to achieve 0.80 power to detect an indirect effect with any combination of large, medium, or H (sm/med) constituent paths (exact number of participants required depends on effect size for each of the constituent paths, but varies between 34 and 148). Though no estimates of the effect sizes for each of the revised SSCS model's constituent paths have been published as of yet, Arcidiacono and colleagues (2010) reported a medium correlation (Cohen, 1988) between burden of SGP and coping ($r = 0.35$), and a large correlation between coping and distress ($r = 0.54$). Given the strength of these associations, it seemed reasonable to expect that both paths in coping's indirect effect would be at least H (sm/med), which would mean that 200 participants would provide sufficient power.

The next issue to consider for this power analysis was sufficient power to determine the salience of IPV to the task of coping with a partner's SGP (Aim 3). No researchers have investigated this question to date, so no estimates of placement or size of effect exist in the literature. However, although no studies to date have tested IPV with the SSCS model (Orford et al., 2005), Orford and colleagues (2001) reported that another stressor, open family conflict (from the Family Environment Scale) interacted with coping when predicting distress. This interaction term increased the R^2 from .28 to .32, an increase of .04. In other studies, regressions of distress on strain and coping achieved R^2 's of .28-.30 (Orford et al., 2005). Though these regressions do not include IPV, the achieved R^2 's can be used to estimate R^2 for this study. This part of the power analysis was conducted via G*Power 3.1 software (Faul, Erdfelder, Buchner & Lang, 2009; Faul, Erdfelder, Lang, & Buchner, 2007). To be conservative, 80% power to detect a medium-sized effect ($f^2 = .15$ for a regression; Cohen, 1992) was desired. This seemed feasible given that the final $R^2 > .25$ for each of the tests of the original SSCS model (Orford et al.,

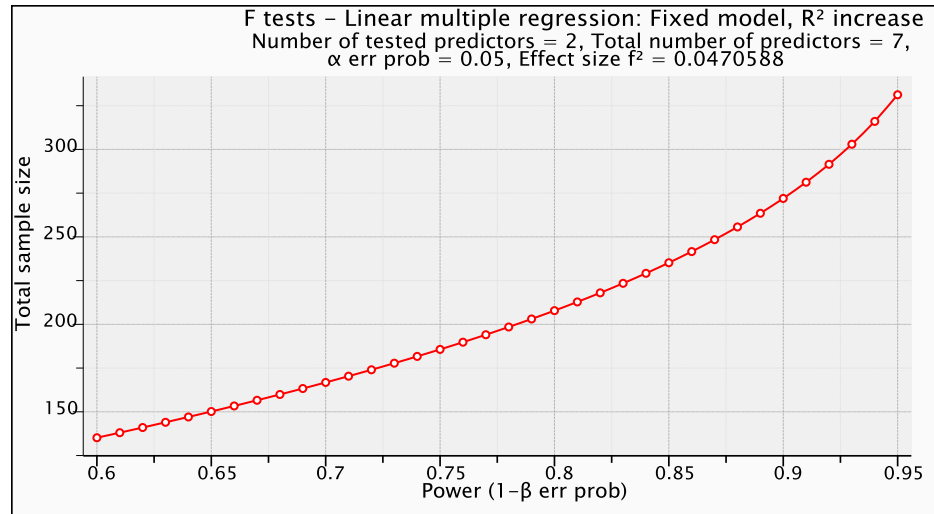
2005), which corresponds to an almost large effect size ($f^2 = .33$). Total number of predictors does not appreciably affect power or increase the required number of participants, as long as the desired effect remains the same ($f^2 = .15$). To achieve 80% power to find a medium-sized effect ($f^2 = .15$), including two additive terms and a single interaction responsible for a change in R^2 of .04 ($f^2 = .047$), would require $N=169$. However, the IPV literature suggests that the power analysis should plan for two interactions (Kocot & Goodman, 2003), which would be expected to require more participants.

Assuming that each interaction term would be smaller than that estimated above, such that together the two terms account for an R^2 change of .04 – a size more in keeping with effect sizes observed in a study of the use of multiple regression in psychology over the past 30 years (Aguinis, Beaty, Boik, & Pierce, 2005) – the study required 208 participants to achieve 80% power (see Figure 5). Because this N is just larger than the 200 participants required to test the mediation model, it was expected that 208 participants would provide sufficient power for all planned analyses.

When planning an interaction, the proportion of participants in each group (IPV and non-IPV) is important to power (in addition to sample size and magnitude of effect). Aguinis & Stone-Romero (1997) showed in a Monte Carlo study that power was affected by the distribution of participants in each level of a dichotomous variable proposed to interact with the continuous independent variable. When the proportion of participants in each level of the dichotomous variable was at a 1:1 ratio, power to detect the interaction was optimal. With ratios as uneven as 1:9, power was very low (<50%) even for large interaction effect sizes. With ratios as uneven as 3:7 (30% of participants in one group), however, the loss of power was minimal even at small interaction effect sizes. Thus, this study used a quota of 30-70% of participants who reported

experiencing IPV (that is, if one group [either IPV or no-IPV] reached 70% of the 208 planned participants, subsequent participants screening into the same group would be refused entry into the survey).

Figure 5. Power curve for two-interaction regression



Recruitment

Recruitment occurred from March 25, 2013 to October 17, 2013, and was primarily focused on the St. Louis, Missouri metropolitan area. The St. Louis area is very much like the United States as a whole in age distribution, marital status, educational attainment, household income, and racial/ethnic diversity (with the exception of having fewer Hispanic/Latino people than the United States on the whole; U.S. Census Bureau, 2010). As such, the St. Louis area provides a pool of potential participants who are diverse in terms of these demographic descriptors. In addition, venues for both alcohol and gambling opportunities (e.g. lottery,

casinos, horse-racing) are legally available in the area for adults, which ensure enough population-wide exposure to alcohol and gambling to provide a local population of adult women whose partners have SGP.

Washington University's Research Enhancement Core (REC) assisted with recruitment. The REC, a service of Washington University's Institute for Clinical and Translational Sciences, helps Washington University researchers to develop and carry out effective study recruitment plans. Its no-cost services include maintaining the Volunteers for Health (VFH) Research Participant Registry database of St. Louis-area people who have expressed interest in participating in research studies, registering the study with the VFH web site and the CenterWatch research web site (not associated with Washington University), and development and placement of flyers and other types of study advertisements.

For this study, the REC created brief recruitment blurbs consisting of statements about the study's purpose/topic, inclusion/exclusion criteria, remuneration, and the study web site. The REC used these recruitment blurbs on four full-color flyers (see Appendix A). The flyers were identical except for the demographic characteristics of the couple pictured: a heterosexual Caucasian couple, heterosexual African-American couple, lesbian Caucasian couple, or bi-racial lesbian couple. The type of couple was varied to allow the PI to post flyers with a picture most similar to those frequenting a specific agency or public message board. The PI also used the REC's recruitment blurb to create a 1/4-page flyer (without pictures). (Though participants indicated whether they had found out about the study via a flyer, they were not asked which flyer they saw, or the location at which they saw the flyer. Thus it is unknown which flyers were most effective in recruiting potential participants.)

The REC also assisted with recruitment efforts via listing the study on its web site and through access to the VFH database. During the first part of recruitment, the study was listed on the REC web site where anybody registered with the VFH database could see it and request that the PI contact them. The REC also provided access to potential participants in their database via emailing electronic versions of the flyer to married women registered with the VFH database. (The VFH database does not record data about partners of those in the database, and as such it was not possible to specifically pinpoint those in the database with partners with SGP.) Later during the recruitment period, REC procedures changed: studies were no longer openly listed on its web site. Instead, the VFH database would automatically send emails to newly-enrolled people, stating that they had matched with this and/or other studies. Potential participants could then log onto the VFH web site and indicate whether or not they were interested in being contacted by study staff. The REC then provided the PI with a list of those who indicated interest in the study. She then emailed them with further information about the study, including the study web site. Those who did not enroll in the study were sent a follow-up email a month later to again solicit their participation in the study.

Study flyers were posted around the St. Louis area, primarily on message boards in public places such as grocery stores, coffee shops, restaurants, and public libraries. Flyers were also posted on message boards in other businesses in the Delmar Loop, South Grand, and Grove neighborhoods. Finally, posters were placed in health care centers and the LGBT Center of St. Louis. The PI checked posted flyers several times during the recruitment period and reposted them as necessary.

Recruitment efforts also included electronic notices about the study. The PI created a study Facebook page which included the recruitment blurb and the study web site address. She

invited her Facebook contacts to like or share the page on their Facebook pages so more people would find out about the study Facebook page. The PI posted the recruitment blurb on the St. Louis Craigslist site (under “Volunteers”). The recruitment blurb was also posted on the Missouri Alliance to Curb Problem Gambling web site (www.888betsoff.com). Although not planned, it was also reposted (presumably by a participant) on www.reddit.com, and a blogger who writes about addiction recovery wrote a blog post about the study. The blog post included the recruitment blurb, additional information from the study consent form, and the blogger’s opinion as to why his readers might be interested in participating in the study. Though recruitment efforts were centered on the St. Louis area, online recruitment notices reached potential participants from across the United States as well. Such women were not excluded from participation as long as they met other qualifying criteria.

Data Collection

Qualtrics survey software. Qualtrics is a survey software suite available to faculty, staff and students at the Brown School via the school’s site license. Surveys are hosted on the company’s secure server, with a password required for data access (Qualtrics, n.d.). The software allows researchers to build their own surveys online, offering over 100 different question types and allowing extensive use of graphics. Question layout and position on the web page, answer choices, and skip patterns are controlled by the researcher. Data are saved on Qualtrics’ server. Researchers may only access data via their personal user name and password, and may download data (and permanently delete data from Qualtrics’ servers) at any time.

The PI chose Qualtrics for this study because of the advantages outlined above. Though use of Qualtrics requires the purchase of a license, the PI was able to access Qualtrics without

cost through the Brown School's site license. She utilized the "Qualtrics University" online training tutorials and called the free helpline for consultation with Qualtrics customer assistance professionals as necessary.

Pilot testing. Pilot testing was done in two stages. First, in order to ensure that the online survey worked correctly, both the PI and customer service professionals at Qualtrics completed surveys before the survey went live. To test the survey interface with different devices, the PI used both a computer and a smartphone during this phase. Further pilot testing occurred after the survey went live. Because IRB rules allowed neither the temporary use of extra pilot-testing questions on the survey, nor extra remuneration for pilot testers, two of the PI's friends who were intimate partners of someone with a SGP agreed to complete the survey and give her feedback on it. They confirmed estimates of how long it would take to complete the survey (25-45 minutes), and said the questions were acceptable and understandable. Examination of data collected from other initial participants lent further support to the acceptability/understandability and time estimates, as these data were completed in similar time with very few questions skipped.

Informed consent and screening. Brief study information (purpose/topic, inclusion criteria, study procedures, and remuneration) was available on an initial study web page. (See Appendix B for verbiage. Layout for Appendices B-F is not identical to the online version.) The page invited those who were interested in participating in the study to continue to the online consent form. The consent form included detailed information about the study and all elements required by Washington University's Human Research Protection Office (see Appendix C). Those who wished to participate in the study after reading the consent form clicked a button

indicating that they consented to the study, and were directed to the next page. They were invited to provide (optional) contact information if they wanted to be informed about future studies.

They were then directed to the screener on the next page.

The screening topics included demographics, how the potential participant learned about the study, questions to establish whether the potential participant met inclusion criteria, and additional questions. (See Appendix D. Note that Qualtrics skip logic, shaded, appears before and/or after screener questions as appropriate. This was not visible to participants.). The additional questions were not strictly of interest to the study, but were intended to keep potential participants who did not qualify for the study from guessing which answer would need to be changed to meet inclusion criteria for the study. More details about the screening questions can be found in the Measures section.

Qualtrics software (version 2013.8.) was programmed to determine which potential participants met study criteria, and sent those who qualified to participate to the study main survey. Potential participants who did not qualify for the study saw a page thanking them for their interest in the study and informing them that “based on your answers, either you are not eligible for the study or we have reached our recruitment goals for people who answered as you did on the screener.” The page also showed a list of local resources for SGP, IPV, and other topics such as financial support, child abuse prevention, etc. (see Appendix E).

Survey. General instructions were presented in the consent form and prior to the beginning of the screener, with instructions specific to each questionnaire appearing as necessary in the survey. (See Appendix F. Again, shaded Qualtrics skip logic was not visible to participants.) To minimize unintentionally missing data (e.g., accidentally missed questions),

Qualtrics was programmed to show a pop-up message if participants attempted to advance to the next page without completing each question on the current page. The pop-up indicated the number of missed questions on the page, and asked if the participant would like to continue. The participant could choose the “answer the question(s)” button to stay on the current page, or the “continue without answering” button to advance to the next page. This function was unavailable for the Coping Questionnaire / Helpfulness of Coping page due to the complex nature of the question/answer matrix.

When they reached the end of the survey, participants who wished to receive the Amazon.com e-gift certificate provided an email address and social security number. A final page thanked participants for their participation. The page also included the list of local resources for parenting/families, health and mental health care, addictions, intimate partner violence, lesbian/gay/bisexual/transgender resources, food, housing, income maintenance, and employment.

Measures

Independent variable: substance and/or gambling problems (SGP). See Table 1 for measures information. Potential participants were asked if they believed their current/past partner had problems with alcohol, drugs, and/or gambling (modified from the National Epidemiologic Study of Alcohol and Related Conditions [NESARC]; Grant, Dawson, & Hasin, 2001), and if their partner had consumed alcohol or drugs or gambled in the past 12 months. (Note that, for this and other 12-month questions, those with past partners were directed to refer to the most recent 12 months of contact with their past partner). Further partner usage questions were specific to alcohol, drugs, and gambling. These were shown to participants who had indicated

Table 1. Study measures

Use	Construct name	Measure name	Placement	Psychometrics	Source	# of items
Inclusion / exclusion questions	Inclusion/ exclusion questions	Does partner have problems with substance use and/or gambling?	Screeners	N/A	Grant et al. 2001 (NESARC)	3
		Length of relationship, when relationship took place (current/past)	Screeners	N/A	N/A	2
Camouflage questions for screener; descriptors	Camouflage questions for screener	Legal status of relationship, residing with partner (yes/no), health, exercise habits, experience with web-based surveys	Screeners	N/A	Duncan et al. 2012 (MOFAM)	5
Descriptors	Demographics	Age, ethnicity, race, education, employment, family income, number of children, own/ rent residence, zip code	Screeners	N/A	Goodman et al. 2009; Grant et al. 2001 (NESARC)	11
	Severity of partner's SGP	Past-year use, frequency, quantity, binge behavior, tolerance, lying, chasing losses, duration of SGP	Main survey	N/A	Grant et al. 2001 (NESARC)	3-18
	Participant's own substance use / gambling	Past-year use, frequency, quantity, binge behavior	Main survey	N/A	Grant et al. 2001 (NESARC)	3-11

Table 1. Study measures, continued

Use	Construct name	Measure name	Where	Psychometrics	Source	# of items
Independent variable	Burden of SGP	Family Member Impact Questionnaire	Main survey	$\alpha = 0.69-0.77$	Orford et al. 2005	16
Potential mediators	Social support	Alcohol, Drugs and the Family Social Support Scale	Main survey	$\alpha = 0.72-0.91$	Toner & Velleman, 2014	25
	Coping	Coping Questionnaire	Main survey	$\alpha = 0.60-0.85$	Orford et al. 2005	30
	Perceived helpfulness of coping	Helpfulness of Coping (helpfulness question added to each Coping Questionnaire item)	Main survey	$\alpha = 0.89$	Bauman et al. 2008	30
Potential moderator: IPV	Violence/abuse	Woman Abuse Screening Tool	Screener (1 st 2 questions); Main survey (last 6 questions)	$\alpha = 0.95$ Sensitivity = 91.7% Specificity = 100%	Brown et al. 1996	8
	Coercive control	Coercive control subscale of the Mediator's Assessment of Safety Issues and Concerns	Main survey	N/A	Holtzworth-Munroe et al. 2010	14
Dependent variables	Psych. distress	Depression Anxiety Stress Scale-21	Main survey	$\alpha = 0.82-0.94$	Lovibond & Lovibond 1995	21
	Quality of life	Personal Wellbeing Index	Main survey	$\alpha = 0.70-0.85$	International Wellbeing Group 2013	9

Table 1. Study measures, continued

Use	Construct name	Measure name	Where	Psychometrics	Source	# of items
Descriptors	Other stressors	Stressful Life Events Scale	Main survey		Billi et al. 2011 (Victorian Gambling Study, Wave 2)	12
		Financial sufficiency questions from the Economic Strain model	Main survey	N/A	Pearlin et al. 1981	2
		Neighborhood safety	Main survey	N/A	N/A	1
	Relationship satisfaction	Question from the SMAT / DAS-4	Main survey	N/A	Sabourin et al. 2005	1
				Total number of questions:		196-219

Note: SGP = substance and/or gambling problems

either that their partner had a problem with, or had consumed alcohol/drugs or gambled, in the past 12 months. These included past-12-month frequency of substance use/gambling, usual amount of substance use/gambling on using days, and frequency of binge behavior (>4 or 5 drinks on one occasion; poly-drug use), tolerance for alcohol/drugs, escalation of gambling behavior (lying about gambling, chasing losses), and duration of the partner's SGP.

Burden of SGP was measured by the Family Member Impact Questionnaire (Orford et al., 2005), a 16-item measure developed to measure the extent and impact of a loved one's alcohol-, drug-, or gambling-related behavior on the intimate partner over the past twelve months (see Table 1). Response options are not at all, once or twice, sometimes or often. The Family Member Impact Questionnaire yields a total impact score (Cronbach's $\alpha=0.77$) as well as active disturbance (Cronbach's $\alpha=0.69$) and worrying behavior (Cronbach's $\alpha=0.74$) subscales. (Note

that subscales were not used for this study.) Time frame was changed to past-12-months from the original 3-month time frame. A few words were changed to make the scale appropriate for participants in this study. “Relative” was changed to “partner,” gambling was mentioned as well as alcohol and drugs, and some words were changed from British English to American English (e.g., “drug taking” was changed to “drug use”).

Potential mediators: social support, coping, perceived helpfulness of coping. All measures of potential mediators (see Table 1) used a past-12-month time frame. Coping was measured with the Coping Questionnaire, a 30-item SGP-specific measure of coping strategies used (Orford et al., 2005). The Coping Questionnaire yields an overall coping score, as well as engaged, tolerant, and withdrawal coping subscale scores. The Coping Questionnaire is scored on a four-point scale (never, once or twice, sometimes, often). Reliability is good for the overall coping score (Cronbach’s $\alpha = 0.85$), as well as the engaged (Cronbach’s $\alpha = 0.85$) and tolerant (Cronbach’s $\alpha = 0.74$) subscales. Reliability for the withdrawal subscale is marginal (Cronbach’s $\alpha = 0.60$). Similar changes were made to the Coping Questionnaire as were made on the Family Member Impact Questionnaire: time frame of all questions was changed from three months to past-12-months, some phrases were changed to American English to make the questions easier for participants to understand (e.g., “causing you upset” was changed to “upsetting you”), and “sometimes” was removed from the beginning of two questions because it did not make sense given that the answer options required participants to choose a frequency of use for each item.

Perceived helpfulness of coping (see Table 1) was measured via an additional question added to each item of the Coping Questionnaire: how helpful was the coping strategy? This measure was patterned after similar questions added to scales measuring helpfulness of IPV-

specific coping strategies (Bauman, Haaga, & Dutton, 2008; Goodman et al., 2003; Cronbach's $\alpha = 0.89$). Mean helpfulness scores were calculated for the Coping Questionnaire overall and each subscale.

Social support (see Table 1) was measured with the Alcohol, Drugs and the Family Social Support Scale (Toner & Velleman, 2014). This is a 25-item measure of social support which yields an overall social support score as well as subscales originally labeled functional support, positive SGP-oriented social support, and negative SGP-oriented social support. For purposes of this dissertation, labels for subscales will be changed to be more congruent with terms found in the social support literature. The "functional" subscale will be labeled Informal Social Support, as its questions pertain to support received from friends or relatives. Most informal subscale questions are about various kinds of emotional support, though one asks about instrumental support received from friends/relatives. The "positive" subscale will be labeled Formal Social Support, as most of its questions pertain to support received from professionals (i.e., social workers, physicians, nurses, or clergy) or via information found in pamphlets, books, on the internet, etc. (Note that two questions on this subscale refer to support from friends/family; though these do not appear to fit the formal support theme of other questions in this subscale, nonetheless this subscale will be used in the original form for this dissertation.) The "negative" subscale will be labeled Unhelpful Social Support, as its questions refer to non-supportive, unhelpful interactions with friends/family. Answer options for this scale are never, once or twice, sometimes, and often. Reliability is good for the overall social support score (Cronbach's $\alpha = .81$), informal support (Cronbach's $\alpha = 0.91$), formal social support (Cronbach's $\alpha = 0.73$), and unhelpful social support (Cronbach's $\alpha = 0.85$).

Once again, similar changes were made to the Alcohol, Drugs and the Family Social Support Scale (Toner & Velleman, 2014) as were made to the Coping Questionnaire. That is, time frame was changed from 3-months to past-12-months; some words were Americanized (“relations” was changed to “relatives,” and “health/social care workers” was changed to “professionals [doctors, nurses, therapists, social workers, clergy]”). Additional changes included removing the bolded and underlined formatting in the original survey to create a clean, easily-read layout similar to the other surveys; adding the internet as a possible source of information to a question referencing information found in books or pamphlets; and adding “I have felt that” to the wording of one question (“I have friends/relatives whom I trust”) to make it appropriate for the answer options given.

Potential moderator: intimate partner violence (IPV). IPV was measured by two scales (see Table 1): the Woman Abuse Screening Tool (Brown, Lent, Brett, Sas, & Pederson, 1996) and the coercive control subscale of the Mediator’s Assessment of Safety Issues and Concerns (Holtzworth-Munroe, Beck, & Applegate, 2010; Pokman et al., 2014). The Woman Abuse Screening Tool is an eight-item measure of physical, emotional, and sexual abuse (Cronbach’s $\alpha = 0.95$) that uses a three-point frequency of occurrence answer scale. The first two questions, which focus on tension and arguments in intimate partnerships, can serve as a screen for IPV (sensitivity of 91.7% and specificity of 100% when Question 1 is answered “a lot of tension” and Question 2 is answered “a lot of difficulty”; Brown et al., 1996; Brown, Lent, Schmidt, & Sas, 2000). These questions appeared in the screener, while the remaining six questions appeared in the main survey. MacMillon and colleagues (2009) summed scores on all eight questions; a score of 4 or more was positive for IPV (sensitivity 84%, no specificity given).

Because the Woman Abuse Screening Tool does not include questions about coercive control, which has been hypothesized to be the motivating factor for IPV, a separate measure of coercive control was also used in this study.

The coercive control subscale of the Mediator's Assessment of Safety Issues and Concerns (Holtzworth-Munroe et al., 2010; Pokman et al., 2014) is a 14-item scale of the frequency of occurrence of controlling behavior, measured on a seven-point ordinal scale (from never to daily; see Table 1). Reliability of the coercive control subscale of the Mediator's Assessment of Safety Issues and Concerns is good (McDonald's omega = 0.88). Pokman and colleagues computed a past-year variety score by counting the number of items endorsed at all. They also computed a past-year frequency score by adding together scores (never = 0, ... daily = 5) for each of the items in this subscale. The correlation between the past-year variety score and past-year frequency score was high ($r = 0.98$), so Pokman and colleagues suggested only using the past-year variety score. Only the coercive control subscale of the Mediator's Assessment of Safety Issues and Concerns was used. Though the Mediator's Assessment of Safety Issues and Concerns was designed to yield a dichotomous measure of whether each item had happened ever (as well as past-year frequency estimates), this option was not used for the current study. Instead, participants were only asked to rate the frequency for which each item had happened in the past year (never-daily).

Dependent variables: psychological distress and quality of life. All dependent variable measures used a past-12-month time frame. Psychological distress (see Table 1) was measured by the Depression Anxiety Stress Scales-21 (Lovibond & Lovibond, 1995). The Depression Anxiety Stress Scales-21 is a 21-item measure that gives three subscale scores

(depression, anxiety, and stress), as well as an overall general psychological distress score (Henry & Crawford, 2005). Response options are: did not apply to me, applied to me to some degree, or some of the time, applied to me to a considerable degree, or a good part of the time, and applied to me very much, or most of the time. The Depression Anxiety Stress Scales-21 has good internal consistency overall (total psychological distress Cronbach's $\alpha = 0.93$) and for subscales (depression Cronbach's $\alpha = 0.88-0.94$, anxiety Cronbach's $\alpha = 0.82-0.87$, and stress Cronbach's $\alpha = 0.90-0.91$; Antony, Beiling, Cox, Enns, & Swinson, 1998; Henry & Crawford, 2005). Convergent validity of the Depression Anxiety Stress Scales-21 is good (Lovibond & Lovibond, 1995; Antony et al., 1998): the overall psychological distress score correlates well ($r = 0.69$) with the negative affect scale of the Positive and Negative Affect Scale (Watson, Clark & Tellegen, 1988). The depression subscale is highly correlated ($r = 0.79-0.81$) with the Beck Depression Inventory (Beck & Steer, 1987), and the anxiety subscale is correlated ($r = 0.74-0.85$) with the Beck Anxiety Inventory (Beck & Steer, 1990). United States norms are available for the general population (Sinclair et al., 2012) and outpatient psychiatric patients (Ronk, Korman, Hooke, & Page, 2013).

Quality of Life (see Table 1) was measured with the Personal Wellbeing Index, a subscale of the International Wellbeing Index (Cummins, 2003; Cummins, Eckersley, Pallant, Van Vugt, & Misajon, 2003; International Wellbeing Group, 2013). The Personal Wellbeing Index consists of eight questions, each of which represents a different domain of wellbeing. Each is answered on a 0-10 scale, with 0 being completely dissatisfied and 10 being completely satisfied. The mean of these questions represents overall life satisfaction. An extra question, "how satisfied are you with life as a whole," is generally included with the Personal Wellbeing

Index but is not scored with the other questions. The reliability of the Personal Wellbeing Index is good ($\alpha = 0.70-0.85$).

Screening questions, demographics, and additional questions. Screening questions determined whether the potential participant was eligible for inclusion in the study. These included questions about the partner's type(s) of SGP, the participant's age and sex, the length of the relationship, and the timing of the relationship (current or past). Though not required for participation in the study, two questions designed to screen for IPV (the first two questions from the Woman Abuse Screening Tool) also appeared on the screener, in order to set quotas for presence/absence of IPV among participants. All of the above questions appeared on the screener.

Demographics included age, ethnicity/race, educational attainment, employment status, income, whether this amount of income is recent or usual for the family [to distinguish between short-term financial troubles and persistent poverty; Goodman et al., 2009], number of children, living situation, e.g. own/rent (see Table 1). Other questions of interest included the intimate partner's own substance/gambling behavior (past-12-months quantity/frequency) neighborhood safety, income sufficiency (Pearlin et al., 1981), relationship satisfaction, and number of stressful life experiences in the past 12 months. The relationship satisfaction question is taken from the Short Marital Adjustment Test (Cross & Sharpley, 1981), and has been shown to discriminate between distressed and non-distressed relationships as well as the entire scale. The same question appears, with minor changes in wording that make it appropriate for all intimate relationships, in the Short Dyadic Adjustment Scale (Sabourin, Valois, & Lussier, 2005); this version of the question was used for the current study. The 12 stressful life experiences questions were taken

from the Victorian Gambling Study (Billi, Marden, & Stone, 2011). Demographics were split between the screener and main survey.

Additional questions designed in part to camouflage the study's inclusion criteria (so that participants answered questions honestly rather than giving answers they thought will screen them into the study) also appeared on the screener. Taken from the Missouri Family Study (MOFAM; Duncan, Lessov-Schlagger, Sartor, & Bucholz, 2012), these all used a multiple choice format and included descriptive relationship questions (legal status of relationship, whether the intimate partner and person with SGP live together), the participant's general health, the participant's exercise habits, how the participant learned about the study, and their experience with web-based surveys.

Analysis

Data management. All data were saved into three data files (consent/contact information, screener/survey, and remuneration email/social security number) on Qualtrics' secure server as it was entered online by participants. These online data files were password-protected (that is, available only with verification of the PI's Qualtrics account user name and password). Data were downloaded into separate files on the Brown School's secure server, with links between files temporarily maintained for data validation purposes (see below).

Because all data collection were conducted online via Qualtrics (which only allows data values assigned by the PI to be entered into the database), data cleaning consisted of three tasks. First, checks were done to be sure that Qualtrics was correctly programmed to include or exclude participants from the study as appropriate. Second, write-in answers that were intended to be numeric (e.g. number of years the intimate partner had been in the relationship with the person

with the SGP) were edited as necessary so that all were numeric rather than spelled out. Third, numeric write-in answers for average number of drinks per drinking day, average amount of money spent per gambling day, and duration of alcohol/drug/gambling problems were vetted for their probable veracity. Impossible answers (e.g., drinking 800 drinks/day) or improbable answers (gambling \$30,000/day, or a report of a partner's SGP of 60 years duration by a young woman in a relationship of only a few years duration) were flagged and closely examined during the data validation process (see next section). Any flagged survey that was subsequently deemed valid was again examined, and impossible or improbable answers were winsorized (Reifman & Keyton, 2010) to the highest realistic value appearing in the dataset (drinking 25 drinks/day; gambling \$4000/day). Three surveys were winsorized on average number of drinks/day variable, two surveys were winsorized on the average amount of money spent/day variable, and no surveys were winsorized on the duration of SGP variable.

Validation. Data underwent a validation process to ensure that, to the best of the PI's judgment, any survey included in the final analyses was the only survey completed by a person. This became necessary partway through the data collection process (after the study had been listed on St. Louis Craigslist), when the PI noticed that multiple surveys had been completed on one or more computer(s)/device(s) using identical internet protocol addresses (IP addresses). Additional patterns in these data led the PI to suspect that one or more people had each completed multiple surveys.

IP addresses have the form xxx.xxx.xxx.xxx, with each xxx being a number between 0 and 255. Internet service providers are assigned a pool of IP addresses, which they then assign to individual computers/devices the first time they are logged onto the internet. A computer's IP

address does not change unless the user manually requests a change of IP address or logs onto the internet using a different internet service provider. A manual request for change of IP address will normally result in a substantially similar IP address (differences in the last three numbers only), though very tech-savvy computer users can circumvent this constraint.

Thus, surveys with substantively similar IP addresses may represent a single person who changed their computer's IP address between completing multiple surveys. It is also possible that these surveys were completed individually by two people on side-by-side computers in a shared office or computer lab, which could be expected to have similar IP addresses. (Note that it is also possible to hide a device's IP address when accessing a web site through the use of an anonymizing proxy server. The user instructs their device to first access the proxy server; all subsequent web sites accessed during that internet session will show an IP address that does not appear to originate from the user's location. Thus, though two surveys completed on devices with identical or similar IP address may have been completed by the same person, this is not certain). IRBs generally allow the collection of IP addresses because, while they can be localized to states or perhaps cities, they cannot be linked to an individual computer or person without a court order.

An extensive validation process was carried out on every survey submitted, so as to avoid using surveys that appeared in the PI's judgment to be invalid. This validation process entailed temporarily linking data from the consent/contact information, screening/survey, and gift certificate databases, in order to detect discrepancies from data deemed valid (i.e., that collected prior to publicizing the study on St. Louis Craigslist). The validation process included looking for (a) patterns uncharacteristic of valid data, (b) internal inconsistencies, and (c) answers that were highly unlikely or impossible. Examples of patterns include identical or similar IP

addresses; identical social security numbers, email addresses, names or other contact information; giving the same answer to every question on a scale; quite a few surveys being completed back-to-back without a break or overlap, especially at a time that is typically slow such as the middle of the night; or quite a few gift certificate requests in succession using the same email provider, especially if there was also a pattern to the first part of the email address (i.e., georgeqv@yahoo.com, stevenzrw@yahoo.com, joshxvq@yahoo.com).

Examples of answers that were unlikely to be truthful include providing a social security number that belonged to a deceased person (it is possible to determine this via online access to the Social Security Agency Death Index); indicating physically impossible alcohol use such as 800 drinks/day; indicating extreme amounts of money spent gambling (i.e., \$30,000 2-3 times/week, especially when yearly household income was modest); providing an address for contact information that does not exist; completing the entire questionnaire in a very short amount of time (i.e., 3-5 minutes) without missing any questions; or stating late in recruitment that they found out about the study via VFH although their email address was not on lists of those interested in the study that the REC provided to the PI.

Finally, examples of inconsistencies on a survey include giving a male name as contact information but indicating on the survey that they were female; providing a zip code from one part of the country but completing the survey on a device with an IP address localized to a different part of the country; giving different email addresses for contact information and receipt of the e-gift certificate; or giving seemingly incompatible answers on the survey (i.e., indicating on the survey that their partner's addiction was severely impacting them and that they were also experiencing significant IPV but later stating that they were very happy in their relationship and that they were extremely satisfied with their quality of life).

Some of these validation problems were considered egregious: for instance, giving a male contact name but pretending to be female on the survey; or providing a non-existent contact address (although giving contact information was completely optional). On the other hand, most validation problems could have reasonable explanations: for instance, a participant in a shared office could tell a coworker about the study, and they might both participate in the study around the same time (on computers with similar IP addresses). Or, an otherwise truthful participant could have given a bogus social security number because she did not want to provide hers over the internet. Finally, a participant could find out about the study while on vacation and thus complete the study in a part of the country other than her home zip code. It was not uncommon for a survey to have one such minor validation problem, so only those with egregious or multiple validation problems were deemed to be invalid.

Missing data. There was relatively little missing data: fewer than 7% of valid participants who started the main survey dropped out before finishing. Moreover, while it was not uncommon for participants to miss a question on one of the surveys, no question had more than 10.8% of data missing. The scale with most missing questions was the Helpfulness of Coping Scale (average 7.6% missing per question). It is expected that more participants missed questions on this scale because it was on the same page as the Coping Questionnaire, in a complex grid: each Coping Questionnaire question had its own line on the left side of the screen, with answer options appearing in a grid to the right of the questions, in the center of the screen. Answer options for the helpfulness of each coping strategy appeared in an additional grid on the right side of the page. While missingness on the Coping Questionnaire was low (average 4.0%), it is possible that some participants simply did not understand that they were supposed to choose

one from each grid of answers. Moreover, while Qualtrics offered this complex grid as one of their normal question layout formats, no pop-up message about missing questions was available for this screen. Thus, those who accidentally skipped questions on this page were able to simply advance to the next page without being prompted to go back and complete questions they had skipped.

To investigate whether missingness on questions in any scale was related to scores on other scales or auxiliary variables, a series of χ^2 and t-tests were run. Missingness on each scale was used as an independent variable (missing on at least one question in the scale / complete on all questions in a scale), with scores on other scales or auxiliary variables serving as dependent variables. With the exception of missingness on the Helpfulness of Coping Scale, there was no evidence that missingness on any scale was systematically related to any other scales or auxiliary variables. That is, the low number of significant relationships found (5 out of 210 comparisons made, excluding the Helpfulness of Coping Scale) is consistent with what would be expected to be found simply by chance.

The Family Member Impact Scale did not have any missing data, but other scales in the SSCS model, as well as the two IPV scales, did have missing data. Although overall missingness was relatively low, listwise deletion of all those who missed even one question on one scale would have resulted in unacceptable loss of power (models included as few as 35 participants). To avoid this loss of power, missing data were multiply imputed using Stata 13's chained imputation procedure. In chained imputation, each variable with missing data is imputed in turn using all non-missing observations for other variables in the imputation model (White, Royston, & Wood, 2011). Once all missing variables have been imputed, another round of imputation is conducted, now using initially imputed observations as well as non-missing observations to

impute missing data. This process continues until convergence is reached, and (after 10 burn-in iterations) imputed datasets are then output with 10 additional iterations happening between each outputted dataset to ensure independence between imputed datasets.

Imputation is done with an imputation model, consisting of variables to be imputed and others to be used as predictors. Imputation models for each variable use a regression appropriate to the type of variable (e.g., linear, logistic, or ordinal logistic regression, etc.). Initial imputation models including many descriptive predictors did not converge due to a high #variables: N ratio. Most descriptive predictors were dropped and final imputation models only included SSCS-model scales, the two IPV scales, and indicators for the partner's problem type(s).

The Woman Abuse Screening Tool was imputed using ordinal logistic regression, but convergence was not achieved when variables for other SSCS-model scales with missing data were included in the imputation model. Thus only the Family Member Impact Scale and problem-type-indicator variables were included in the model for this imputation. Variables from the Helpfulness of Coping scale would not impute when their imputation model included items from any other scales. This would be unacceptable since standard imputation practices require that imputation models include constructs to be used in the final analysis whenever possible (Rose & Fraser, 2008). Therefore, items from the Helpfulness of Coping scale were not imputed. Instead, total helpfulness of coping was calculated as the mean of scores on all answered (non-missing) questions. Helpfulness of coping subscales was calculated in the same manner.

Other variables for scales in the SSCS model were initially imputed using linear regression, with the model including SSCS-model scale variables, the Mediator's Assessment of Safety Issues & Concerns scale, and problem-indicator variables. This resulted in imputed data far outside the bounds of the scales being imputed. Bounded linear regression did not converge,

but Predictive Mean Matching regression converged and resulted in imputed data appropriate to the bounds of the scale. Predictive Mean Matching is a semi-parametric procedure which predicts a temporary imputed value using linear regression, then randomly chooses a final imputed value from among non-missing observations with values close to the temporarily-imputed value (White, Royston, & Wood, 2011).

Ten datasets were initially imputed and normal Q-Q plots were constructed for parameter estimates from mediation and moderated mediation models. The distributions of some parameters were not normal, indicating that additional imputations were necessary. Twenty-five additional imputations were run, and subsequent normal plots on parameters for all 35 imputed datasets indicated that the distributions of parameters were more normal. Analyses for Aims 1, 2, and 3 were run separately for each imputed dataset, then combined (see next section for details).

Analyses. Multiply imputed data were imported into SAS 9.3. Descriptive statistics were run for all variables. Cronbach's alpha was calculated for all scales and subscales, in addition to an examination of the distribution of all scales and subscales. Scales and subscales were calculated according to developer instructions. Where there was more than one possible scoring for a scale (i.e., the Woman Abuse Screening Tool & the Mediator's Assessment of Safety Issues & Concerns), each scoring scheme was carefully examined. Final decisions on which scoring to use were based on the literature and on the scoring schema's utility within the SSCS model.

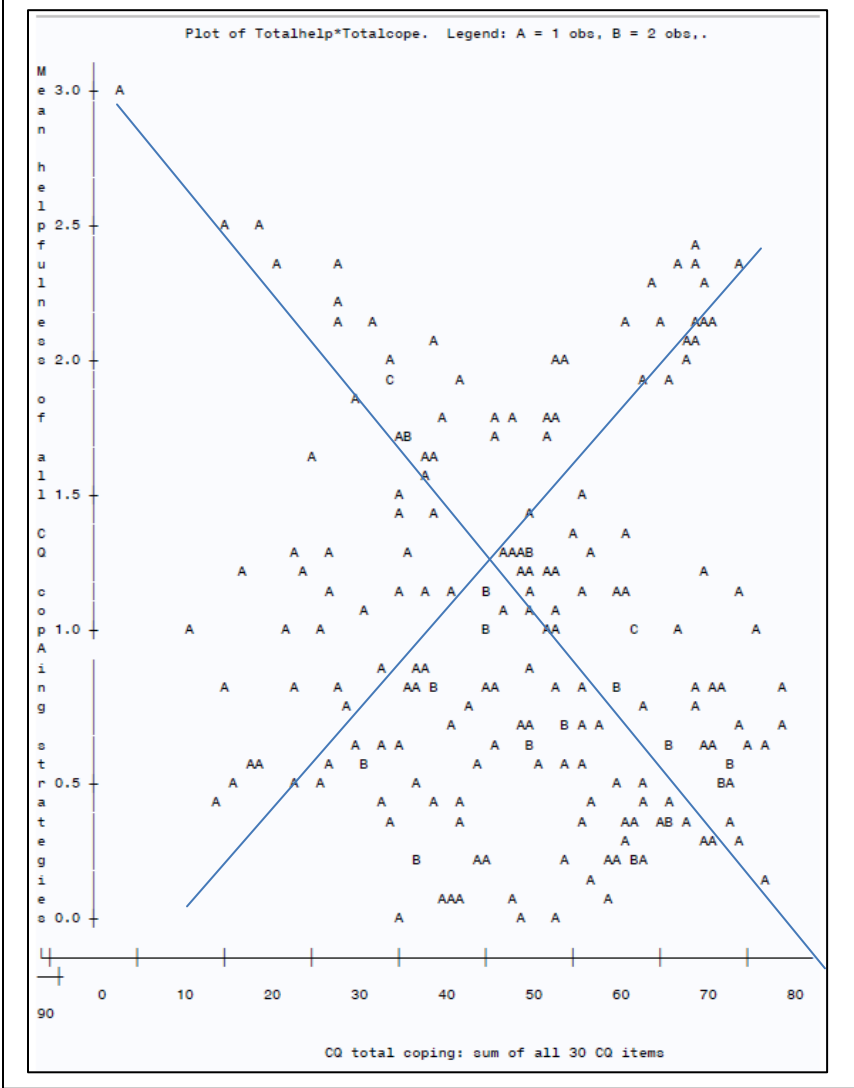
Aim 1 predicts specific relationships between IPV, burden of SGP, coping, social support, perceived helpfulness of coping, distress, and quality of life (see Figure 2, Chapter 2). Correlations were conducted to determine the existence, strength, and direction of relationship for each of the planned comparisons.

The remaining aims were assessed using regression-based mediation and moderation analyses. Regressions to predict psychological distress (including total psychological distress, depression, anxiety, and stress) and quality of life were run separately. Furthermore, analyses were run once with total coping and total social support, and again using expanded subscales of coping and social support in the model.

Prior to running regressions, the PI tested assumptions for the regression: linear relationship between independent and dependent variables & mediators, no multicollinearity, and independent/ homoscedastic residuals. Scatterplots were constructed for the independent variable (stress) with each dependent variable (psychological distress and quality of life), the independent variable with each mediator (coping, social support, and helpfulness of coping), and each mediator with each dependent variable. Linear relationships emerged between burden of SGP, coping, and the dependent variables. Relationships between social support and other variables appeared to be slight but linear. Relationships between helpfulness of coping and other variables were not clear-cut, with scatterplots appearing to suggest that helpfulness of coping may have multiple (crossed) linear relationships with other variables (see Figure 6).

Regressions of the dependent variables on the independent variable and mediators, and of the mediators on the independent variable, were run to check multicollinearity and residuals. Variance Inflation Factors for all regressions were less than 2.5, indicating no problematic multicollinearity. Residual Q-Q plots looked normal. Plots of studentized residuals with predicted values primarily indicated homoscedasticity of residuals, with the exception of the regression of Helpfulness of Coping on total coping and stress, which was heteroscedastic. To correct for this problem, all analyses that included Helpfulness of Coping were conducted with a heteroscedasticity-consistent standard error (Hayes & Cai, 2007).

Figure 6. Scatter plot of Coping Questionnaire and Helpfulness of Coping scale scores



Aim 2 tested the revised version of the SSCS theory (see Figure 3 in Chapter 2). The PI tested for mediation with procedures outlined by MacKinnon (2008), MacKinnon, Fritz, Williams, & Lockwood (2007), and Preacher and Hayes (2008). Unlike the four-step procedure for testing mediation outlined by Baron and Kenny (1986), the methods described by Preacher, Hayes, Mackinnon, and colleagues advocate examining the indirect effect (mediation) by testing the product of the constituent (a & b) paths of the proposed mediation. If the product of the constituent paths is significant at $\alpha = .05$, then the mediation is deemed significant.

Since the product of the paths is only asymptotically normally distributed (that is, normally distributed only in samples of almost infinite N), however, alternate methods of determining significance must be used. MacKinnon and colleagues (2007) present a mathematical derivation of the distribution of the product of paths which does not assume normality, as well as a SAS macro which calculates the 95% confidence intervals. Preacher and Hayes (2008) advocate bootstrapping, a resampling procedure which results in a sampling distribution which is then used to construct confidence intervals. In a simulated test of the distribution of products and bootstrapping methods, Preacher and Hayes (2008) found that bias-corrected bootstrapping provides the most accurate confidence intervals. They provide SAS macros for this procedure (later extended as the PROCESS macro, Hayes, 2013b). Using the PROCESS macro to conduct the procedure described above, the PI determined whether coping and social support are mediators of the stress-strain relationship.

Aim 3 determined whether IPV is a moderator of the process of dealing with a partner's SGP (see Figure 3 in Chapter 2). Moderated mediation is defined as an indirect effect where the strength of the mediation depends on an additional variable (hypothesized to be IPV for this study). Preacher, Rucker, and Hayes (2007) conducted a simulation of different methods of determining significance of the moderated mediation and determined that bias-corrected bootstrapping was again the most powerful and accurate method. That article provides a SAS macro to test different models of mediated moderation (again, later extended as the PROCESS macro in Hayes, 2012, 2013b). In the PROCESS macro, an index of moderated mediation is used in the determination of statistical significance (Hayes, 2013a). If the index is significant then the moderated mediation effect is deemed significant. For this aim, the PI tested the hypothesis that burden of SGP and IPV interact to predict coping, which serves as a mediator between burden of

SGP and psychological distress (or quality of life). Tests of moderated mediation were run separately using violence/abuse and coercive control, in order to determine the role of each aspect of IPV in coping with a partner's SGP.

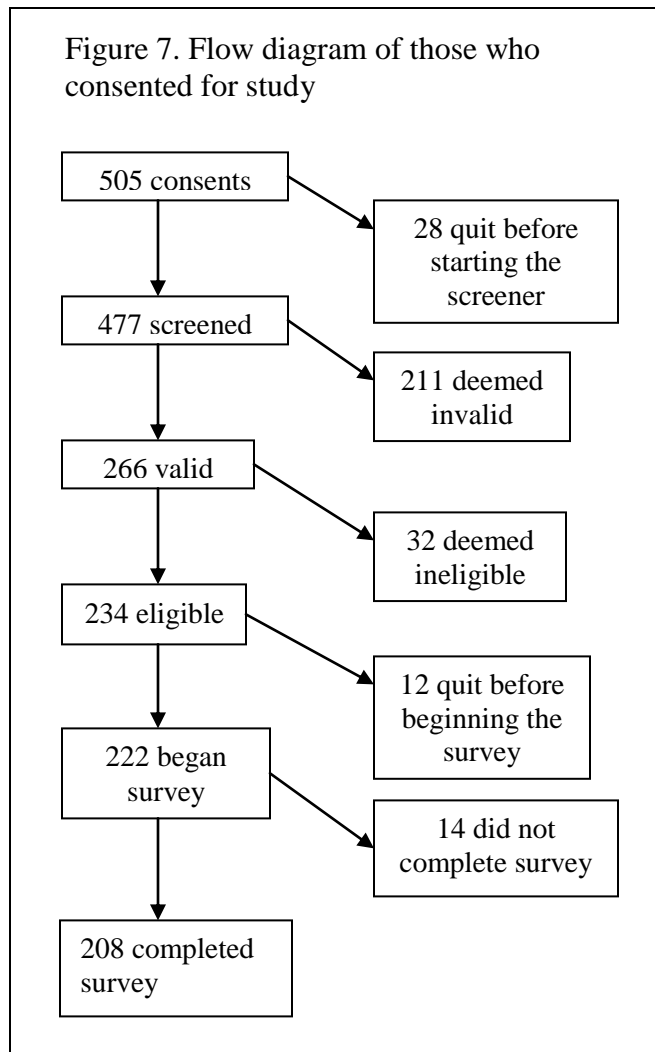
As stated above, the analyses for Aims 1, 2, & 3 were each conducted 35 times (once for each imputed dataset). The imputed dataset results for statistical tests based on normal theory (correlations for Aim 1) were combined via Rubin's Rules (Rubin, 1987). The combined parameter (point) estimate is simply the mean of all of the imputed datasets' parameter estimates. Standard errors take into account both within-imputation and between-imputation variability. Point estimates are divided by standard errors, with significance determined by the t-distribution. Aim 1 correlations were first transformed via Fisher's Z transformation (Fisher, 1915), then combined and back-transformed to correlation form.

When combining mediation and moderated mediation results from imputed datasets, final point estimates are simply the mean of point estimates for the imputed datasets. Because mediation and moderated-mediation paths are not normally distributed, however, using the normal-theory-based Rubin's Rules to combine estimates from imputed datasets results in incorrect inference (Wu & Jia, 2013). Therefore, a bias-corrected confidence interval for each final point estimate was constructed via Wu & Jia's (2013) method, using the bias-corrected confidence interval capability of the PROCESS macro (Hayes, 2013b). In this method, the bootstrapped samples for all imputed datasets are merged to create a combined empirical sampling distribution. A 95% confidence interval is constructed, then corrected for bias in the combined empirical sampling distribution via shifting the confidence interval up or down as necessary until the median of the combined empirical sampling distribution matches the final point estimate. Results presented in Chapter 4 are the final combined results.

Chapter 4: Results

Participants

Potential participants ($N = 505$) consented to participate in the study (see Figure 7; details about items in text boxes in the right column appear in the following text). Of these, 477 went on to complete the screener. It is not known why those who consented and quit did not complete the screener. Nearly half of those who completed the screener (44.2%) were later deemed to be



invalid, primarily due to multiple validation problems (e.g., use of a deceased person's social security number, zip code and IP address localizing to different regions, and spending less than 3 minutes on the survey; see previous chapter for details). Thirty-two of the 266 valid participants were determined to be ineligible: they were male ($n = 13$), failed to answer one or more qualifying questions ($n = 11$), did not have a qualifying relationship ($n = 7$), or were screened out because recruitment goals had been met for IPV ($n = 1$). The ineligible participants did not differ from eligible participants in ways unrelated to the reason for their ineligibility ($p > .05$). Those who were eligible but did not start the survey (defined as not answering any questions on the Family Member Impact Scale or any other scales in the SSCS model) were not demographically different from those who started the survey on age, relationship length, race, partner's sex, or screening for IPV ($p > .05$ for all comparisons). It is not known why those who were eligible and completed the screener failed to start the survey.

The majority of participants were from the St. Louis metropolitan area (65.7%), with the remaining participants scattered across the United States (see Table 2). Participants' median age was 35.9 years (range 24-63 years). Less than 10% of participants (7.2%) were Hispanic. Most participants were White (76.6%), with 21.6% identifying as Black and the remainder self-reporting being another racial category (Asian, Native Hawaiian/Pacific Islander, or American Indian/ Alaska Native) or multiple racial categories. (Though participants were directed to mark all racial categories that applied, 96.4% chose only one racial category.)

On the whole, participants were highly educated: 90.1% had at least some college or technical school, with over half reporting an undergraduate, graduate, or professional degree. Most worked full-time (69.4%), while less than 10% worked part-time (9.9%) or were unemployed/laid off (8.6%), and 12.2% reported being a homemaker, disabled, full-time student,

Table 2. Participant demographics

Variable	Answer options	Number (total N=222)	Percent	Median	Range
Residence	St. Louis area	146	65.8%		
	Outside of St. Louis	76	34.2%		
Age				33.0 years old	24-63 years old
Race/ ethnicity [†]	Hispanic	16	7.2%		
	White	170	76.6%		
	Black	48	21.6%		
	Other	14	6.3%		
Education	High school or less	22	9.9%		
	Some college	79	35.6%		
	College degree	81	36.5%		
	Graduate degree	40	18.0%		
Employment	Work full-time	154	69.4%		
	Work part-time	22	9.9%		
	Unemployed	19	8.6%		
	Other	27	12.2%		
Household income				\$50,000- \$59,999	\$0- \$100,000+
Adequacy of income	Not enough to make ends meet	52	23.4%		
	Just enough to get by	85	38.3%		
	Keeps you comfortable but allows no luxuries	58	26.1%		
	Allows you to do more or less whatever you want	13	5.9%		
Housing	Rent	78	35.1%		
	Own	126	56.8%		
	Stay with somebody / Other	18	8.1%		
	How participant found out about study [†]	VFH Research Participant Registry	100	45.1%	
Online notices		71	32.0%		
Word of mouth		41	18.5%		
Flyers		4	1.8%		
Other way		15	6.8%		
Number of children				2*	0 – 8

[†] more than one choice allowed

*median number of children among the 62.6% of participants who reported having children

or “other” employment status. Median household income was \$50,000 – \$59,999/year, though the wide range (\$0 - \$100,000+) meant that over 60% reported that this income was either not enough to make ends meet or was just enough to get by. Nearly 2/3 of participants had children (62.6%). Among those who reported having children, the median number of children was two. When asked how they found out about the study, they cited the Volunteers for Health Research Participant Registry (45.1%), online notices (32.0%), word of mouth (18.5%), flyers (1.8%), or another way (6.8%).

In comparison with St. Louis Metropolitan Area data from the 2012 American Community Survey (U.S. Census Bureau, 2008-2012), the racial breakdown of participants was comparable [$\chi^2(2) = 2.75, p = .25$]. Participants were more educated than the St. Louis area population [$\chi^2(2) = 83.69, p < .0001$] and were more likely than the St. Louis area population to be working full-time [$\chi^2(3) = 82.04, p < .0001$]. However, participants’ median income was not significantly different from the St. Louis area [Sign Test $M = -3.00, p = .07$]. Moreover, participants were less likely to own their homes than the St. Louis area population [$\chi^2(1) = 7.12, p = .008$].

Most participants (93.7%) had a current partner with SGP (see Table 3). These partners were nearly all male (96.4%). The median length of relationship was 5 years (range 0.75 – 44 years). Most participants (56.3%) reported being married to, or in a civil union with, their partner, though 30.2% had never been married to their partner and 7.2% were currently divorced from their partner. The majority had lived with their partner for most or all of the past year (74.8%). When asked to rate the degree of happiness in their relationship over the past year on a scale of 1 (extremely unhappy) to 7 (perfectly happy), the median answer was 3 (a little unhappy).

Table 3. Participants' relationships

Variable	Answer options	Number	Percent	Median	Range
Relationship status	Current relationship	208	93.7%		
	Past relationship (dissolution within past 12 months)	14	6.3%		
Partner's gender	Male	214	96.4%		
	Female	7	3.2%		
	Transgender	1	0.5%		
Marital status	Married/civil union with partner	125	56.3%		
	Not married	67	30.2%		
	Separated/divorced from partner	16	7.2%		
Length of relationship				5 years	0.75 – 44 years
Living arrangements with partner	Lived together most/all of the past year	166	74.8%		
	Lived separately most/all of the past year	42	18.9%		
Degree of happiness in relationship (past 12 months)				3 (a little unhappy)	1 (extremely unhappy) – 7 (perfectly happy)

Though most participants said their partner had problems from either alcohol use, drug use, or gambling, 26.1% said their partners had problems with two of these behaviors and 4.1% indicated that their partner had problems from all three (see Table 4). Alcohol problems were by far the most common: either singly or in combination with drugs and/or gambling problems, 69.8% of partners were reported to have alcohol problems. Fewer partners were reported to have drug (36.5%) or gambling problems (27.9%), either singly or in combination with other SGP. See Figure 8 for the distribution of various combinations of SGP among partners. Again, among partners the biggest category of SGP was alcohol problems only, at 40.1%. Fewer partners were reported to have only drug problems (16.2%) or only gambling problems (13.5%). Among partners who reportedly had problems with two of these behaviors, the most common

combination was alcohol and drugs (15.8%), followed by alcohol and gambling (9.9%), and drugs and gambling (0.5%). A few partners (4.1%) were reported to have problems with alcohol, drugs and gambling.

Partners' alcohol problems had reportedly lasted a median of 7 years (range ½ - 50 years), with partners reportedly drinking a median of 4 drinks 3-4 times/week and binge-drinking twice/week (see Table 4). Twenty-five percent of partners were reported to binge-drink daily or almost daily, and only 27% of partners were reported to binge-drink less often than once/week. Moreover, 51.8% of partners were reported to show increased alcohol tolerance over the past year.

Figure 8. Distribution of alcohol, drug and gambling problems in partners

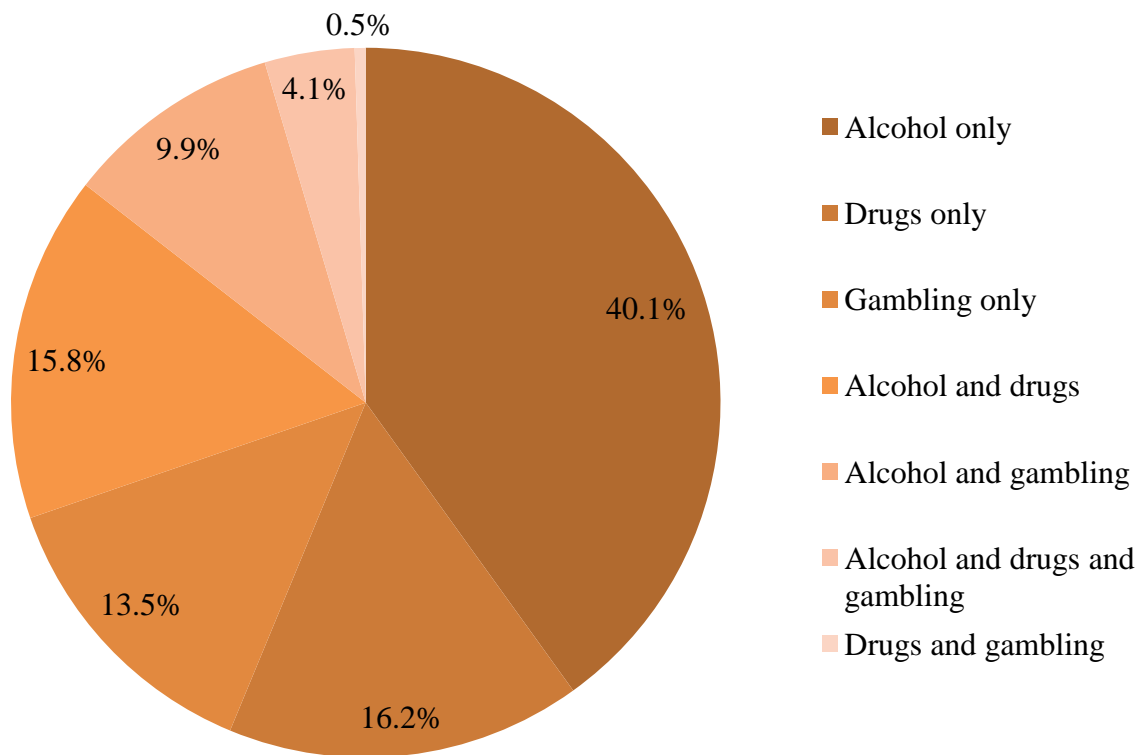


Table 4. Alcohol, drug, & gambling behavior of partners and participants

Category	Variable	Number	Percent	Median	Range
Reports of partner's alcohol problem	Alcohol problem	155	69.8%		
	Duration of alcohol problem			7 years	½ - 50 years
	Past-year alcohol use	203	91.4%		
	Past-year frequency of use			3-4 times/week	Never – daily
	Usual # drinks per drinking day			4 drinks	½ - 25
	Binge drinking frequency			Twice/week	Never – daily
Reports of partner's drug problem	Alcohol tolerance	115	51.8%		
	Drug problem	81	36.5%		
	Duration of drug problem			10 years	1 – 38 years
	Past-year drug use	92	41.4%		
	Past-year frequency of use			3-4 times/week	Never – daily
	Drug tolerance	66	29.7%		
Reports of partner's gambling problem	Gambling problem	62	27.9%		
	Duration of gambling problem			5 years	0 – 56 years
	Past-year gambling	95	42.8%		
	Past-year frequency of gambling			Twice/week	Never – daily
	Usual \$ spent per gambling day			\$200	\$0 - \$4,000
	Lying to cover up gambling	64	28.8%		
	Chasing gambling losses	70	31.5%		
Reports of participant's alcohol use	Past-year alcohol use	173	77.9%		
	Past-year frequency alcohol use			2-3 times/month	Once or twice/year–daily
	Usual # drinks per drinking day			2 drinks	1/10 – 24 drinks
	Binge drinking frequency			3-6 times/year	Never-nearly every day
Reports of participant's drug use	Past-year drug use	32	14.4%		
	Past-year frequency drug use			2-3 times/month	Once or twice/year–daily
	Poly-drug use (or drug & alcohol)	15	6.8%		
Reports of participant's gambling	Past-year gambling	60	27.0%		
	Past-year frequency gambling			7-11 times/year	Never – 3-4 times/week
	Usual \$ spent per gambling day			\$50	\$2 - \$2,000

Participants' reports of their partner's drug problems (see Table 4) were less common, but were of longer duration on average than alcohol problems (median 10 years, range 1-38 years). Again, partners reportedly used drugs 3-4 times/week on average, and 29.7% reportedly showed increased tolerance for drugs in the past year.

Participants who reported that their partner had a gambling problem (see Table 4) stated that the gambling problems were of shorter duration, on the whole (median 5 years, range 0-56 years), than were partners' alcohol or drug problems. Reported gambling problems were nonetheless significant, with partners reportedly spending a median of \$200 (range \$0 - \$4,000) twice/week on gambling. Two measures indicative of gambling problems were relatively common among partners: 28.8% of participants said their partner lied to cover up gambling and 31.5% said their partner went back to the gambling venue the day after a loss to attempt to win back the losses (i.e., chased their losses).

Though most of the time participants' judgments that their partner had a gambling problem were congruent with their reports of the partner's behavior (all but four of the partners with gambling problems lied and/or chased losses in the past year), the converse was not always true. That is, 16 participants who did not report that their partner had a gambling problem nonetheless said that their partners lied about gambling and/or chased losses. The same pattern held for drug and alcohol problems: only three partners with drug problems did not use drugs in the past year, but 12 partners without reported drug problems were reported to experience tolerance and/or used drugs monthly or more frequently. Finally, only four partners with reported alcohol problems did not binge-drink or show tolerance in the past year; however, 28 partners without reported alcohol problems showed alcohol tolerance and/or binge drinking at least monthly.

Participants tended to use alcohol and/or gamble at more modest levels than their partners (see Table 4). Though 77.9% of participants had consumed alcohol in the past year, those who drank tended to have two drinks, 2-3 times/month. Binge drinking was reported 3-6 times/year. Similarly, though 27% of participants gambled in the past year, they spent a median of \$50 every one or two months. Drug use was less common among participants: 14.4% used drugs in the past year. However, this drug use was relatively frequent (median of 2-3 times/month), and nearly half of those who used drugs (6.8%) reported poly-substance use.

Scales

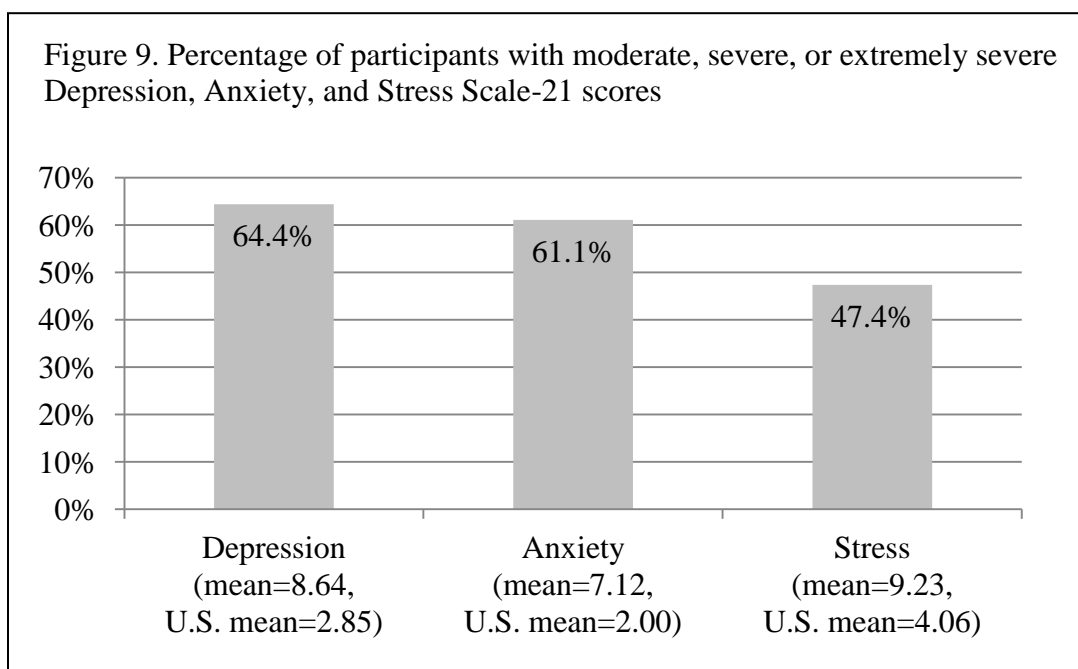
Psychometric and other information about scales can be found in Table 5. (Note that these results, and all further results presented in this dissertation, are the result of analyses run on the multiply imputed datasets. As such, the effective N for these and all following results is 222.) Reliability of the scales used for this study was good to excellent, with Cronbach's alphas for total scale scores ranging from 0.90-0.95 with the exception of the Woman Abuse Screening Tool (Cronbach's $\alpha = 0.77$). Alphas for subscale scores were also good on the whole (Cronbach's $\alpha = 0.80$ -0.96), except for withdrawal coping (Cronbach's $\alpha = 0.71$) and unhelpful social support (Cronbach's $\alpha = 0.77$). Distributions for all scales were relatively normal, with skewnesses ranging from -0.32 to 0.79. Therefore, it was not necessary to transform scales prior to analyses.

Mean scores on all scales can be found in Table 5. Total impact (burden) of SGP on intimate partners ($Mean=29.17$, $Standard\ Deviation=10.14$) was comparable to scores found among family members of people with alcohol or drug problems in England and Singapore:

Table 5. Scales

Name of Scale	Name of Subscale	Mean	Std. Dev.	Skew	Min.	Max.	Cronbach's Alpha
Family Member Impact Scale	Total impact of SGP	29.17	10.14	-0.32	1	48	0.90
Coping Questionnaire	Total coping	47.85	17.27	-0.36	0	82	0.92
	Engaged coping	23.16	9.71	-0.30	0	42	0.90
	Tolerant coping	12.81	6.06	-0.12	0	25	0.81
	Withdrawal coping	12.89	3.74	-0.24	3	22	0.71
Helpfulness of Coping	Helpfulness of total coping	1.03	0.65	0.62	0	3	0.96
	Helpfulness of engaged coping	0.97	0.71	0.60	0	3	0.94
	Helpfulness of tolerant coping	0.76	0.72	0.79	0	2.50	0.93
	Helpfulness of withdrawal coping	1.40	0.49	0.16	0.25	2.75	0.80
Alcohol, Drugs and the Family Social Support Scale	Total support	17.59	10.09	0.13	-7	44	0.91
	Informal support	18.77	8.44	-0.30	0	33	0.93
	Formal support	7.66	4.17	-0.16	0	17	0.83
	Unhelpful support	8.84	5.46	0.12	0	21	0.77
Woman Abuse Screening Tool	--	5.78	3.20	0.19	0	13	0.77
Mediator's Assessment of Safety Issues and Concerns	(number of items that happened in past year)	7.51	4.86	-0.07	0	14	0.95
Depression, Anxiety, Stress Scale-21	Total psychological distress	24.99	14.11	0.18	0	63	0.95
	Depression	8.64	5.51	0.33	0	21	0.91
	Anxiety	7.12	4.94	0.28	0	21	0.88
	Stress	9.23	4.92	0.10	0	21	0.88
Personal Wellbeing Index	--	5.64	1.93	-0.24	0.50	9.75	0.92

$M=30.62$, $SD=8.07$ (Lee et al., 2011; Orford, et al., 2005). No United States scores for the Family Member Impact Scale are available. Use of coping strategies was also similar to previous studies of families of people with alcohol and drug problems in England and Singapore (Lee et al., 2011; Orford, et al., 2005) and family members of people with gambling problems in England and the United States (Rychtarik & McGillicuddy, 2006). Engaged coping among participants averaged 23.16 ($SD=9.71$), compared to published means of 20.4 – 28.1. Tolerant coping among participants ($M=12.81$, $SD=6.06$) was also comparable to published scores ($M=5.2$ – 15.1). Finally, withdrawal coping ($M=12.89$, $SD=3.74$) was similar to that found in other studies ($M=5.42$ – 12.5). No comparison scores have been published for the Alcohol, Drugs, and the Family Social Support Scale.

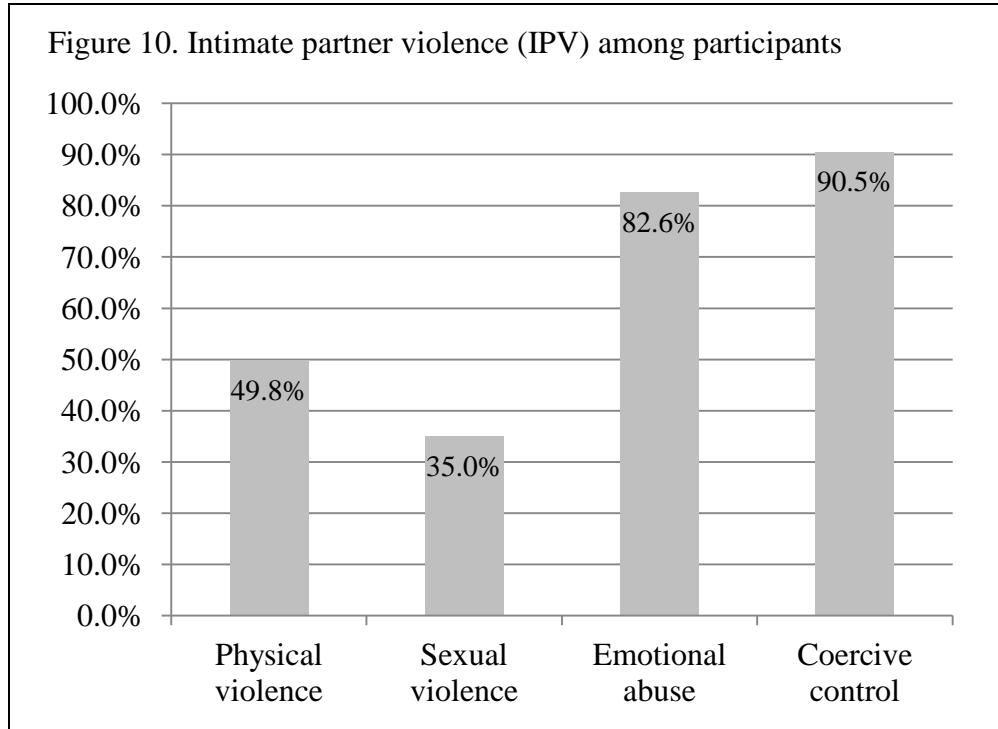


Participants experienced significant strain, as is evidenced by Depression, Anxiety, Stress Scale-21 scores (see Table 5; see Figure 9). Though each subscale had a minimum observed score of zero, meaning that some participants did not endorse any questions on the subscale,

mean scores were far above United States population norms (Sinclair et al, 2012). Population norms fall within a “normal” range, with elevated depression, anxiety, or stress categorized as “mild,” “moderate,” “severe,” or “extremely severe.” As shown in Figure 9, over 60% of participants exhibited moderate or more severe depression and anxiety. Nearly half of participants had moderate or more severe stress. Though DASS subscales do not strictly correspond with DSM 5 diagnoses (Psychology Foundation of Australia, 2013), cut-scores for probable DSM 5 diagnoses of depression (≥ 12) and anxiety disorder (≥ 5) were suggested by Nieuwenhuijsen, de Boer, Verbeek, Blonk, & van Dijk (2002). Using these cut-scores, clinically significant levels of depression and anxiety were found in 32.9% and 66.7% of participants, respectively.

Participants’ quality of life scores (Personal Wellbeing Index) also showed evidence of strain (see Table 5). Though Western norms for the Personal Wellbeing Index are 7-8 (International Wellbeing Group, 2013), on average participants scored lower ($M=5.64$, $SD=0.13$).

Intimate partner violence as measured by the Woman Abuse Screening Tool was common among participants, with nearly half stating that they had been physically abused by their partner, over one-third experiencing sexual abuse, and four out of five reporting emotional abuse (see Figure 10). Moreover, when MacMillan and colleagues’ (2009) scoring schema is used (rescore on a 0-2 scale and sum, cut-point = 4), 74.67% of participants score at least four, indicating exposure to IPV. In contrast, according to the WAST-screen (the first two questions of the Woman Abuse Screening Tool) only 20.72% of participants experienced IPV. This is unexpected, given that the literature reports sensitivity as high as 92% and specificity as high as 100% for the WAST-screen (MacMillan et al., 2009). For purposes of calculating sensitivity and specificity for this study, question 6 on the Woman Abuse Screening Tool (“Has your



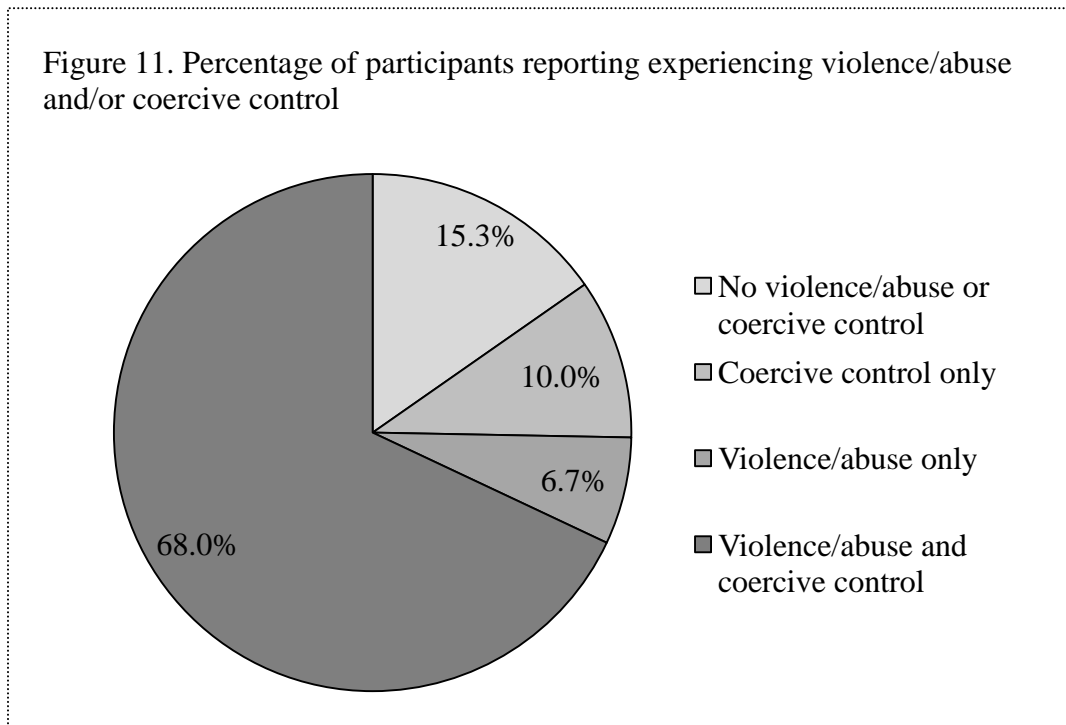
partner ever abused you physically?") can be used as a "gold standard." In comparison to answers on question 6, while the WAST-screen is 85.63% specific, it is only 27.31% sensitive. Thus, the WAST-screen will not be used in further analyses as a measure of IPV violence/abuse.

Another option was to simply use the physical violence question from the Woman Abuse Screening Tool as a measure of IPV violence/abuse. This appeared too conservative and restrictive a measure, however, since some participants reported that arguments resulted in hitting, kicking or pushing (question 4) and/or that they were frightened by their partner (question 5), yet did not report physical abuse. Another problem is that it does not capture any other aspects of IPV (e.g., emotional or sexual abuse). The MacMillan and colleagues (2009) scoring schema is less restrictive in that it uses all questions on the Woman Abuse Screening Tool. To avoid unnecessary loss of power in analyses, the sum of scores on all questions was utilized as a dimensional measure of IPV violence/abuse instead of using a cut-score.

Coercive control was measured by the coercive control subscale of the Mediator's Assessment of Safety Issues and Concerns (Holtzworth-Munroe et al., 2010; Pokman et al., 2014). Figure 10 shows that nearly all participants (90.54%) had experienced from their partners at least one coercive control tactic in the past year, slightly more than the percentage found for divorcing couples (84.3%) studied by Pokman and colleagues in their validation study of the Mediator's Assessment of Safety Issues and Concerns. Over half of participants (53.06%) reported experiencing coercive control on a monthly basis, over one-third (37.37%) experienced coercive control weekly, and 17.48% experienced at least one kind of coercive control tactic on a daily basis. As per developer instructions, a past-year variety score and a past-year frequency score were computed. The past-year variety scoring method resulted in a relatively normal distribution, albeit with somewhat heavy tails. The past-year frequency scoring method resulted in a skewed distribution which was corrected with a log-transformation. As predicted by Pokman and colleagues (2014), the correlation between past-year variety score and past-year frequency score was very high ($r = 0.94$). Therefore, as recommended, only the past-year variety score was used for this study.

Violence/abuse and coercive control were highly correlated ($r = 0.65$; see Table 6). To show the relationship between the two types of IPV, the Mediator's Assessment of Safety Issues and Concerns was recoded dichotomously, with each participant categorized as either not experiencing coercive control (zero, one, or two types of coercive control experienced in the past year) or as experiencing coercive control (three or more types of coercive control experienced in the past year). Figure 10 shows that most participants who reported experiencing violence/abuse also reported experiencing coercive control, with 68.0% of participants reporting both. Only 15.3% of participants reported neither coercive control nor violence/abuse. (Note that the cut-off

of two types of coercive control used in Figure 11 was chosen because it is just more than one standard deviation below the mean coercive control score for all participants. This roughly corresponds to conditions of low coercive control mentioned in Aim 3 results, below.)



Aim 1 results: relationships between Stress-Strain-Coping-Support (SSCS) model elements

Aim 1 predicted relationships between elements in the SSCS model. See Table 6 for correlations between these elements and confidence intervals. Hypothesis 1a predicted that greater burden of SGP would be associated with higher levels of IPV. This was the case, with significant positive correlations between burden of SGP and violence/abuse ($r = 0.57$) and coercive control ($r = 0.52$). Though no relationship was predicted between burden of SGP and partner's alcohol/drug use/gambling, two significant relationships were found between these variables. (Note that the partner's usual number of drinks consumed on drinking days and

partner's frequency of binge-drinking were both transformed via a square-root transformation due to skewness.) Burden of SGP was positively related to the partner's usual number of drinks consumed on drinking days ($r = 0.17, p = 0.01$) and frequency of binge-drinking ($r = 0.17, p = 0.01$).

Hypothesis 1b predicted that greater burden of SGP and higher levels of IPV would be associated with more psychological distress and lower quality of life. Here, again, the hypotheses were borne out: burden of SGP was positively correlated with total psychological distress ($r = 0.56$), depression ($r = 0.55$), anxiety ($r = 0.50$), and stress ($r = .48$). Higher burden of SGP was associated with lower quality of life, ($r = -0.47$). Similarly, violence/abuse and coercive control were associated with total psychological distress ($r = 0.51$ & $r = 0.44$, respectively) and with depression, anxiety and stress (r 's range from 0.33 to 0.51). As expected, higher violence/abuse and coercive control were associated with lower quality of life ($r = -0.35$ & $r = -0.30$, respectively). Though not hypothesized, violence/abuse and coercive control were also positively correlated with coping (range: $r = 0.16$ - 0.52) and helpfulness of coping ($r = 0.13$ & $r = 0.30$, respectively). Violence/abuse and coercive control were also associated with increased receipt of both formal and unhelpful social support (range: $r = 0.41$ - 0.56), though they were unrelated to receipt of informal social support ($r = -0.04$, n.s. for both violence/abuse and coercive control) and were negatively related to total social support ($r = -0.14$ & $r = -0.16$, respectively).

Hypothesis 1c predicted a positive relationship between receipt of social support and use of coping strategies. Here results were more complex: though correlations between coping and social support were positive and generally significant, the magnitude of correlations varied (see Table 6). The strongest relationships were found between total coping, engaged coping, and

Table 6. Correlations between elements in the SSCS model

	1	2	3	4	5	6	7	8	9
1. Total impact of SGP	--								
2. Total coping	<i>r</i> =.76 (.69, .81)	--							
3. Engaged coping	<i>r</i> =.69 (.21, .75)	<i>r</i> =.93 (.91, .95)	--						
4. Tolerant coping	<i>r</i> =.65 (.56, .72)	<i>r</i> =.83 (.79, .87)	<i>r</i> =.65 (.56, .72)	--					
5. Withdrawal coping	<i>r</i> =.34 (.22, .46)	<i>r</i> =.40 (.28, .50)	<i>r</i> =.24 (.11, .36)	<i>r</i> =.19 (.05, .31)	--				
6. Helpfulness of total coping	<i>r</i> =-0.12 (-.14, -.10)	<i>r</i> =-.14 (-.27, -.002)	<i>r</i> =-.18 (-.31, -.05)	<i>r</i> =-.10 (-.23, .04)	<i>r</i> =.06 (-.07, .20)	--			
7. Total social support	<i>r</i> =.14 (.009, .28)	<i>r</i> =.17 (.04, .30)	<i>r</i> =.17 (.03, .29)	<i>r</i> =.03 (-.11, .16)	<i>r</i> =.29 (.16, .41)	<i>r</i> =-.03 (0.16, .11)	--		
8. Informal social support	<i>r</i> =.29 (.16, .40)	<i>r</i> =.31 (.18, .42)	<i>r</i> =.28 (.15, .40)	<i>r</i> =.14 (.01, .27)	<i>r</i> =.33 (.20, .44)	<i>r</i> =.04 (-.09, .18)	<i>r</i> =.89 (.86, .91)	--	
9. Formal social support	<i>r</i> =.51 (.40, .61)	<i>r</i> =.54 (.44, .63)	<i>r</i> =.47 (.36, .57)	<i>r</i> =.49 (.38, .59)	<i>r</i> =.31 (.18, .42)	<i>r</i> =.12 (-.02, .26)	<i>r</i> =.51 (.40, .60)	<i>r</i> =.47 (.36, .57)	--
10. Unhelpful social support	<i>r</i> =.57 (.46, .65)	<i>r</i> =.57 (.47, .66)	<i>r</i> =.48 (.37, .58)	<i>r</i> =.54 (.43, .63)	<i>r</i> =.21 (.08, .33)	<i>r</i> =.21 (.07, .34)	<i>r</i> =-.09 (0.22, .05)	<i>r</i> =.27 (.14, .38)	<i>r</i> =.56 (.46, .65)
11. Violence/abuse	<i>r</i> =.57 (.47, .65)	<i>r</i> =.45 (.34, .55)	<i>r</i> =.35 (.23, .46)	<i>r</i> =.49 (.39, .59)	<i>r</i> =.21 (.08, .34)	<i>r</i> =.13 (.10, .15)	<i>r</i> =-.14 (-.27, -.003)	<i>r</i> =-.04 (-.17, .10)	<i>r</i> =.41 (.29, .52)
12. Coercive control	<i>r</i> =.52 (.42, .61)	<i>r</i> =.45 (.34, .55)	<i>r</i> =.35 (.23, .46)	<i>r</i> =.52 (.42, .61)	<i>r</i> =.16 (.03, .29)	<i>r</i> =.30 (.17, .42)	<i>r</i> =-.16 (-.29, -.03)	<i>r</i> =-.04 (-.18, .09)	<i>r</i> =.42 (.31, .53)
13. Total psych. distress	<i>r</i> =.56 (.46, .64)	<i>r</i> =.47 (.36, .56)	<i>r</i> =.39 (.28, .49)	<i>r</i> =.51 (.41, .61)	<i>r</i> =.11 (-.02, .24)	<i>r</i> =.03 (-.10, .17)	<i>r</i> =-.04 (-.17, .09)	<i>r</i> =.06 (-.07, .19)	<i>r</i> =.40 (.28, .51)
14. Depression	<i>r</i> =.55 (.45, .64)	<i>r</i> =.46 (.35, .56)	<i>r</i> =.39 (.27, .50)	<i>r</i> =.49 (.38, .58)	<i>r</i> =.13 (-.01, .26)	<i>r</i> =.46 (.35, .56)	<i>r</i> =-.05 (-.18, .09)	<i>r</i> =.05 (-.09, .18)	<i>r</i> =.36 (.24, .47)

Note: SGP = Substance and/or gambling problems. 95% confidence intervals are in parentheses.

Table 6. Correlations between elements in the SSCS model, continued

	1	2	3	4	5	6	7	8	9
15. Anxiety	r=.50 (.39, .59)	r=.42 (.30, .52)	r=.33 (.21, .45)	r=.51 (.40, .60)	r=.06 (-.07, .19)	r=.16 (.03, .30)	r=-.10 (-.23, .03)	r=-.01 (-.14, .12)	r=.40 (.28, .50)
16. Stress	r=.48 (.37, .58)	r=.40 (.28, .51)	r=.34 (.21, .45)	r=.42 (.31, .53)	r=.12 (-.01, .25)	r=-.02 (-.16, .11)	r=.05 (.09, .18)	r=.13 (-.001, .26)	r=.34 (.22, .46)
17. Quality of life	r=-.47 (-.49, -.45)	r=-.30 (-.41, -.17)	r=-.25 (-.37, -.11)	r=-.31 (-.43, -.18)	r=0.14 (-.27, -.001)	r=.23 (.21, .25)	r=.18 (.16, .20)	r=.10 (.07, .12)	r=-.16 (-.18, -.14)

Note: SGP = Substance and/or gambling problems. 95% confidence intervals are in parentheses.

Table 6. Correlations between elements in the SSCS model, continued

	10	11	12	13	14	15	16	17
10. Unhelpful social support	--							
11. Violence/abuse	r=.51 (.40, .60)	--						
12. Coercive control	r=.56 (.46, .64)	r=.65 (.57, .73)	--					
13. Total psych. distress	r=.47 (.36, .57)	r=.51 (.40, .60)	r=.44 (.32, .54)	--				
14. Depression	r=.43 (.32, .54)	r=.49 (.38, .59)	r=.37 (.25, .48)	r=.92 (.90, .94)	--			
15. Anxiety	r=.48 (.37, .57)	r=.50 (.39, .60)	r=.51 (.40, .60)	r=.90 (.87, .92)	r=.73 (.55, .78)	--		
16. Stress	r=.38 (.26, .49)	r=.40 (.30, .50)	r=.33 (.20, .44)	r=.93 (.91, .95)	r=.79 (.74, .84)	r=.77 (.71, .82)	--	
17. Quality of life	r=-.31 (-.33, -.29)	r=-.35 (-.37, -.33)	r=-.30 (-.32, -.28)	r=-.49 (-.50, -.47)	r=-.54 (-.55, -.52)	r=-.36 (-.38, -.34)	r=-.44 (-.47, -.42)	--

Note: SGP = substance and/or gambling problems. 95% confidence intervals are in parentheses.

tolerant coping, and both formal and unhelpful social support (r 's range from 0.47 to 0.57). Withdrawal coping was less strongly associated with all types of social support (r 's range from 0.21 to 0.33). There were small correlations between informal social support and tolerant coping ($r = 0.14$), and between total social support and total coping ($r = 0.17$) and engaged coping ($r = 0.17$).

Hypothesis 1d predicted that greater burden of SGP would be associated with more use of coping strategies, lower perceived helpfulness of coping strategies, and less social support. As expected, burden of SGP was strongly associated with total coping ($r = .76$), engaged coping ($r = 0.69$), and tolerant coping ($r = 0.65$). Burden of SGP was, however, less predictive of withdrawal coping ($r = 0.34$). Although the relationship between burden of addiction and helpfulness of total coping was negative, the correlation was small ($r = -0.12$). Unexpectedly, the relationship between burden of addiction and receipt of social support was positive. Though the correlation between impact of SGP and total social support was small ($r = 0.14$), higher burden of addiction was associated with receipt of more informal social support ($r = 0.29$) and more formal social support ($r = 0.51$), as well as receipt of more unhelpful social support ($r = 0.57$).

Aim 2 results: mediation

Aim 2 was to investigate the functions of coping, perceived helpfulness of coping, and social support in the relationship of burden of SGP to psychological distress and quality of life. It was hypothesized that coping, social support, and perceived helpfulness of coping would all mediate the relationship of burden of SGP to psychological distress and quality of life. Aim 2 results that follow will be organized by outcome (overall psychological distress, depression,

anxiety, stress, and quality of life), with tables presented for each outcome and figures presented for selected outcomes.

For all figures, variables are shown in boxes, with tested paths indicated by either dotted-black or solid-colored lines. Significant paths are shown in color, with nonsignificant paths denoted by dotted-black lines. For significant mediated paths, the direction of the mediated effect is indicated by a + or - sign in the mediating variable's box, and for significant direct paths the + or - sign is shown next to the direct path. In models of moderated mediation, an arrow connects the moderator to the mediated path. Point estimates and bias-corrected 95% confidence intervals for significant paths are located at the bottom of each figure.

Coping and social support as mediators. In the indirect effect of burden of SGP on overall psychological distress, the direct (c') path is significant in both the total mediator and subscale mediator models (see Table 7). (Significant paths are denoted by bias-corrected bootstrapped confidence intervals that do not span zero, Preacher & Hayes, 2008). Total social support mediates the path between burden of SGP and overall psychological distress ($b = -0.03$; see Figure 12). In the model using subscale coping and social support, informal social support mediates the path between burden of SGP and overall psychological distress ($b = -0.05$; see Figure 13).

Table 7. Indirect effects of burden of SGP on overall psychological distress via coping and social support

Model	Effect	Point estimate	Standard error	Bias-corrected 95% confidence interval
Total mediators	Direct (c') effect of SGP	0.669	0.121	(0.42, 0.91)*
	Indirect effects			
	Total coping	0.131	0.099	(-0.07, 0.33)
	Total social support	-0.025	0.021	(-0.07, -0.0001)*

Subscale mediators	Direct (c') effect of SGP	0.558	0.120	(0.31, 0.81)*
	Indirect effects			
	Engaged coping	-0.007	0.085	(-0.27, 0.07)
	Tolerant coping	0.167	0.108	(-0.004, 0.32)
	Withdrawal coping	-0.032	0.030	(-0.10, 0.02)
	Informal social support	-0.054	0.038	(-0.13, -0.002)*
	Formal social support	0.107	0.060	(-0.002, 0.23)
	Unhelpful social support	0.120	0.067	(-0.01, 0.25)

* Significant direct or indirect effect

Note: SGP = substance and/or gambling problems

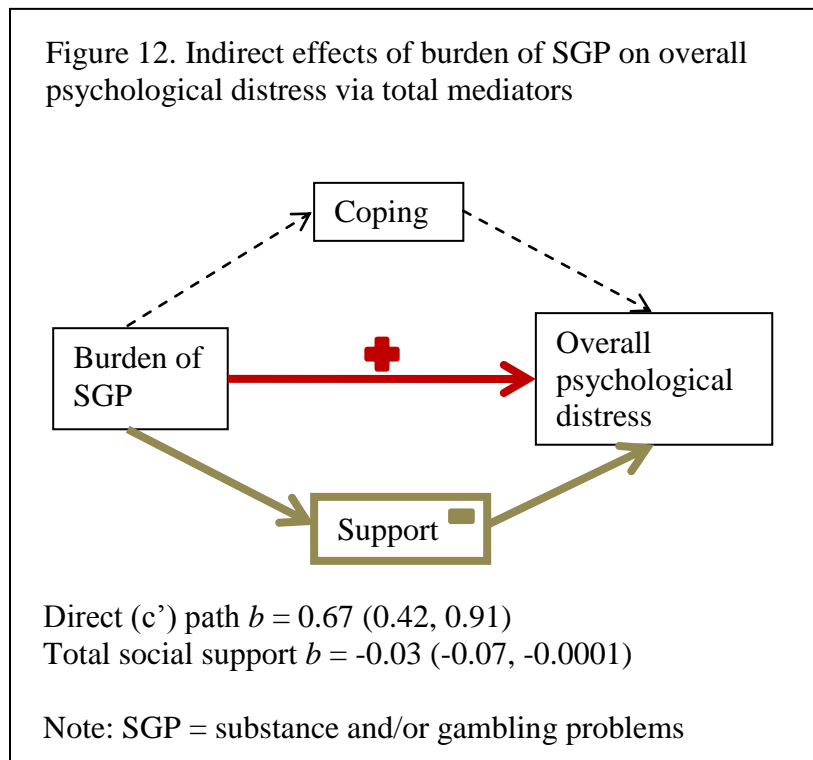
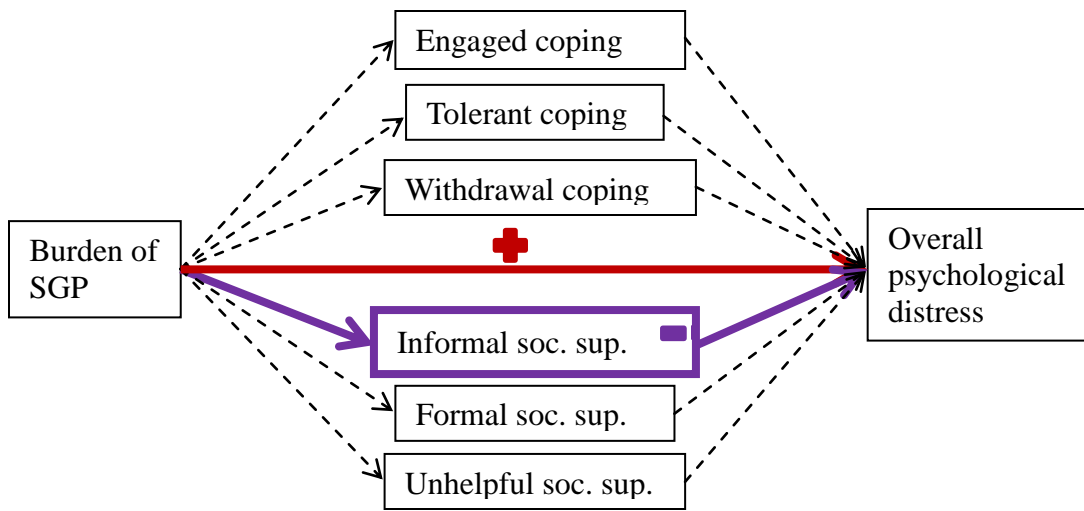


Figure 13. Indirect effect of burden of SGP on overall psychological distress via subscale mediators



Direct (c') path: $b = 0.56 (0.31, 0.81)$
 Informal social support: $b = -0.05 (-0.13, -0.002)$

Note: SGP = substance and/or gambling problems

For depression, the indirect effect of burden of SGP is mediated by total social support ($b = -0.01$; see Table 8 and Figure 14). That is, though burden of SGP acts directly to predict worsened depression (c' path), receipt of total social support predicts lessened depression. In the model using subscale mediators, once again burden of SGP acts directly to predict worsened depression, while receipt of informal social support ($b = -0.22$) predicts lessened depression (see Figure 15).

For anxiety, burden of SGP acts directly to predict worsened anxiety (c' path) whereas receipt of total social support predicts lessened anxiety ($b = -0.01$; see Table 9 and Figure 14). In a similar manner, in the subscale mediator model burden of SGP again acts directly (c' path) to predict elevated anxiety (i.e., anxiety elevated beyond that which is felt as a result of the SGP)

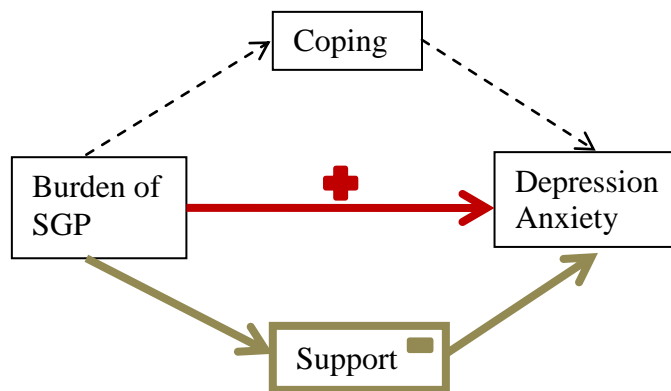
Table 8. Indirect effects of burden of SGP on depression via coping and social support

Model	Effect	Point estimate	Standard error	Bias-corrected 95% confidence interval
Total mediators	Direct (c') effect of SGP	0.254	0.048	(0.16, 0.35)*
	Indirect effects			
	Total coping	0.055	0.038	(-0.02, 0.13)
	Total social support	-0.011	0.008	(-0.03, -0.0003)*
Subscale mediators	Direct (c') effect of SGP	0.223	0.120	(0.13, 0.32)*
	Indirect effects			
	Engaged coping	-0.022	0.085	(-0.09, 0.05)
	Tolerant coping	0.054	0.108	(-0.01, 0.12)
	Withdrawal coping	-0.007	0.030	(-0.03, 0.01)
	Informal social support	-0.022	0.060	(-0.05, -0.001)*
	Formal social support	0.031	0.067	(-0.01, 0.08)
	Unhelpful social support	0.039	0.026	(-0.01, 0.09)

* Significant direct or indirect effect

Note: SGP = substance and/or gambling problems

Figure 14. Indirect effects of burden of SGP on depression and anxiety via total mediators



Depression

Direct (c') path $b = 0.25$ (0.16, 0.35)

Total social support $b = -0.01$ (-0.03, -0.0003)

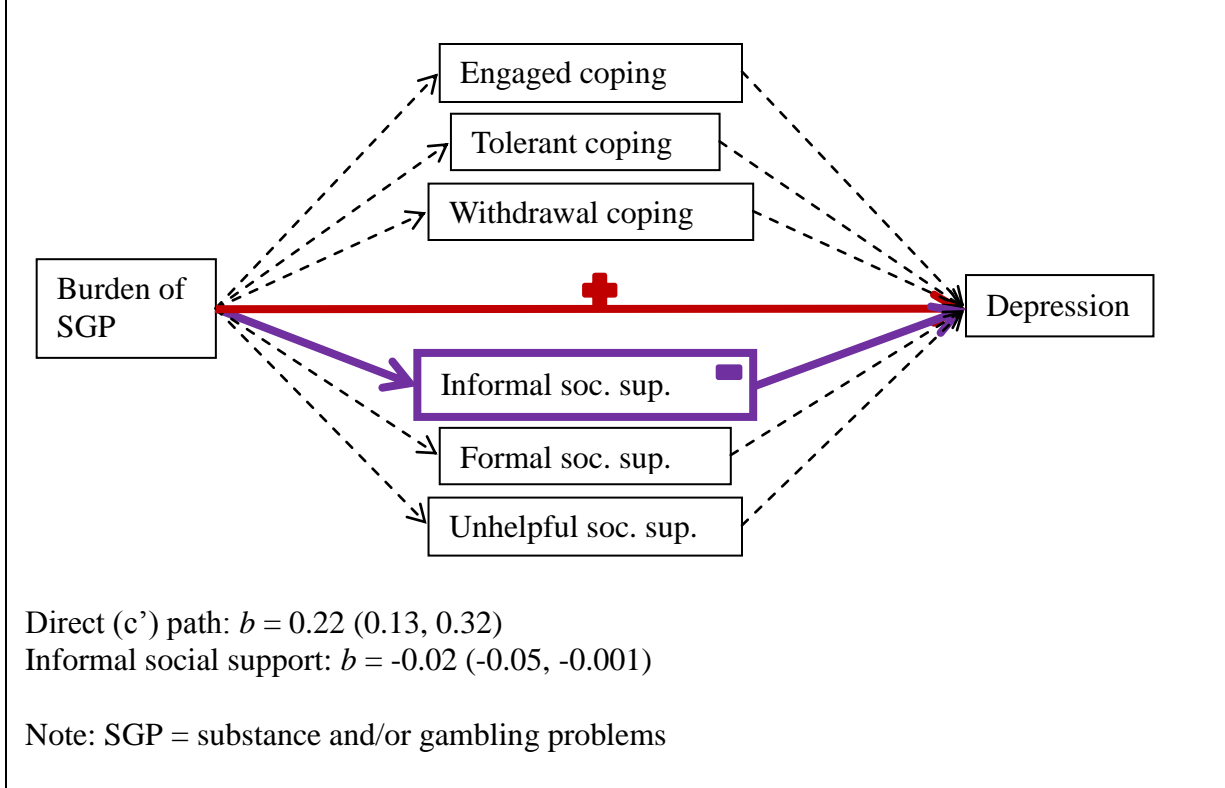
Anxiety

Direct (c') path $b = 0.21$ (0.12, 0.30)

Total social support $b = -0.01$ (-0.04, -0.001)

Note: SGP = substance and/or gambling problems

Figure 15. Indirect effect of burden of SGP on depression via subscale mediators



whereas receipt of informal social support predicts lessened anxiety ($b = -0.06$; see Figure 16). Here, use of tolerant coping strategies (inactively putting up with, tolerating, or even supporting the SGP; $b = 0.07$) as well as receipt of both formal social support ($b = 0.05$) and unhelpful social support ($b = 0.06$) predict worsened anxiety as well. (Remember that unhelpful “support” consists of interactions with family and friends – undermining coping efforts, avoiding the intimate partner, or blaming them for the SGP, for instance – that are experienced as distinctly unhelpful by intimate partners).

For stress, though burden of SGP directly predicts increased stress (c' path), neither total coping nor total social support are significant mediators (see Table 10). The same is true for the model using subscales of coping and social support. That is, no type of coping or social support is able to predict decreased or increased stress.

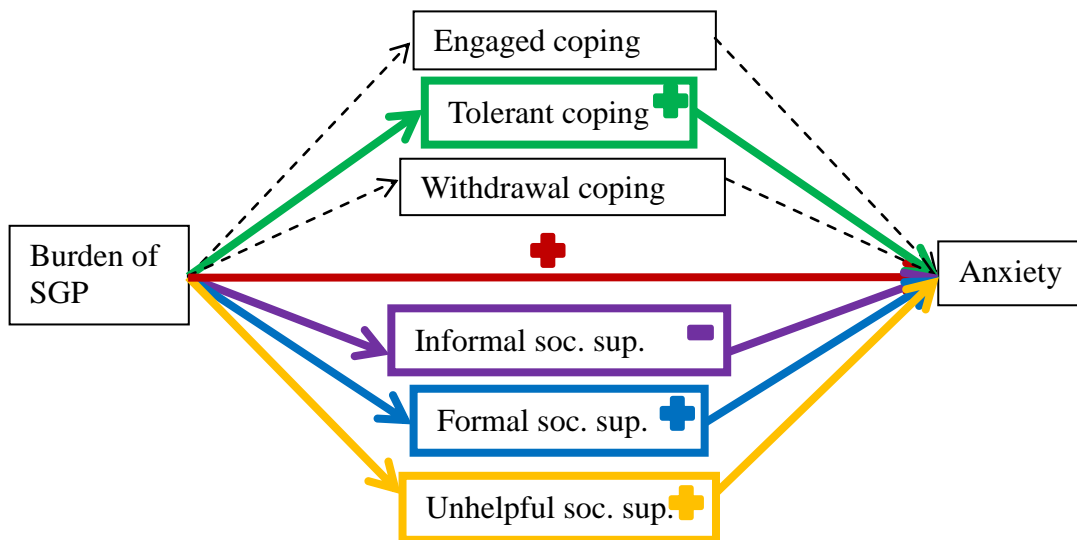
Table 9. Indirect effects of burden of SGP on anxiety via coping and social support

Model	Effect	Point estimate	Standard error	Bias-corrected 95% confidence interval
Total mediators	Direct (c') effect of SGP	0.212	0.044	(0.12, 0.30)*
	Indirect effects			
	Total coping	0.043	0.036	(-0.03, 0.11)
	Total social support	-0.013	0.008	(-0.04, -0.001)*
Subscale mediators	Direct (c') effect of SGP	0.160	0.043	(0.07, 0.25)*
	Indirect effects			
	Engaged coping	-0.048	0.038	(-0.10, 0.01)
	Tolerant coping	0.073	0.039	(0.02, 0.13)*
	Withdrawal coping	-0.016	0.012	(-0.04, 0.003)
	Informal social support	-0.029	0.017	(-0.06, -0.007)*
	Formal social support	0.052	0.022	(0.01, 0.10)*
Unhelpful social support	0.055	0.024	(0.01, 0.10)*	

* Significant direct or indirect effect

Note: SGP = substance and/or gambling problems

Figure 16. Indirect effect of burden of SGP on anxiety via subscale mediators



Tolerant coping: $b = 0.07$ (0.02, 0.13)
 Direct (c') path: $b = 0.16$ (0.07, 0.25)
 Informal social support: $b = -0.03$ (-0.06, -0.007)
 Formal social support: $b = 0.05$ (0.01, 0.10)
 Unhelpful social support: $b = 0.06$ (0.01, 0.10)

Note: SGP = substance and/or gambling problems

Table 10. Indirect effects of burden of SGP on stress via coping and social support

Model	Effect	Point estimate	Standard error	Bias-corrected 95% confidence interval
Total mediators	Direct (c') effect of SGP	0.203	0.045	(0.11, 0.29)*
	Indirect effects			
	Total coping	0.032	0.036	(-0.04, 0.10)
	Total social support	-0.002	0.005	(-0.02, 0.006)

Subscale mediators	Direct (c') effect of SGP	0.175	0.046	(0.08, 0.27)*
	Indirect effects			
	Engaged coping	-0.031	0.034	(-0.10, 0.04)
	Tolerant coping	0.052	0.032	(-0.01, 0.12)
	Withdrawal coping	-0.009	0.011	(-0.03, 0.01)
	Informal social support	-0.003	0.011	(-0.03, 0.02)
	Formal social support	0.024	0.023	(-0.02, 0.07)
	Unhelpful social support	0.025	0.025	(-0.02, 0.07)

* Significant direct or indirect effect

Note: SGP = substance and/or gambling problems

For quality of life, burden of SGP directly predicts lessened quality of life (c' path), whereas receipt of total social support is a significant mediator ($b = 0.007$; see Table 11 and Figure 17). That is, receipt of total social support predicts improved quality of life. In similar fashion, in the subscale mediator model, again burden of SGP directly predicts lessened quality of life (c' path) and informal social support is a significant mediator ($b = 0.01$; see Figure 18). That is, receipt of informal social support predicts improved quality of life.

Table 11. Indirect effects of burden of SGP on quality of life via coping and social support

Model	Effect	Point estimate	Standard error	Bias-corrected 95% confidence interval
Total mediators	Direct (c') effect of SGP	-0.116	0.018	(-0.15, -0.08)*
	Indirect effects			
	Total coping	0.018	0.013	(-0.01, 0.04)
	Total social support	0.007	0.004	(0.001, 0.02)*
Subscale mediators	Direct (c') effect of SGP	-0.110	0.018	(-0.15, -0.07)*
	Indirect effects			
	Engaged coping	0.018	0.012	(-0.01, 0.04)
	Tolerant coping	-0.002	0.011	(-0.02, 0.02)
	Withdrawal coping	-0.003	0.004	(-0.01, 0.01)
	Informal social support	0.014	0.005	(0.01, 0.02)*
	Formal social support	0.005	0.009	(-0.01, 0.02)
	Unhelpful social support	-0.014	0.009	(-0.03, 0.004)

* Significant direct or indirect effect

Note: SGP = substance and/or gambling problems

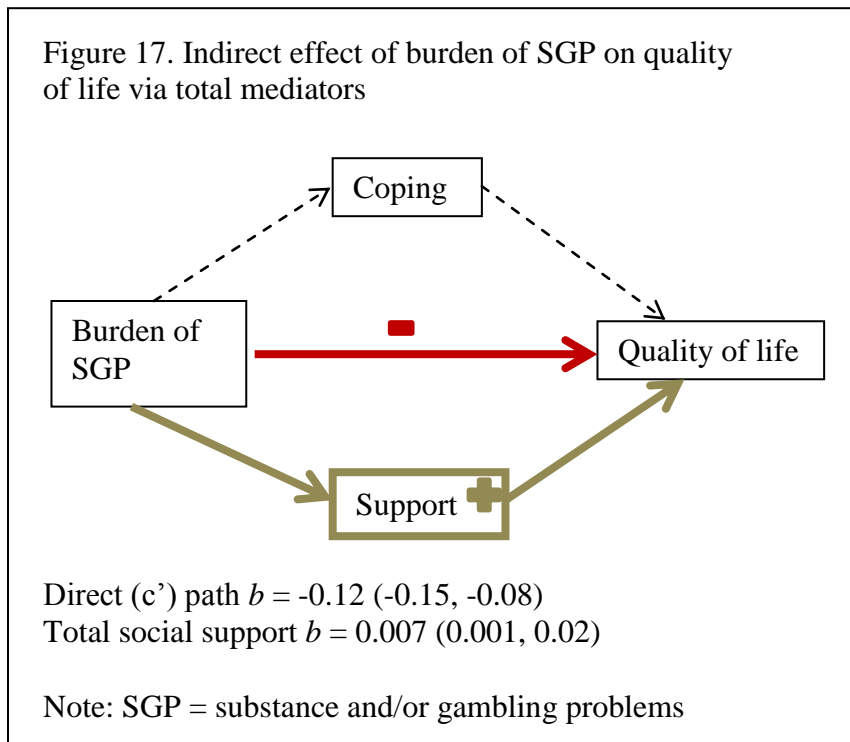
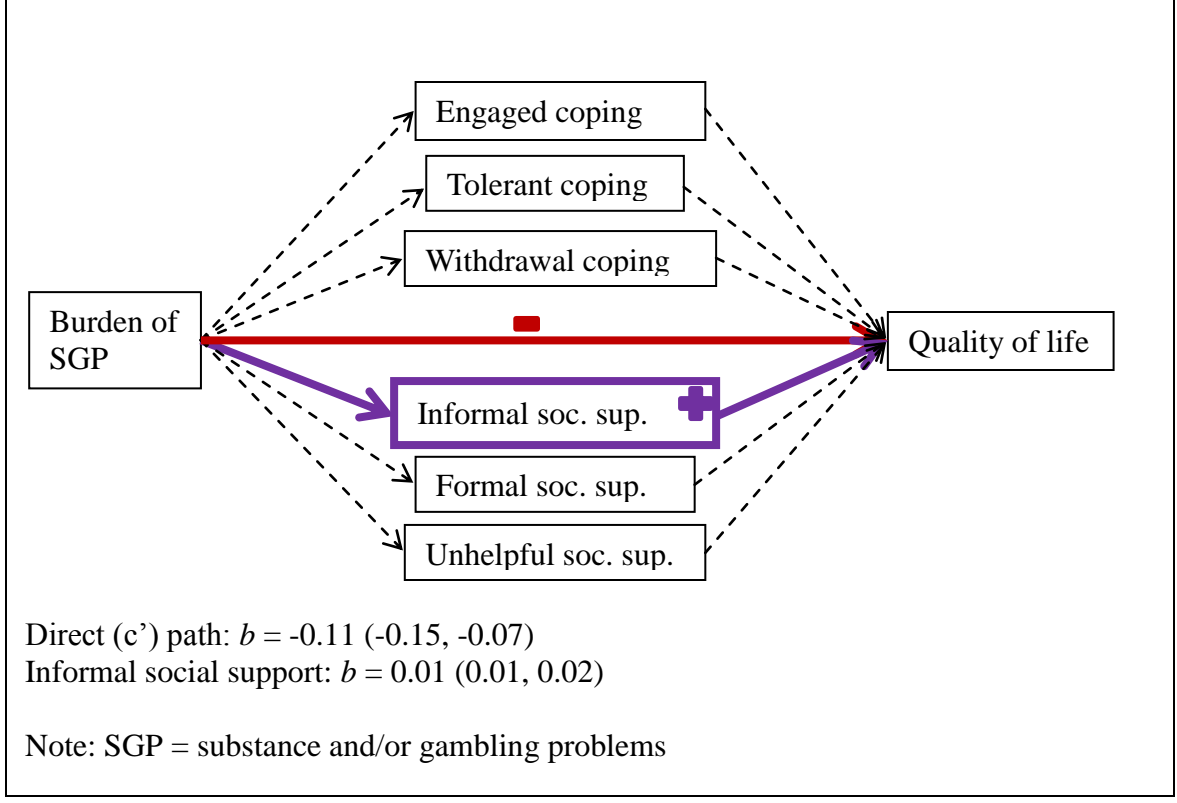


Figure 18. Indirect effect of burden of SGP on quality of life via subscale mediators



In summary, though burden of SGP directly predicts deleterious effects on overall psychological distress, depression, anxiety, stress, and quality of life, there are some indirect effects as well. Though total coping does not mediate the relationship of burden of SGP with any outcome, total social support is a mediator in models predicting depression, anxiety, and quality of life. In each of these models receipt of total social support from friends and family predicts a lessening of deleterious effects of burden of SGP on the outcome. This mediating effect of total social support appears to be driven by informal social support, in that it is a significant mediator for all outcomes except stress. In each model, receipt of informal social support appears to lessen deleterious effects of burden of SGP. For models predicting anxiety, the other two social support subscales (formal and unhelpful social support), as well as use of tolerant coping strategies, are also mediators. They predict worsened anxiety (beyond levels which would be predicted by burden of SGP alone).

Coping and perceived helpfulness of coping as mediators. It was hypothesized that coping would mediate the relationship between burden of SGP and overall psychological distress, as well as the relationship between burden of SGP and quality of life, through the intimate partner's perceived helpfulness of the coping efforts. (Note that coping and perceived helpfulness of coping run serially – that is, one after the other – with perceived helpfulness of coping subsequent to coping in the model.) This hypothesis was tested separately for total coping/helpfulness of total coping and for each subscale type of coping/helpfulness of coping. In models predicting overall psychological distress, the addition of perceived helpfulness of coping as a mediator subsequent to coping resulted in a significant indirect path only for tolerant

Table 12. Indirect effects of burden of SGP on overall psychological distress via coping and helpfulness of coping in serial mediation

Type of coping in model	Effect	Point estimate	Standard error	Bias-corrected 95% confidence interval
Total coping	Direct (c') effect of SGP	0.691	0.129	(0.437, 0.946)*
	Total coping/ helpfulness of total coping	-0.013	0.014	(-0.052, 0.007)

Engaged coping	Direct (c') effect of SGP	0.799	0.121	(0.56, 1.03)*
	Engaged coping/ helpfulness of engaged coping	-0.0004	0.012	(-0.02, 0.02)

Tolerant coping	Direct (c') effect of SGP	0.580	0.102	(0.372, 0.772)*
	Tolerant coping/ helpfulness of tolerant coping	0.020	0.016	(0.004, 0.067)*

Withdrawal coping	Direct (c') effect of SGP	0.833	0.088	(0.660, 0.999)*
	Withdrawal coping/ helpfulness of withdrawal coping	0.025	0.020	(-0.006, 0.072)

*Significant direct or indirect effect

Note: SGP = substance and/or gambling problems

coping ($b = 0.02$; see Table 12). Though higher burden of SGP predicted more use of tolerant coping strategies, and use of tolerant coping strategies predicted increased perceived helpfulness of these strategies, nonetheless the result was increased overall psychological distress (beyond that which was predicted directly by burden of SGP).

Conversely, tolerant coping/perceived helpfulness of tolerant coping predict improved quality of life ($b = 0.003$; see Table 13). Once again, higher burden of SGP predicted increased use of tolerant coping strategies, and use of tolerant coping strategies predicted increased perceived helpfulness of these strategies; however, in contrast to the previous result, this path predicted improved quality of life. Again, tolerant coping and perceived helpfulness of tolerant coping together made up the only significant serially mediated path among the models tested.

Table 13. Indirect effects of burden of SGP on quality of life via coping and helpfulness of coping in serial mediation

Type of coping in model	Effect	Point estimate	Standard error	Bias-corrected 95% confidence interval
Total coping	Direct (c') effect of SGP	-0.115	0.019	(-0.151, -0.079)*
	Total coping/helpfulness of total coping	0.004	0.004	(-0.014, 0.002)

Engaged coping	Direct (c') effect of SGP	-0.110	0.017	(-0.14, -0.08)*
	Engaged coping/helpfulness of engaged coping	0.0001	0.003	(-0.006, 0.005)

Tolerant coping	Direct (c') effect of SGP	-0.084	0.016	(-0.116, -0.054)*
	Tolerant coping/helpfulness of tolerant coping	0.003	0.002	(0.0001, 0.010)*

Withdrawal coping	Direct (c') effect of SGP	-0.090	0.014	(-0.118, -0.064)*
	Withdrawal coping/helpfulness of withdrawal coping	0.004	0.003	(-0.001, 0.012)

*Significant direct or indirect effect

Note: SGP = substance and/or gambling problems

Aim 2 summary. In summary, results did not fully support Aim 2 hypotheses. On the whole, coping did not mediate the relationship of burden of SGP with outcomes. The exception to this was tolerant coping: it predicted heightened anxiety (above that which would be due to burden of SGP alone). Additionally, in models including perceived helpfulness of tolerant coping as a second mediator subsequent to tolerant coping, together tolerant coping and perceived helpfulness of tolerant coping made up significant indirect paths. They predicted worsening of overall psychological distress, but conversely predicted improved quality of life.

Social support functioned as a mediator in many models. Total social support appeared to be helpful in that it predicted lessened depression and anxiety and improved quality of life (though it did not significantly mediate the relationships of burden of SGP with overall psychological distress or stress). This significant mediation (of total social support) may primarily be due to the action of informal social support, which was shown to predict lessened overall psychological distress, depression, and anxiety, as well as predicting improved quality of life. Other types of social support had no effect for the most part, though both formal and unhelpful social support were found to predict exacerbated anxiety (beyond that which would be predicted solely by burden of SGP).

Aim 3 results: moderated mediation

Aim 3 hypothesized that IPV would moderate the indirect effects of burden of SGP on psychological distress and quality of life (through coping and social support). Results will be organized by proposed moderator: first for IPV defined as violence/abuse, then for IPV defined as coercive control. For each definition of IPV, results will be organized by outcome (overall psychological distress, depression, anxiety, stress, quality of life). For each model run, an index

of moderated mediation is presented (in tables). When the index is significant, the indirect effect is moderated: that is, the mediated effect when the moderator is at one level is significantly different from the mediated effect when the moderator is at any other level. For each significant moderated mediation path, the moderated effect can be explored by estimating the path estimate for three levels of coercive control: mean, -1 standard deviation, and +1 standard deviation.

Models without significant moderated mediation revert to the mediated models covered in Aim 2 results, so these are not presented again. Models with significant moderated mediation have different parameter estimates than corresponding mediation-only models, so these models are presented in tables and figures.

Violence/abuse as moderator. Violence/abuse did not moderate any indirect paths, whether in models with total or with subscale coping and social support, for any outcome. That is, indexes of moderated mediation were all non-significant. Though violence/abuse is positively associated with overall psychological distress, depression, anxiety, stress, and quality of life, nonetheless it does not influence how coping and social support may function as mediators of the relationship of burden of SGP with any outcome. See Table 14 for indexes of moderated mediation for overall psychological distress. Table 15 shows indexes of moderated mediation for depression. Indexes of moderated mediation for anxiety, stress, and quality of life can be found in Tables 20, 21, and 22, respectively.

Table 14. Indexes of moderated mediation of violence/abuse for indirect effects of burden of SGP on overall psychological distress via coping and social support

Model	Effect	Index of moderated mediation	Standard error	Bias-corrected 95% confidence interval
Total mediators, moderator violence/abuse	Moderated indirect effects	-0.003	0.004	(-0.01, 0.001)
	Total coping	0.004	0.004	(-0.002, 0.02)
	Total social support			

Subscale mediators, moderator violence/abuse	Moderated indirect effects			
	Engaged coping	0.003	0.004	(0.001, 0.02)
	Tolerant coping	0.001	0.004	(-0.01, 0.01)
	Withdrawal coping	0.002	0.003	(-0.001, 0.01)
	Informal social support	0.003	0.004	(-0.003, 0.01)
	Formal social support	0.0004	0.004	(-0.007, 0.01)
	Unhelpful social support	0.004	0.004	(-0.001, 0.01)

* Significant index of moderated mediation

Note: SGP = substance and/or gambling problems

Table 15. Indexes of moderated mediation of violence/abuse for indirect effects of burden of SGP on depression via coping and social support

Model	Effect	Index of moderated mediation	Standard error	Bias-corrected 95% confidence interval
Total mediators, moderator violence/abuse	Moderated indirect effects	-0.001	0.001	(-0.006, 0.0005)
	Total coping	0.002	0.002	(-0.0001, 0.01)
	Total social support			

Subscale mediators, moderator violence/abuse	Moderated indirect effects			
	Engaged coping	0.001	0.004	(0.001, 0.01)
	Tolerant coping	0.003	0.004	(-0.002, 0.004)
	Withdrawal coping	0.0004	0.003	(-0.001, 0.004)
	Informal social support	0.001	0.004	(-0.001, 0.01)
	Formal social support	0.0001	0.004	(-0.002, 0.003)
	Unhelpful social support	0.001	0.004	(-0.0004, 0.006)

* Significant index of moderated mediation

Note: SGP = substance and/or gambling problems

Table 16. Indexes of moderated mediation of violence/abuse for indirect effects of burden of SGP on anxiety via coping and social support

Model	Effect	Index of moderated mediation	Standard error	Bias-corrected 95% confidence interval
Total mediators, moderator violence/abuse	Moderated indirect effects			
	Total coping	-0.001	0.001	(-0.005, 0.001)
	Total social support	0.002	0.002	(-0.001, 0.01)

Subscale mediators, moderator violence/abuse	Moderated indirect effects			
	Engaged coping	0.002	0.002	(-0.0002, 0.00)
	Tolerant coping	0.0004	0.002	(-0.002, 0.004)
	Withdrawal coping	0.001	0.001	(-0.001, 0.004)
	Informal social support	0.002	0.002	(-0.002, 0.01)
	Formal social support	0.0002	0.002	(-0.0003, 0.005)
	Unhelpful social support	0.002	0.002	(-0.0004, 0.01)

* Significant index of moderated mediation

Note: SGP = substance and/or gambling problems

Table 17. Indexes of moderated mediation of violence/abuse for indirect effects of burden of SGP on stress via coping and social support

Model	Effect	Index of moderated mediation	Standard error	Bias-corrected 95% confidence interval
Total mediators, moderator violence/abuse	Moderated indirect effects			
	Total coping	-0.001	0.001	(-0.004, 0.001)
	Total social support	-0.0003	0.001	(-0.001, 0.003)

Subscale mediators, moderator violence/abuse	Moderated indirect effects			
	Engaged coping	0.001	0.001	(-0.001, 0.006)
	Tolerant coping	0.0002	0.001	(-0.002, 0.004)
	Withdrawal coping	0.001	0.001	(-0.001, 0.004)
	Informal social support	0.0002	0.001	(-0.001, 0.003)
	Formal social support	0.0001	0.001	(-0.002, 0.003)
	Unhelpful social support	0.001	0.001	(-0.001, 0.005)

* Significant index of moderated mediation

Note: SGP = substance and/or gambling problems

Table 18. Indexes of moderated mediation of violence/abuse for indirect effects of burden of SGP on quality of life via coping and social support

Model	Effect	Index of moderated mediation	Standard error	Bias-corrected 95% confidence interval
Total mediators, moderator violence/abuse	Moderated indirect effects			
	Total coping	-0.0003	0.0004	(-0.002, 0.0001)
	Total social support	-0.001	0.001	(-0.003, 0.001)

Subscale mediators, moderator violence/abuse	Moderated indirect effects			
	Engaged coping	-0.001	0.0005	(-0.002, 0.0001)
	Tolerant coping	0.00	0.0003	(-0.001, 0.001)
	Withdrawal coping	0.0001	0.0003	(-0.0002, 0.001)
	Informal social support	0.001	0.001	(-0.003, 0.001)
	Formal social support	0.00	0.0003	(-0.001, 0.001)
	Unhelpful social support	-0.001	0.0005	(-0.002, 0.0001)

* Significant index of moderated mediation

Note: SGP = substance and/or gambling problems

Coercive control as moderator. In all models testing coercive control as a moderator, the direct path is significant and predictive of deleterious outcomes. Coercive control does not mediate indirect paths through total coping or total social support for overall psychological distress (see Table 19). However, in models using subscale mediators, coercive control moderates the indirect path through informal social support (index of moderated mediation = 0.006). See Table 20 for parameter estimates for the moderated mediation model. Figure 19 is a figure of this moderated mediation model. When coercive control is at -1 Standard Deviation, receipt of informal social support predicts lessened overall psychological distress (less than what would otherwise be expected from the burden of SGP; $b = -0.102$). At high levels of coercive control (+1 SD), however, informal social support is less predictive of lowered overall psychological distress ($b = -0.049$). In the moderated mediation

Table 19. Indexes of moderated mediation of coercive control for indirect effects of burden of SGP on overall psychological distress via coping and social support

Model	Effect	Index of moderated mediation	Standard error	Bias-corrected 95% confidence interval
Total mediators, moderator coercive control	Moderated indirect effects			
	Total coping	-0.003	0.003	(-0.01, 0.001)
	Total social support	0.005	0.004	(-0.0001, 0.010)

Subscale mediators, moderator coercive control	Moderated indirect effects			
	Engaged coping	0.003	0.004	(-0.001, 0.01)
	Tolerant coping	-0.001	0.003	(-0.01, 0.005)
	Withdrawal coping	-3e ⁻⁵	0.002	(-0.004, 0.003)
	Informal social support	0.006	0.004	(0.0004, 0.02)*
	Formal social support	-0.002	0.003	(-0.01, 0.003)
	Unhelpful social support	0.002	0.003	(-0.0018, 0.01)

* Significant index of moderated mediation

Note: SGP = substance and/or gambling problems

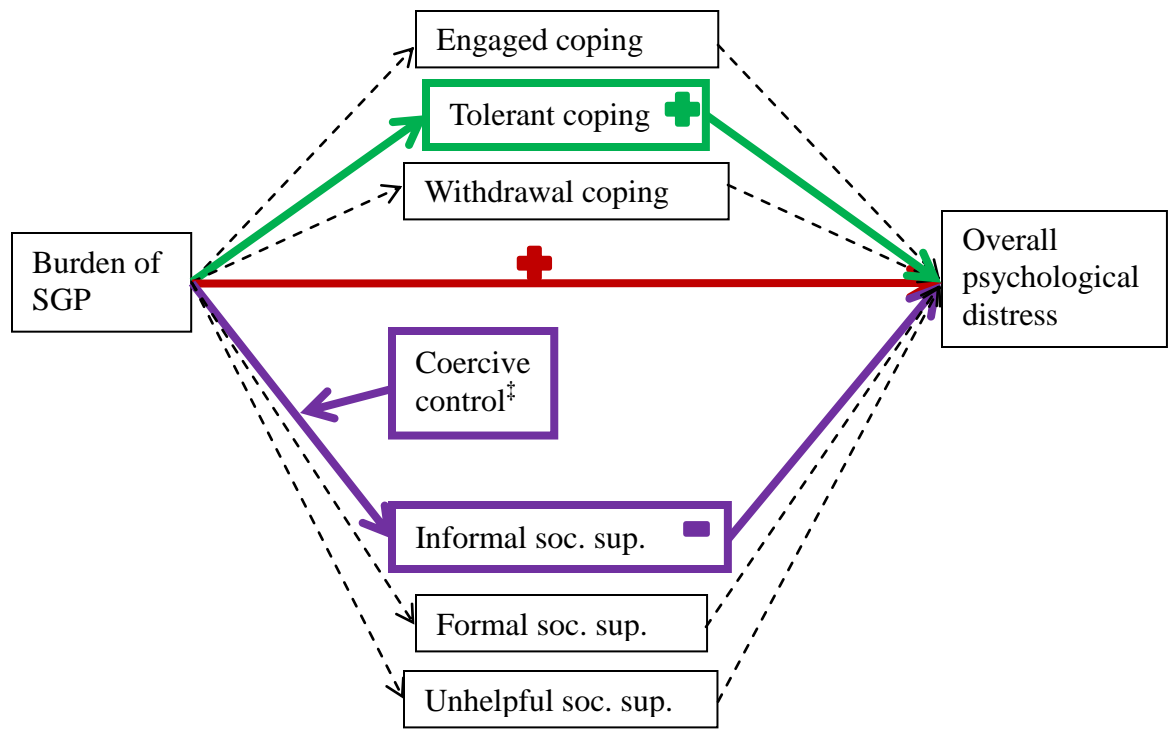
Table 20. Final moderated mediation model predicting overall psychological distress: indirect effects of burden of SGP on overall psychological distress via subscale mediators, moderated by coercive control

Model	Effect	Point estimate	Standard error	Bias-corrected 95% confidence interval
Subscale mediators, informal s.s. moderated by coercive control	Direct (c') effect of SGP	0.558	0.120	(0.312, 0.814)*
	Indirect effects			
	Engaged coping	-0.100	0.083	(-0.261, 0.066)
	Tolerant coping	0.144	0.069	(0.024, 0.293)*
	Withdrawal coping	-0.033	0.033	(-0.113, 0.018)
	Informal social support			
	@ low coercive control	-0.102	0.054	(-0.219, -0.011)*
	@ mean coercive control	-0.076	0.041	(-0.170, -0.008)*
	@ high coercive control	-0.049	0.035	(-0.145, -0.003)*
	Formal social support	0.077	0.054	(-0.006, 0.178)
	Unhelpful social support	0.082	0.049	(-0.003, 0.189)

*Significant direct or indirect effect

Note: SGP = substance and/or gambling problems

Figure 19. Indirect effect of burden of SGP on overall psychological distress via subscale mediators, moderated by coercive control



Tolerant coping: $b = 0.14$ (0.02, 0.29)

Direct (c') path: $b = 0.56$ (0.31, 0.81)

Informal social support index of moderated mediation = 0.006 (0.0004, 0.02)

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‡ Informal social support's mediation is strongest under low coercive control

- Informal social support @ low coercive control: $b = -0.10$ (-0.22, -0.01)
- Informal social support @ mean coercive control: $b = -0.08$ (-0.17, -0.008)
- Informal social support @ high coercive control: $b = -0.05$ (-0.15, -0.003)

Note: SGP = substance and/or gambling problems

model, use of tolerant coping predicts increased overall psychological distress (beyond that which would be expected solely from burden of SGP; $b = 0.144$). In models predicting depression, coercive control moderates total social support (index = 0.002; see Table 21 and Figure 20). Under low levels of coercive control, total social support predicts a lessening of

depression ($b = -0.044$; see Table 22). Under higher levels of coercive control, however, the degree to which total social support predicts a lessening of depression is much smaller ($b = -0.009$).

When subscale mediators are used, coercive control moderates the indirect path through informal social support (index = 0.002; see Table 22). See Figure 21 for the moderated mediation model. Again, receipt of informal social support is more predictive of lower depression (than what might be expected simply as a result of the burden of SGP) under conditions of low coercive control ($b = -0.044$) than under conditions of higher coercive control ($b = -0.019$).

Table 21. Indexes of moderated mediation of coercive control for indirect effects of burden of SGP on depression via coping and social support

Model	Effect	Index of moderated mediation	Standard error	Bias-corrected 95% confidence interval
Total mediators, moderator coercive control	Moderated indirect effects			
	Total coping	-0.001	0.001	(-0.005, 0.0001)
	Total social support	0.002	0.001	(0.0003, 0.006)*

Subscale mediators, moderator coercive control	Moderated indirect effects			
	Engaged coping	0.0007	0.004	(-0.001, 0.005)
	Tolerant coping	-0.0003	0.003	(-0.0037, 0.001)
	Withdrawal coping	$-4e^{-22}$	0.002	(-0.001, 0.001)
	Informal social support	0.002	0.004	(0.0002, 0.007)*
	Formal social support	-0.001	0.003	(-0.003, 0.001)
	Unhelpful social support	0.0007	0.003	(-0.0005, 0.004)

* Significant index of moderated mediation

Note: SGP = substance and/or gambling problems

Table 22. Final moderated mediation model predicting depression: indirect effects of burden of SGP on depression via subscale mediators, moderated by coercive control

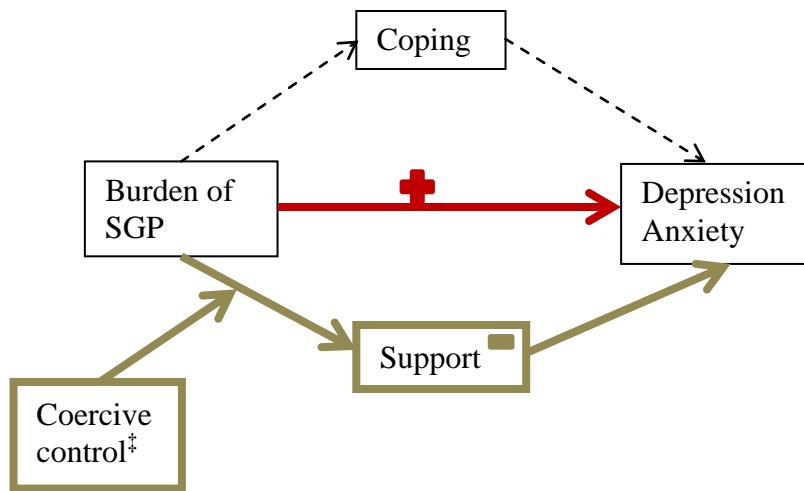
Model	Effect	Point estimate	Standard error	Bias-corrected 95% confidence interval
Total mediators,	Direct (c') effect of SGP	0.254	0.047	(0.157, 0.350)*
Total s.s. moderated by coercive control	Indirect effects			
	Total coping	0.051	0.034	(-0.018, 0.120)
	Total social support			
	@ low coercive control	-0.032	0.016	(-0.071, -0.007)*
	@ mean coercive control	-0.020	0.011	(-0.049, -0.004)*
	@ high coercive control	-0.009	0.010	(-0.036, 0.005)*

Subscale mediators, informal s.s. moderated by coercive control	Direct (c') effect of SGP	0.223	0.049	(0.126, 0.324)*
	Indirect effects			
	Engaged coping	-0.021	0.034	(-0.084, 0.049)
	Tolerant coping	0.045	0.029	(-0.007, 0.105)
	Withdrawal coping	-0.007	0.012	(-0.035, 0.015)
	Informal social support			
	@ low coercive control	-0.044	0.021	(-0.093, -0.008)*
	@ mean coercive control	-0.032	0.016	(-0.072, -0.006)*
	@ high coercive control	-0.019	0.017	(-0.056, -0.0004)*
	Formal social support	0.024	0.018	(-0.007, 0.063)
	Unhelpful social support	0.027	0.019	(-0.006, 0.069)

*Significant direct or indirect effect

Note: SGP = substance and/or gambling problems

Figure 20. Indirect effects of burden of SGP on depression and anxiety via total mediators, moderated by coercive control



Depression

Direct (c') path: $b = 0.25$ (0.16, 0.35)

Social support index of moderated mediation = 0.002 (0.0003, 0.006)

--

‡Total social support's mediation is strongest under low coercive control

○ Total social support @ low coercive control: $b = -0.03$ (-0.07, -0.007)

○ Total social support @ mean coercive control: $b = -0.02$ (-0.05, -0.004)

○ Total social support @ high coercive control: $b = -0.009$ (-0.04, 0.005)

Anxiety

Direct (c') path: $b = 0.21$ (0.12, 0.30)

Social support index of moderated mediation = 0.003 (0.001, 0.007)

--

‡Total social support's mediation is strongest under low coercive control

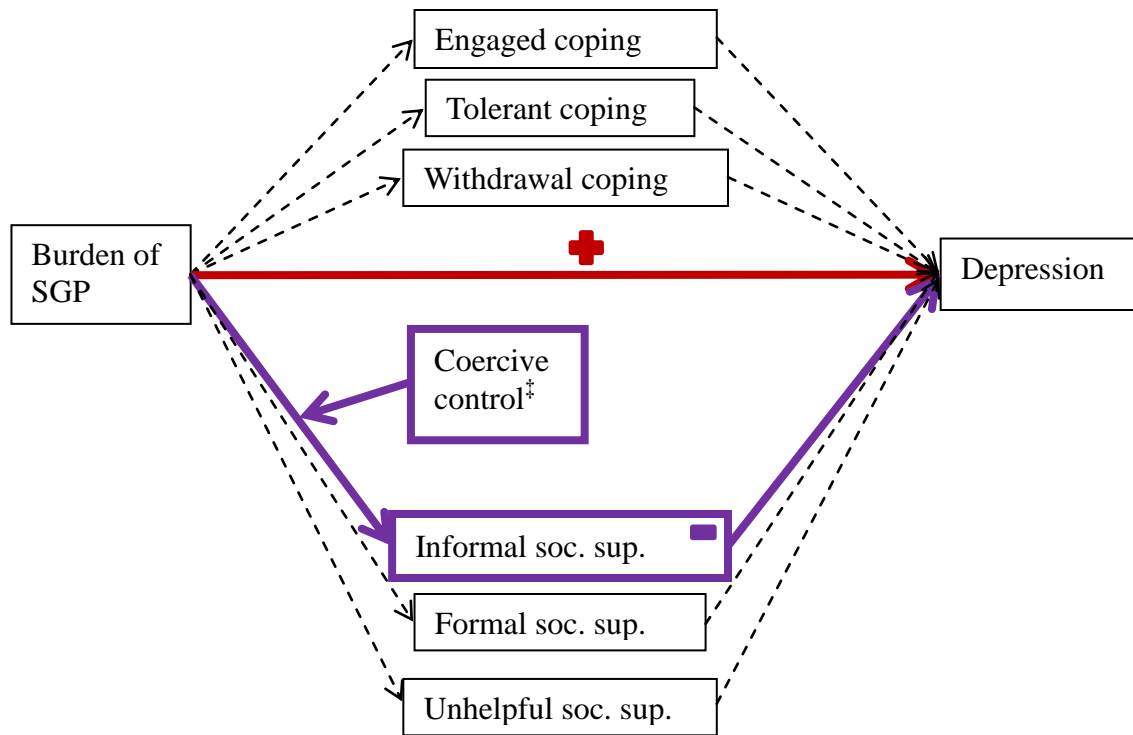
○ Total social support @ low coercive control: $b = -0.03$ (-0.07, -0.007)

○ Total social support @ mean coercive control: $b = -0.02$ (-0.05, -0.004)

○ Total social support @ high coercive control: $b = -0.008$ (-0.03, 0.01)

Note: SGP = substance and/or gambling problems

Figure 21. Indirect effect of burden of SGP on depression via subscale mediators, moderated by coercive control



Direct (c') path: $b = 0.22$ (0.13, 0.32)

Informal social support index of moderated mediation = 0.002 (0.0002, 0.007)

--

‡ Informal social support's mediation is strongest under low coercive control

○ Informal social support @ low coercive control: $b = -0.04$ (-0.09, -0.008)

○ Informal social support @ mean coercive control: $b = -0.03$ (-0.07, -0.006)

○ Informal social support @ high coercive control: $b = -0.02$ (-0.06, -0.0004)

Note: SGP = substance and/or gambling problems

In models predicting anxiety, coercive control moderates the indirect path of total social support (index = 0.003; see Table 23). Again, total social support is more predictive of lessened anxiety under conditions of low coercive control ($b = -0.032$; see Table 24) than under conditions of higher coercive control ($b = -0.008$, n.s.). See Figure 20.

When subscale mediators are used, coercive control moderates indirect path of informal social support (index = 0.003; see Table 23). Receipt of informal social support is more

predictive of lessened anxiety under conditions of low coercive control ($b = -0.054$; see Table 24) than under conditions of higher coercive control ($b = -0.026$). In this model, other (non-mediated) indirect paths are also significant (see Figure 22). Receipt of formal social support ($b = 0.040$) and unhelpful social support ($b = 0.038$), as well as use of tolerant coping strategies ($b = 0.058$) predict higher levels of anxiety (beyond that which would be expected simply from burden of SGP).

When coercive control is tested in models predicting stress, it does not moderate any indirect paths (all indexes of moderated mediation are non-significant; see Table 25). No path coefficients are presented for the resulting models, since (after dropping coercive control) these models revert to the mediation models presented in Table 10.

Table 23. Indexes of moderated mediation of coercive control for indirect effects of burden of SGP on anxiety via coping and social support

Model	Effect	Index of moderated mediation	Standard error	Bias-corrected 95% confidence interval
Total mediators, moderator coercive control	Moderated indirect effects			
	Total coping	-0.001	0.001	(-0.004, 0.0003)
	Total social support	0.003	0.002	(0.001, 0.007)*

Subscale mediators, moderator coercive control	Moderated indirect effects			
	Engaged coping	0.002	0.001	(-0.0001, 0.006)
	Tolerant coping	-0.0003	0.001	(-0.003, 0.002)
	Withdrawal coping	$-3e^{-5}$	0.001	(-0.002, 0.001)
	Informal social support	0.003	0.002	(0.0003, 0.008)*
	Formal social support	-0.001	0.001	(-0.004, 0.002)
	Unhelpful social support	0.0009	0.001	(-0.001, 0.004)

* Significant index of moderated mediation

Note: SGP = substance and/or gambling problems

Table 24. Final moderated mediation model predicting anxiety: indirect effects of burden of SGP on anxiety via subscale mediators, moderated by coercive control

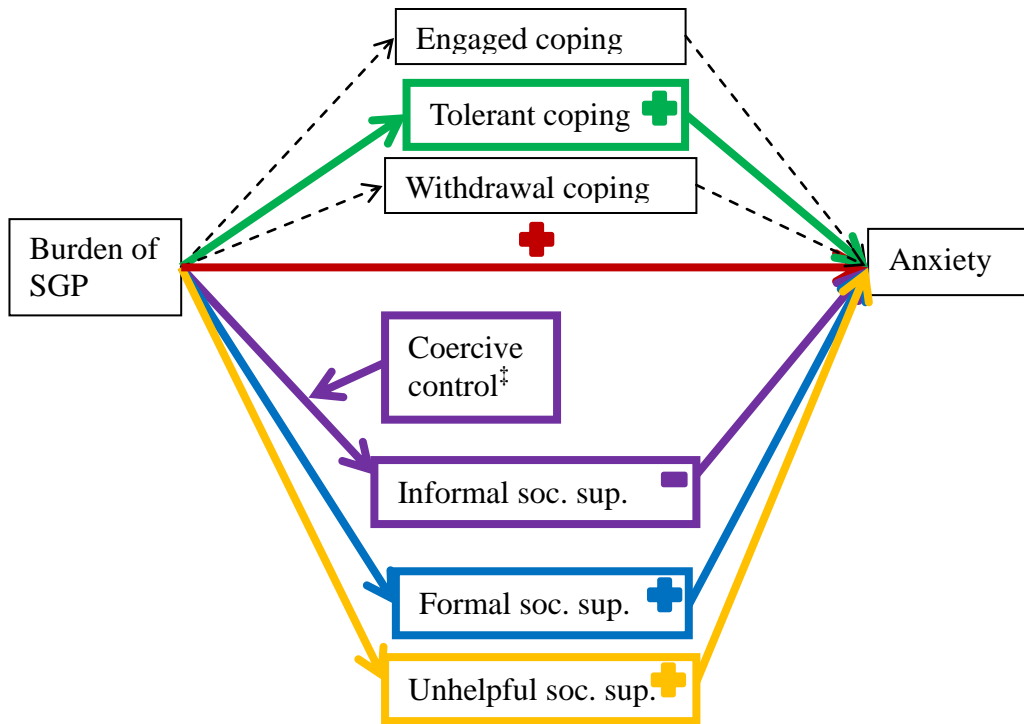
Model	Effect	Point estimate	Standard error	Bias-corrected 95% confidence interval
Total mediators,	Direct (c') effect of SGP	0.212	0.044	(0.121, 0.299)*
Total s.s.	Indirect effects			
moderated	Total coping	0.040	0.032	(-0.024, 0.105)
by	Total social support			
coercive	@ low coercive control	-0.036	0.023	(-0.070, -0.010)*
control	@ mean coercive control	-0.022	0.018	(-0.046, -0.006)*
	@ high coercive control	-0.008	0.015	(-0.030, 0.012)

Subscale mediators,	Direct (c') effect of SGP	0.160	0.043	(0.074, 0.248)*
informal	Indirect effects			
s.s.	Engaged coping	-0.050	0.029	(-0.108, 0.006)
moderated	Tolerant coping	0.058	0.024	(0.016, 0.111)*
by	Withdrawal coping	-0.017	0.013	(-0.049, 0.993)
coercive	Informal social support			
control	@ low coercive control	-0.054	0.022	(-0.102, -0.017)*
	@ mean coercive control	-0.041	0.017	(-0.080, -0.014)*
	@ high coercive control	-0.026	0.015	(-0.066, -0.004)*
	Formal social support	0.040	0.018	(0.010, 0.081)*
	Unhelpful social support	0.038	0.018	(0.008, 0.078)*

*Significant direct or indirect effect

Note: SGP = substance and/or gambling problems

Figure 22. Indirect effect of burden of SGP on anxiety via subscale mediators, moderated by coercive control



Tolerant coping: $b = 0.06$ (0.02, 0.11)

Direct (c') path: $b = 0.16$ (0.07, 0.25)

Formal social support: $b = 0.04$ (0.01, 0.08)

Unhelpful social support: $b = 0.04$ (0.008, 0.08)

Informal social support index of moderated mediation = 0.003 (0.0003, 0.008)

--

‡ Informal social support's mediation is strongest under low coercive control

○ Informal social support @ low coercive control: $b = -0.05$ (-0.10, -0.02)

○ Informal social support @ mean coercive control: $b = -0.04$ (-0.08, -0.01)

○ Informal social support @ high coercive control: $b = -0.03$ (-0.07, -0.004)

Note: SGP = substance and/or gambling problems

Table 25. Indexes of moderated mediation of coercive control for indirect effects of burden of SGP on stress via coping and social support

Model	Effect	Index of moderated mediation	Standard error	Bias-corrected 95% confidence interval
Total mediators, moderator coercive control	Moderated indirect effects			
	Total coping	-0.001	0.001	(-0.004, 0.001)
	Total social support	0.0004	0.001	(-0.001, 0.003)

Subscale mediators, moderator coercive control	Moderated indirect effects			
	Engaged coping	0.001	0.001	(-0.0008, 0.005)
	Tolerant coping	-0.0003	0.001	(-0.0034, 0.001)
	Withdrawal coping	-1e ⁻⁵	0.0005	(-0.001, 0.001)
	Informal social support	0.0003	0.001	(-0.002, 0.003)
	Formal social support	-0.0004	0.001	(-0.0036, 0.0005)
	Unhelpful social support	0.0004	0.001	(-0.0005, 0.003)

* Significant index of moderated mediation

Note: SGP = substance and/or gambling problems

In models predicting quality of life, coercive control moderated the indirect path through total social support (index = -0.001; see Table 26 and Figure 23). Under conditions of low coercive control, receipt of total social support is more predictive of higher quality of life ($b = 0.021$; see Table 27) than under conditions of higher coercive control ($b = 0.007$). In models using subscale mediators, coercive control does not moderate any indirect path (all indexes non-significant).

Aim 3 summary. Aim 3 focused on testing whether IPV was a moderator in the indirect relationships of burden of SGP to outcomes. Hypothesis H3 predicted that IPV (defined as violence/abuse and coercive control) would moderate the indirect relationship between burden of SGP and outcomes through coping. This hypothesis was not supported: though violence/abuse is associated with each outcome (see Table 6), it was not a moderator of indirect paths through total

or subscale coping or social support. Similarly, coercive control also did not moderate indirect paths through total and subscale coping for any outcome. However, coercive control moderated total social support in models predicting depression, anxiety, and quality of life. Coercive control also moderated informal social support in models predicting overall psychological distress, depression, and anxiety. In each model, social support was more predictive of a lessening of deleterious outcomes when coercive control was low than when coercive control was high. Therefore, though H3 was not supported, other (not predicted) results were shown.

Table 26. Indexes of moderated mediation of coercive control for indirect effects of burden of SGP on quality of life via coping and social support

Model	Effect	Index of moderated mediation	Standard error	Bias-corrected 95% confidence interval
Total mediators, moderator coercive control	Moderated indirect effects			
	Total coping	-0.0003	0.0003	(-0.002, 0.0001)
	Total social support	-0.001	0.001	(-0.003, -0.0001)*

Subscale mediators, moderator coercive control	Moderated indirect effects			
	Engaged coping	-0.0004	0.0005	(-0.0016, 0.0002)
	Tolerant coping	0.0	0.0002	(-0.0004, 0.0004)
	Withdrawal coping	0.0	0.0002	(-0.0004, 0.0004)
	Informal social support	-0.0009	0.001	(-0.002, 0.0007)
	Formal social support	-9e ⁻⁶	0.0003	(-0.0006, 0.0005)
	Unhelpful social support	-0.0003	0.0003	(-0.0015, 0.0001)

* Significant index of moderated mediation

Note: SGP = substance and/or gambling problems

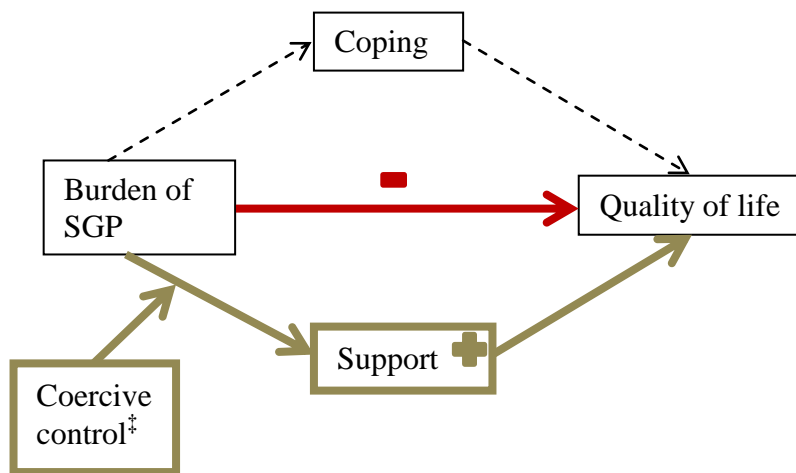
Table 27. Final moderated mediation model predicting quality of life: indirect effects of burden of SGP on quality of life via subscale mediators, moderated by coercive control

Model	Effect	Point estimate	Standard error	Bias-corrected 95% confidence interval
Total mediators, total s.s. moderated by coercive control	Direct (c') effect of SGP	-0.116	0.018	(-0.150, -0.082)*
	Indirect effects			
	Total coping	0.016	0.012	(-0.007, 0.041)
	Total social support			
	@ low coercive control	0.021	0.007	(0.011, 0.037)*
	@ mean coercive control	0.014	0.004	(0.007, 0.025)*
	@ high coercive control	0.007	0.005	(-0.003, 0.018)

*Significant direct or indirect effect

Note: SGP = substance and/or gambling problems

Figure 23. Indirect effect of burden of SGP on quality of life via total mediators, moderated by coercive control



Direct (c') path: $b = -0.12$ (-0.15, -0.08)

Total social support index of moderated mediation = -0.001 (-0.003, -0.0001)

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† Total social support's mediation is strongest under low coercive control

- Total social support @ low coercive control: $b = 0.02$ (0.01, 0.04)
- Total social support @ mean coercive control: $b = 0.01$ (-0.007, 0.03)
- Total social support @ high coercive control: $b = 0.007$ (-0.003, 0.02)

Note: SGP = substance and/or gambling problems

Chapter 5

This dissertation study has investigated the role of IPV in the task of dealing with a partner's SGP, focusing on adult females currently (or recently) in a relationship with someone they believe has a SGP. Using the Stress, Strain, Coping, Support (SSCS) theory (Orford et al., 2010), this study has described relationships among elements in the SSCS model (Aim 1), explored the utility of coping and social support in the relationship of burden of SGP to psychological distress and quality of life (Aim 2), and examined the role of IPV (violence/abuse and coercive control) in this process (Aim 3). The remainder of this chapter will interpret and discuss results presented in Chapter 4, present limitations and strengths of this work, and consider implications for social work policy, practice, and research.

Discussion

Partners' and participants' drinking, drug use, and gambling. One of the eligibility requirements for this study was that participants have a partner with a SGP. The determination of whether their partners' alcohol, drug, and/or gambling behavior was problematic was entirely up to participants. As the partners were not enrolled in the study, direct corroboration of participants' judgments was not possible. However, since people are generally accurate when reporting their partner's alcohol use, drug use, and/or gambling (Connors & Maisto, 2003; Maisto & Connors, 1992; Petra & Cunningham-Williams, 2013), these reports can be used to assess participants' judgments.

Alcohol problems were by far the most common, with most participants reporting that their partners were current drinkers. At four drinks/drinking day, partners' reported median consumption nearly met definitions of hazardous use (or binge drinking, five drinks/day).

Indeed, participants reported that their partners binge-drank twice/week on average, and over half (51.8%) reportedly showed increased tolerance for alcohol in the past year. Only 27% of partners were reported to drink hazardously (binge) less often than once/week. Frequency of drug usage was similar for partners with reported drug problems, at 3-4 times/week on average. Even some partners without reported drug problems were current drug users, and past-year reports of tolerance was not uncommon. Finally, gambling was the least frequently reported SGP, though some of those without reported gambling problem were current gamblers. Though there is no cut-point for problematic amounts of gambling, the reported median (\$200 twice/week) would result in nearly \$20,000/year being spent on gambling, 33-40% of the average yearly household income for families in the study.

Thus it appears that most of those with reported SGP were, indeed, using alcohol or drugs hazardously or gambling excessively. In fact, it appears that some of those without a reported substance problem were nonetheless showing problematic use (binge-drinking or showing reported tolerance for alcohol or drugs). Similarly, some current gamblers without reported gambling problems were nonetheless reported to have been gambling in a problematic way. That is, the number of partners who reportedly lied about gambling and/or chased their losses was higher than the number of partners with a reported gambling problem. In a few cases the opposite was true, with participants reporting that though their partner had a SGP, they were not current substance users/gamblers. This phenomenon might be elucidated by an email received by the PI. A potential participant wanted to know if she was appropriate for the study: though her partner was currently clean/sober, she felt nonetheless that the substance issue remained and that it was still causing problems for her.

Other indications of SGP problems are Family Member Impact Scale scores, which were comparable to those reported in other studies of family members of people with SGP, and participants' answers to financial questions. That is, though participants were more educated than the general St. Louis population (perhaps because almost half of participants were recruited via Washington University's VFH research participant database, which includes many well-educated people) and more likely to be employed full-time, nonetheless their reported household income did not differ from the average income for the St. Louis metropolitan area. Moreover, many reported that this income barely covered family expenses, if that. Though participants were not asked if their partner was employed, it may be inferred from the discontinuity between participants' education/employment status and household income that some partners may have been unemployed or underemployed, a non-uncommon consequence of SGP. Thus, it may be concluded that participants were not, on the whole, catastrophizing when they judged that their partner had a SGP. Indeed, it is more probable that participants may have erred on the side of being too conservative about naming more than one problem (with alcohol, drugs, and/or gambling).

Participants' own reported alcohol and/or drug use and gambling was less problematic on the whole. For instance, though some participants did report binge-drinking, this happened on average once every 2-4 months. Additionally, those that gambled did so less than once/month, usually spending a relatively modest amount of money (\$50). The possible exception to this less-problematic use was participants' drug use. Though less than 15% of participants reported being current drug users, those that did use drugs typically did so 2-3 times/month. Moreover, poly-substance use (often considered problematic) was reported by half of those who were current

drug users. Although clinically important, it is beyond the scope of this dissertation to determine whether this subgroup of participants has serious drug problems.

One limitation of the study is that it is not known which drug(s) partners used, and whether there was differential use of various drugs among those who use more than one drug. Thus, it is difficult to judge how severe and/or problematic the reported drug use may be for participants and other family members. Another limitation of the study is that severity of alcohol/drug use/gambling was not used as a predictor in the models. Though Orford and colleagues (2010) posit that burden of SGP is a result of the alcohol/drug use/gambling, directly testing this assertion was not possible because the macro used in analyses has no provision for analysis of such complicated models. However, bivariate analyses may shed some light on the relationship between partners' alcohol use and burden of SGP. Partners' usual number of drinks consumed and frequency of binge drinking was, indeed correlated with burden of SGP, though the correlations were slight (r 's < 0.20). In fact, the presence of IPV was more strongly related to burden of SGP (r 's > 0.50). This suggests that, although problems with alcohol were the most commonly reported SGP, it is unlikely that participants' burden of SGP was entirely a product of their partner's alcohol use. Instead, it is probable that burden of SGP is also affected by personal, familial or societal contextual factors. In the future, this can be tested by inclusion of the severity of alcohol/drug use/gambling and other possibly important contextual factors in models.

Scales. Though slight changes were made to a number of published scales (primarily changing some phrases from British English to American English, as well as changing some scale time frames, e.g. from past-3-months to past-12-months), nonetheless participant scores were reflective of those published in the literature. Participants' experienced burden of SGP and

use of coping strategies was similar to those of relatives of people with SGP in England, Singapore, and the United States. Participants experienced elevated distress compared to the United States general population, and their quality of life was lower than expected for people in Western countries. These scores indicate that participants are experiencing significant personal consequences from their partner's SGP.

Two measures did not show good psychometric or mathematical properties in this study. First, missing data from the Helpfulness of Coping scale could not be imputed. This is problematic given that missing data from all other scales in the SSCS model were imputed. Furthermore, it appears that the relationship between the Helpfulness of Coping scale and other SSCS elements may not be strictly linear. That is, there appeared to be a multi-linear relationship (two lines crossed in an "X") between coping and helpfulness of coping (see Figure 6). In some cases (positive-sloped line), the expected relationship between use of coping and helpfulness of coping emerged: those who believed that coping strategies were more useful used more of them, whereas those who believed that coping strategies were less helpful used fewer of them. In other cases (negative-sloped line), the opposite pattern emerged: some participants used a lot of coping strategies though they believed that they were not helpful at all, whereas other participants did not use many coping strategies but believed that these coping strategies were very helpful when used. As exploring this possible multi-linear relationship is beyond the scope of this dissertation, more research into the use and perceived helpfulness of specific coping strategies is necessary. Results presented for models using the Helpfulness of Coping scale should be considered provisional at best.

The other measure that did not show good psychometric properties was the WAST-screen (first two questions of the Woman Abuse Screening Tool). Though purported to have over 90%

sensitivity and 100% specificity, in this study its sensitivity was lower than 30%. Based on its less than optimal performance in the current study, it was decided that the WAST-screen should not be used to determine which participants had or had not experienced IPV. Instead, the sum of scores on all Woman Abuse Screening Tool items was used as a measure of IPV due to its relatively normal distribution and similarity to the MacMillan and colleagues (2009) scoring schema. However, there were problems with this measure: missing data could not be imputed when other elements of the SSCS model were included in the imputation equation. Imputation was carried out nonetheless because IPV was hypothesized to be exogenous (not caused by other elements in the SSCS model). Therefore, it was judged that the Woman Abuse Screening Tool imputed data would not be egregiously incorrect. It is possible, however, that this separate imputation of the Woman Abuse Screening Tool data and other elements of the SSCS model biased estimates such that they were less likely to be significant. Additional research with different measures of IPV would potentially determine whether violence/abuse does or does not moderate the relationship of SGP to psychological distress and quality of life.

Finally, it should be noted that many of the scales used in this study have not yet been widely used or validated by multiple researchers over time. Though they were chosen because no psychometrically sound, well-validated scales were available for the topics of interest to this study, nonetheless it is possible that some of the results are artifacts of the scales used. For instance, it is possible that violence/abuse did not appear to change how participants dealt with their partner's SGP because the Woman Abuse Screening Tool did not provide enough information about violence/abuse. While the brevity of the Woman Abuse Screening Tool is one of its strengths, nonetheless such brevity is achieved at the expense of depth of information gathered. That is, the Woman Abuse Screening Tool does not provide specific, detailed

information about prevalence and frequency of a range of types of abusive behaviors. If the study had utilized a longer, more detailed IPV scale, it is possible that the results concerning violence/abuse may have been different.

Similarly, not all questions on the Mediator's Assessment of Safety Issues and Concerns apply to all women. That is, women with children may tend to achieve higher scores on the Mediator's Assessment of Safety Issues and Concerns coercive control scale simply because some questions pertain to use of children in coercive control. The inclusion of questions about children and coercive control is a strength of the measure, but it must be acknowledged that there may be systematic score differences between women with versus without children. Though analysis of data separately for participants with children versus those without children was beyond the scope of this study, such analyses may improve our understanding of the function of coercive control in relationships where an SGP is present.

Finally, the Alcohol, Drugs and the Family Social Support Scale is very new and may yet require changes to optimally measure social support for intimate partners of people with SGP. One aspect of the scale which needs improvement is the grouping of questions into subscales. For instance, not all questions in the formal social support subscale (see Appendix H) pertain to formal social support. Moreover, remember that the formal social support subscale was originally labeled "positive" social support by scale developers. Question 20 ("friends/relatives have advised me to leave my partner") was considered positive by scale developers, whereas an almost equivalent question about advice to end the relationship (Question 12: "friends/relatives have said that my partner should leave home") was placed in the unhelpful social support scale. While research has showed that such advice may, indeed, be considered either helpful or unhelpful by different women (or by the same woman at different times; Edwards, Dardis, &

Gidycz, 2012), nonetheless the inclusion of similar questions on opposing subscales is problematic from a measurement perspective. Another problematic aspect of this scale is the lack of adequate coverage of instrumental and companionship social support. Only one question (#7) is devoted to all sorts of instrumental social support, and there are no questions at all about the ways in which friends or relatives may provide companionship for relaxation or recreational activities. While few social support scales provide adequate coverage of all aspects of social support (Petra, 2008), further development of this scale would be helpful to researchers and clinicians working with families in which an SGP is present.

Intimate Partner Violence (IPV). The amount of IPV reported by participants in this study was unexpectedly high, with estimates of IPV ranging from half of participants (experiencing physical violence as reported on question 6 of the Woman Abuse Screening Tool) to nearly three-quarters of participants (using MacMillan and colleagues' 2009 cut-point score of four or more on the Woman Abuse Screening Tool). This is higher than general-population rates of IPV in the literature, though these estimates vary: c.f. reported past-year violence/abuse prevalence of 1.6% among members of a U.S. health maintenance organization (Thompson et al., 2006), and 4.0% in 2010 U.S. population data from the National Intimate Partner and Sexual Violence Survey (Bridling, Chen, & Black, 2014). Similarly, over 80% of participants reported experiencing emotional abuse perpetrated by their partners, in comparison to 13.9% in the 2010 National Intimate Partner and Sexual Violence Survey (Bridling et al, 2014).

Finally, over 90% of participants reported experiencing at least one coercive control tactic over the past year, in comparison to a prevalence of 4.5% among health maintenance organization enrollees (Thompson et al., 2006) and 10.7% among women in the 2010 National

Intimate Partner and Sexual Violence survey (Bredling et al., 2014). Though it is possible that the Thompson and colleagues study prevalence was lower because they used a single-question measure, this is unlikely to be the cause of disparate rates between the current study and the National Intimate Partner and Sexual Violence Survey (which used similar questions and scoring as the current study). It is clear that the rate of IPV (physical, emotional, and coercive control) among study participants is simply higher than rates found in other studies.

One explanation for this elevated rate of IPV is that the risk for IPV increases for female partners of people with addictions. For instance, female participants in the National Epidemiologic Study of Alcohol and Related Conditions were 1.4 times more likely to experience IPV if their male partners had an alcohol use disorder (Smith, Homish, Leonard, & Cornelius (2012) than if their male partners did not have an alcohol use disorder. As this number does not include women whose male partners have problematic but sub-clinical alcohol use, this number may not be directly comparable to the current study. Within the National Study of Couples, a female participant with a male partner who had alcohol problems was up to 4.5 times as likely to experience IPV as was a female participant with a male partner who did not have alcohol problems (Cunradi, Caetano, & Schafer, 2002).

Multiplying the highest IPV rates by the highest increase in risk because of SGP (both from the literature) would provide an upper-limit estimate of the expected rate of IPV for participants in this study: 18.0% violence, 62.6% emotional abuse, and 84.6% coercive control. Yet the rates of IPV are still higher among study participants: 50-75% violence, >80% emotional abuse, and >90% coercive control. Thus, it is clear that the rate of IPV reported by study participants is only partially explained by participants' partners' SGP. While this study is not a true prevalence study, one possible explanation is that the prevalence of IPV in families

where one partner has a SGP may be higher than we had previously realized. An alternate explanation is that the rate of reported IPV is high among participants because those interested in participating in the study were primarily women experiencing higher-than-average burden of SGP, perhaps including IPV.

Finally, a third possible explanation for the high rate of IPV among participants is that study methods are partially responsible for this result. This third possibility is not likely, since recruitment materials did not mention IPV and no targeted recruitment was done in venues which might be expected to primarily serve survivors of IPV. Furthermore, it is unlikely that those experiencing IPV have more and/or easier access to the internet than those not experiencing IPV. (In fact, it was expected that some of those experiencing coercive control might be unable to safely access the survey if their partners monitored their computer use.) Though it is therefore unlikely that study methods are responsible for the high rate of IPV among study participants, it is not possible to determine which of the first two explanations is more correct from study data.

Aim 1: to describe the relationships among burden of SGP, IPV, coping, perceived helpfulness of coping, social support, psychological distress, and quality of life for female intimate partners of people with SGP. Most of the predicted hypotheses for Aim 1 were supported by study data. Greater burden of SGP was, indeed, associated with more psychological distress (H1b), lower quality of life (H1a), higher use of coping strategies, especially engaged and tolerant coping (H1d), and lower perceived helpfulness of coping strategies (H1d). Contrary to what was hypothesized, however, greater burden of SGP was associated with receipt of more social support. Thus, though the partner's SGP is associated with negative outcomes for female

intimate partners, they apparently attempt to ameliorate these outcomes via use of coping strategies and receipt of social support.

Both violence/abuse and coercive control were positively associated with burden of SGP (H1a) and psychological distress (H1b), while negatively associated with quality of life (H1b). Moreover, though not hypothesized, both forms of IPV were associated with increased use of all types of coping strategies, as well as increased receipt of formal and unhelpful social support. Though intimate partners facing IPV receive plenty of unhelpful “support” from friends and relatives, for study participants there was simply no relationship between IPV and informal social support. It is possible that formerly supportive friends and relatives tend to add advice-giving (or other forms of support considered unhelpful by intimate partners) to their interactions with intimate partners when they discover the IPV, though more research is needed to explicate this finding.

Aim 2: to investigate the functions of coping, perceived helpfulness of coping, and social support in the relationship between burden of SGP (stress) and outcomes (psychological distress [strain] and quality of life [strain]) for female intimate partners of people with SGP. Aim 2 tested the SSCS model with several outcomes: overall psychological distress, depression, anxiety, stress, and quality of life. The mediation models for each outcome were run using total (combined) coping and social support, and again using subscale (individual) types of coping and social support in parallel with each other. In models predicting depression, anxiety, and quality of life, total social support mediated the relationships between burden of SGP and the outcomes. That is, receipt of social support predicted reduced depression and anxiety, and higher quality of life, than intimate partners might have experienced in the absence

of social support. Models of subscale mediators showed that informal social support was primarily responsible for the previous results: informal social support predicted lessened overall psychological distress, depression, anxiety, and improved quality of life. These social support results supported the SSCS model and the Aim 2 hypothesis (H2).

Conversely, however, for one outcome receipt of unhelpful social support, as well as formal social support, appeared to function in the opposite manner: unhelpful and formal social support predicted worsened anxiety. These results were not predicted by H2 or the SSCS model. Though it makes sense that unhelpful “support” could be associated with an increase in the intimate partner’s anxiety, it is less clear why social support from professionals might predict increased anxiety in intimate partners. One possible explanation is that, on a day-to-day basis, intimate partners may simply be trying to get through the day and do not have time, energy, or inclination to think about or focus on the entire situation (Orford et al., 2005). Contact with a professional might then provide an anxiety-provoking focus on the scope of the situation. It is also possible that the increased anxiety is deliberate on the part of the professionals. That is, while the ultimate goal of social workers and other professionals is to empower people to improve their lives, this may require some difficult choices and changes on the part of the intimate partner. Because changing is not easy, people may need to experience significant discomfort before they are willing to make those changes. Thus, a social worker who sees the need for a client to make changes may encourage her to confront difficult realities and sit with the resulting discomfort, in order to stimulate her willingness to make changes in her life. Finally, it is possible that there is an association between social support from professionals and elevated anxiety simply because people put off seeking help from professionals until the burden of SGP is relatively severe (c.f. Copello, Templeton, Chohan, & McCarthy, 2012).

Finally, burden of SGP indirectly affected anxiety (i.e., predicted increased anxiety) through use of tolerant coping strategies. This result was predicted by the SSCS model, though other SSCS predictions about coping (that engaged coping leads to increased strain but withdrawal coping leads to less strain) were not supported by the current research. Note that, in these data, the use of tolerant coping did not increase overall psychological distress, depression, or stress, or decrease quality of life. Thus the SSCS model's predictions were only partially supported.

Aim 2 also predicted that coping strategies would lower psychological distress and increase quality of life through their perceived helpfulness. Neither total coping, engaged coping, nor withdrawal coping worked through their perceived helpfulness to change psychological distress or quality of life. However, use of tolerant coping mediated the indirect effect of burden of SGP on both psychological distress and quality of life. That is, through its perceived helpfulness, use of tolerant coping predicted improved quality of life. Conversely, through its perceived helpfulness, use of tolerant coping also predicted increased psychological distress. Several explanations are possible for these findings. First, it is possible that tolerant coping does, indeed improve quality of life through its perceived helpfulness, whereas tolerant coping is simply deleterious to overall psychological distress even if an intimate partner feels that it is helpful. It is also possible that the quality of life measure used for this study is not ideal for measuring the influence of burden of SGP on quality of life, and that this result is partially due to measurement issues. Finally, it is possible that the apparent multi-linear relationship of coping and helpfulness of coping do not satisfy regression assumptions for mediation models, and that any models run are therefore not valid. Given this caveat, it is not possible to reliably determine whether hypotheses about the helpfulness of coping are upheld or not.

In summary, though it is clear that receipt of informal social support mediates the relationship between burden of SGP and the outcomes measured in this study, results about the use of coping strategies are much less clear. Though Orford and colleagues (2005) consider withdrawal coping to be the only kind of useful or adaptive coping for intimate partners of people with SGP, the current results do not support this assertion: use of withdrawal coping did not predict lower psychological distress or improved quality of life. Instead, the only type of coping which significantly mediated the relationship between burden of SGP and the outcomes was tolerant coping. These results were not clear, in that tolerant coping predicted worsened outcomes even as participants considered use of tolerant coping strategies to be helpful. Though it is possible that participants considered tolerant coping to be helpful in achieving an outcome not measured by the study (such as keeping peace in the household), more research on the use of coping strategies is needed to understand the role of coping in families affected by an SGP. Thus, no practice recommendations about coping can be made at this time.

Aim 3: to determine the function of IPV in the relationships between burden of SGP (stress) and outcomes (psychological distress [strain] and quality of life [strain]) for female intimate partners of people with SGP. The hypothesis for Aim 3 predicted that IPV (defined as violence/abuse and coercive control) would moderate the relationship of burden of SGP to psychological distress and quality of life; specifically, that IPV would moderate indirect paths through total and subscale coping. This hypothesis about violence/abuse was not supported. Violence/abuse did not moderate any of the mediation models. Thus, while violence/abuse apparently adds to the severity of burden felt by intimate partners (as evidenced by its positive correlations with burden of SGP, psychological distress, and quality of life), it

does not change how coping and social support work (or do not work) to change the strain felt by intimate partners.

When IPV was defined as coercive control, H3 was also not supported: coercive control did not moderate indirect paths through total or subscale coping. Conversely, though not predicted, coercive control did moderate the indirect relationship between burden of SGP and the outcomes depression, anxiety, and quality of life, through total social support. That is, it appears that receipt of total social support may lead to reduced depression and anxiety and improved quality of life, but only under conditions of lower coercive control. When coercive control is higher, however, total social support does not appear to lead to much improvement in outcomes for intimate partners.

Again, the result for total social support is apparently driven by informal social support. That is, the indirect effects of burden of SGP on overall psychological distress, depression, and anxiety through informal social support were moderated by coercive control. Under conditions of low coercive control, receipt of informal social support may lead to attenuated overall psychological distress, depression, and anxiety. When coercive control is at higher levels, however, informal social support does not predict improved outcomes. Similar differential effects of social support for those experiencing varied levels of IPV have been found by other researchers. Carlson, McNutt, Choi & Rose (2002) found that more severe abuse limited the effectiveness of protective factors such as social support in buffering IPV survivors from depression and anxiety, though they also noted that those with more severe abuse also tended to report fewer protective factors. Similarly, Beeble, Bybee, Sullivan, and Adams (2009) found that level of psychological abuse (defined to include coercive control) and social support interacted to predict quality of life. That is, participants reporting very low social support reported low quality

of life no matter the level of psychological abuse experienced. For other participants, however, though psychological abuse was inversely related to quality of life, this effect was buffered by social support. Carlson and colleagues and Beeble and colleagues concluded that it would be beneficial to work to increase social support among survivors of IPV, since participants experiencing more severe IPV also tended to report lower levels of social support.

However, results of the current study (failure of social support to buffer the deleterious effects of SGP under conditions of high coercive control) do not necessarily support this recommendation. Although it might be suggested that these results are seen because one coercive control technique is isolation, and that therefore intimate partners experiencing more coercive control are less able to access social support, this was not the case among study participants. In fact, informal social support and coercive control were completely unrelated: those facing high coercive control reported having access to approximately the same informal social support as did those facing lower levels of coercive control. Thus, social support is apparently less able to buffer the deleterious effects of SGP when coercive control is high. This suggests that simply increasing informal social support for women experiencing high coercive control may not lead to improvements in their psychological distress or quality of life.

It is interesting that, while tolerant coping, formal social support, and unhelpful social support also predicted worsened anxiety, coercive control did not moderate these relationships. The level of coercive control was immaterial to how use of tolerant coping and receipt of formal social support as well as unhelpful social support apparently led to heightened anxiety for intimate partners. Though coercive control was associated with increased use of tolerant coping (possibly in an attempt to go along with the demands of the partner), tolerant coping predicted raised anxiety regardless of whether or not coercive control was present. Similarly, though

coercive control was associated with both more formal and unhelpful social support, these types of social support predicted increased anxiety levels no matter the level of coercive control. It is not clear why the indirect effects of burden of SGP on anxiety through informal social support were moderated by coercive control, whereas indirect effects through tolerant coping as well as formal and unhelpful social support were not. Future research is necessary in this area.

Another question of interest is why coercive control changes the process of dealing with a partner's SGP but actual violence/abuse does not. Beeble et al. (2009) suggested that it is not coercive control alone that is important to psychological distress and quality of life, but that coercive control is important over and above physical abuse also experienced by women. The women's movement and coercive control theorists have an alternate explanation: though the physical injuries caused by violence are perhaps more visible than are the consequences of coercive control, nonetheless they do not feel that violence itself is the most important aspect of IPV. Instead, they posit that power and control are at the center of – the reason for – use of violence and abuse in relationships. Dutton and Goodman (2005) explain that, in general, an abuser uses violence and abuse only as much as necessary to keep the partner under control. If this is truly the case, then it may not matter how frequently or recently the violence occurred, as long as the memory of the violence is sufficient to keep coercive control effective. That coercive control (and not violence/abuse) moderated the relationship of burden of SGP to psychological distress and quality of life, lends support to Dutton and Goodman's assertion that coercive control is the basis or core of IPV.

It should be noted that the correlation between violence/abuse and coercive control was substantial, and that very few participants reported only one or the other type of IPV. This is not uncommon (c.f. Beeble et al., 2009), but the high correlation between violence/abuse and

coercive control make it difficult to decisively untangle the effects of each type of IPV.

However, the strong relationship between violence/abuse and outcomes suggests that it may be fruitful in future research to add direct paths between violence/abuse and outcomes to models of coercive control as a moderator of the indirect effects of burden of SGP on outcomes.

Many effect sizes for the mediation analyses and moderated mediation analyses in Aims 2 and 3 had very small numbers, close to zero. Though some of these parameter estimates were nonetheless significant, the practical significance of such small effects is yet to be determined. Moreover, replication research is necessary to establish whether the numerically small results in this study will be reliably stable over different participants or whether the magnitude and significance of results will vary among populations.

Limitations and strengths

There were a number of limitations and strengths to this dissertation. Limitations including the large number of invalid surveys, low power, the cross-sectional nature of the survey, and retrospective reports will be discussed below. Other potential limitations (e.g., imputation difficulties for the Woman Abuse Screening Tool and Helpfulness of Coping) were discussed in the previous section. Strengths of the study, including the success in recruiting participants experiencing IPV and minority participants, will also be discussed below.

One limitation of this study was the high number of invalid surveys submitted (44% of those screened). This was problematic because the PI's determination of the validity of individual surveys was undoubtedly less than perfect. Though the validation technique described herein was created and implemented to take advantage of the best available evidence to judge the validity of each survey, the technique itself has not been validated by use in multiple studies.

More work is needed to refine and extend this validation technique. Another way to minimize the presence of invalid data in the final dataset of future studies would be to refine study procedures so as to minimize the attractiveness of the study to those whose interest in the study is not genuine and honest. (For instance, instead of providing remuneration to each participant, study procedures could offer a small or no incentive at the outset but could offer valid participants an entry into a drawing for larger incentive. Alternatively, initial recruitment and/or screening could be web-based, with study staff conducting subsequent assessments with potential participants prior to completion of a web-based survey. Such individual contact with study staff may also reduce the number of invalid surveys.)

Although study recruitment goals were set using the results of a power analysis that predicted sufficient power to detect small-to-medium-sized effects, nonetheless the study suffered from low power. This is primarily due to the smaller-than-expected effect sizes observed for the data. Wu and Jia (2013) provided power curves for small (0.196) mediation effects, similar in magnitude to those found in this study. With 250 participants, a study would have 42.2% power to detect small effects that truly existed. Thus, the effective study *N* of 222 (in multiply imputed datasets) was insufficient to provide acceptable (80%) power for the study.

The preponderance of participants reporting IPV was another potential power problem for the study. Though exceeding recruitment goals is not usually problematic, Aguinis & Stone-Romero (1997) noted that when the proportion of participants in two groups grows more unbalanced than 70:30, a loss of power to detect differences between the groups results. Though 75:25 (the proportion of participants with/without IPV as per MacMillan and colleagues' (2009) scoring schema for the Woman Abuse Screening Tool) is not very different from 70:30, the proportions of participants reporting/not reporting emotional abuse and coercive control were

even less balanced. Indeed, over 90% of participants reported experiencing at least one coercive control tactic. To minimize this loss of power, the violence and emotional abuse constructs were operationalized with one combined measure, and a continuous measure of coercive control was used as well. Though there are mathematical advantages to using continuous measures, nonetheless a further limitation of the preponderance of participants reporting IPV is that it was not possible to do statistical comparisons between those who did and those who did not report IPV.

Because this study was cross-sectional, causation could not be determined for any associations found in the analyses. Moreover, requesting retrospective reports of coping over a time period does not yield within-person reports of the use of specific coping strategies in response to a particular situation (Tennen, Affleck, Armeli, & Carney, 2000). Ideally, the aims of this study would have best been answered via daily or semi-daily reports of situations encountered and coping strategies employed by the intimate partner. However, such methods were not practical for a study of this scope.

Another limitation of retrospective reports of coping is that they may not accurately reflect coping strategies actually used (Stone & Shiffman, 2002), although the degree of correspondence between immediate and retrospective reports of coping is still in question. For example, in a study of recall of coping with day-to-day stresses, Todd, Tennen, Carney, Armeli, & Affleck (2004) found adequate correspondence between daily and end-of-month retrospective reports, while global reports of how participants usually coped with stressors showed weak correspondence with daily reports. With recall required over a period of months for this study, it is probable that participant reports were not 100% accurate. Nonetheless, this retrospective

coping procedure has also been used in studies of coping with a partner's SGP (Orford et al., 2005) and in studies of coping with IPV (Goodman et al., 2003).

An additional problem with the long retrospective period of time used for this study (past-12-months) is that a participant's family situation, use of coping strategies, and receipt of social support may vary throughout a year. One participant reported to the PI that she had a hard time determining which answers to give, since both her partner's behavior and her behavior had changed over the final 12 months of their relationship. Thus, she was unable to find one answer to many questions that was true of the entire year-long period. One solution to this issue would be the use of repeated, immediate participant reports (called "microlongitudinal," often accomplished via cell phone apps; Hamby, McDonald, & Grych, 2014) to avoid decay in recall and to facilitate examination of situational use of coping in intimate partners of people with SGP.

As stated above, recruitment goals for intimate partners experiencing IPV were more than met. The power implications of this recruitment success were discussed above, but other implications are more positive. Although it was expected that intimate partners experiencing IPV might not feel safe enough to enroll in the study, this did not turn out to be the case. Great care was taken to ensure participant anonymity/confidentiality and enhance safety, including use of some methods recommended as best-practices for intimate partner violence research (Hellmuth & Leonard, 2013): participants could complete the survey completely anonymously if desired, the survey was hosted on a secure server, participants were encouraged to consider time, place, and device to maximize their safety when completing the survey, and a list of community resources was provided to every participant. Intimate partners have not reported any breaches of confidentiality from their participation in the study. Therefore, assuming that participants were

being truthful about their experiences with IPV, safety issues did not appear to be a limitation for recruitment of participants experiencing IPV into the study.

Another strength of this study was that the proportion of minority (primarily African-American) participants was representative of the population of the target recruitment area (i.e., the St. Louis metropolitan area). Though there were initial concerns that disparate access to the internet among minority and low-income participants might result in an over-representation of Caucasian and higher-income participants, US Census Bureau data suggested this might not be a problem. The 2010 supplement to the Current Population Survey (2011) documented rates of internet access across income and racial groups in the St. Louis metropolitan area. Although many more Caucasians (87%) than African-Americans (62%) participating in the Current Population Survey owned computers, disproportionate internet access via smart phones among African-Americans (28%) as compared to Caucasians (10%) brought the home internet access rates to nearly equal (87% of African-Americans, 95% of Caucasians). Since Qualtrics surveys are accessible via iPhone and Android smart phones, potential participants with access to the internet through these devices were not precluded from enrolling in the study. In future studies, documentation of devices used to access online surveys would enhance our understanding of differences or similarities in online access methods among diverse participants. This information could then be used to customize data collection methods for specific subgroups of participants.

Implications for Social Work

Research. It is expected that this study will guide further research in this field. As this is the first study to focus on the salience of IPV to the process of coping with a partner's SGP, the results will serve as evidence for the need to more closely study aspects of this process.

Specifically, more research is necessary to better understand three aspects of the process: coping, social support, and IPV, as well as the role of additional contextual elements (i.e., children, finances, etc.).

First of all, it was seen that coping with a partner's SGP is complex. That is, the three types of coping (engaged, tolerant, withdrawal) are used at different rates and do not necessarily work in the same way. Furthermore, it appears that the relationship between use of coping and the perceived helpfulness of coping is not simple and linear: while in some cases it appears that use of coping is greater when the coping strategies are perceived as more helpful, for other participants it appears that the use of coping is great even when strategies are not perceived as helpful at all. Why is this? Do people use strategies they do not feel are helpful because other strategies they would prefer are unavailable to them (because of IPV, lack of resources, etc.), because they do not have the skills to utilize their preferred coping strategy, or some other reason? Or do they use strategies they feel are not very helpful because the particular strategies are expected to accomplish a goal of importance to the intimate partner? An understanding of why people choose to use particular coping strategies, in which situations, for what goals or purposes, and to what effects, would inform creation of best-practices for social workers. Ideally, research focused on these questions would use a longitudinal design (Lawrence, Orengo-Aguayo, Langer, & Brock, 2012).

Secondly, social support among intimate partners of people with SGP is not yet well-understood. Further investigation, validation, psychometric analyses, and development of the Alcohol Drugs and the Family Social Support Scale is needed. Though this scale has been used for the current study, it does not yet have good evidence to support its continued use. Nonetheless, study results from this scale should be further examined. For instance, it was seen

that IPV is unrelated to informal social support. This was not expected since a hallmark of IPV is isolation from supportive others. What is it about informal social support that is vulnerable to increased coercive control, since an increase in coercive control did not keep intimate partners from receiving informal social support? It is not known whether this finding would remain in a different sample (for instance, with more frequent/severe violence/abuse and/or coercive control), but as informal social support is a strength for intimate partners of people with SGP, it is important to find out more about it (such as where, when, from whom, and how informal social support is received). Additionally, it was seen that IPV is associated with greater receipt of both formal and unhelpful social support. A better understanding of how the increase in formal social support comes about when IPV is at higher levels would provide clues as to how and where contact with intimate partners could be used to provide effective assistance.

Thirdly, a more complete understanding of IPV in families of people with SGP is needed. For instance, though most participants reported experiencing some coercive control tactics, nonetheless they were able to participate in the study. Thus, it is apparent that their computer access was not completely controlled by their partner. Though it is possible that intimate partners of people with SGP who experience this kind of coercive control were unable to participate in the study, it is also possible that the way coercive control was operationalized for this study was simply not sensitive enough to detect the impact of coercive control on the day-to-day lives of participants. In the future, it would be helpful to know the range, extent, frequency, types, and impact of coercive control tactics experienced by intimate partners of people with SGP.

Thus, different, more sensitive measures would be helpful for future research (Hamby, 2014). The Woman Abuse Screening Tool does not provide frequency information or information about specific abusive behaviors. While violence and abuse were common among

intimate partners participating in this study, it is unknown how often the violence/abuse happened or how recently it had happened. Furthermore, some participants endorsed questions indicative of emotional abuse or physical violence yet stated that they had not been emotionally or physically abused. This is not uncommon in IPV research (Stith, Lectenber, & Cafferky, 2013), so more sensitive measures would solicit information about frequency for specific abusive behaviors. Moreover, the coercive control scale of the Mediator's Assessment of Safety Issues and Concerns is a good length for research but does not cover all aspects of Dutton & Goodman's (2005) theory of coercive control. Other available scales are much longer but are not necessarily more comprehensive. A comprehensive but concise scale measuring coercive control would be very helpful to future IPV research with intimate partners of people with SGP. Additionally, a brief but effective screener for IPV that specifically screens for coercive control in addition to violence/abuse would be helpful to practitioners.

Finally, while this study has shown that IPV is salient to the task of dealing with a partner's SGP, other contextual elements (i.e. children, transportation, education, finances, etc.) have not yet been explored. Because some of these elements may also be salient to the task of dealing with a partner's SGP, future research needs to include a focus on such contextual elements as well as IPV.

It is expected that the answers to these and future research questions will ultimately lead to the development of effective programs to help intimate partners of people with SGP, and that evidence of effective programming will enable social workers to persuade decision-makers to amend current policy so that it is inclusive of services for intimate partners.

Practice. Implications for social work practice include the need for screening for IPV, screening and treatment for depression and anxiety, and empowerment for partners and other family members of people with SGP. Each will be discussed in turn. This section will end with a brief overview of some programs for family members of people with SGP that are not widely available in the United States at this time.

The first implication of this research for social work practice is that, given the high rate of IPV among study participants, intimate partners of people with SGP would benefit from routine screening for IPV. This screening should include not only questions about physical and/or sexual violence, but also questions about coercive control. Though causing physical injury is illegal while controlling or coercing another's behavior may not be against the law, it was found in this study that coercive control may be even more salient to the task of dealing with a partner's SGP than the violence/abuse itself. For this reason, it is just as important to determine whether coercive control is happening as it is to screen for violence/abuse. An effective, easily used screener will have to be developed to this end.

Participants scored quite high in depression and anxiety on the Depression Anxiety Stress Scales. Indeed, nearly one-third of participants scored at or beyond Nieuwenhuijsen and colleagues' (2003) diagnostic cut-point for depression, suggesting that their depression is clinically significant. Given that the past-year rate of depression in the U.S. population is 6.9% (SAMHSA, 2013), the rate of depression in study participants is very high. Similarly, two-thirds of participants scored at or beyond Nieuwenhuijsen and colleagues (2003) cut-point for anxiety. Again, this rate is very high in comparison to the past-year population rate of 18.1% for anxiety disorders (Kessler, Chiu, Demler, & Walters, 2005). The Depression Anxiety Stress Scale measures of depression and anxiety were highly correlated in this study ($r = 0.73$), which is

typical according to the developer's web site (Psychology Foundation of Australia, 2013). It is also typical of these disorders in the general population, where comorbidity is as high as 62% (Kessler et al., 2005). Thus many partners of SGP may be experiencing both clinically significant depression and clinically significant anxiety. These results point to the need for mental health screening for intimate partners of people with SGP, and treatment for depression and anxiety when present.

Treatment for both depression and anxiety includes pharmaceutical and non-pharmaceutical therapies. Best practices advise using a stepped-care model (c.f. National Collaborating Centre for Mental Health, 2009), in which potential interventions are ranked according to their appropriateness for different levels of severity of depression or anxiety, generally going from least intrusive to most intrusive. Least intrusive interventions are to be implemented first, stepping up to the next level of intervention if the client does not benefit from initial interventions. For example, the guideline for treatment and management of depression in adults, sub-clinical depression should be treated with support, psychoeducation, and monitoring. Mild depression would benefit from low-intensity psychosocial and psychological interventions as well as medications. Additional steps involve medication and higher-intensity outpatient treatment, with inpatient treatment, crisis services, and intrusive interventions such as electroconvulsive therapy being treatments of last resort.

Though social workers do not prescribe medications, they may refer clients to physicians for this service. However, social workers may be qualified to provide other effective interventions for depression and anxiety. Standard psychological interventions such as cognitive behavioral therapy are especially effective in treating anxiety disorders, and are as effective as other psychological interventions in treating depression (Hofmann, Asnaani, Vonk, Sawyer, &

Fang, 2012). Less staff-intensive guided self-help therapies can be as effective as more intensive face-to-face psychotherapies (Cuijpers, Donker, van Straten, Li & Andersson, 2010). Alternate therapies have also been shown to be effective. For instance, mindfulness-based therapy (e.g., mindfulness-based cognitive therapy and mindfulness-based stress reduction) has moderate effects in reducing anxiety and depression across a range of severities (Hoffmann, Sawyer, Witt, & Oh, 2010). Though not as effective as mindfulness-based therapy, meditation programs have nonetheless been shown to result in small or moderate reductions in anxiety and depressive symptoms (Goyal et al., 2014). Finally, social workers may have colleagues who could provide additional evidence-based interventions. For example, exercise has been shown to be an effective therapy for mild depression and a range of anxiety disorders (Carek, Laibstain, & Carek, 2011). These or other evidence-based therapies are recommended to treat depression and anxiety in clients presenting with these disorders.

Both those who work with families of people with SGP and those working in the family violence field call for empowerment of family members affected by these problems. Cattaneo and Goodman (2014) set forth a model of empowerment that is salient to the task of dealing with a partner's SGP. In this model, empowerment is seen as both an iterative process and an outcome. The process consists of setting a goal (one that is of importance to the client/family member; Cattaneo, Calton, & Brodsky, 2014), taking action, then reflecting on the outcome or impact of the action before setting a new goal. Cattaneo and Goodman note that people's ability to work towards goals is dependent on skills, knowledge, self-efficacy, and community resources/supports. Each aspect of Cattaneo and colleagues' model (goal-setting, skills, knowledge, self-efficacy, and community resources/supports) will be discussed in turn.

Though Cattaneo and colleagues' (2014) model is congruent with standard social work tenets, the nature of SGP and IPV may make it difficult to know how to best empower a particular client. For instance, in their desire that clients have a good life, social workers may find that they want a client to no longer have to deal with the deleterious effects of SGP and perhaps IPV. One way to attempt to accomplish this is to help the partner access treatment. If this is not feasible, however, an obvious alternative would be for the client to end the relationship. To clients, however, the loss of the relationship may be too high of a cost to pay for freedom from the day-to-day effects of the SGP. If there are children, shared custody arrangements may require the client to continue to stay in contact with the partner (and thus to continue to experience the effects of the SGP even after dissolution of the relationship). Moreover, if the client experiences violence/abuse and/or coercive control, the merits of leaving the relationship may be even more difficult to determine, since danger to IPV survivors does not necessarily end with the end of the relationship. Indeed, danger may initially increase after a client leaves her partner. Thus, the goal to be accomplished in the empowerment work must truly be set by the client since only she can gauge the likelihood of possible benefits and costs of potential goals.

A successful program would also work to improve clients' skills and knowledge, with the goal of intervening at a number of points in the process of dealing with a partner's SGP (Schultz & Martier, 2004). For instance, improved knowledge about SGP may help clients to depersonalize the problem – that is, to see that their partner behaves the way they do (e.g., displays addictive behavior) because of the SGP – instead of feeling that they may have been in some way responsible for their partner's SGP and its effects. Ideally, a program would also teach clients effective coping skills. In addition to helping clients to deal more effectively with their

partner's SGP, improved coping skills may make the ongoing task of coping with their partner's SGP feel less daunting (e.g., increase self-efficacy). Clients' changed appraisal of the situation as no longer one that is beyond their coping abilities would then have the effect of lowering stress. (Note that treating clients' depression and anxiety may also reduce the disorders' drag on the client's self-efficacy.)

One problem with increasing clients' skills in coping effectively with their partner's SGP is that there is not clarity about which coping strategies are useful in which situations. That is, we do not yet know how family context (IPV, children, transportation, education, finances, etc.) influences the helpfulness of particular coping strategies for intimate partners, and thus cannot confidently advise the use of particular coping strategies across the board. Given the high prevalence of IPV among intimate partners of people with SGP, it is particularly important that social workers understand the positive and negative sequelae of the use of coping strategies in this vulnerable population.

Finally, an effective program would rally and utilize community resources and supports to empower clients. One example of community supports is people who can provide additional social support for clients. This may be especially effective for clients who do not experience high coercive control. Programs may accomplish this via on-site support groups or therapy groups, or through helping clients to strengthen or re-establish weakened or lost relationships with supportive family and friends (Beeble et al., 2009). Clients may also be referred to existing support groups outside the program such as Al-Anon or Gam-Anon 12-step mutual aid groups for families of people of SGP, "Family Nights" at alcohol/drug/gambling treatment programs if their partner is accessing treatment, or support designed for survivors of IPV at community agencies devoted to that population.

For women facing high levels of coercive control, improving social support may be of limited help. In these cases, it might be more effective for programs to focus on helping the client to access other community resources such as those that provide housing or education assistance, job training and placement, income maintenance, food security, health insurance, or child care. Finally, an important support for women experiencing high levels of coercive control is safety planning. The high correlation between violence/abuse and coercive control suggests that women who experience high coercive control may also be at heightened risk for serious injury at the hands of their violent partner (Beck & Raghavan, 2010). At a minimum, safety planning includes helping clients to identify danger signs that would indicate they need to leave the house to escape violence, locate and determine how to secure critical resources that will be needed if they need to leave (keys, money, credit cards, phone, and documents such as driver's license, social security card, insurance card, etc.), plan where to go (shelter, friend/relative, etc.), determine how to get help from police if necessary, and explore legal options such as restraining orders and/or child custody orders. Kamimura, Parekh, & Olson (2013) suggest that these supports may be ideally located in a community organization rather than a shelter, especially for women still living with their violent partner.

Though Cattaneo and colleagues (2014) suggest that an effective empowerment program should focus on multiple aspects of the process of dealing with a partner's SGP, most programs mentioned in the literature have focused primarily on coping. Only one program - Rychtarik and McGillicuddy's (2005, 2006) coping skills training programs for intimate partners of people with people with SGP - has been implemented in the United States, but it is not widely available. Another program, the 5-Step Method (Copello, Templeton, Orford, & Velleman, 2010) has been implemented in England (Velleman et al, 2011), Italy (Velleman, Arcidiacono, Procentese,

Copello, & Sarnacchairo, 2008), Mexico (Natera Rey, Medina Aguilar, Callejas Pérez, Juárez, & Tiburcio, 2011), and online (Ibanga, 2010). The practitioner leading the intervention uses the following steps as topics for learning and discussion: “1) listen, reassure and explore concerns,... 2) provide relevant, specific and targeted information,... 3) explore coping responses,... 4) discuss social support,... and 5) discuss and explore further needs” (Copello et al., 2010, p. 87). This program is flexible in that it can be implemented in person, online, or via self-help manual (Orford, Templeton, Patel, Copello, & Velleman, 2007), and may be one option that could be implemented in the United States in the future.

Orford (2012) sees potential for the 5-Step Method to move beyond a program that is used with a few people at a time. He cites the need to change the view of dealing with a partner’s SGP from that of a private, family matter to one that affects the community as a whole. Naming Mothers Against Drunk Driving as an example of communal effort, Orford envisions increased community awareness, assistance, and communal effort toward change. Social workers, especially those educated as Advanced Generalists, would be ideal for this kind of work in that it would involve intervening at a community level to effect change for individuals.

Policy. Finally, this research has implications for policy change as well. With the implementation of the Affordable Care Act in 2014, many people may have access to affordable mental health and addiction treatment for the first time. Though parity is required for mental health and substance abuse treatment (in comparison to provisions for physical health treatment), it is not clear whether parity for addiction treatment is inclusive of treatment for Gambling Disorder. Moreover, the chronic nature of addictions (and low rate of treatment for those in need) point to the need for assistance for intimate partners and other family members of people

with untreated SGP. While policy should ideally be informed by the latest research (Stith et al., 2013), it is not clear what specific policy changes would be of greatest benefit to intimate partners and families of people with SGP, whether or not they also experience IPV.

One question that may lead to suggestions for specific policy changes is that of how to pay for assistance for intimate partners of people with SGP. Though social workers and other health care providers can certainly treat symptoms of the stress of living with a partner's SGP (e.g. depression, anxiety, ill health) if the symptoms are severe enough, 'would benefit from empowerment and other assistance' is not currently a reimbursable diagnostic category. This may not ultimately be an insurmountable barrier to care, however, since the U.S. government has recently added auxiliary services to its expectations for addictions and mental health service systems. In its "Description of a Good and Modern Addictions and Mental Health Service System" (2011), SAMHSA listed its expectations for services that should be provided by an addictions and mental health service system. Some of these services would directly benefit intimate partners and other family members of people with SGP, including individual and family support provided in a healthcare home, consumer and family education provided as part of engagement services, family therapy and consultation for caregivers provided on an outpatient basis, and parent/caregiver support provided under the auspices of rehabilitative community support services. To date this list represents ideals to aim for rather than currently-available services. The document also notes that new funding and payment strategies would need to be implemented in order for states to be able to provide these services. Policy changes to mandate payment and provision of such services would benefit intimate partners.

Another question with policy implications is where to best situate assistance and empowerment for intimate partners given our current systems of care in the United States. One

option might to build services for intimate partners and other family members into Recovery-Oriented Systems of Care (ROSCs). Through discretionary grants, SAMHSA has funded ROSCs in locations across the nation, and is encouraging state applicants for Mental Health and Substance Abuse Block Grants to apply a recovery focus in programs thus funded as well. ROSCs may become an additional source for help for intimate partners if the current policy is adjusted to suggest or mandate inclusion of services for intimate partners. According to the ROSC resource guide (SAMHSA, 2010), “the central focus of a ROSC is to create an infrastructure or ‘system of care’ with the resources to effectively address the full range of substance use problems within communities” (p. 2). Thus, ROSCs are meant to provide ‘one-stop shopping’ for people with substance use disorders: medical and therapeutic treatment, general support for recovery, as well as access to other community services conducive to recovery (e.g., housing, job training, etc.).

SAMHSA envisions some involvement for families of people with substance use disorders in ROSCs (SAMHSA, 2010), particularly in the form of prevention for children and other family members of people already in treatment for a substance use disorder. One example of a ROSC that already provides services for families of people with SGP – whether or not the person with the SGP is getting treatment – is Kansas City’s First Call Alcohol/Drug Prevention & Recovery. First Call offers “How to Cope,” a six-session group program designed to help families better cope with their loved one’s SGP (“How to Cope,” 2014). This provision of services to family members including intimate partners is a step in the right direction.

Though not all ROSCs provide such family-focused services as of yet, the ROSC resource guide (SAMHSA, 2010) acknowledges that very little evaluation of ROSCs has been conducted to date, and it is expected that changes to the federal policy may be necessary as our

understanding of SGP and recovery improves. SAMHSA's acknowledgement that ROSC policy will evolve over time is an opportunity to establish resources for intimate partners and other family members within the ROSC system, whether or not the person with the SGP accesses treatment. However, in order to provide a persuasive rationale for adding intimate partner services to current ROSC mandates, it must be shown that such services are helpful to intimate partners.

Although this study will not provide sufficient knowledge to urge that ROSCs provide services for intimate partners, it is a first step in that direction. This is the inaugural study in a program of research which is expected to culminate in development and dissemination of effective services for intimate partners of people with SGP, whether or not they also experience IPV. The information provided by this study – enhanced understanding of the role of IPV in the task of dealing with a partner's SGP – is a step towards this goal.

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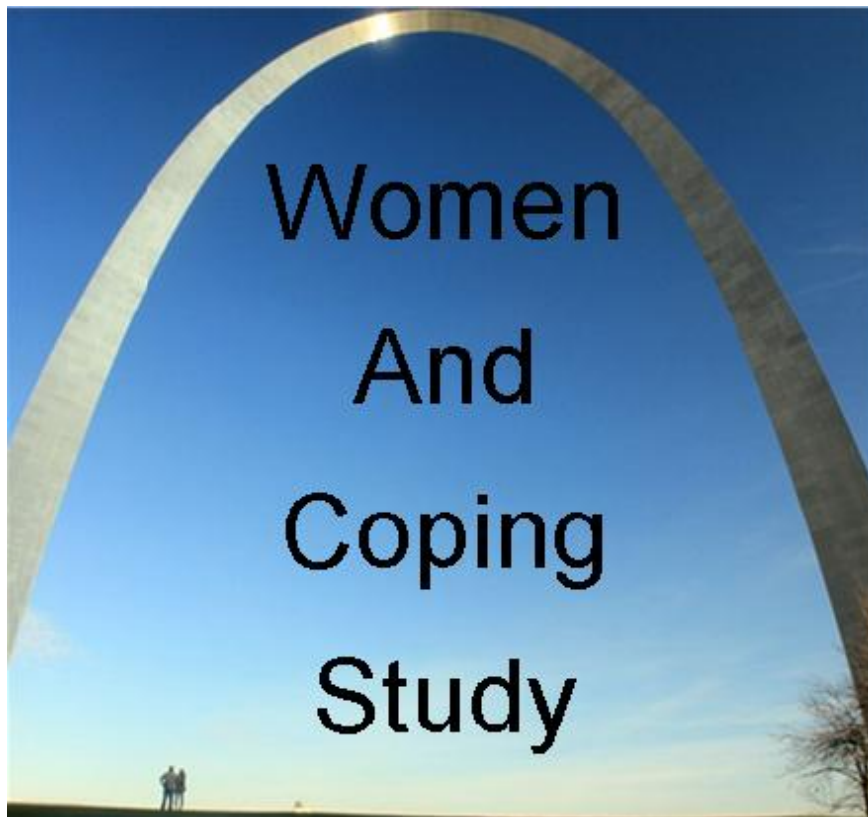
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Appendix B



Welcome to the Women and Coping Study web site!

In the Women and Coping Study, we want to learn more about how women cope with a spouse or partner's alcohol, drug, or gambling problem. We also would also like to find out how other aspects of women's lives (e.g. children, social support, family violence, employment, or finances) play a role in their coping process.

You may be eligible for this study if:

- You are a woman 24-65 years old, with a
- Current (or recent) spouse/partner who has an alcohol, drug, or gambling problem.
- Your relationships must be at least 6 months long.
- If not a current relationship, the break-up should have been within the past 12 months.

This study is an online survey, including screening questions and (if you are eligible) the main survey. The survey should take 25-60 minutes to complete, and you can get a \$10 amazon.com electronic gift certificate via email to thank you for your participation.

The next page is a consent form which gives more details about the study. If you decide to participate in the study after reading the consent form, click the "I agree to participate" button at the bottom of the consent form page and the ">>" button to enter the study.

Appendix C

INFORMED CONSENT DOCUMENT

Project Title: Women and Coping Study

Principal Investigator: Megan Petra

Research Team Contact: Megan Petra (mpetra@wustl.edu or 314-935-5698)

This consent form describes the research study and helps you decide if you want to participate. It provides important information about what you will be asked to do during the study, about the risks and benefits of the study, and about your rights as a research participant.

- If you have any questions about anything in this form, you should ask the research team for more information.
- You may also wish to talk to your family or friends about your participation in this study.
- Do not agree to participate in this study unless the research team has answered your questions and you decide that you want to be part of this study.

WHAT IS THE PURPOSE OF THIS STUDY?

This is a research study. We invite you to participate in this research study if you are a woman age 24-65 with a current (or recent) spouse/partner with an alcohol, drug or gambling problem. The relationship with your spouse/partner must be at least 6 months long, and (if not an ongoing relationship) the break-up needs to have been within the past 12 months. No person can participate in the study more than once.

The purpose of this research study is to learn more about how women cope with a spouse or partner's alcohol, drug or gambling problem. We also want to find out how other aspects of women's lives (e.g. children, social support, family violence, employment or finances) play a role in the coping process.

WHAT WILL HAPPEN DURING THIS STUDY?

This study is an online survey. If you decide to participate, you will first answer some screening questions, then (if you are eligible) the main survey. The main survey includes questions about the alcohol, drug and/or gambling problem and its effects on you and the family, your relationship, coping, social support, intimate partner violence, and demographics. We expect it will take 25-60 minutes to complete all questions. (Because of the small screen, using a smart phone to complete the survey may take longer than using a computer or tablet.) You may skip any questions that you would prefer not to answer, but if you do not answer certain questions on the screener you may not be eligible for the study.

If you would like to find out about future studies, you can give us your contact information (before the screening questions). You don't have to do this. To protect your privacy, your contact information and your survey answers will be downloaded and saved into separate, unlinked, databases.

HOW MANY PEOPLE WILL PARTICIPATE?

Approximately 210 people will take part in this study conducted by investigators at Washington

University.

HOW LONG WILL I BE IN THIS STUDY?

If you agree to take part in this study, your involvement will last for 25-60 minutes.

WHAT ARE THE RISKS OF THIS STUDY?

You may experience one or more of the risks indicated below from being in this study. First, some survey questions may make you uncomfortable. Second, with online surveys there is always a risk to your privacy. For instance, if you are using an unsecured (public) internet connection, somebody could electronically monitor your answers (keystrokes) before they are transmitted to our secure database. Somebody could also see your answers by looking over your shoulder if you do not complete the survey in private. Finally, if you do not delete your web browser history after finishing the survey then somebody using your computer later could tell that you had visited the main study web page. In addition to these, there may be other unknown risks, or risks that we did not anticipate, associated with being in this study.

WHAT ARE THE BENEFITS OF THIS STUDY?

You will probably not benefit from being in this study. However, we hope that, in the future, other people might benefit from this study because we hope to use study's results to help other women to better cope with their partner's alcohol, drug, and/or gambling problem.

WILL IT COST ME ANYTHING TO BE IN THIS STUDY?

No. You will not have any costs for being in this research study.

WILL I BE PAID FOR PARTICIPATING?

You can receive a \$10 electronic gift certificate to Amazon.com via email to thank you for participating in this study (sent within two weeks after you complete the study). To receive the electronic gift certificate, after finishing the main survey you can provide an email address and your social security number (used for payment purposes only). If you do not wish to provide an email address or social security number you may participate in the study without receiving a gift certificate. We will delete the email address and social security number you provided for the gift certificate after the end of the study.

Note that nobody can participate in the survey more than once, or receive more than one electronic gift certificate. If there is evidence that two or more surveys were completed by the same person (e.g., the same email address was submitted and/or the computer IP addresses were substantively similar), only the first survey will be eligible for an electronic gift certificate. (An IP address is a number anonymously assigned by an internet service provider to a computer that accesses the internet. We cannot match up an IP address with a particular person, so we won't be able to tell who you are by looking at an IP address. All IP addresses will be deleted at the end of the study.)

WHO IS FUNDING THIS STUDY?

The study is funded by Washington University.

HOW WILL YOU KEEP MY INFORMATION CONFIDENTIAL?

We will make every effort to keep your answers confidential. To help protect your confidentiality, your answers will go into a secure (password-protected) database. If you provide your contact information (to hear about future studies) and/or an email address (for the electronic gift certificate), they will be downloaded into different databases from your study answers. There will be no links between the downloaded databases, so we will have no way to tell who gave which answers on the survey. If we write a report or article about this study or share the study data set with others, we will make sure that nobody will know whether or not you participated in the study, or which survey answers were yours.

We will keep your participation in this research study confidential to the extent permitted by law. However, it is possible that other people such as those indicated below may become aware of your participation in this study and may inspect and copy records pertaining to this research. Some of these records could contain information that personally identifies you.

- Federal government regulatory agencies,
- University representatives, to complete University responsibilities
- Washington University's Institutional Review Board (a committee that reviews and approves research studies)

IS BEING IN THIS STUDY VOLUNTARY?

Taking part in this research study is completely voluntary. You may choose not to take part at all. If you decide to be in this study, you may stop participating at any time. If you decide not to be in this study, or if you stop participating at any time, you won't be penalized or lose any benefits for which you otherwise qualify.

WHAT IF I HAVE QUESTIONS?

We encourage you to ask questions. If you have any questions about the research study itself, please contact: Megan Petra at mpetra@wustl.edu, or call (314) 935-5698. If you feel that you have been harmed in any way by your participation in this study, please contact Megan Petra at mpetra@wustl.edu, or call (314) 935-5698. You may also contact Renee Cunningham-Williams, PhD, Associate Professor, at williamsr@wustl.edu, or call (314) 935-4563.

If you have questions, concerns, or complaints about your rights as a research participant please contact the Human Research Protection Office, 660 South Euclid Avenue, Campus Box 8089, St. Louis, MO 63110, (314) 633-7400, or 1-(800)-438-0445 or email hrpo@wusm.wustl.edu. General information about being a research participant can be found by clicking "Participants" on the Human Research Protection Office web site, <http://hrpohome.wustl.edu>. To offer input about your experiences as a research participant or to speak to someone other than the research staff, call the Human Research Protection Office at the number above.

This consent form is not a contract. It is a written explanation of what will happen during the study if you decide to participate. You are not waiving any legal rights by agreeing to participate in this study.

IF YOU WANT TO PARTICIPATE IN THE STUDY:

- Once you start the screener, you will not be able to come back later to finish the study if you stop before you're done. Make sure you have enough time (25-60 minutes) before you begin.
- For your privacy, you may wish to take the survey at a place and time where you will not be disturbed.
- If you wish to receive an electronic Amazon.com gift certificate for study participation, you should have your email address available.
- You may wish to print this page for your records.
- If you want to participate, click the "I agree to participate" button below, then click the ">>" button to enter the survey.

Appendix D

Women and Coping screener

Directions: After answering each page of questions, use the >> button at the bottom of the page to advance to the next page of questions. (Note: do not use your web browser's "back" or "forward" buttons, as this will cause the survey software to kick you out of the survey.)

Do you have a current intimate partner (spouse, boyfriend, or girlfriend) who has problems with drinking, drugs or gambling? (Problems because of excessive drinking, drug use, or gambling may include physical or emotional problems; problems with you, family, or friends; problems at work or school; financial problems; or problems with the police.)

- Yes (think about this partner when answering the remaining study questions)
- No

Qualtrics Skip Logic: If No Is Selected, Then Skip To Did you have a past intimate partner ...

Qualtrics Skip Logic: Display Following Question If Do you have a current intimate partner with... (Yes) Is Selected

Which does your partner have problems with? (check all that apply)

- Drinking (alcohol)
- Drugs
- Gambling

Qualtrics Skip Logic: Display Following Question If Do you have a current intimate partner with... (Yes) Is Selected

How long have you been with your partner?

- Less than 6 months
- Between 6 months and 1 year
- More than 1 year (How many years?) _____

Qualtrics Skip Logic: If Less than 6 months Is Not Selected, Then Skip To What sex is your partner?

Qualtrics Skip Logic: Display Following Question If Do you have a current intimate partner with... (No) Is Selected

Did you have a past intimate partner (spouse, boyfriend, or girlfriend) who had problems with drinking, drugs, or gambling? If you had more than one past partner who had problems with alcohol, drugs or gambling, think about the most recent partner. (Problems because of excessive drinking, drug use, or gambling may include physical or emotional problems; problems with you, family, or friends; problems at work or school; financial problems; or problems with the police.)

- Yes (think about this partner when answering the remaining study questions)
- No

Qualtrics Skip Logic: If No Is Selected, Then Skip To What is your sex?

Qualtrics Skip Logic: Display Following Question If Did you have a current intimate partner with... (Yes) Is Selected

Which did your partner have problems with? (check all that apply)

- Drinking (alcohol)
- Drugs
- Gambling

Qualtrics Skip Logic: Display Following Question If Did you have a current intimate partner with... (Yes) Is Selected

When did this relationship end?

- Within the past 6 months
- Between 6 and 12 months ago
- More than 12 months ago

Qualtrics Skip Logic: Display Following Question If Did you have a current intimate partner with... (Yes) Is Selected

How long were you with your partner?

- Less than 6 months
- Between 6 months and 1 year
- More than 1 year (how many years?) _____

What sex is your partner?

- Male
- Female
- Transgender

What is your sex?

- Male
- Female
- Transgender

How old are you as of today?

Years: _____

In general, how would you describe your relationship with your partner?

- A lot of tension
- Some tension
- No tension

Do (did) you and your partner work out arguments with...

- Great difficulty
- Some difficulty
- No difficulty

Generally speaking, how is your overall health?

- Excellent
- Very Good
- Good
- Fair
- Poor

Do you exercise?

- Yes, every day
- Yes, a few times a week
- Yes, weekly
- Yes, a few times a month
- No

Thinking about the place where you live, do you:

- Rent
- Own
- Stay with somebody
- Other _____

Do you feel safe in your neighborhood?

- Yes, most or all of the time
- Sometimes
- No, not at all

Are you of Hispanic or Latino/a origin?

- Yes
- No

Please select one or more categories to describe your race.

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Pacific Islander
- White or Caucasian

What is the highest level of education you have completed?

- Less than high school
- High school (diploma or GED)
- Some college or technical school
- Bachelor's degree
- Graduate degree

What is your current employment status?

- Working full-time
- Working part-time
- Unemployed / laid off
- Homemaker
- Disabled
- Full-time student
- Other _____

What is your zip code? _____
(Please answer again even if you previously gave contact information.)

Have you ever participated in a web-based survey (not including this one)?

- Yes
- No

How did you hear about this study? (check all that apply)

- Flyer or poster. (Where?) _____
- Online notice. (Which web site?) _____
- Washington University's Volunteers for Health registry (or other registry)
- Word of mouth
- Other _____

Appendix E

St. Louis Metropolitan Area Resources

Parenting / Families:

Family Resource Center www.frcmo.org (314) 547-9350

Children's Division Child Abuse and Neglect Hotline (800) 392-3738

Annie Malone Child & Family Services Center www.anniemalone.com (314) 531-0120

Health care:

MO HealthNet (888) 275-5908

Gateway to Better Health (314) 814-8778

Grace Hill Health Centers www.gracehill.org (314) 898-1700

Mental Health:

Behavioral Health Response www.bhrstl.org (800) 811-4760

Life Crisis Suicide Prevention www.providentstl.org (800) 273-8255

Addiction:

Al-Anon www.al-anon.org

Gam-Anon www.gam-anon.org

National Council on Alcoholism and Drug Abuse www.ncada-stl.org (314) 962-3456

Missouri Alliance to Curb Problem Gambling www.888betsoff.com (888) BETSOFF

Intimate Partner Violence:

ALIVE crisis hotline www.alivestl.org (314) 993-2777

Missouri Coalition Against Domestic and Sexual Violence www.mocadsv.org

Safe Connections hotline www.safeconnections.org (314) 531-2003

LGBT:

The LGBT Center of St. Louis www.lgbtcenterstl.org (314) 472-LGBT

Food:

http://www.foodpantries.org/ci/mo-st_louis

Operation Food Search hotline

(314) 726-5355 ext. 3

Housing:

Housing Resource Center

(314) 802-5444

Income maintenance:

Missouri Department of Social Services <http://www.dss.mo.gov/mhd/>

Employment:

Missouri Career Center jobs.mo.gov (888) 728-JOBS

Appendix F

Women and Coping survey

Your partner's recent drinking, drug use, and/or gambling

Directions: the following questions ask about your partner's drinking, drug use, and/or gambling over the past 12 months. If this is a past relationship, think about the most recent 12 months of contact with your partner when answering these questions.

During the last 12 months, has your partner had at least one alcoholic beverage?

- Yes
- No

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Drinking (alcohol) Is Selected Or Which did your partner have problems with? (check all tha... Drinking (alcohol) Is Selected Or During the last 12 months, has your partner had at least ... Yes Is Selected

During the last 12 months, about how often did your partner drink any kind of alcoholic beverage?

- Every day
- Nearly every day
- 3-4 times a week
- 2 times a week
- Once a Week
- 2-3 times a month
- Once a month
- 7-11 times in the last year
- 3-6 times in the last year
- 1-2 times in the last year
- Never in the past year

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Drinking (alcohol) Is Selected Or Which did your partner have problems with? (check all tha... Drinking (alcohol) Is Selected Or During the last 12 months, has your partner had at least ... Yes Is Selected

On days when he/she drank in the last 12 months, how many drinks did your partner usually have? _____ (number of drinks)

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Drinking (alcohol) Is Selected Or Which did your partner have problems with? (check all tha... Drinking (alcohol) Is Selected Or During the last 12 months, has your partner had at least ... Yes Is Selected

During the last 12 months, about how often did your partner drink 5 or more drinks in a single day? (If your partner is female, 4 or more drinks)

- Every day
- Nearly every day
- 3-4 times a week
- 2 times a week
- Once a week
- 2-3 times a month
- Once a month
- 7-11 times in the past year
- 3-6 times in the past year
- 1-2 times in the past year
- Never in the past year

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Drinking (alcohol) Is Selected Or Which did your partner have problems with? (check all tha... Drinking (alcohol) Is Selected Or During the last 12 months, has your partner had at least ... Yes Is Selected

During the last 12 months, has your partner needed to drink much more alcohol to get an effect, or found that he/she could no longer get drunk on the amount he/she used to drink?

- Yes
- No

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Drinking (alcohol) Is Selected Or Which did your partner have problems with? (check all tha... Drinking (alcohol) Is Selected

How long has your partner had problems with drinking?
_____ (number of years)

During the last 12 months, has your partner used illegal drugs or used prescription drugs other than those required for medical reasons?

- Yes
- No

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Drugs Is Selected Or Which did your partner have problems with? (check all tha... Drugs Is Selected Or During the last 12 months, has your partner used illegal ... Yes Is Selected

During the last 12 months, how often has your partner used drugs (either illegal drugs or prescription drugs other than those required for medical reasons)?

- Every day
- Nearly every day
- 3-4 times a week
- 2 times a week
- Once a week
- 2 times a month
- Once a month
- 7-11 times a year
- 3-6 times a year
- 1-2 times a year
- Never in t
- he past year

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Drugs Is Selected Or Which did your partner have problems with? (check all tha... Drugs Is Selected Or During the last 12 months, has your partner used illegal ... Yes Is Selected

On days when he/she used drugs in the last 12 months, about how many times did your partner usually use drugs?

- 1-2 times
- 3-4 times
- 5-6 times
- 7 or more times

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Drugs Is Selected And Which did your partner have problems with? (check all tha... Drugs Is Selected And During the last 12 months, has your partner used illegal ... Yes Is Selected

During the last 12 months, did your partner typically use more than one type of drug on the same occasion (or use a drug and alcohol)?

- Yes
- No

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Drugs Is Selected Or Which did your partner have problems with? (check all tha... Drugs Is Selected Or During the last 12 months, has your partner used illegal ... Yes Is Selected

During the last 12 months, has your partner needed to use larger amounts of drugs to get an effect, or found that he/she could no longer get high on the amount he/she used to use?

- Yes
- No

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Drugs Is Selected Or Which did your partner have problems with? (check all tha... Drugs Is Selected

How long has your partner had problems with drugs?

_____ (number of years)

During the last 12 months, has your partner gambled?

- Yes
- No

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Gambling Is Selected Or Which did your partner have problems with? (check all tha... Gambling Is Selected Or During the last 12 months, has your partner gambled? Yes Is Selected

During the last 12 months, about how often has your partner gambled?

- Every day
- Nearly every day
- 3-4 times a week
- 2 times a week
- Once a week
- 2 times a month
- Once a month
- 7-11 times a year
- 3-6 times a year
- 1-2 times a year
- Never in the past year

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Gambling Is Selected Or Which did your partner have problems with? (check all tha... Gambling Is Selected Or During the last 12 months, has your partner gambled? Yes Is Selected

On a typical gambling day in the last 12 months, how much money did your partner spend gambling?

\$ _____

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Gambling Is Selected Or Which did your partner have problems with? (check all tha... Gambling Is Selected Or During the last 12 months, has your partner gambled? Yes Is Selected

During the last 12 months, has your partner lied in order to keep you, family or friends from knowing how much he/she gambled?

- Yes
- No

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Gambling Is Selected Or Which did your partner have problems with? (check all tha... Gambling Is Selected Or During the last 12 months, has your partner gambled? Yes Is Selected

During the last 12 months, has your partner gambled again as soon as possible after losing, in order to win back the money?

- Yes
- No

Qualtrics Skip Logic: Display Following Question If Which does your partner have problems with? (check all th... Gambling Is Selected Or Which did your partner have problems with? (check all tha... Gambling Is Selected

How long has your partner had problems with gambling?

_____ (number of years)

Your recent drinking, drug use, and/or gambling

During the last 12 months, have you had at least one alcoholic beverage?

- Yes
- No

Qualtrics Skip Logic: Display Following Question If During the last 12 months, have you had at least one alco... Yes Is Selected

During the last 12 months, about how often did you drink any kind of alcoholic beverage?

- Every day
- Nearly every day
- 3-4 times a week
- 2 times a week
- Once a week
- 2 times a month
- Once a month
- 7-11 times a year
- 3-6 times a year
- 1-2 times a year
- Never in the past year

Qualtrics Skip Logic: Display Following Question If During the last 12 months, have you had at least one alco... Yes Is Selected

On days when you drank in the last 12 months, how many drinks did you usually have?

_____ (number of drinks)

Qualtrics Skip Logic: Display Following Question If During the last 12 months, have you had at least one alco... Yes Is Selected

During the last 12 months, about how often did you drink 4 or more drinks in a single day?

- Every day
- Nearly every day
- 3-4 times a week
- 2 times a week
- Once a week
- 2 times a month
- Once a month
- 7-11 times a year
- 3-6 times a year
- 1-2 times a year
- Never in the past year

During the last 12 months, have you used illegal drugs or used prescription drugs other than those required for medical reasons?

- Yes
- No

Qualtrics Skip Logic: Display Following Question If During the last 12 months, have you used illegal drugs or... Yes Is Selected

During the last 12 months, about how often did use drugs (either illegal drugs or prescription drugs other than those required for medical reasons)?

- Every day
- Nearly every day
- 3-4 times a week
- 2 times a week
- Once a week
- 2 times a month
- Once a month
- 7-11 times a year
- 3-6 times a year
- 1-2 times a year
- Never in the past year

Qualtrics Skip Logic: Display Following Question If During the last 12 months, have you used illegal drugs or... Yes Is Selected

On days when you used drugs in the last 12 months, about how many times did you usually use drugs?

- Every day
- Nearly every day
- 3-4 times a week
- 2 times a week
- Once a week
- 2 times a month
- Once a month
- 7-11 times a year
- 3-6 times a year
- 1-2 times a year
- Never in the past year

Qualtrics Skip Logic: Display Following Question If During the last 12 months, have you used illegal drugs or... Yes Is Selected

During the last 12 months, did you typically use more than one type of drug on the same occasion (or use a drug and alcohol)?

- Yes
- No

During the last 12 months, have you gambled?

- Yes
- No

Qualtrics Skip Logic: Display Following Question If During the last 12 months, have you gambled? Yes Is Selected

About how often have you gambled in the last 12 months?

- Every day
- Nearly every day
- 3-4 times a week
- 2 times a week
- Once a week
- 2 times a month
- Once a month
- 7-11 times a year
- 3-6 times a year
- 1-2 times a year
- Never in the past year

Qualtrics Skip Logic: Display Following Question If During the last 12 months, have you gambled? Yes Is Selected

On a typical gambling day in the last 12 months, how much money did you spend gambling?

\$ _____

Family Member Impact Questionnaire

Directions: to your knowledge, have any of the following happened in the last 12 months, as a result of your partner’s drinking, drug use, or gambling? If this is a past relationship, think about the last 12 months of contact with your partner when answering these questions.

	Not at all	Once or twice	Sometimes	Often	(Don't know)
Does your partner have very changeable moods?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does your partner communicate badly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does your partner steal or borrow money and not pay it back?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have the family's finances been affected?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does your partner start arguments with you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has your partner threatened you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have people outside the family had to get involved?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does your partner come and go at irregular or awkward times?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not at all	Once or twice	Sometimes	Often	(Don't know)
Does your partner's drinking/drug use/gambling get in the way of your social life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has your partner upset family occasions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does your partner fail to join in family activities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has your partner been late or unreliable?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are you worried that your partner's ability to work or study has been affected by the drinking/drug use/gambling?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are you worried that your partner's physical health has been affected by the drinking/drug use/gambling?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are you worried that your partner has neglected his/her appearance or self-care?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not at all	Once or twice	Sometimes	Often	(Don't know)
Are you worried that your partner's mental state is becoming affected by the drinking/drug use/gambling?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Coping Questionnaire

Directions: In the last 12 months, indicate whether you have done each action listed below. Then, say how helpful each action was for you. If you did not do the action, choose “N/A” for the second part of the question. (If this is a past relationship, think about the last 12 months of contact with your partner when answering these questions.)

	Did you do this?				How helpful was it?				
	No	Once or twice	Sometimes	Often	Not at all helpful	A little helpful	Helpful	Very helpful	(N/A)
Refused to lend your partner money or help him/her out financially in other ways.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Put the interests of other members of the family before your partner's.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Put yourself out for your partner, for example by getting him/her to bed, cleaning up after him/her, or taking care of problems after he/she had been drinking/using drugs/gambling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Did you do this?				How helpful was it?				
	No	Once or twice	Sometimes	Often	Not at all helpful	A little helpful	Helpful	Very helpful	(N/A)
Given your partner money even when you thought it would be spent on alcohol, drugs or gambling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sat down together with your partner and talked frankly about what could be done about his/her drinking/drug use/gambling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Started an argument with your partner about his/her drinking/ drug use/ gambling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pleaded with your partner about his/her drinking/ drug use/ gambling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Did you do this?				How helpful was it?				
	No	Once or twice	Sometimes	Often	Not at all helpful	A little helpful	Helpful	Very helpful	(N/A)
When your partner was under the influence of alcohol or drugs, or preoccupied by gambling, left him/her alone to look after himself/herself or kept out of his/her way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Made it quite clear to your partner that the drinking/drug use/gambling was upsetting you and that it had to change.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt too frightened to do anything.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Did you do this?				How helpful was it?				
	No	Once or twice	Sometimes	Often	Not at all helpful	A little helpful	Helpful	Very helpful	(N/A)
Tried to limit your partner's drinking/ drug use/ gambling by making some rule about it, for example forbidding drinking/drug use/gambling in the house or stopping your partner from bringing his/her drinking/ drug-using/ gambling friends home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pursued your own interests, looked for new activities or jobs for yourself, or got more involved in a political, church, sports or other organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encouraged your partner to take an oath or promise not to drink/use drugs/gamble.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Did you do this?				How helpful was it?				
	No	Once or twice	Sometimes	Often	Not at all helpful	A little helpful	Helpful	Very helpful	(N/A)
Felt too helpless to do anything.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Avoided your partner as much as possible because of his/her drinking/drug use/gambling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Got moody or emotional with your partner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Watched your partner's every move, checked up on your partner, or kept a close eye on your partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Went about your own business or acted as if your partner wasn't there.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Made it clear that you won't accept your partner's reasons for drinking/using drugs/gambling, or cover up for her/him.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Did you do this?				How helpful was it?				
	No	Once or twice	Sometimes	Often	Not at all helpful	A little helpful	Helpful	Very helpful	(N/A)
Made threats that you didn't really mean to carry out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Made clear to your partner your expectations of what he/she could do to contribute to the family.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stuck up for your partner or stood by your partner when others were criticizing him/her.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Got in a state where you didn't or couldn't make any decision.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accepted the situation as a part of life that couldn't be changed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accused your partner of not loving you, or of letting you down.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Did you do this?				How helpful was it?				
	No	Once or twice	Sometimes	Often	Not at all helpful	A little helpful	Helpful	Very helpful	(N/A)
Sat down with your partner to help him/her deal with the financial situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When things have happened as a result of your partner's drinking/drug use/gambling, made excuses for him/her, covered up for him/her, or taken the blame yourself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Searched for evidence of alcohol/ drugs/ gambling, or hidden or disposed of alcohol/ drugs/ items used for gambling yourself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Put yourself first by taking care of yourself or doing something special for yourself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Did you do this?				How helpful was it?				
	No	Once or twice	Sometimes	Often	Not at all helpful	A little helpful	Helpful	Very helpful	(N/A)
Tried to keep things looking normal, pretended everything was fine when it wasn't, or hidden evidence of your partner's drinking/ drug use/ gambling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

WAST Questionnaire

Directions: Choose one answer for how often each of the statements has happened in the last 12 months. (If this is a past relationship, think about the last 12 months of contact with your partner when answering these questions.)

	Often	Sometimes	Never
Do arguments with your partner ever result in you feeling put down or bad about yourself?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do arguments with your partner ever result in hitting, kicking, or pushing?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you ever feel frightened by what your partner says or does?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has your partner ever abused you physically?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has your partner ever abused you emotionally?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Has your partner ever abused you sexually?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

MASIC Questionnaire

Directions: Choose one answer for how often your partner did each action listed below in the past 12 months. (If this is a past relationship, think about the last 12 months of contact with your partner when answering these questions.) How often did your partner:

	Never	Once or twice	3-6 times (~every few months)	7-12 times (~every month)	Weekly	Daily
Forbid you to out without him/her?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Try to control how much money you had or spent?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Try to control your activities in or outside of the home?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Try to control your contact with family and friends?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Act extremely jealous, or frequently check up on where you've been or who you've been with?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Never	Once or twice	3-6 times (~every few months)	7-12 times (~every month)	Weekly	Daily
Demand that you obey him/her?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physically abuse or threaten to abuse pets to scare or hurt you, or when angry with you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Punish or deprive the children because he/she was angry at you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Make threatening gestures or faces at you or shake a fist at you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Threaten to take or have the children taken from you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Never	Once or twice	3-6 times (~every few months)	7-12 times (~every month)	Weekly	Daily
Destroy property, for example, hit or kick a wall, door, or furniture or throw, smash, or break an object?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drive dangerously to scare you, or when angry at you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Throw an object at you to scare or hurt you, or when angry at you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Destroy or harm something you care about?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

DASS Questionnaire

Directions: Please read each statement and choose an answer that indicates how much the statement applied to you over the last 12 months. There are no right or wrong answers. Do not spend too much time on any statement. (If this is a past relationship, think about the last 12 months of contact with your partner when answering these questions.)

	Did not apply to me at all	Applied to me to some degree, or some of the time	Applied to me a considerable degree, or a good part of the time	Applied to me very much, or most of the time
I found it hard to wind down.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was aware of dryness of mouth.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I couldn't seem to experience any positive feeling at all.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found it difficult to work up the initiative to do things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tended to over-react to situations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I experienced trembling (e.g., in the hands).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that I was using a lot of nervous energy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Did not apply to me at all	Applied to me to some degree, or some of the time	Applied to me a considerable degree, or a good part of the time	Applied to me very much, or most of the time
I was worried about situations in which I might panic and make a fool of myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that I had nothing to look forward to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found myself getting agitated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found it difficult to relax.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt down-hearted and blue.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was intolerant of anything that kept me from getting on with what I was doing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt I was close to panic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was unable to become enthusiastic about anything.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt I wasn't worth much as a person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that I was rather touchy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Did not apply to me at all	Applied to me to some degree, or some of the time	Applied to me a considerable degree, or a good part of the time	Applied to me very much, or most of the time
I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart-rate increase, heart missing a beat).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt scared without any good reason.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that life was meaningless.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Alcohol, Drugs and the Family Social Support Scale

Directions: Which have happened to you in the last 12 months? Choose one answer for each question. (If this is a past relationship, think about the last 12 months of contact with your partner when answering these questions.)

	Never	Once or twice	Sometimes	Often
Friends/relatives have understood what it is like for me to live with my partner's drinking/ drug use/ gambling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have helped to cheer me up.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professionals (doctors, nurses, therapists, social workers, clergy) have given me helpful information about problem drinking/ drug use/ gambling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have felt that I have friends/relatives whom I can trust.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have listened to me when I have talked about my feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Never	Once or twice	Sometimes	Often
Friends/relatives have backed the decisions that I have made towards my partner and his/her drinking/ drug use/ gambling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have put themselves out for me when I needed practical help (i.e., aid or assistance).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have advised me to focus on myself and my own needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have questioned my efforts to stand up to my partner's problem drinking/ drug use/ gambling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have been too critical of my partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have given me space to talk about my problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have said that my partner should leave home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Never	Once or twice	Sometimes	Often
Friends/relatives have said things about my partner that I do NOT agree with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have avoided me because of my partner's drinking/ drug use/ gambling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professionals (doctors, nurses, therapists, social workers, or clergy) have made themselves available for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have blamed me for my relative's behavior.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have said that my partner does NOT deserve help.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have identified with the information found in books, pamphlets, or on the internet about people living with a problem drinker/ drug user/ gambler.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have told my partner off on my behalf.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Never	Once or twice	Sometimes	Often
Friends/relatives have advised me to leave my partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have been there for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have provided support for the way I cope with my partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have talked to me about my partner and listened to what I have to say.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friends/relatives have said nasty things about my partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have confided in a professional (doctor, nurse, therapist, social worker, or clergy) about my situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Personal Wellbeing Index

Directions: On a scale of 0 (completely dissatisfied) to 10 (completely satisfied), how satisfied have you been with each aspect of your life over the last 12 months? (If this is a past relationship, think about the last 12 months of contact with your partner when answering these questions.)

	0 (completely dissatisfied)	1	2	3	4	5	6	7	8	9	10 (completely satisfied)
Thinking about your own life and personal circumstance, how satisfied are you with your life as a whole?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied are you with your standard of living?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied are you with your health?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied are you with what you are currently achieving in life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied are you with your personal relationships?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied are you with how safe you feel?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied are you with feeling part of your community?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	0 (completely dissatisfied)	1	2	3	4	5	6	7	8	9	10 (completely satisfied)
How satisfied are you with your future security?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied are you with your spirituality or religion?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Which of the following life experiences have you experienced in the last 12 months (of contact with your partner)? (check all that apply)

- Death of someone close to you
- Divorce
- Legal difficulties
- Major injury or illness to either yourself or someone close to you
- Marriage or finding a relationship partner
- Troubles with your work, boss, or superiors
- Retirement
- Pregnancy or new family additions
- Major change to your financial situation
- Taking on a mortgage, loan or making a purchase
- Increase in the number of arguments with someone you are close to
- Major change in living or work conditions (e.g. renovations, new job)

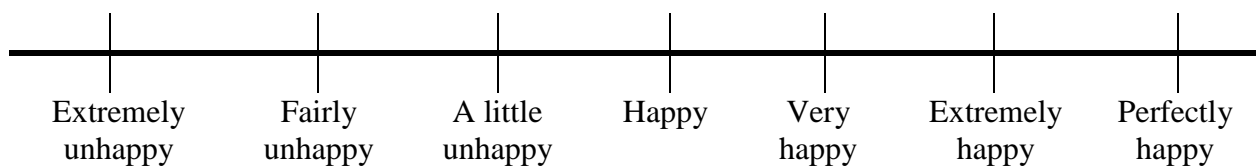
Are you and your partner currently:

- Married or in a civil union
- Legally separated or divorced
- Never married/ never in a civil union

In the past 12 months (of contact with your partner), did you and your partner:

- Live together (most or all of the time)
- Live separately (most or all of the time)

The marks on the following line represent different degrees of happiness in your relationship. The middle point, "happy," represents the degree of happiness of most relationships. Please indicate the mark which best describes the degree of happiness, all things considered, of your relationship over the past 12 months (of contact with your partner).



How many children do you have? _____

How many of your children live with you? _____

Where were you born?

- In the United States
- In another country

Which category best represents your total household income in the last 12 months?

- \$0 (no income)
- \$1 to \$4,999
- \$5,000 to \$7,999
- \$8,000 to \$9,999
- \$10,000 to \$12,999
- \$13,000 to \$14,999
- \$15,000 to \$19,999
- \$20,000 to \$24,999
- \$25,000 to \$29,999
- \$30,000 to \$34,999
- \$35,000 to \$39,999
- \$40,000 to \$49,999
- \$50,000 to \$59,999
- \$60,000 to \$69,999
- \$70,000 to \$79,999
- \$80,000 to \$89,999
- \$90,000 to \$99,999
- \$100,000 or over

Which of the following best describes your current household income?

- Not enough to make ends meet
- Gives you just enough to get by
- Keeps you comfortable but allows no luxuries
- Allows you to do more or less whatever you want

Has your household income usually been like it is now?

- Yes
- No, usually there has been less money
- No, usually there has been more money

Do you attend religious services at a church, synagogue, mosque, or other place of worship?

- No
- Yes, once or twice a year
- Yes, a few times a year
- Yes, 1-3 times/month
- Yes, once a week
- Yes, twice a week or more

In general, how important are religious or spiritual beliefs in your daily life?

- Very important
- Somewhat important
- Not very important
- Not important at all

Appendix G

WAST Questionnaire

Directions: choose one answer for how often each of the statements has happened in the last 12 months. (If this is a *past* relationship, think about the last 12 months of contact with your partner when answering these questions.)

1. In general, how would you describe your relationship with your partner?
 - A lot of tension
 - Some tension
 - No tension

2. Do you and your partner work out arguments with...
 - Great difficulty
 - Some difficulty
 - No difficulty

3. Do arguments with your partner ever result in you feeling put down or bad about yourself?
 - Often
 - Sometimes
 - Never

4. Do arguments with your partner ever result in hitting, kicking, or pushing?
 - Often
 - Sometimes
 - Never

5. Do you ever feel frightened by what your partner says or does?
 - Often
 - Sometimes
 - Never

6. Has your partner ever abused you physically?
 - Often
 - Sometimes
 - Never

7. Has your partner ever abused you emotionally?
 - Often
 - Sometimes
 - Never

8. Has your partner ever abused you sexually?
 - Often
 - Sometimes
 - Never

Appendix H

Alcohol, Drugs and the Family Social Support Questionnaire subscales

Informal social support subscale questions

1. Friends/relatives have understood what it is like for me to live with my partner's drinking/drug use/gambling.
2. Friends/relatives have helped to cheer me up.
4. I have felt that I have friends/relatives whom I can trust.
5. Friends/relatives have listened to me when I have talked about my feelings.
6. Friends/relatives have backed the decisions that I have made towards my partner and his/her drinking/drug use/gambling.
7. Friends/relatives have put themselves out for me when I needed practical help (i.e., aid or assistance).
8. Friends/relatives have advised me to focus on myself and my own needs.
11. Friends/relatives have given me space to talk about my problems.
21. Friends/relatives have been there for me.
22. Friends/relatives have provided support for the way I cope with my partner.
23. Friends/relatives have talked to me about my partner and listened to what I have to say.

Formal social support subscale questions

3. Professionals (doctors, nurses, therapists, social workers, clergy) have given me helpful information about problem drinking/drug use/gambling.
15. Professionals (doctors, nurses, therapists, social workers, or clergy) have made themselves available for me.
18. I have identified with the information found in books, pamphlets, or on the internet about people living with a problem drinker/drug user/gambler.
19. Friends/relatives have told my partner off on my behalf.
20. Friends/relatives have advised me to leave my partner.
25. I have confided in a professional (doctor, nurse, therapist, social worker, or clergy) about my situation.

Unhelpful social support subscale questions

9. Friends/relatives have questioned my efforts to stand up to my partner's problem drinking/drug use/gambling.
10. Friends/relatives have been too critical of my partner.
12. Friends/relatives have said that my partner should leave home.
13. Friends/relatives have said things about my partner that I do NOT agree with.
14. Friends/relatives have avoided me because of my partner's drinking/drug use/gambling.
16. Friends/relatives have blamed me for my relative's behavior.
17. Friends/relatives have said that my partner does NOT deserve help.
24. Friends/relatives have said nasty things about my partner.