

## Problem Gambling and Intimate Partner Violence

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**Abstract** This study examined the prevalence and severity of intimate partner violence (IPV) among 248 problem gamblers (43 women, 205 men) recruited from newspaper advertisements. The main outcome measures used were the Canadian Problem Gambling Index, the Conflicts Tactics Scale-2, the State Trait Anger Expression Inventory-2, the drug and alcohol section of the Addiction Severity Index and the substance use section of the Structured Clinical Interview for the DSM-IV. In this sample, 62.9% of participants reported perpetrating and/or being the victims of IPV in the past year, with 25.4% reporting perpetrating severe IPV. The majority of the sample (64.5%) also had clinically significant anger problems, which was associated with an increased risk of being both the perpetrator and victim of IPV. The presence of a lifetime substance use disorder among participants who had clinically significant anger problems further increased the likelihood of both IPV perpetration and victimization. These findings underscore the importance of routinely screening gambling clients for anger and IPV, and the need to develop public policy, prevention and treatment programs to address IPV among problem gamblers. Future research to examine IPV among problem gamblers is recommended.

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## Introduction

While there is an extensive literature on the prevalence of intimate partner violence (IPV) in the general population, relatively little is known about the prevalence of IPV among problem gamblers. In their examination of problem gambling from a public health perspective, Korn and Shaffer (1993) have suggested that IPV may be a hidden problem among problem gamblers. The paucity of studies on gambling and IPV is surprising, given the frequency of anecdotal reports of domestic conflict among problem gamblers, and the social, health and economic costs associated with these concurrent problems.

While the research on gambling and IPV is limited, the little empirical data available suggests IPV may be more prevalent among problem gamblers than in the general population. Bland et al. (1993) interviewed pathological gamblers and found that 23% reported having hit or thrown things at their partners on one occasion. To our knowledge, Bland et al.'s study is the only research of its kind to systematically survey pathological gamblers. In a treatment study of problem gamblers with concurrent anger problems (Korman et al. 2005), 74% reported being verbally abusive and 25% reported committing acts of physical violence against others in the 3 months prior to treatment. While the latter study specifically targeted individuals with comorbid gambling and anger problems and did not examine violence against intimate partners, the findings suggest a high degree of self-reported violence and abusive behaviours among angry problem gamblers.

Interviews of spouses of gamblers also suggest that IPV is more common among gamblers than in the general population. Lorenz and Shuttlesworth (1983), surveyed 144 spouses of compulsive gamblers, and found that 50% reported being physically and verbally abused by their partners. In a more recent study of 300 women attending an emergency room in Nebraska, Muelleman et al. (2002) found that those women who reported their partners had gambling problems were significantly more likely to have been the victims of IPV. Of those women who reported experiencing IPV, 64% believed there was a relationship between their partners' gambling and violence. As expected, the likelihood of IPV was also higher among those women who reported their partners had a drinking problem, but the presence of both gambling and drinking problems was associated with a much higher risk of IPV. Finally, there is also some survey data suggesting a rise in IPV associated with the establishment of new casinos in local communities (National Opinion Research Center 1999).

While there is some evidence linking problem gambling and IPV, to date no systematic study has been made of the prevalence of IPV among problem gamblers. A number of studies have examined the incidence of IPV among the general populations in the USA and Canada. A study of 1,599 couples in the US general population found that 9.8% of women and 10.6% of men reported their partners had used physical violence against them during the past year (Schafer et al. 1998). In a Canadian national survey of 24,000 people, 7% of women and 6% of men reported they had been victimized by their partner during the last 5 years (Statistics Canada 2005). Earlier general population surveys in the USA (Straus and Gelles 1986) and Canada (Kennedy and Dutton 1989) found that approximately 11% of both men and women reported physically assaulting their intimate partners in the past year; severe physical assault of intimate partners has been reported in 3% of American and

2.3% of Canadian general population samples. The purpose of this study was to measure the prevalence and severity of IPV among male and female problem gamblers in a Canadian sample.

## Methods

### Procedure

Participants were recruited from community flyers, and from advertisements in newspapers and at gambling treatment service agencies. The flyers and advertisements sought individuals who gambled to participate in a research study examining gambling and conflict. There were 316 calls in response to recruitment efforts. On first contact, the research assistant read an information script about the study to all respondents. All respondents initially expressed an interest in participating in the study and were screened by telephone for eligibility. Eligibility criteria included being at least 18 years old, basic English literacy, and the presence of a gambling problem as defined by a Problem Gambling Severity Index (PGSI) score of 6 and above on the Canadian Problem Gambling Index (CPGI; Ferris and Wynne 2001). Twenty-six respondents who received the phone screen were excluded because their PGSI scores were not indicative of a gambling problem. Two hundred and ninety respondents were eligible for participation after the phone screen. Of these, six expressed they were no longer interested in participating in the study after the phone screen, and the remaining 284 respondents were booked for study interviews. A total of 248 problem gamblers attended and completed study interviews. Participants were paid \$20 at the completion of the study interview.

### Participants

The sample consisted of 205 men (82.7%) and 43 women (17.3%) with an average age of 41 years (range = 18–69,  $SD = 11.34$ ) and a median income of \$30,000 (range \$1,000–\$400,000, mean = \$41,050,  $SD = 46,491$ ). Twenty-nine percent of participants were married or living with a partner and 71% were single, divorced or separated. Approximately half the sample was employed (29.4% full-time, 18.9% part-time). Three quarters of the sample completed high school and 47.6% reported some postsecondary education (5.2% attended some community college/technical school, 12.9% completed community college/technical school, 7.7% had some university, 18.1% completed undergraduate degree and 3.6% completed masters/professional degree). Participants' ethno-cultural affiliations reflected the cultural diversity of a Canadian metropolitan area, with 30 different primary ethno-cultural affiliations reported and 60.5% of participants reporting their primary ethno-cultural affiliation being something other than Canadian, British or French.

### Measures

#### *Canadian Problem Gambling Inventory (CPGI; Ferris and Wynne 2001)*

The CPGI was used to measure severity of problem gambling. The CPGI is a measure of problem gambling that was designed to be consistent with the DSM-IV criteria for

pathological gambling. The CPGI has been demonstrated to be reliable: Estimates of both internal consistency and test–retest reliability were high (0.78 or higher). The authors also provide evidence of the validity of the CPGI, such as the high correlation between CPGI classification and DSM-IV diagnosis, and high sensitivity (i.e., correctly identifying individuals with gambling problems).

*Conflicts Tactics Scale-2 (CTS2; Straus et al. 1996)*

The CTS2 is a widely used measure of IPV. In this study the presence of IPV (perpetration, victimization, any perpetration or victimization) in intimate partner relationships in the past year was tabulated based on reports of minor and severe acts of physical assault, injury and/or sexual coercion from the CTS2. The CTS2 is a 78-item questionnaire with 15 subscales measuring minor, severe and overall rates of physical (e.g., slapping, pushing/shoving, kicking or beating), psychological (e.g., yelling/screaming, insults or name calling, threatening) and sexual aggression (e.g., coercing or forcing a partner to have sex), rates of injury (e.g., bruises, scrapes, broken bones or needing a doctor as a result of a fight) and rates of non-violent negotiation behaviour (e.g., expressing opinions, supporting partner's view). The CTS2 has demonstrated good internal consistency (Cronbach's alpha ranging from 0.79 for the psychological aggression scale to 0.95 for the injury scale) and construct validity (significantly correlated with other measures of relationship conflict).

*State-Trait Anger Expression Inventory-II (STAXI-II; Spielberger 1999)*

The STAXI-II is a 57-item self-report measure of anger, yielding an overall anger index score and 11 subscales. The STAXI-II has demonstrated reliability (i.e., high internal consistency estimates for the various subscales 0.8 or higher) and validity (i.e., expected correlations with other anger measures). Scores above the 75th percentile on the anger expression scales, and/or below the 25th percentile on the anger control scales, signify clinically significant anger problems.

*Addiction Severity Index: Drug and Alcohol Use Section (ASI; McLellan et al. 1985)*

The drug and alcohol subsections of the ASI were used to assess substance use in the month preceding the interview period. This questionnaire has been used widely in the addictions literature to assess the severity of drug and alcohol use. It provides detailed information about the type, frequency and amount of substances used in the month preceding the interview period and yields composite drug and alcohol use scores ranging from 0.00 to 1.00, with higher scores indicative of more severe problem substance use. The self-report version of the ASI (Butler et al. 2001) has demonstrated good convergent and discriminant validity.

*Structured Clinical Interview for the DSM-IV Substance Use Section (SCID; First et al. 2002)*

The substance use section of the SCID was used to assess abuse or dependence for substances participants reported using in the past 3 months.

## Results

### Gambling

Participants in this study tended to have severe gambling problems as indicated by high PGSI scores (average PGSI score = 15.28, *SD* = 5.22), and by average expenditures of more than 100% of gross monthly household income on gambling (average = 126.8%, median = 56.9%). There were no significant gender differences overall on the average percentages of gross monthly household income spent gambling (126% vs. 130%). The prevalence of reported gambling activities in the past 12 months by gender are presented in Table 1. As indicated in Table 1, a wide range of gambling activities was reported. Participants reported engaging in an average of 7.8 different gambling activities per month. The most frequently reported gambling activity, for both men and women, was buying lottery tickets. Men were more likely than expected to report betting on horse races ( $\chi^2(1) = 6.831, p < .009$ , Cramer's  $V = 0.166$ ) and sports lottery ( $\chi^2(1) = 22.111, p < .001$ , Cramer's  $V = 0.299$ ). In contrast, women were more likely than expected to bet on bingo ( $\chi^2(1) = 9.048, p < .003$ , Cramer's  $V = 0.191$ ). In all analyses, Bonferroni Step-Down (Holms) correction was used to control for experiment-wise error rate (Holms 1979) and significance levels indicated in tables are limited to those results that remain significant after corrections for multiple comparisons.

**Table 1** Prevalence (%) of reported gambling activities in the past year by gender

Reported gambling activity	Men (n = 205)	Women (n = 43)	$\chi^2 (1)$
Lottery tickets	80.5	76.7	0.309
Instant win/scratch ticket	54.1	72.1	4.678
Sports lottery/pro-line	62.4	23.3	22.111***
Casino slots/VLT	47.8	51.2	5.321
Horse races	47.3	25.6	6.831**
Daily lottery	38.0	34.9	0.152
Casino black jack	39.0	9.3	NC
Cards/board games	33.7	27.9	0.535
Bingo	23.9	46.5	9.048**
Casino poker	31.2	9.3	NC
Games of skill	24.9	9.3	NC
Internet	21.0	16.3	0.487
Sports pools	21.5	9.3	NC
VLTs other than casino	16.6	16.3	0.006
Sports with a bookie	15.6	4.7	NC
Casino roulette	13.7	2.3	NC
Raffle/fundraising ticket	9.3	20.9	4.827
Stocks/options/commodities	6.3	2.3	NC
Casino craps	4.9	0.0	NC
Casino keno	2.0	0.0	NC
Arcade/video games	1.0	0.0	NC

\*\*\*  $p < .001$ , \*\*  $p < .05$ ,  
 NC = not calculated, less than five observations per cell

## Substance Use

Substance use in the past 30 days was reported by 75.8% of participants (188 of 248). Alcohol (64.9%), tobacco (61.7%), cannabis (34.7%) and cocaine (19.4%) were the most frequently reported substances used. There were no significant gender differences in reported substance use.

Of the 248 participants screened, 185 (74.6%) met DSM-IV criteria for a lifetime substance abuse or dependence disorder. Seventy-three participants (29.4%) met criteria for a current substance abuse or dependence disorder. The most common substances of abuse or dependence were alcohol (46%), cocaine (33.5%), cannabis (18.1%) and opioids (14.5%).

## Problem Anger

The majority of problem gamblers assessed had clinically significant anger problems according to STAXI-2 criteria. Clinically significant problem anger was identified in 64.5% (160 of 248) of participants, including 63.4% of males (130 of 205) and 69.8% of females (30 of 43).

## IPV

Incidents of IPV (either perpetrator or victim of physical assault, injury, and/or sexual coercion) in the past year were reported by 62.9% (156 of 248) of participants. In this sample, 55.6% of participants (138 of 248) reported perpetrating IPV, 25.4% of participants (63 of 248) reported perpetrating severe IPV and 59.7% (148 of 248) reported being victims of IPV. The prevalence of types of reported IPV in the past year are presented in Table 2. As can be seen in Table 2, 40.7% (101 of 248) of the sample, including 40% (82 of 205) of men and 44.2% (19 of 43) of women reported physically assaulting their intimate partners in the past year. The perpetration of psychological aggression was reported by 74% of participants.

Gender differences were found for the perpetration of injury, minor injury and severe injury. More women than expected reported that they perpetrated IPV in the past year causing injury to their partner ( $\chi^2(1) = 13.156, p < .001$ , Cramer's  $V = 0.230$ ), including both minor injury ( $\chi^2(1) = 8.853, p < .003$ , Cramer's  $V = 0.189$ ) and severe injury ( $\chi^2(1) = 16.827, p < .001$ , Cramer's  $V = 0.260$ ). Table 3 presents the prevalence of reported acts of IPV perpetration in the past year by gender. More women than expected reported that they slapped ( $\chi^2(1) = 17.774, p < .001$ , Cramer's  $V = 0.268$ ), or hit or tried to hit their intimate partner with something ( $\chi^2(1) = 7.778, p < .005$ , Cramer's  $V = 0.177$ ).

The prevalence of types of reported IPV victimization in the past year is presented in Table 4. As can be seen in Table 4, 48.8% (121 of 248) of the sample reported being victims of physical IPV in the past year. No gender differences in victimization were reported for IPV in the past year.

IPV perpetration and/or victimization were not associated with the severity of gambling as measured by participant's PGSI scores, the percent of gross monthly income spent gambling and the amount of time spent gambling. More gamblers than expected who bought instant win/scratch and win lottery tickets reported being victims ( $\chi^2(1) = 13.919, p < .001$ , Cramer's  $V = 0.237$ ) and/or perpetrators ( $\chi^2(1) = 8.054, p < .005$ , Cramer's

**Table 2** Prevalence (%) of types of reported IPV perpetration in the past year by gender

Type of IPV perpetration	Men (n = 205)	Women (n = 43)	$\chi^2$ (1)
Any IPV perpetration (physical assault, injury and/or sexual coercion)	53.7	65.1	1.891
Physical assault	40.0	44.2	0.258
Minor	38.5	41.9	0.165
Severe	14.6	30.2	6.034
Injury	22.0	48.8	13.156***
Minor	20.5	41.9	8.853**
Severe	6.8	27.9	16.827***
Sexual coercion	32.7	25.6	0.831
Minor	31.7	25.6	0.628
Severe	6.8	9.3	0.323
Psychological aggression	75.1	69.8	0.532
Minor	75.1	69.8	0.532
Severe	44.9	39.5	0.412

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

**Table 3** Prevalence (%) of reported types of IPV perpetration in the past year by gender

Type of violent act	Men	Women	$\chi^2$ (1)
Threw something	24.9	44.2	6.541
Pushed, or grabbed	34.1	32.6	0.040
Slapped	14.1	41.9	17.774***
Kicked or hit	21.0	34.9	3.837
Hit or tried to hit with something	23.4	44.2	7.778**
Beat up	3.4	9.3	2.907
Choked	3.9	11.6	4.271
Burned	2	9.3	NC
Forced sex	2.4	1.4	NC
Used knife or gun	2	11.6	NC

\*\*\* $p < .001$ , \*\* $p < .05$ , NC = not calculated, less than five observations per cell

$V = 0.180$ ) of IPV. No other relationships between type of gambling activity and IPV perpetration and/or victimization were observed. No significant relationships were found between IPV perpetration and/or victimization and reported substance use in the past 30 days (days of substance use, days of alcohol use, days of heavy drinking, ASI alcohol composite score or ASI drug composite score). The presence of a substance use disorder, either current or lifetime, did not predict IPV.

Significant relationships were found between problem anger and IPV: More participants than expected with anger problems reported perpetrating IPV (physical assault, injury and/or sexual coercion) ( $\chi^2(1) = 12.001$ ,  $p < .001$ , Cramer’s  $V = 0.220$ ). In addition, more participants than expected with anger problems reported being victims of IPV (physical assault, injury and/or sexual coercion) ( $\chi^2(1) = 11.466$ ,  $p < .001$ , Cramer’s  $V = 0.215$ ). The rates of IPV among angry and non-angry problem gamblers are presented in Fig. 1. In

**Table 4** Prevalence (%) of types of reported IPV victimization in the past year by gender

Type of IPV victimization	Men ( <i>n</i> = 205)	Women ( <i>n</i> = 43)	$\chi^2$ (1)
Any IPV victimization (physical assault, injury and/or sexual coercion)	58	67.4	1.303
Physical assault	48.8	48.8	0.000
Minor	46.3	48.8	0.089
Severe	25.9	34.9	1.456
Injury	14.6	30.2	6.034
Minor	13.7	23.3	2.523
Severe	6.3	14.0	2.911
Sexual coercion	35.1	48.8	2.853
Minor	33.2	48.8	3.792
Severe	8.8	14.0	1.088
Psychological aggression	75.1	72.1	0.172
Minor	75.1	67.4	1.084
Severe	46.3	55.8	1.278

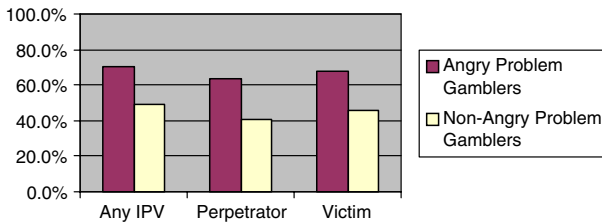
**Fig. 1** Rates of IPV among angry and non-angry problem gamblers

Fig. 1, the data presented under “any IPV” include any reports of IPV perpetration and/or victimization in the past year. In Fig. 1, data are also presented separately for reported perpetration and victimization. As can be seen in Fig. 1, 74% of angry problem gamblers report IPV compared to 45% non-angry problem gamblers. The presence of a lifetime substance use disorder among participants with an anger problem further increased the likelihood of both IPV perpetration ( $\chi^2(1) = 12.869$ ,  $p < .001$ , Cramer’s  $V = 0.228$ ) and victimization ( $\chi^2(1) = 6.996$ ,  $p < .008$ , Cramer’s  $V = 0.168$ ).

## Discussion

Results from this study suggest that IPV perpetration and victimization in this sample of problem gamblers was substantially higher than rates reported in general population surveys. Overall, 62.9% of participants reported some violence in their intimate relationships, as perpetrator and/or victim. IPV perpetration was a relatively frequent phenomenon for both men and women in this sample, with 55.6% of participants reporting perpetrating physical assault, injury and/or sexual coercion, and 25.4% reporting perpetrating severe IPV. This sample of problem gamblers reported significantly higher rates of perpetration of physical assault, injury, sexual coercion and severe physical assault than reported in

previous studies of general populations in both the USA and Canada. Women reported higher than expected rates of perpetrating IPV resulting in injury to their partners. This finding is consistent with reports in the IPV literature in studies using the CTS2.

Both male and female problem gamblers in this sample also reported experiencing considerable victimization within their intimate relationships. Almost six in ten participants (59.7%, 148 of 248) reported being victims of IPV. In this study we did not examine collateral reports of IPV from the intimate partners of problem gamblers. Future research is needed to further examine the observed gender differences in reports of IPV and the reported mutuality of IPV in the intimate partner relationships of problem gamblers.

A possible limitation of this study involved the use of a sample of gamblers responding to newspaper advertisements seeking individuals who gambled to participate in a survey study examining gambling and conflict. As such, this sample may not be representative of the general population of individuals with gambling problems. Though recruitment advertisements in IPV prevalence studies commonly use terms like “crime,” “victim” or “conflict” in study descriptions, it is not known how the term “conflict,” used in the description for this study of problem gamblers, may have affected the representativeness of this sample of gamblers. It is currently unknown if this sample of gamblers was more likely to report IPV than gamblers who do not respond to such research advertisements. Future research is recommended to examine the prevalence of IPV among gamblers using alternative recruitment methods like random telephone recruitment.

Findings from the present study raise a number of important questions. Though the present study indicated a high prevalence of IPV in this sample of problem gamblers, it remains unclear why IPV is so much more prevalent among problem gamblers in this sample than it is among individuals in the general population. Understanding the relationship between gambling and IPV may yield information relevant both to the prevention and treatment of IPV among problem gamblers. One hypothesis to explain the high rates of IPV observed in this sample of problem gamblers is that violence is to some degree a direct or indirect result of gambling. For example, IPV may be related to domestic conflict caused or exacerbated by financial or other stressors directly associated with gambling activities. Anecdotally, the loss of family financial resources in gambling activities, and failures in family role responsibilities associated with gambling-related activities are frequently mentioned by problem gambling clients as antecedents to domestic conflict. Despite the high rates of IPV reported in our sample, we did not find an association between IPV and the severity of gambling as measured by participants’ PGSI scores, the percent of gross monthly income spent on gambling activities and the amount of time spent gambling. A possible explanation for the absence of such an association was the restricted range of high gambling severity found in the sample. Future research is needed to study the prevalence of IPV across a broader spectrum of individuals who gamble, including those who occasionally or recreationally gamble and those considered at risk for developing gambling problems. Future research on samples with a wider range of gambling severity could also examine if there is a particular threshold of gambling severity, demarcating a danger zone for IPV.

Another possible explanation for the high rates of IPV observed in this sample is that IPV and problem gambling may both be mediated by one or more factors. Possible common mediating factors include a history of victimization, problems in anger and emotion regulation, impulsivity and/or psychiatric comorbidity. Almost two thirds of problem gamblers in our sample met criteria for a clinically significant anger problem, according to Spielberger’s (1999) STAXI-II criteria. Men and women in this sample were equally likely to experience anger problems. There was a significant, moderate association

between problem anger and both IPV perpetration and victimization. This observation is consistent with findings in the IPV literature (e.g., Norlander and Eckhardt 2005). Though previous studies have identified substance use, particularly alcohol use, as a significant risk factor for IPV, current anger problems were actually more prevalent than current substance use disorders in this sample of gamblers. In fact, no significant relationships were found between IPV and reported substance use in the past 30 days, and the presence of a current or lifetime substance use disorder did not predict IPV in the overall sample. However, the presence of a lifetime substance use disorder among participants who had clinically significant anger problems further increased the likelihood of both IPV perpetration and victimization, suggesting that anger problems are more likely to be associated with IPV when gamblers also struggle with substance use problems.

Though the prevalence of IPV was extremely high among problem gamblers with comorbid anger problems in this sample, non-angry problem gamblers also reported rates of IPV at rates far higher than those reported in general population surveys. It may be that for the minority of problem gamblers in this sample who did not have anger issues, problems associated with gambling pose a risk factor for IPV. On the other hand, for the majority of problem gamblers in this sample, comorbid anger problems may be an extremely volatile catalyst for IPV. This study did not examine the temporal and causal relationships between gambling and anger: Do gamblers gamble to regulate anger, are gamblers angry because of gambling losses, or are gambling and anger problems both symptoms of poor impulse control or other factors? Future research is needed to address these questions.

Future research is also needed to explore the role of psychopathology in comorbid problem gambling and IPV. Anger and aggression are diagnostic and/or clinical features of a number of disorders (e.g., intermittent explosive disorder, bipolar affective disorder, borderline personality disorder and antisocial personality disorder) that have been found to co-occur among problem gamblers (e.g., Black and Moyer 1998). Such research is important both to understand the relationship between problem gambling and IPV and to help develop prevention and treatment strategies.

The high rates of reported IPV among problem gamblers and the very high rates of IPV among angry problem gamblers in this sample highlight the need for routine screening of problem gamblers for IPV and anger. The findings also suggest the importance of developing public policy, and public awareness and prevention programs to address IPV among problem gamblers. Recent research suggests that gambling and substance use outcomes are significantly better when comorbid anger problems are addressed in treatment (Korman et al. 2006). Given that almost two thirds of problem gamblers in this study evidenced anger problems, there is a need to develop integrated treatment models to address comorbid gambling and anger problems.

## Limitations

As mentioned earlier, problem gamblers in this study were recruited in response to newspaper advertisements seeking participants for a study on gambling and conflict. As such this sample may not be representative of problem gamblers in the general population. We did not identify the gender of the problem gamblers' intimate partners and as such we cannot comment of the prevalence and severity of male-to-female, female-to-male, female-to-female, or male-to-male IPV. We did not examine if anger, substance use and/or gambling were directly or indirectly involved in reported incidents of IPV. We recommend

that future research include qualitative analyses of reported incidents of IPV in order to better understand the roles of anger, substance use and gambling in IPV among problem gamblers.

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