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## Problem gambling, familial violence and alcohol misuse: exploring the triad for treatment-seekers

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Research into the co-occurrence of problem gambling, familial violence, and alcohol misuse is limited. While these issues have been considered in combination (i.e. violence and alcohol misuse, problem gambling and alcohol misuse, problem gambling and violence), within Australia, in particular, there has been an absence of exploration of this triad. The current research attempts to fill the gap in the literature, to establish whether there is any difference between problem gamblers with co-occurring violence and problem gamblers who had not experienced violence in terms of their alcohol misuse and gambling behaviours. Interviews were conducted with 81 treatment-seeking problem gamblers to explore how a history of victimization only, perpetration only, victimization and perpetration, or no history of family violence impacted on gambling behaviours (including baseline Victorian Gambling Screen), as well as alcohol misuse. Results indicated that in this treatment-seeking sample there were no significant differences for gambling behaviours or alcohol misuse between problem gamblers with issues of violence and those without. Males demonstrated (on average) a greater tendency toward hazardous drinking or disordered alcohol use. It would be prudent for treatment services to routinely examine problem gamblers' history of violence and alcohol misuse until research verifies the nature of this triad.

**Keywords:** problem gambling; violence; alcohol misuse; treatment

Recognition that violence co-occurs with problem gambling is relatively recent (e.g. Korman et al., 2008; Muelleman, DenOtter, Wadman, Tran, & Anderson, 2002), and as such there are many aspects of this relationship which are yet to be explored comprehensively. Gambling treatment services have not routinely assessed (or treated) issues of violence, and thus research has neglected to ascertain the nature of the relationship between gambling, violence and alcohol misuse in a treatment-seeking sample. Most problem gambling treatment services address issues of violence on an ad hoc basis, either as part of a programme specific to problem gambling or through referral to a (domestic) violence treatment service (Battersby, Oakes, & Harris, 2012). Despite this lack of attention, the acknowledgement that negative social situations might act as an obstacle for relapse prevention (Oakes et al., 2012) highlights the importance of recognizing broader familial issues, including violence, for a problem gambling population. It is recognized that problem gambling creates financial, mental and physical stressors for partners, children and other family members; thus, understanding how violence is linked to problem gamblers, and the role of alcohol in this relationship, is important (Hodgins, Shead, & Makarchuk, 2007; Ladouceur, Boisvert, Pépin, Loranger, & Sylvain, 1994; Productivity Commission, 1999).

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Within Australia, intimate partner violence (IPV) has been estimated to occur (for people aged 18 or older) for 1.5% of women and 0.6% of men (in a preceding 12-month period; Australian Bureau of Statistics, 2012). Lifetime prevalence of IPV (since age 15) has been established at approximately 17% for women and 5.3% for men. Physical violence was more commonly reported (15.6% of women, 5.0% of men) when compared with sexual violence (4.9% of women, 0.4% of men; Australian Bureau of Statistics, 2012). IPV has been shown to be more likely for problem gamblers; problem gamblers are more prone to the perpetration of IPV (Muelleman et al., 2002), but are also more likely to be victims of IPV (Korman et al., 2008; Muelleman et al., 2002).

It has been established that problem gambling and alcohol use have a high level of co-occurrence (e.g. Lorains, Cowlshaw, & Thomas, 2011; Petry, Stinson, & Grant, 2005). Petry et al. (2005) found, in a nationally representative sample in the United States, that alcohol use disorders co-occurred with pathological gambling for nearly three-quarters of pathological gamblers. Lorains et al. (2011) conducted a systematic review and meta-analysis, and similarly established that alcohol use disorders co-occurred with problem and pathological gambling for nearly a third of the sample (28.1%). Similar findings have been noted specifically within a treatment-seeking population, where (a review of the literature revealed) pathological gambling was co-morbid with substance use (Crockford & el-Guebaly, 1998).

In general, the relationship between IPV and alcohol consumption has been well established. A systematic review and meta-analysis for women who were victimized through physical or sexual violence demonstrated, in both longitudinal and cross-sectional data, that alcohol use and IPV co-occur (Devries et al., 2014). Similarly, Lipsky, Kernic, Qiu, Wright, and Hasin (2014) found, for males and females, that physical IPV (from a sample representative of the US population) predicted alcohol misuse (e.g. binge drinking, alcohol abuse). Further, Reingle, Jennings, Connell, Businelle, and Chartier (2014) found (also in a nationally representative US sample) that alcohol use was prevalent (in 35% of cases) during IPV, for both victims and perpetrators of violence. Although the exact causal relationship is yet to be fully established, there is some evidence to suggest that alcohol (mis)use could be a coping mechanism for (physical) violence (Temple, Weston, Stuart, & Marshall, 2008).

Although there is some evidence of the co-occurrence of gambling, violence and alcohol misuse, consideration of all three in combination, in a treatment-seeking population in Australia, has not been explored. Within Australia, one study has provided evidence of a co-occurrence of problem gambling and violence, indicating that family violence resulted in increased likelihood of gambling problems, and, vice versa, that family violence could result from gambling problems (Borderlands Cooperative, 2007). These findings were based on qualitative interviews with a subset of problem gamblers who self-selected to be involved (Borderlands Cooperative, 2007). The results from this study should therefore be viewed with some caution, as it is not known how this group would compare with non-participants.

Research in the United States and Canada has begun to explore the role violence plays when considering problem gambling and alcohol misuse. In the United States, Muelleman et al. (2002) questioned female partners of problem gamblers (using structured closed-ended questions) in an emergency department in relation to their episodes of IPV, gambling activities of their partner and alcohol use by their partner. Those participants who reported IPV were more likely to have partners with problem gambling, problem drinking or both (Muelleman et al., 2002). Similarly, Korman et al. (2008) explored the relationship between IPV and problem gambling for male and female problem gamblers in

a Canadian sample. Participants included those recruited from a community sample and gambling treatment service agencies, and measures included those specific to gambling (e.g. Canadian Problem Gambling Inventory), as well as IPV (i.e. Conflict Tactics Scale-2) and co-morbid conditions, such as drug and alcohol abuse or dependence (measured using a structured clinical interview). Problem gamblers were found to be more prone to violence against their intimate partners, and a notable proportion of problem gamblers were victimized by intimate partners (Korman et al., 2008). The research also noted high rates of substance use (in the previous 30 days), with alcohol use being the most prominent (64.9% of the sample). Substance abuse or dependence was determined to be at 29.4% ( $N = 73$ ), with a lifetime prevalence of 74.6% ( $N = 185$ ).

The limited research available which considers the links between familial violence, problem gambling and alcohol misuse suggests that a triad of issues exists for some problem gamblers (see e.g. Muelleman et al., 2002). Kausch, Rugle, and Rowland (2006) directly considered pathological gamblers' history of trauma and substance dependence (in conjunction with impulsivity, problem gambling severity and personality variables; using structured clinical interview combined with psychological tests). All gamblers were veterans, admitted to a gambling treatment programme (i.e. Louis Stokes Veterans Administration Medical Center). Substance abuse/dependence for the female pathological gamblers ranged from 55.6% for gamblers who had experienced emotional trauma to 83.3% for gamblers who had experienced physical trauma. For male problem gamblers, substance abuse/dependence was more consistent irrespective of the type of trauma (74.1% for emotional trauma; 73.7% for physical trauma).

The research that currently exists in relation to the triad of issues of problem gambling, familial violence, and alcohol misuse suggests that a notable proportion of problem gamblers experience issues of violence and that these gamblers are also likely to experience some issues of substance misuse. The proportion of problem gamblers who experience or perpetrate familial violence in Australia has not yet been clearly established, nor has the role (if any) of alcohol misuse been clearly substantiated. The current research explored factors related to gambling, violence and alcohol misuse, for problem gamblers who sought treatment with a therapy service in South Australia. Specifically, the study sought to establish whether there was any difference, for alcohol misuse, between problem gamblers with co-occurring violence (victimization, perpetration, both) and problem gamblers who had not experienced violence. The research also sought to expand the existing knowledge related to violence for treatment-seeking problem gamblers and to determine whether there were any gambling behaviours which differentiated those problem gamblers experiencing issues of violence from those who had not experienced violence.

## Method

Ethical approval was granted by the Flinders University Social and Behavioural Research Ethics Committee. Data was collected from consecutive self-referrals to the Statewide Gambling Therapy Service (SGTS; across key metropolitan and rural regions) during a six-month study recruitment period. Adults ( $N = 385$ ) who contacted SGTS in relation to treatment for (problem) gambling and who completed a baseline assessment were included in the dataset. Baseline assessments were completed individually (i.e. in a quiet waiting area at SGTS). All problem gamblers who self-referred during the study recruitment period were given information about participating in this study. A total of 81 problem gamblers volunteered (consented) to be interviewed and also endorsed 1 (or

more) of 3 questions: Have you become restless, irritable or anxious when trying to stop/cut down on gambling? Have you tried to keep your family or friends from knowing how much you gambled? Did you have such financial trouble as a result of gambling that you had to get help with living expenses from family, friends, or welfare? The remaining problem gamblers were not interviewed ( $N = 304$ ) because they did not provide consent (through self-referral) and/or did not endorse one (or more) of the 3 questions. Interviews were conducted via telephone, by a registered psychologist who also held a doctor of philosophy qualification. Each interview was conducted using a fixed set of questions. The duration of the interviews varied depending on the history of violence and experiences of gambling of the participant, but generally took approximately 30 minutes to 1 hour to complete.

Data analyses were conducted using SPSS. The data were examined and appropriate tests conducted (e.g. histograms) to consider whether assumptions were met for the analyses (e.g. normality, randomness of samples, independence of observations, etc.). Where the assumptions were called into question (e.g. data were skewed), it was determined that the data were suitable for analyses on the basis of the robustness of the technique and sample size (see e.g. Tabachnick & Fidell, 2013).

### **Measures**

In this study, family members were defined as people in a close relationship with the service user, such as partners, ex-partners, parents, children, siblings, or significant others who were not necessarily part of the physical household but were part of the family and/or fulfilling the function of family. Baseline demographic variables included: age, employment status (wage, self-employed, unemployed, home duties, student, disability support), gender, marital status (married/de facto, separated/not live with, widowed, divorced), number of children and type of gambling (electronic gaming machines, horse/greyhound/TAB, casino and other, including lottery, keno, sports, online). Questions related to violence experienced included, for example: Has [a family member] physically hurt you, insulted or talked down to you, threatened you with harm, or screamed or cursed at you?

Baseline measures included the Victorian Gambling Screen (VGS) and AUDIT-C (to assess alcohol misuse). The VGS was developed specifically for an Australian population, and comprises 15 items which were formulated under the original 'harm to self' scale, including items such as: Have you felt bad or guilty about your gambling? How often have you lied to others to conceal the extent of your involvement in gambling? (Tolchard & Battersby, 2010). The reliability of this scale was found to be high; Cronbach's alpha of .89 (Tolchard & Battersby, 2010). As recommended by Tolchard and Battersby (2010), a cut-off of 22 (from the range 0–60) was applied for the treatment-seeking sample. The AUDIT-C consists of 3 (of the original 10 AUDIT) items including: How often do you have a drink containing alcohol? How many standard drinks containing alcohol do you have on a typical day? How often do you have six or more drinks on one occasion? Scores range from 0 to 12, with a score of 4 for males, and 3 for females, being acceptable for indicating hazardous drinking/alcohol abuse or dependence (see e.g. de Meneses-Gaya, Zuardi, Loureiro, & Crippa, 2009), as sensitivity (i.e. the proportion of people with hazardous drinking or alcohol abuse/dependence who are identified) has been determined to be reasonable for use with the recommended cut-offs (Bradley et al., 2007; Bush, Kivlahan, McDonell, Fihn, & Bradley, 1998; Frank et al., 2008).

## Results

### Descriptive statistics

A total of 385 consecutive referrals were made to SGTS during the 6-month recruitment period. All cases were included for the demographic data analyses. The age ranged from 20 to 84 ( $M = 46.72$ ;  $SD = 13.87$ ). There were marginally more males (51.5%;  $n = 189$ ) compared with females (48.5%;  $n = 178$ ), although data was missing for 18. The majority were employed for a wage (48%;  $n = 172$ ), with 15% receiving disability support ( $n = 54$ ), 14% unemployed ( $n = 50$ ), 10% retired ( $n = 37$ ), 7% self-employed ( $n = 26$ ), 4% performing home duties ( $n = 14$ ) and 1% students ( $n = 5$ ). Most were married or in de facto relationships (47%;  $n = 166$ ), while 22% had never married ( $n = 76$ ), 15% were separated ( $n = 54$ ), 13% were divorced ( $n = 45$ ) and 4% were widowed ( $n = 13$ ). The majority had no children (70.8%;  $n = 255$ ), while 9.7% had 1 child ( $n = 35$ ), 12.5% had 2 children ( $n = 45$ ), 4.2% had 3 children ( $n = 15$ ), 1.7% had 4 children ( $n = 6$ ), 2 reported having 5 children, and 1 each reported having 7 children and 11 children, respectively. The main type of gambling reported related to gaming machines (84%;  $n = 307$ ), followed by horse racing/greyhound racing/TAB (11%;  $n = 41$ ), and casino (2%;  $n = 7$ ), with less than 1% reporting they played keno ( $n = 3$ ), online ( $n = 3$ ), lottery ( $n = 2$ ) or other sports ( $n = 1$ ).

### Interviewed problem gamblers versus non-interviewed

To test whether the 81 problem gamblers who volunteered to be interviewed were significantly different from those who did not volunteer to be interviewed ( $n = 304$ ), a series of chi-square tests for independence was conducted, to compare gender, employment status marital status and type of gambling (see Table 1). Independent-samples t-tests were also conducted to compare age, baseline VGS scores and the number of children the problem gamblers had (see Table 2). Results indicated that there was no significant difference between those participant problem gamblers who were interviewed and those who were not, on most variables. The one exception was that those problem gamblers who agreed to be interviewed ( $M = 38.25$ ,  $SD = 13.11$ ) were significantly higher for baseline VGS scores when compared with those who did not agree to be interviewed ( $M = 27.93$ ,  $SD = 19.64$ ). Both groups exceeded the VGS cut-off of 22, however, which classifies both groups as pathological and problem gamblers, and there was disparity noted in the non-interviewed subgroup (Tolchard & Battersby, 2010). Although interviewed gamblers could be generally viewed as a subset of the larger data pool, the significant difference on baseline VGS scores is notable.

The data for the 81 interviewed treatment-seeking problem gamblers was used for the analyses specific to violence. Of these 81 gamblers, 31% ( $n = 25$ ) indicated that they had never experienced violence either as a victim or perpetrator, 16% ( $n = 13$ ) indicated they

Table 1. Chi-square tests for independence between interviewed gamblers and non-interviewed gamblers (interview status) for gender, employment status, marital status and type of gambling.

Measure	<i>df</i>	<i>n</i>	$\chi^2$	<i>p</i>	$\phi$
Gender	1	367	.04	.84	.02
Employment	6	358	6.17	.41	.13
Marital status	3	278	1.48	.69	.07
Type of gambling	3	364	1.01	.80	.05

Table 2. Independent-samples T-tests comparing gamblers who were interviewed with those who were not for age, baseline VGS scores and number of children.

Measure	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Age					
Interviewed	45.86	13.44	355	-.63	.53
Non-interviewed	46.97	14.00			
Baseline VGS scores					
Interviewed	38.25	13.11	372	4.24	< .001
Non-interviewed	27.93	19.64			
No. of children (all)					
Interviewed	.85	1.62	91.72	1.51	.14
Non-interviewed	.55	1.08			
No. of children (with children)					
Interviewed	2.29	1.96	103	.77	.44
Non-interviewed	2.05	1.10			

had perpetrated violence against a family member, 20% ( $n = 16$ ) indicated they had experienced victimization by a family member and 33% ( $n = 27$ ) reported both victimization and perpetration. The majority of male problem gamblers (58%;  $n = 24$ ) reported that they had never experienced any violence, whereas only 30% of female ( $n = 11$ ) problem gamblers had not experienced violence. A total of 27% of male problem gamblers had experienced both victimization and perpetration of violence ( $n = 11$ ), while 10% had been perpetrators ( $n = 4$ ) and 5% had been victims ( $n = 2$ ). Half of female problem gamblers had been both victims and perpetrators of violence ( $n = 18$ ), 17% ( $n = 6$ ) had been victimized and 3% ( $n = 1$ ) had perpetrated violence.

Analyses related to violence experienced by the problem gamblers were based around comparing groups (namely, no history of violence, victimization, perpetration, victimization and perpetration) for their experiences with violence. A one-way between-groups ANOVA was conducted to compare those gamblers with no history of violence, issues of victimization, perpetration or both, on the basis of age, and found no significant difference:  $F(3, 75) = 1.29$ ,  $p = .29$ ,  $f = .23$ .

### ***Alcohol misuse for problem gamblers experiencing violence versus no violence***

To explore whether alcohol misuse varied according to the problem gamblers' experiences of violence (no history, victimization, perpetration, both victimization and perpetration), a two-way between-groups ANOVA was conducted including gender (given that the cut-off for hazardous drinking for an alcohol use disorder varies by gender; Bush et al., 1998). Specifically, these analyses sought to explore whether there were any differences on scores on the AUDIT-C on the basis of the problem gamblers' issues of violence (no history, victimisation, perpetration, both) or gender (see Table 3 for the descriptive statistics and Table 4 for the inferential statistics). There was a significant main effect of gender, with a large effect size. Post-hoc Tukey HSD analyses indicated that on average males reported significantly higher AUDIT-C scores than females. The average AUDIT-C scores for males met the cut-off of four which is indicative of hazardous drinking or a potential alcohol use disorder (Bush et al., 1998), whereas the average AUDIT-C scores for females

Table 3. Means (and standard deviations) [with 95% CIs] for AUDIT-C scores across gender and violence conditions.

Measure	Male	Female	Total
No violence	3.62 (3.66) [1.41, 5.83]	2.67 (2.81) [.88, 4.46]	3.16 (3.25) [1.82, 4.50]
Victimization	2.88 (2.03) [1.18, 4.58]	3.44 (2.34) [2.00, 4.88]	4.00 (2.62) [1.81, 6.19]
Perpetration	6.56 (2.40) [4.72, 8.40]	3.25 (4.03) [-3.16, 9.66]	5.54 (3.23) [-.84, 7.18]
Both	5.85 (2.70) [4.22, 7.48]	1.71 (3.41) [-.26, 3.68]	3.70 (3.69) [2.24, 5.16]
Overall	4.98 (3.11) [4.02, 5.94]	2.42 (2.97) [1.44, 3.40]	3.78 (3.29) [3.05, 4.51]

did not meet the cut-off of three. In fact, on average, males in each violence condition (victimization, perpetration, both) met the required cut-off, whereas, on average, those with no history of violence did not meet the required cut-off. Further, only those females who experienced issues of perpetration of familial violence, on average, met the required cut-off of three (Bush et al., 1998). The main effect for violence issues was non-significant, as was the interaction between violence issues and gender.

#### *Gambling behaviour differences where violence versus no violence exists*

Finally, analyses were conducted to establish whether problem gamblers with different experiences of violence (no history of violence, victimization, perpetration, victimization and perpetration) differed in terms of their gambling behaviours. One-way ANOVAs were conducted to explore whether the baseline VGS scores and/or other gambling behaviours of participants (i.e. how often they gambled per week, how much time they spent gambling [in hours] per week and how much money they gambled per week) varied across violence conditions (no history of violence, issues of victimization, perpetration or both). As shown in Table 5, all groups scored above the cut-off for problem gambling (Tolchard & Battersby, 2010). On average, the participants gambled between 1 and 2 times per week, spent close to \$300 in total and spent nearly 4 hours gambling per week. There were, however, no significant differences for any of these measures related to gambling behaviour across the violence conditions (see Table 6).

#### **Discussion**

The current research sought to establish whether problem gamblers presenting in a gambling treatment service presented with experiences of violence and alcohol misuse. Specifically, whether there was any difference in terms of both alcohol misuse and

Table 4. Two-way between-groups analyses of variance comparing gamblers for the AUDIT-C across violence conditions and gender.

Effect	<i>dfs</i>	<i>F</i>	<i>p</i>	<i>f</i>
Gender	1, 81	10.91	.001	.37
Violence	3, 81	.93	.43	.19
Gender × violence	3, 81	1.56	.21	.24

Table 5. Means (and standard deviations) [with 95% CIs] for baseline VGS, how often, time spent (in hours) and amount spent (in dollars) gambling across violence conditions.

Measure	Baseline VGS	How often	Time spent	Amount spent
No violence	38.86 (11.64) [33.56, 44.15]	1.36 (1.43) [.77, 1.95]	4.08 (4.73) [2.13, 6.03]	183.44 (243.67) [82.86, 284.02]
Victimization	35.81 (14.59) [28.03, 43.59]	1.20 (1.21) [.56, 1.85]	4.66 (6.28) [1.31, 8.00]	389.06 (652.88) [41.17, 736.96]
Perpetration	37.58 (15.80) [27.54, 47.62]	1.38 (1.73) [.34, 2.43]	3.73 (6.85) [−.41, 7.87]	188.46 (306.97) [2.96, 373.96]
Both	39.74 (12.43) [34.37, 45.12]	1.20 (1.22) [.72, 1.69]	3.23 (2.92) [2.08, 4.39]	277.22 (369.80) [130.93, 423.51]
Overall	38.25 (13.11) [35.17, 41.33]	1.28 (1.35) [.98, 1.58]	3.85 (4.92) [2.77, 4.94]	256.12 (402.98) [167.02, 345.23]

gambling behaviours between problem gamblers with co-occurring violence (victimization, perpetration, or both) and problem gamblers who had not experienced violence. The results for the 81 problem gamblers interviewed indicated that there was no fundamental, statistically significant difference between those problem gamblers with a history of victimization only, perpetration only, victimization and perpetration, and/or no history of family violence for those variables that were explored. The absence of statistically significant findings in this study is notable. This is the first attempt to identify and describe the nature of the relationship between problem gambling, experiences of violence and alcohol misuse in an Australian treatment-seeking sample. Although the limited previous research would suggest that problem gamblers with experiences of victimization and/or perpetration would be more likely to present with higher levels of (hazardous) alcohol consumption (e.g. Korman et al., 2008; Lorains et al., 2011; Muelleman et al., 2002; Petry et al., 2005), this was not observed in the current study.

The only statistically significant finding of this study related to hazardous drinking; male problem gamblers were significantly more likely to display higher levels of alcohol misuse (and, on average, met the cut-off for hazardous drinking) compared with female problem gamblers (who, on average, did not). These findings are consistent with those of Kausch et al. (2006), who found that the proportion of substance abuse/dependence for the female pathological gamblers was lower than for male pathological gamblers. Future attention should be given to exploring the role of alcohol misuse for those problem gamblers with associated family violence, with a larger sample of participants in each of the violence subgroups. This is particularly important to establish whether there is, in fact, a difference between violence subgroups based on gender (since females who experienced issues of perpetration of familial violence were the only subgroup to meet the required cut-

Table 6. One-way between-groups analyses of variance comparing gamblers across violence conditions on the basis of baseline VGS, how often, time spent (in hours) and amount spent (in dollars) gambling per week.

Measure	<i>dfs</i>	<i>F</i>	<i>p</i>	<i>f</i>
Baseline VGS	3, 68	.30	.83	.12
How often they gambled per week	3, 77	.10	.96	.06
Total time spent gambling per week	3, 77	.30	.83	.11
Amount of money spent gambling per week	3, 77	1.00	.40	.20

off), in light of the fact that previous research has indicated that alcohol misuse is generally co-morbid with gambling issues (Crockford & el-Guebaly, 1998; Lorains et al., 2011; Petry et al., 2005), as are IPV and alcohol misuse (Devries et al., 2014; Lipsky et al., 2014; Reingle et al., 2014). Further, research should establish the causal relationship between violence and alcohol misuse for problem gamblers (e.g. whether alcohol misuse might be a coping mechanism), and whether the relationship differs by gender (Klostermann & Fals-Stewart, 2006; Temple et al., 2008).

Potential limitations of this study were the fact that the definition of violence was broad, and measured across the lifespan. While lifetime prevalence of IPV in the general population has been established at approximately 17% for women and 5.3% for men (Australian Bureau of Statistics, 2012), our findings indicate that 69% of problem gamblers had experienced family violence, including 70% of females and 42% of males. No doubt, the broad definition of violence used in the current research inflated reports of violence when compared with those of the general population; however, these results are still noteworthy (especially when considered with recognition of issues of sensitivity/specificity of the screening instruments). It is also worth considering the fact that in an attempt to explore all issues of violence, ranging from comparatively minor conflict to more serious criminal acts, this approach meant that there was the potential for some participants to be currently experiencing dysfunction, while others might have resolved issues of conflict/violence. It is unclear what impact, if any, this might have had in terms of exploring issues of family violence in the context of problem gambling. Further research is required to explore the nature of violence and to determine whether there is a difference within the subgroups in terms of their experiences in relation to problem gambling. To do this, future research should be conducted quantitatively using a larger sample of problem gamblers and/or qualitatively using in-depth interviews.

A notable limitation of the present study was the fact that there was a significant difference between those problem gamblers who were interviewed and those who were not, in terms of baseline VGS scores. It cannot be concluded that this subset of (interviewed) problem gamblers is representative of the population of treatment-seeking problem gamblers, although the majority of demographic variables did not differ significantly (and comparison data was unavailable for alcohol misuse). It is also important to note, however, that both interviewed and non-interviewed groups would be classified, according to baseline VGS scores, as pathological and problem gamblers (exceeding the cut-off of 22; Tolchard & Battersby, 2010). Future research should explore, therefore, whether the degree of reported problem gambling impacts on issues of violence and alcohol misuse in light of this limitation. It would also be useful to consider relevant proximal factors (e.g. affective states, coping behaviours, alcohol misuse quantity and frequency), in addition to distal factors, to more accurately place findings related to the triad in context.

Although the current research does not document significant differences between problem gamblers with issues of family violence and those without, in light of the high levels of reported violence this would nevertheless seem an adequate basis on which to recommend the routine (cf. ad hoc) examination of violence in gambling treatment services. This is especially so given that research suggests issues of violence can affect relapse prevention (Oakes et al., 2012). It is clear that greater exploration of the issues is warranted to confirm (or refute) the findings of the current study. Future research should consider the impact of violence across the lifespan (including proximal violence) in concordance with alcohol (mis)use and (problem) gambling across the lifespan, in order to

obtain a more complete picture of how these issues intersect, rather than observing gambling and alcohol misuse for a discrete (recent) period. In particular, it is important to establish whether any baseline measures could be used to differentiate problem gamblers with issues of violence from those who do not have such issues in order to establish what (if any) changes should be made in treatment planning for problem gamblers with a history of family violence (including treatment-seeking for the triad of alcohol misuse, problem gambling and violence).

In sum, the current research adds to the existing literature, exploring the experiences of problem gamblers in an Australian treatment-seeking population. On the basis of this study, it would appear that problem gamblers in treatment settings do not differ significantly depending upon their experiences of violence in terms of their alcohol usage or gambling behaviours. Treatment services should nevertheless begin to address the gap in current best practice, to obtain information related to violence as well as alcohol misuse, especially in light of the finding that male problem gamblers (irrespective of experiences of violence) present with higher levels of alcohol misuse; a risk factor for IPV (Thompson & Kingree, 2006). Previous research has shown that issues of violence and alcohol misuse are commonly co-morbid with problem gambling, and, therefore, even in the absence of conclusive evidence to support a triad of issues, treatment services should routinely consider this triad. Given the consistent findings of co-morbidity, this is an area of research which is in need of far greater attention. Exploring the nature of this triad further will help to fill the existing gap in the literature, but, perhaps more importantly, will direct future treatment practices to minimize harm.

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