

**Alcohol use, alcohol-related aggression and intimate partner abuse: a cross-sectional survey of convicted versus general population men in Scotland**

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**(a) Title page**

Title: Alcohol, alcohol expectancies and intimate partner abuse: a cross-sectional survey of convicted versus general population men in Scotland

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**(b) Abstract and key words****Abstract**

Research into the co-occurrence of alcohol use and intimate partner abuse (IPA) has focused on drunkenness at the time of offending, rather than drinking patterns and beliefs. Scotland has a particular problem with alcohol, the links between IPA and alcohol appear stronger here than elsewhere across Europe. This study conducted in Scotland used recognised tools to explore differences in alcohol use, expectancies, and relationship conflict across a number of groups: men convicted for intimate partner abuse, men convicted of general offences and men recruited from community sports teams. A cross sectional survey design was used.

Participants (N=64) completed three questionnaires exploring their alcohol use (Alcohol Use Disorders Identification Test, AUDIT); beliefs about alcohol and aggression (Alcohol Related Aggression Questionnaire, ARAQ-28), and relationship conflict (Revised Conflict Tactics Scale, CTS-2). There were significant differences across the groups in terms of AUDIT and ARAQ-28 scores, IPA and general offenders scored higher than the community sample. CTS-2 scores showed significant differences: both offender groups reported more use of negotiation and psychological abuse, than the community men, and IPA offenders reported causing more physical harm than either general offenders or the community sample. Alcohol related beliefs correlated with physical abuse for IPA offenders and with psychological abuse for general offenders. Alcohol use was very high across all groups but our heavy-drinking, football supporting men did not endorse an aggression-precipitating view of alcohol and did not report high IPA. Discussed is the need for a multiple thresholds model to explain the occurrence of physical IPA.

Keywords: alcohol use, alcohol expectancies, intimate partner abuse, domestic abuse, domestic violence, AUDIT, ARAQ-28, CTS-2.

### **(c) Text**

Introduction:

The findings of recent international research investigating the relationship between alcohol and IPA have consistently shown similarities to those concerning alcohol and violence more generally. For example although (heavy episodic) drinking correlates to violence the relationship cannot be said to be causal. As with other forms of violence there is better international evidence that alcohol use by the assailant, victim or both, makes the extent and consequences of violence more severe [1; 2] and that these events are influenced by drinking context [3]. Also that alcohol can be used in a systemic way to excuse aggression or provide mitigation in legal proceedings [1]. Despite the observed links between intimate partner abuse (IPA) and alcohol use, surprisingly little work has been conducted in the UK to measure the nature and extent of problem drinking among either perpetrators or victims of IPA [4; 5].

The UK, and Scotland in particular has a very high use of alcohol. Overall consumption rates of alcohol in the UK are higher than nine other OECD (Organisation for Economic Cooperation and Development) countries, sitting at 9 litres per capita, differing from Norway at just over 6 litres per capita, but less than France at over 12 litres consumption. Scotland sits above this, higher than 15 other countries at 10 – 11.5 litres. The per capita consumption in Scotland was 17% higher than that in England and Wales in 2003 [6] and policy reports have indicated that there are negative health, social and criminal impacts of this relationship [7].

There is also a high rate of IPA in the UK with 29% of women reporting they had experienced physical or psychological abuse at the hands of a partner since the age of 15, in comparison to 15% in Ireland and 18% in Italy [8]. In Scotland, the link between IPA and alcohol appears to be particularly strong; one Scottish study identified that two thirds of IPA incidents known to the police involved alcohol [9]. The link between violence including IPA

and certain sporting events, specifically the ‘auld firm’ football matches involving two high-profile teams with associated oppositional loyalties, and IPA is also strong, and considered to be associated with alcohol consumption [9]. This raises the question as to whether the ‘drunken bum’ theory [10] of IPA could hold within Scottish culture, or whether IPA is just one form of violence linked to alcohol [9].

There is a gap in our knowledge as to the extent of alcohol use amongst the UK’s IPA population [3; 4] as whilst there is a great deal of overlap between the two, the nature of this link is anecdotal or at best based on either self-reports from victims and perpetrators (which may be unreliable) or correlational evidence from police reports or surveys [15]. The use of standardised measures across the three concepts within relevant populations would be helpful to calibrate our thinking in this area. For example, use of a screening tool such as AUDIT [13; 14] to explore alcohol use; a well-developed tool to measure alcohol related thinking, ARAQ-28 [16; 17] and a self-report measure of behaviours enacted and experienced in response to relationship conflict, CTS-2 [18], in IPA populations would, in the first instance, allow more objective exploration of any linkage. The aim of this paper is to consider similarities, differences and interrelationships across self-reported drinking, beliefs about the impact of alcohol and conflict tactics using standardised measures in men from three different groups: those convicted of domestic abuse, those convicted of more general offending and men from the community to more systematically explore possible links within Scottish culture.

Methods:

Participants:

This is a cross sectional survey study. Participants were recruited from two locations: a local prison and local football clubs, forming the conditions of a ‘natural experiment’ which

allowed us to consider whether the attitudes of the IPA offenders were simply reflective of general masculinity attitudes among Scottish men [9]. This paper reports the responses of two groups of male offenders recruited in the local prison: IPA offenders ('IPA'), n=25; general offenders ('General'), n=15, and a male community sample recruited from local football clubs ('Community') n=24<sup>i</sup>. Our 'offenders' sample (n=40) was recruited via a local prison with the help of prison staff, who identified individuals who were willing to participate in the research. The clinical identification of suitable participants was required as convictions for IPA are not always 'marked' on the formal reporting systems in prison. Prison staff were unwilling to identify only IPA offenders for the study, as they felt that this could indirectly disclose the nature of their offending, and if this were the case this could put the prisoners at risk of retaliation from other prisoners who are known to hold strong beliefs about different types of offending (sexual offenders and IPA offenders being rated more negatively than other offenders within the Scottish prison culture). This created two groups, the first who had convictions for IPA-related offences (n=25) and a second group of general offenders (n=15). This allowed a consideration of whether IPA offenders (from whom less pro-social attitudes and higher drinking levels might be expected) differ in their alcohol-related practices and beliefs from the general offending population, and to consider whether there is a need for different explanations for IPA in relation to alcohol.

Our male community group (n=24) was recruited via adult community football teams (all were men). These football clubs allowed our researchers to approach their amateur players, participants were those who opted into the study.

The minimum sample size based on the mean difference between scores on the AUDIT [13; 14] in a general population and scores from an offending population, for a two-tailed hypothesis, and accepting a probability level of 0.05 (i.e. less than 5% likelihood of results bring due to chance alone) was 6 per group, however as this number was too small to be

reliable for unrelated t-tests, so the sample size was set at > 15 in line with the minimum sample for which t-test is acceptable allowing for slightly skewed distribution [19; 20; 21].

Measures:

The Alcohol Use Disorders Identification Test (AUDIT; [13; 14]) is a 10-item measure designed to identify individuals at risk for alcohol use disorders. The first three AUDIT items (questions 1-3) deal with level of alcohol consumption. Items 4–6 deal with alcohol dependence, items 7–10 consider alcohol-related problems. Total AUDIT scores (i.e. from all 10 items) can be grouped into four zones indicating level of risk, from Zone I (an AUDIT score of 7 or less) which is considered the least risky level, Zone II (scores of 8-15), Zone III (scores of 16-19) to Zone IV (scores over 20) which is considered the highest level of risk. Recommended interventions [11] for scores in each zone include: Zone I “Alcohol education”; Zone II “Simple advice”; Zone III “Simple advice plus brief counselling and continued monitoring”, and Zone IV “Referral to specialist for diagnostic evaluation and treatment”.

The Alcohol Related Aggression Questionnaire (ARAQ-28) is a 28-item questionnaire designed to measure the extent to which individuals engage in alcohol-related violence [16]. The ARAQ-28 includes subscales that account for; Trait Aggression (TA, 4 items), Alcohol-aggression Expectancies (AE, 18 items), sensitivity to Pain and Anxiety (PA, 3 items) and Drinking Contexts (DC, 3 items), with higher scores indicating greater levels of involvement in alcohol-related aggression.

The Conflict Tactics Scale (CTS-2) is a 78-item questionnaire (39 pairs of questions) which measures the occurrence and frequency of a variety of conflict tactics used within

relationships [18]. This comprises of six-subcales, specifically; the ‘Negotiation’ subscale (6 pairs of questions concerning positive conflict resolution tactics), the ‘Psychological Aggression’ subscale (8 pairs of questions), the ‘Physical Assault’ subscale (12 pairs of questions), the ‘Injury’ subscale (6 pairs of questions) and the ‘Sexual Coercion’ subscale (7 pairs of questions). Each of the 39 questions in the CTS-2 is essentially asked twice, ordered in a format intended to measure whether the participant has used a certain conflict tactic in a domestic setting (e.g. a negotiation technique, or a type of physical assault) against their partner or whether their partner has used this tactic against them. Each paired question (by self or by partner) is then recorded according to whether this tactic had ever been employed by either party during in their relationship, if so whether this was only in the past (i.e. more than one year ago), and if within the past year, how frequently this conflict tactic was used. Sub-scale scores were calculated for all participants on the CTS-2.

#### Procedure:

All participants were provided with a pack of questionnaires, and completed these themselves, or gave verbal responses to the researcher where support for literacy issues was required. Questionnaires were returned without names but with identification codes so that participants were able to withdraw their data following the study if desired (no data withdrawal was requested). The completed questionnaires were processed and anonymised by the researchers and data was stored electronically in line with UK Data Protection requirements.

#### Analysis



The data were entered into SPSS and analysed using ANOVA, independent t-tests and Pearson's correlations, procedures identified as suitable for this data set and these hypotheses in a standard statistical text [19; 20; 21].

#### Ethics:

The study was conducted in accordance with the Declaration of Helsinki, and was given ethical approval by Glasgow Caledonian University PSWAHS ethics committee and the Scottish Prison Service ethics committee, and all participants were treated in accordance with UK legal requirements and British Psychological Society ethical guidelines [22]. All participants were provided with written and verbal information about the research and about the limits to confidentiality (if risk issues arose, or in the case of those in prison, if serious, previously undetected offending was disclosed). All provided written confirmation of consent and all were clearly signposted onto further relevant agencies, in case completing the questionnaires had raised issues which could not be addressed by the agency via which they were recruited.

#### Results:

The age differences between IPA offender, general offender and male community groups were not statistically significant. The modal relationship status was single and modal sexual orientation was heterosexual. There was some difference in educational attainment in that a greater proportion of the IPA offenders had no educational qualifications and the majority of all respondents identified as supporting a football team with more of both groups of offenders identifying as supporting of the two big Glasgow clubs, 'the auld firm', than in the community group.

[TABLE 1 ABOUT HERE]

Differences across AUDIT and ARAQ-28 scores are described in Table 1. There were significant differences across the groups in terms of AUDIT scores ( $F(2,61)=13.7$ ,  $p<0.01$ ). Post hoc comparisons using t-test indicated that the IPA offenders' mean AUDIT score ( $M=23.8$ ,  $SD=12.33$ ) and that of general offenders ( $M=25$ ,  $SD = 13.2$ ) were higher than male community ( $M=8.6$ ,  $SD = 5.76$ ). There was no significant difference between the two offender groups.

Similarly, there were differences across the groups ( $F(2,59)=7.27$ ,  $p<0.01$ ) on the overall ARAQ-28 scores. Post hoc comparisons using the t-test indicated that the mean score for the IPA offender group ( $M=33.2$ ,  $SD=19.7$ ) was not significantly different from the general offender group ( $M = 27.2$ ,  $SD = 17.0$ ) but both were significantly different from the male community ( $M=13.38$ ,  $SD=16.56$ ).

A pattern of differences was also identified across the CTS-2 sub-scales.

[TABLE 2 ABOUT HERE]

On the CTS-2, the scores were calculated within the sub-scales, and comparisons made using ANOVA. There were significant differences across the groups on psychological abuse ( $F(2,61)=18.01$ ,  $p<0.01$ ) and use of physical abuse ( $F(2,61)=6.7$ ,  $p<0.01$ ) and causing injury ( $F(2,74)=4.62$ ,  $p<0.01$ ).

Post hoc testing using Tukey HSD indicated that the male community (M=13.6, SD=29.2) reported less psychological abuse, than both IPA ( M = 92.7, SD = 52.9) and general offenders (M=74.3, SD = 55.5); and IPA offenders (M=24.4, SD = 28) reported significantly more physical abuse than both the general offenders (M= 13.7, SD = 20.8) and the community group (M= 2.83, 7.29). IPA offenders reported significantly more injury (M= 6, SD = 9.35) than general offenders (M= 1.8, SD= 3.23) and the community group (M= 0.83, SD = 2.3). These are comparable with previously published findings (see Table 3).

[TABLE 3 ABOUT HERE]

The CTS-2 includes a severity scale but as the majority of cases for all participants were identified as severe this was not explored as a variable.

The links between AUDIT, ARAQ-28 and CTS-2 were explored using Pearson's correlations. When all participants were considered together (see Appendix 1), there were statistically significant associations between the abuse measures, and the alcohol use and the alcohol beliefs measures. There was a link between total ARAQ-28 and psychological abuse ( $r=.664$ ,  $p<0.01$ ,  $n= 62$ ), and physical abuse and total ARAQ-28 score ( $r=.529$ ,  $p<0.01$ ,  $n=64$ ) and a similar link between the AUDIT score and psychological abuse ( $r=.64$ ,  $p<0,01$ ) and physical abuse ( $r=.466$ ,  $p<0,01$ ).

The correlations amongst the alcohol and abuse measures, remained similar when the groups were split (see Appendices 2-4), however the links between the alcohol measures and conflict changed. The association between AUDIT and abuse reduced to non-significant at  $p<0.01$  and for IPA there was a non-significant correlation between ARAQ-28 and physical abuse

( $r=.552$ ,  $p>0.01$ ). For general offenders (see Appendix 3), there was a significant link between ARAQ-28 and psychological abuse ( $r=.852$ ,  $p<0.01$ ), and there were no significant correlations between alcohol use and beliefs for the community group (see Appendix 4).

#### Discussion:

This study sought to identify any differences between IPA offenders, general offenders and a general population sample in their drinking, beliefs about drink and their conflict resolution behaviour within relationships, and to explore the association across these factors.

On AUDIT harmful drinking measure, 87.5% of offenders, and 88% of IPA offenders were harmful or hazardous drinkers. This put them higher on reported drinking than the 63% identified in sentenced prisoners in England and Wales, and higher than general prisoners in Scotland, where between 59% of male prisoners were drinking at hazardous or harmful [23] and 73% were in the hazardous or harmful drinking zones [24]. Most, 63%, of our community males also scored in the hazardous drinking zone, this was similar to the previous drinking levels reported by prison groups [24]. Thus, each of our groups reported high levels of alcohol consumption.

In comparison to previous studies exploring beliefs about alcohol, the ARAQ-28 scores for the community sample ( $M=13.4$ ,  $SD=16.6$ ) were comparable to a previous non-offender population ( $M=15.3$ ,  $SD=12.2$ ) [16]; the general offender group ( $M=27.2$ ,  $SD=17.0$ ) looked similar to violent but not alcohol-related prisoners ( $M=24.05$ ,  $SD=19.18$ ) [16], and the IPA offenders ( $M=33.2$ ,  $SD=19.7$ ) looked like those previously found in violent alcohol-related offenders ( $M=37.95$ ,  $SD=16.37$ ) [17].

All groups reported lower scores on the CTS-2 for injury and sexual assault than the published norm. Both offender groups reported more use of negotiation and psychological

aggression than the published norm. The IPA offenders reported more physical aggression than the published norm and our community males reported less negotiation and less psychological aggression than the published norm [18].

Across the whole sample, there was a link between alcohol use and alcohol-related beliefs and abuse, however this changed when considered by group. There was a link between beliefs about alcohol and physical abuse for IPA offenders and a link between alcohol-related beliefs and psychological abuse for general offenders; there was no such link for the community sample.

As, for IPA offenders, physical abuse was linked to beliefs about alcohol but not alcohol consumption, this challenges the utility of a disinhibition model in explaining IPA offending, and provides more supports for an indirect association whereby the alcohol and IPA association is mediated by cultural norms. For general offenders the link was between attitudes to alcohol and psychological abuse, perhaps indicating an indirect association, but suggesting that for physical abuse also to occur further factors need to be present.

The community sample, high-level drinkers and football supporters, had low scores on all other measures, and there was no link between their high-level drinking and IPA. The ‘drunken[football] bum’ theory [10] is not supported. Our findings suggest that drinking in itself does not link with IPA, thus the disinhibition theory is not supported, given that problematic beliefs about alcohol can link with psychological abuse in those not inclined towards relationship abuse, and physical harm among IPA offenders. Problematic beliefs about drinking cannot be enough for physical IPA to occur and provides some support for a multiple-thresholds model where, for some, alcohol-related beliefs will be enough for physical abuse to occur, for others only psychological abuse will occur in this situation [9];

25]. It may be in a larger study there would be those for whom alcohol use would be enough for violence to occur, which was implied by the correlations across the whole sample, but did not exist once broken into groups [24].

#### Future directions

The present study has several limitations that should be noted. First, the samples were not randomly recruited and having been identified by practitioners working with them as potential recruits, participants self-selected into the study. Thus, generalisation to other populations should be approached with caution. The groups were small and not of equal sizes. With a larger sample it may be possible to explore whether there are mediating or moderating variables that might explain the differences between psychological abuse and alcohol beliefs for general offenders, and alcohol-related beliefs and physical abuse for IPA offenders. Cross-cultural replication and comparisons of findings would be useful in terms of internationalising psychological knowledge in this domain. More detailed exploration of the pattern and nature of the association, perhaps separating out drunkenness and heavy usage, and allowing for examination of any temporal links between alcohol use and IPA across these groups would greatly expand knowledge in this field.

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<sup>i</sup> The community sample were recruited from local football clubs as recent data in Scotland has linked the occurrence of certain football matches with increased rates of IPA, and there has been some suggestion that the football and drinking cultures are interlinked and that they could both contribute to both the occurrence of IPA and the maintenance of attitudes supportive of IPA.

Table 1: Mean age, family status, educational level, AUDIT and ARAQ scores across IPA offender, general offender and male community groups

	IPA Offender (N= 25)	General Offender (N= 15)	Male community (n = 24)	All (n = 64)
Age (mean years)	37.7	29.9 *	33.7	33.7
Currently Single	11	4	9	24
Has Children	5	5	8	18
Educational Level:				
None	13	3	1	17
Standard Grades	8	9	1	18
Highers	1	1	6	8
Diploma	2	1	6	9
Degree	0	1	5	6
Higher degree	1	0	2	3
Football status:				
Any team	21	14	22	57
Auld firm	19	13	6	38
AUDIT mean score (0 – 40)	23.8 (12.3)*	25.0 (13.2)	9.00 (5.74)*	18.5 (12.8)
-Safe (0 – 7) (N = )	3	2	9	6 (mean)
-Hazardous (8 +)	7	3	15	8 (mean)
-Dependent (20 +)	15	10	0	8 (mean)
ARAQ-28 mean Scores (0 – 84)	33.2 (19.7)*	27.2 (17)	13.36 (16.2)*	24.7 (19.7)
Expectancies	25.4	22.3	10.6	19.4 (mean)
Trait Aggression	2.2	1.1	0.5	1.3 (mean)
Pain & Anxiety	3.0	2.1	1.1	2 (mean)
Drinking Context	2.6	1.7	1.1	1.8 (mean)

Scores indicated with \* are significant at  $p < 0.01$

Table 2: Mean CTS2 subscale scores perpetrated by group: IPA offender, general offender, male community

Sub-scale	IPA Offender (n = 25) Mean (SD)	General offender (n = 15) Mean (SD)	Male Community (n= 24) Mean (SD)
CTS2: negotiation	106.7 (60)	110.7 (57.8)	34.5 (39.5)
CTS2: psychological	92.7 (52.9)*	74.3 (55.5)	5.8 (13.1)*
CTS2: physical	24.4 (28)	13.7 (20.7)	1.2 (4.1)

CTS2: injury	6 (9.3)	1.8 (3.2)	0.6 (1.8)*
CTS2: sexual	1.7 (6.2)*	1.7 (6.4)	1.8 (5.4)

Table 3: Comparison of present study with the CTS2 published norms for perpetration

Sub-scale	<i>College Student Sample norms Mean (SD)</i>	IPA Offender	General offenders	Community Male
CTS2 Negotiation	<b>61.6 (38.5)</b>	106.7 (60)	110.7 (57.8)	34.5 (39.5)
CTS2 Psychological Aggression	<b>15.1 (17.4)</b>	92.7 (52.9)	74.3 (55.5)	5.8 (13.1)
CTS2 Physical Assault	<b>12.9 (21.6)</b>	24.4 (28)	13.7 (20.7)	1.2 (4.1)
CTS2 Injury	<b>25.1 (37.8)</b>	6 (9.3)	1.8 (3.2)	0.6 (1.8)
CTS2 Sexual	<b>19.9 (31.4)</b>	1.7 (6.2)	1.7 (6.4)	1.8 (5.4)