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# Evaluation of the South Wales Know the Score intervention

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## Summary

Excessive alcohol consumption, drunkenness and associated harms are a common feature of nightlife settings in the UK (Bellis and Hughes, 2011; Graham *et al.*, 2013). Whilst the sale of alcohol to people who are drunk is illegal under UK law, public awareness of this legislation and bar server compliance with it appears to be low (Hughes and Anderson, 2008; Hughes *et al.*, 2014). While this law is often broken and few convictions for the service of alcohol to drunks are successful (HM Government, 2012), licensed premises have a clear legal and social responsibility to prevent such sales. Previous studies have shown that reductions in the service of alcohol to drunks, and associated harms, can be achieved through the implementation of multi-agency interventions which promote awareness and increase enforcement of the legislation. Thus, to address the sale of alcohol to drunks, the Police and Crime Commissioner for South Wales and South Wales Police developed and implemented the Know the Score #drinklessenjoymore pilot intervention. The intervention aimed to increase bar staff and public awareness of the law and promote responsible drinking behaviours in nightlife environments. It included: a social marketing campaign; radio broadcasts; intervention materials promoting the campaign (e.g. posters, bar server t-shirts); enhanced police enforcement; and promotion of the intervention materials by the Welsh Rugby Union and other partner agencies. To inform the development of the pilot intervention and provide a baseline for monitoring progress of future work, an evaluation was undertaken which comprised of pre- and post-intervention surveys with nightlife patrons in Cardiff and Swansea City Centres.

### Key findings

#### ***Pre-intervention nightlife survey***

- The majority (93.2%) of nightlife users had consumed alcohol prior to participation in the survey (referred to as drinkers).
- Almost a quarter (24.6%) of drinkers had consumed their first drink by 6pm.
- Two thirds (63.2%) of drinkers reported consuming alcohol at home or a friend's house (preloading), with students and younger people significantly more likely to have done so.
- Almost one fifth (17.6%) of drinkers reported consuming alcohol after leaving home but prior to entering the city centre nightlife area (en route loading).
- The majority (81.1%) of drinkers had consumed alcohol in a city centre bar prior to survey participation, with older people significantly more likely to have done so.
- One in ten (14.9%) drinkers had consumed alcohol purchased from an off-licence whilst in the city centre nightlife area.
- In total, the median expected units of alcohol consumed over the course of the night (including alcohol already consumed and expected to be consumed post-survey) was

17.9 units. Males and preloaders reported significantly higher estimated number of units consumed over the course of the night out.

- Over one in ten (16.1%) of all participants intended to consume more alcohol after leaving the city's nightlife (e.g. at home).
- The majority (over 75.0%) of participants: reported their ideal level of drunkenness as high; expected their level of drunkenness to be high when leaving the city's nightlife; perceived people on a night out in the city centre to typically reach a high level of drunkenness; and believed that getting drunk was socially acceptable in the city centre.
- Over half (55.1%) of all participants believed that if someone was drunk and tried to get served alcohol in a bar in the city centre they would usually be served, while over a third (39.4%) of participants reported they would be less likely to go to a bar they knew would not serve alcohol to someone who was drunk.
- Four in ten (40.3%) participants thought it was legal for a bar server to sell alcohol to someone who was already drunk and one third (37.7%) thought it was legal to buy alcohol for a friend who was already drunk.

#### ***Post-intervention nightlife survey - awareness and perceptions of Know the Score***

- Overall, nearly three in 10 (28.5%) participants reported being aware of the Know the Score intervention.
- After all participants were shown the Know the Score intervention poster, over half agreed that they demonstrated that drunk people will not get served more alcohol in bars and that the intervention made them feel safer on a night out. Four in ten agreed the intervention would make them more likely to go on a night out in the city centre. A third agreed that the intervention would make them drink less alcohol before or during a night out in the city centre.

#### ***Pre- and post-intervention survey findings comparison<sup>1</sup>***

- A significantly higher proportion of participants correctly answered that it is illegal for a bar server to sell alcohol to someone who is already drunk (from 48.0% to 60.8%).
- The proportion of participants reporting it is illegal to buy alcohol for a drunk friend also increased (from 50.2% to 57.0%) although this was non-significant.
- A significantly smaller proportion of participants agreed that getting drunk is socially acceptable in the city's nightlife (from 86.6% to 74.1%) and that it's hard to enjoy a night out if you are not drunk (from 46.1% to 36.0%).
- The proportion of participants reporting preloading reduced significantly (from 63.2% to 54.3%) as did the proportion of participants consuming alcohol from an off-licence (from 14.9% to 6.4%).

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<sup>1</sup> The pre- and post-intervention surveys were cross-sectional and thus involved different samples.

## **Conclusion**

The Know the Score pilot intervention presents an important step in working towards preventing the sale of alcohol to drunks and reducing associated harms in South Wales. Whilst no definitive conclusions can be made, the evaluation does suggest that the intervention had a positive impact on increasing knowledge of the laws around the service of alcohol to drunks amongst nightlife users. Further, findings suggest a shift in the perceived acceptability of drunkenness in the two nightlife environments studied, as well as a decrease in preloading drinking behaviour following implementation of the intervention. Despite this, post-intervention surveys illustrated that excessive alcohol consumption and drunkenness remain key features of the night-time economy. Further intervention is therefore required and should form part of a long-term plan to prevent drunkenness and associated harms in South Wales. Know the Score should form a key feature of future work.

## **Recommendations**

- The Know the Score intervention should continue, and be developed and incorporated into an on-going feature of a broader work programme to prevent violence and alcohol-related harms across South Wales.
- Future work should consider the inclusion of bar/venue staff training on refusing the service of alcohol to drunks, as well as continued enhanced police and licensing activity, and awareness raising both across South Wales and towards at risk groups (e.g. males, students, young people, preloaders).
- Preventing preloading, and levels of preloaded alcohol consumption, should be a focus of future work. This could include consideration of policy options that may influence preloading behaviour, as well as overall alcohol consumption (e.g. minimum unit pricing).
- Differences in drinking behaviours, and thus associated harms, between Cardiff and Swansea should be explored further to identify if more focused work, or different levels and types of intervention, are required in each city. Consideration however needs to be given to differences in the survey sample characteristics between cities, and thus potential differences in nightlife users.
- The evaluation has provided a baseline of drinking behaviours, knowledge of the law, and perceptions and attitudes towards drunkenness that can inform the development of future interventions and be used to assess change. Consideration should be given to how future progress can be monitored and evaluated.
- Used in other European studies evaluating similar interventions, the use of pseudo-intoxicated actors as a method of assessing bar server propensity to serve alcohol to drunks would provide a robust understanding of the extent of the problem, and if repeated, could be used to measure change in bar server practice over time.
- With many areas developing interventions to prevent the sale of alcohol to drunks across the UK, and also a lack of evaluation studies, the positive results found in this

evaluation should be shared widely. Such findings are useful for informing a broader debate around preventing drunkenness and associated harms in nightlife settings.

- Comparisons to other similar interventions should be made to develop understanding around the most effective ways of preventing the sale of alcohol to drunks, drunkenness and associated harms.
- With excessive alcohol consumption and drunkenness a common feature of most UK nightlife areas, consideration should be given to implementing an intervention such as Know the Score across other areas of Wales.



## 1. Introduction

There are a wide range of health and social harms associated with the misuse of alcohol, which place a large cost on health, police and other public services (World Health Organization, 2014). For example, excessive alcohol consumption is associated with unintentional injury, violence, disease and public disorder (Anderson *et al.*, 2007; Drummond *et al.*, 2005; Rehm *et al.*, 2009). Nightlife environments are key settings for excessive alcohol consumption, drunkenness and related harms (Bellis and Hughes, 2011; Graham *et al.*, 2013). Studies have shown that the amount of alcohol consumed during a night out can exceed 27 units for males and 16 units for females (prior to and during a typical night out) (Bellis *et al.*, 2010). Both preloading behaviour and excessive alcohol consumption during a night out have been associated with violence (Hughes *et al.*, 2008; Labhart *et al.*, 2013). A fifth of all violence takes place in or around pubs and nightclubs (Budd, 2003); and half of all violence is estimated to be alcohol-related (Flatley *et al.*, 2010).

Whilst drunkenness and associated harms are a common feature of many nightlife environments in the UK, under Section 141 of the Licensing Act 2003, it is an offence to knowingly sell alcohol to a customer who is drunk, or to purchase alcohol for someone who is drunk (Parliament of the United Kingdom, 2003). However studies suggest that both bar server awareness of the law (Hughes and Anderson, 2008) and compliance with it are low (Hughes *et al.*, 2011; Lenk *et al.*, 2006). Whilst it is clear that this legislation is often broken, convictions for the service of alcohol to drunks are also low due to challenges in identifying that bar staff 'knowingly' sold alcohol to drunks (HM Government, 2012). Despite these issues, licensed premises have a clear legal and social responsibility to prevent the service of alcohol to drunks. Studies have shown that reductions in the service of alcohol to drunks, and associated harms, can be achieved through the implementation of multi-agency interventions that incorporate awareness-raising activity, bar server training and increased enforcement (Andreasson *et al.*, 2000; Lenk *et al.*, 2006; Wallin *et al.*, 2005; Warpenius and Mustonen, 2010).

In the UK, whilst interventions in nightlife areas have typically focused on reducing and, or managing the harms associated with drunkenness (Bellis and Hughes, 2011), interventions that aim to address drunkenness and improve adherence to the law around the sale of alcohol to drunks have started to emerge (Bamfield *et al.*, 2014; Quigg *et al.*, 2015). As part of a broader long-term programme of work to address violence and alcohol-related harms in South Wales, in 2015 the Police and Crime Commissioner for South Wales and South Wales Police developed and implemented the Know the Score #drinklessenjoy more pilot intervention (Box 1; Figure 1). The intervention aimed to promote responsible drinking in South Wales, address the sales of alcohol to drunks, and drive cultural change. The intervention was supported by Public Health Wales and other partners including Alcohol Concern Wales and the Welsh Rugby Union.



Implemented over a seven week period (coinciding with the RBS Six Nations Championship Rugby Union Tournament), the Know the Score intervention included an awareness raising campaign (e.g. Figure 1) and enhanced police enforcement activity in and around licensed premises. The Centre for Public Health at Liverpool John Moores University was commissioned to evaluate the pilot intervention and provide a baseline for evaluating future work. The research aimed to:

- Explore patterns of alcohol consumption and drinking behaviour within the two main nightlife areas in South Wales (Cardiff and Swansea), including expectations and tolerance of extreme drunkenness in nightlife;
- Assess nightlife users' knowledge of legislation on service of alcohol to drunks;
- Assess awareness and perceptions of the intervention; and,
- Explore the impact of the intervention on: behavioural change, awareness of the legislation on serving alcohol to drunks, and the social acceptance of drunkenness.

**Figure 1. The Know the Score posters**



*NB: Posters were also produced in the Welsh Language (see Appendix 1).*

### **Box 1: The Know the Score pilot intervention**

**Purpose and method:** The intervention aimed to promote responsible drinking behaviours in nightlife environments across South Wales, and improve bar staff and public awareness of the law around the service of alcohol to drunks. It combined an awareness raising campaign and increased police enforcement activity in and around licensed premises.

**Intervention materials:** A series of posters (Figure 1/Appendix 1) were designed, produced (over 12,000) and distributed to licensed premises across South Wales to highlight to both bar staff and the public that it is an offence to serve alcohol to intoxicated people or, to purchase alcohol for a drunk person. Posters were displayed in prominent areas within bars and in restrooms. Bar staff/glass collectors wore t-shirts and badges that carried the message “we can’t serve drunks” (Appendix 1). In addition, receipts were given to patrons when purchasing drinks which demonstrated the cost of a night out and highlighted the fine for buying alcohol for intoxicated individuals (Appendix 1). All material was supported by the “Know the Score #drinklessenjoymore” strapline.

**Enhanced police enforcement and licensing activity:** Throughout the intervention South Wales Police made additional visits to licensed premises, delivering posters and reinforcing key messages of the intervention. The intervention was also promoted through the licensee’s forum in Cardiff and Pubwatches across South Wales. An additional police presence was also made during peak periods for violence and alcohol-related harms.

#### **Press, social media and communications activity**

The intervention included an extensive and broad range of press, social media and other communication activity to promote the intervention messages. This was supported by a number of organisations. For example, the intervention was launched on ITV Wales 6pm News with a broadcast from a Cardiff location. The Police and Crime Commissioner and Deputy Commissioner for South Wales featured in a number of newspaper editorials (e.g. Western Mail) and radio programmes (e.g. Radio Wales Drive Time programme). Local radio stations (e.g. The Wave FM; Swansea Sound; Capitol FM) conveyed intervention messages during the intervention period with infomercials highlighting how drunken behaviour and serving drunks impacts on a wide range of individuals and services. The Wave FM radio station held outdoor broadcasts in Swansea to engage with members of the public about the intervention. The Welsh rugby team promoted the intervention. The team captain featured in a video interview supporting the intervention which was screened at the Millennium Stadium during two Welsh home games, and intervention details were included in the Wales v Ireland match programme. Using the #drinklessenjoymore hashtag, the intervention and its messages were promoted on social media by numerous partners (e.g. South Wales Police, the Police and Crime Commissioner, local members of parliament, licensees, Alcohol Concern and Public Health Wales). Further, a number of partners produced press releases on the intervention, or included articles on the intervention in their publications and, or on their websites.

## 2. Methods

### 2.1. Nightlife patron surveys

A short anonymous survey was conducted with users of the night-time economies in Cardiff (Friday nights) and Swansea (Saturday nights) pre- and post-intervention (pre-intervention survey: 30<sup>th</sup>/31<sup>st</sup> January 2015; post-intervention survey: 27<sup>th</sup>/28<sup>th</sup> March 2015).

The pre-intervention survey explored: drinking behaviours including preloading; use of the nightlife environment; expectations and tolerance of drunkenness; and knowledge of legislation on service of alcohol to drunks. The post-intervention survey duplicated the pre-intervention survey, and additionally explored public awareness and perceptions of the intervention, and potential behavioural change as a result of the intervention.

Surveys were primarily administered by Public Service students from The University of Wales, Trinity Saint David, with support from Liverpool John Moores University researchers and the Police and Crime Commissioners Tackling Violence Team. All field researchers were provided with training prior to conducting the survey which included details on: the intervention and evaluation; researcher and participant safety (e.g. group working with supervision and exit strategies); how to approach participants; how to recognise signs of intoxication; research ethics; and survey completion. Field researchers worked in teams of three who were supervised by a Liverpool John Moores University researcher and, or a Police and Crime Commissioners Tackling Violence Team officer. Surveys were completed by researchers on behalf of participants in face-to-face interviews which lasted between 8-10 minutes. Surveys were conducted between the hours of 9pm and 3am, with participants recruited using opportunistic sampling on the street in the nightlife areas of Cardiff and Swansea, with a particular focus on the St Mary Street and Greyfriars Road areas of Cardiff and Wind Street area of Swansea.

Prior to approaching potential participants, researchers made an assessment of their sobriety based on criteria used in previous research (e.g. participant unsteadiness, intoxication, rowdiness [Perham *et al.*, 2007; Hughes *et al.*, 2011; Quigg *et al.*, 2015]). Individuals who appeared highly intoxicated were not approached for inclusion in the research due to issues on researcher and participant safety and ethical issues around their ability to provide informed consent (Quigg *et al.*, 2015). Researchers approached eligible participants and introduced themselves as being part of a research team from the University of Wales, Trinity Saint David, or Liverpool John Moores University as appropriate. Potential participants were given a brief description of the research and asked if they would like to take part. Of 971 individuals approached to take part, 393 nightlife users declined to participate (240 of those approached for the pre-survey [157 Cardiff; 83 Swansea], and 153 for the post-survey [115 Cardiff; 38 Swansea]). Once individuals agreed to participate they were given an information sheet which detailed the study further, the contents of which

were summarised verbally. Individuals were assured of their confidentiality and the survey was then completed.

Two hundred and sixty nightlife users took part in the pre-intervention survey (149 Cardiff; 111 Swansea) and 318 in the post-intervention survey (170 Cardiff; 148 Swansea). Throughout the explanation of the study and survey completion researchers continued to monitor and assess participant intoxication levels. Sixteen individuals who had commenced the survey were then deemed by researchers to be too intoxicated to participate. In these circumstances, researchers politely ended the survey at a convenient point and thanked the participant for their time. These surveys were excluded from analysis, thus, 253 pre- (144 Cardiff; 109 Swansea) and 309 post-intervention (163 Cardiff; 146 Swansea) surveys were used in the final analyses. After completing the survey all participants were thanked for their time.

## **2.2. Data analyses**

All data were entered, cleaned and analysed using SPSS v21. Analyses used descriptive statistics, chi-squared, t-tests, Mann-Whitney U and Kruskal-Wallis tests.

## **2.3. Ethics**

Ethical approval for the study was granted by Liverpool John Moores University Research Ethics Committee.

### 3. Findings

This section presents findings from all surveys conducted in Cardiff and Swansea. Analyses for each city are presented separately in Appendix 2.

#### 3.1. Pre-intervention survey findings

##### Sample characteristics

Two hundred and fifty three nightlife users took part in the pre-intervention survey; 56.9% in Cardiff City Centre and 43.1% in Swansea City Centre. Over half (52.7%) of patron surveys were conducted between 10pm and 11.59pm. Six in ten (60.1%) participants were male; a significantly higher number of male participants completed the survey in Cardiff (66.7%) than Swansea (51.4%;  $p < .05$ ). Participants ranged in age from 18 to 65 years, with a mean age of 25 years. The majority (85.5%) of participants were currently living in South Wales; there was a significantly higher number of participants not currently living in South Wales in the Cardiff sample (19.4%) than the Swansea sample (7.3%;  $p < .05$ ). Over one quarter (28.5%) of participants were students; there was a significantly higher number of students in Cardiff (35.7%) than Swansea (18.9%;  $p < .01$ ).

##### Nightlife usage

Three in ten (29.2%) participants reported that they typically go on a night out in the city in which they were surveyed once a week or more, whilst almost a fifth (19.8%) went on a night out 2-3 times per month and 43.5% once a month or less. Just under one in ten (7.5%) were on their first night out in the city. On average, survey participants expected to be out in the city's nightlife for five and a half hours (from time of entry to anticipated home time). At the time of the survey, participants had visited on average two venues (range: zero to 12). Over half (58.6%) of participants had arrived in the city centre for their night out before 10pm. Over a third (36.3%) reported coming into the city centre between 10pm and 11.59pm, while 5.2% reported entering past midnight. The majority (70.6%) of participants intended to leave the city's nightlife between the hours of 12am and 3.59am, whilst a fifth (20.2%) expected to go home between the hours of 4am and 5.59am.

##### Alcohol consumption

The majority (93.2%) of participants had consumed alcohol prior to taking part in the survey (drinkers). Almost a quarter (24.6%) of drinkers consumed their first drink before 6pm, whilst 64.5% started drinking between the hours of 6pm and 9.59pm, and 11.0% between 10pm and 1.59am. The average time between participants' first drink and survey participation was four and a half hours. Almost two thirds (63.2%) of drinkers consumed alcohol at home or a friend's house before coming into the city centre for their night out

(preloading). Younger age groups and students were significantly more likely to have preloaded (Table 1). Almost one fifth (17.6%) of drinkers reported consuming alcohol after leaving home/a friend's house, but prior to arriving in the city centre (en route loading). Compared to their counterparts, students were significantly less likely to engage in en route loading. Half (50.0%) of drinkers reporting en route loading had consumed alcohol at a licensed premise (e.g. local pub, restaurant), whilst 36.8% had drunk on transport/within transport settings (e.g. taxi, train, airport) and 13.2% on the street or other location.

The majority (81.1%) of drinkers had consumed alcohol in a city centre bar, pub or nightclub prior to survey participation, with older age groups significantly more likely to have done so. Just over one in ten (14.9%) drinkers had consumed alcohol in the night-time economy prior to survey participation which was purchased from an off-licence or supermarket (including alcohol they had brought into the city centre with them). Further, survey participants in Swansea were significantly more likely to have consumed alcohol purchased in an off-licence if they were not currently living in South Wales (50.0%) than if they were (12.1%;  $p < .05$ ).

Overall, the median number of units that drinkers consumed prior to survey participation was 11.0 units, with males reporting having consumed significantly more units than females (males, 12.1; females, 9.0;  $p < .001$ ) and participants not living in South Wales consuming significantly more units than those who did currently live in South Wales (Non-residents, 14.0; South Wales residents, 10.2;  $p < .05$ ). The median number of units drinkers consumed at different points over the course of the night out was: 6.0 units while preloading; 4.0 units during en route loading; 6.0 units in bars, nightclubs and pubs in the city centre; and for alcohol consumed in the night-time economy purchased from an off-licence 7.4 units. There was no significant difference between gender, age groups, student status or residency on the number of units consumed at any of these points over the course of the night out. By the time of the survey participation, the majority (69.0%) of drinkers had consumed spirits<sup>2</sup>, almost half (48.9%) beer or lager, almost one quarter (23.6%) wine, 16.2% cider and 3.1% alcopops.

Survey participants were asked about their intention to drink any alcohol after the survey, during the rest of their night out. The majority (78.4%) of drinkers intended to consume more alcohol (77.0% of all participants). Of those who intended to consume more alcohol, the median number of units expected to be consumed was 8.0, with males (males, 9.0; females, 6.3;  $p < .05$ ) and non-students (students, 6.0; non-students, 8.4;  $p < .05$ ) expecting to consume significantly more. In total the median expected alcohol consumption over the entire night (including alcohol already consumed and expected to be consumed) was 17.9 units. Males expected to consume significantly more units over the entire night out than females (males, 20.0; females, 14.2;  $p < .001$ ). Amongst the individuals who had drunk alcohol prior to survey participation, preloaders expected to consume a significantly higher

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<sup>2</sup> Including cocktails which were coded as two units.

number of units over the course of the entire night than non-preloaders (preload, 19.1; non-preloaders, 14.0;  $p < .001$ ). Overall, 26.4% of the total alcohol consumed over the course of the night out was drunk while preloading or en route loading prior to entering the city's nightlife. Finally, 16.1% of all participants intended to consume more alcohol after leaving the city's nightlife (16.5% of drinkers).

### **Drunkenness**

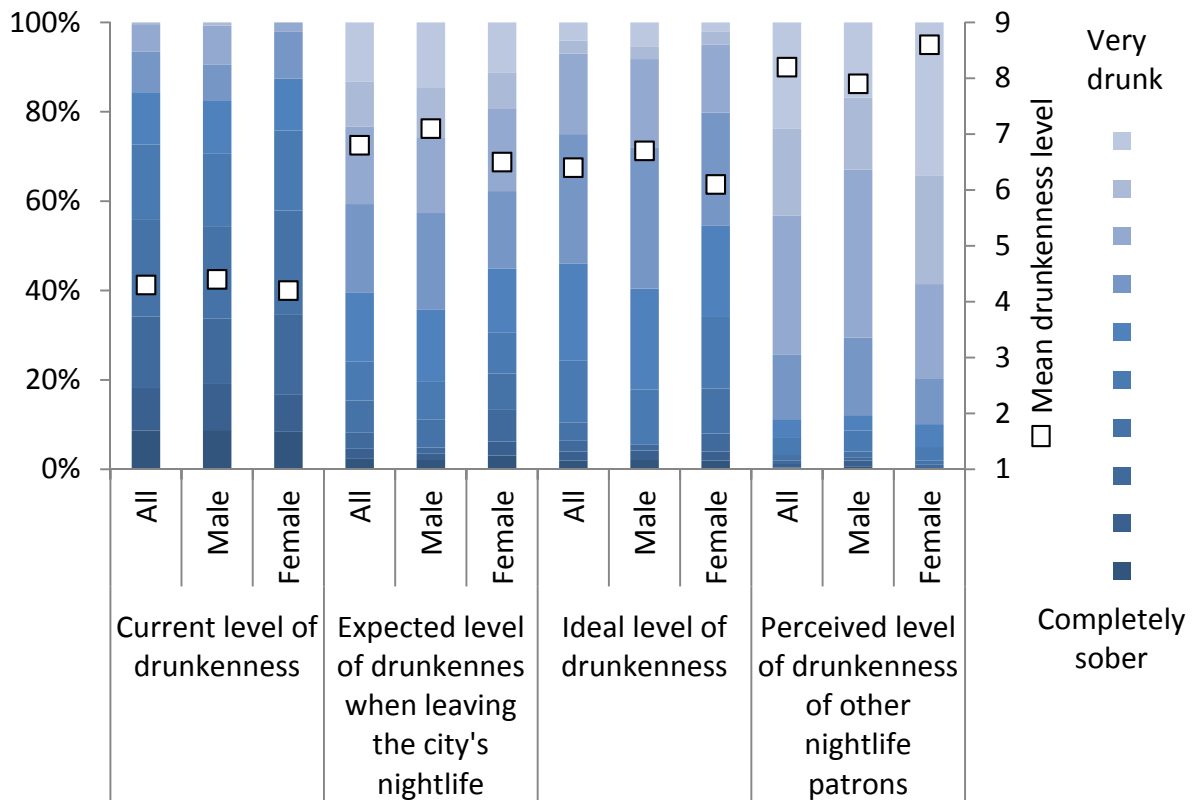
Using a scale of 1 (completely sober) to 10 (very drunk), participants were asked: how drunk they felt at the time of survey; how drunk they thought they would be when they left the city's nightlife that evening; what their ideal level of drunkenness is; and what they thought the typical level of drunkenness was that people reach on a night out in the city centre (Figure 2). Almost one in ten (8.7%) of those who had drunk prior to survey participation reported feeling completely sober. The mean score for how drunk drinkers felt at the time of the survey was 4.3; there was no significant difference between gender. The mean score for how drunk drinkers (including those who had not drunk alcohol prior to the survey but intended to do so on the remainder of their night out) felt they would be when they left the city's nightlife that night was 6.8; there was a significant difference between the genders (males, 7.1; females, 6.5;  $p < .05$ ). The mean ideal level of drunkenness reported by all participants was 6.4; with a significant difference between the genders (males, 6.7; females, 6.1;  $p < .01$ ). The mean score reported by participants for the perceived level of drunkenness that people reach on a night out in the city centre was 8.2; there was a significant difference between gender (males, 7.9; females, 8.6;  $p < .01$ ).

These scales of drunkenness were grouped into two levels: low (scores one to five) and high (scores six to 10). At the time of the survey, almost three in ten (27.3%) of drinkers reported their current level of drunkenness as high, while 75.9% of drinkers (including those who had not drunk prior to survey participation but intended to do so during the remainder of the night) expected their level of drunkenness to be high when they left the city's nightlife that night. Three quarters (75.5%) of individuals reported their ideal level of drunkenness as high, whilst the majority (92.7%) thought people on a night out in the city centre typically reached a high level of drunkenness.

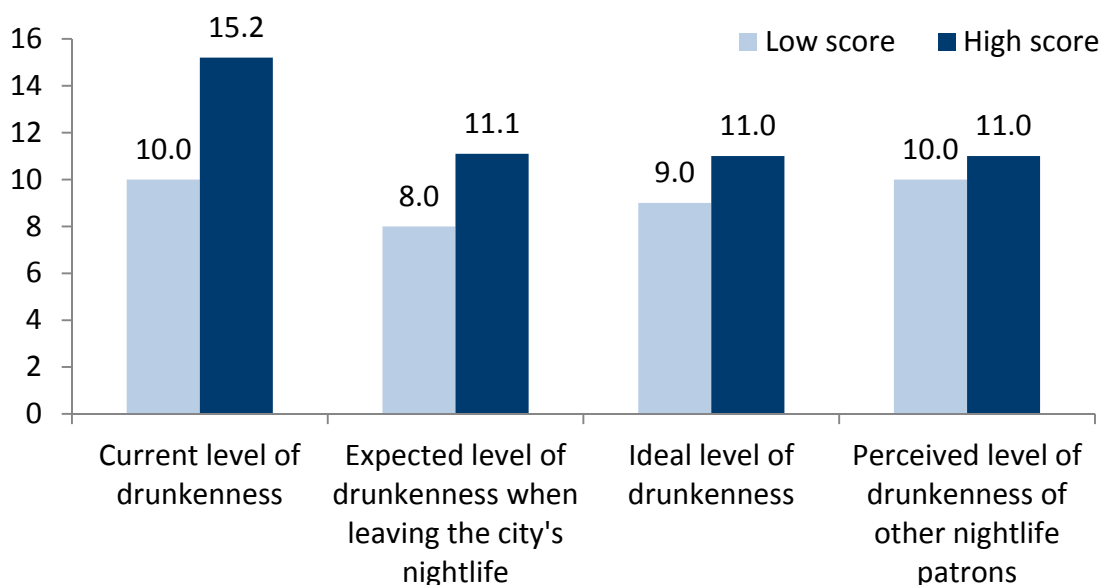
Figure 3 shows the median alcohol units drunk prior to survey participation by drinkers reporting low and high scores for each drunkenness statement. Those who reported high scores for each of the following drunkenness statements drank significantly more units than those reporting low scores: current drunkenness (high, 15.2 units; low, 10.0;  $p < .001$ ) and expected drunkenness upon leaving the city's nightlife (high, 11.1; low, 8.0;  $p < .01$ ).



**Figure 2: Participants' perceptions on their and other nightlife users' level of drunkenness, pre-intervention survey**



**Figure 3: Median alcohol units consumed up to the point of survey of drinkers reporting a low (1-5) or high (6-10) drunkenness rating\* for selected statements on drunkenness, pre-intervention survey**



\*Drunkenness was rated on a scale of one to 10, with one being completely sober and 10 being very drunk. Ratings of one to five were classed as a low rating and ratings of six to 10 as a high rating.

Participants were then asked how much they agreed or disagreed with a range of statements relating to drunkenness using a five point scale from strongly agree to strongly disagree<sup>3</sup>. The majority (86.6%) of participants agreed (strongly agreed and agreed) that getting drunk is socially acceptable in the city's nightlife, whilst almost two thirds (62.3%) also agreed that bar staff do not care if customers get drunk on their premises. Over two thirds (68.8%) of participants agreed the city centre was a safe place to go for a night out with a similar proportion (61.0%) agreeing that the authorities do not tolerate drunken behaviour in the city's nightlife. Whilst just under half (46.1%) of participants agreed it was hard to enjoy a night out in the city centre if you do not get drunk, almost half (49.0%) also agreed that people who get drunk ruin the night out for other people and 38.5% of participants agreed that the city centre would offer a better night out if people got less drunk.

### **Service of alcohol to drunk people**

Participants were asked two questions relating to the service of alcohol to drunk people in licensed premises in the respective city centres. Over half (55.1%) of all participants believed that if someone was drunk and tried to get served alcohol on a night out in the city centre they would usually be served. Participants were then asked if they knew a bar would not serve alcohol to someone who was drunk would they be more likely or less likely to go there. Over a third (39.4%) reported that they would be less likely to go there, 15.0% were more likely to go there and 45.5% stated that it would not affect their decision to go there.

### **Perceptions of the law on drinking, serving and purchasing alcohol**

Four in ten (40.3%) participants thought it was legal for a bar server to sell alcohol to someone who was already drunk, with just under half (48.0%) stating it was illegal and 11.7% reporting they did not know. One third (37.7%) of participants thought it was legal to buy alcohol for a friend who was already drunk, while half (50.2%) thought it was illegal and 12.1% did not know. Two thirds of individuals thought it was legal for a person to drink alcohol when they were already drunk (67.7%), one fifth (22.6%) thought it was illegal and one in ten (9.7%) did not know.

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<sup>3</sup> Strongly agree, agree, neither, disagree and strongly disagree.

**Table 1: Alcohol consumption over the course of the night out, pre-intervention survey**

Alcohol consumption		Sex				Age group				Student			South Wales resident		
		All	Male	Female	p	18-21	22-29	30+	p	No	Yes	p	No	Yes	p
<b>Preloading*</b>	%	63.2%	59.9%	68.0%	NS	82.8%	52.2%	44.7%	<.001	59.5%	76.2%	<.05	69.7%	62.2%	NS
	Units	6.0	6.0	4.8	NS	6.0	6.0	4.0	NS	6.0	7.0	NS	8.0	6.0	NS
<b>En route loading*</b>	%	17.6%	19.1%	15.5%	NS	18.3%	18.5%	13.0%	NS	21.6%	7.9%	<.05	15.2%	18.0%	NS
	Units	4.0	4.0	2.1	NS	2.0	4.0	5.6	NS	4.0	4.0	NS	4.0	4.0	NS
<b>City centre nightlife - purchased in pubs/bars/nightclubs*</b>	%	81.1%	81.8%	80.2%	NS	73.1%	86.4%	91.1%	p<.05	83.3%	74.6%	NS	93.9%	79.0%	NS
	Units	6.0	6.4	6.0	NS	5.0	6.3	7.5	NS	6.7	5.1	NS	6.0	6.0	NS
<b>City centre nightlife - purchased from off-licences/supermarkets*</b>	%	14.9%	15.9%	13.5%	NS	16.1%	17.0%	8.9%	NS	16.0%	12.7%	NS	27.3%	12.8%	NS
	Units	7.4	8.0	6.8	NS	8.0	4.0	13.5	NS	6.8	11.0	NS	10.2	6.8	NS
<b>Total units consumed prior to survey completion*</b>	Units	11.0	12.1	9.0	<.01	11.9	10.0	11.0	NS	11.0	10.0	NS	14.0	10.2	<.05
<b>Expected units consumed post survey^</b>	Units	8.0	9.0	6.3	<.05	7.0	8.0	8.0	NS	8.4	6.0	<.05	8.0	8.0	NS
<b>Total units consumed during night out<sup>+</sup></b>	Units	17.9	20.0	14.2	<.001	19.0	17.2	15.5	NS	18.1	15.4	NS	21.5	17.0	NS

Note. Units presented are the median value. NS = not significant. \*Of those who had consumed alcohol pre survey only. ^Of those who reported that they would drink alcohol post survey only. <sup>+</sup>Including reported and, or expected consumption.

## 3.2. Pre- and post-intervention survey findings comparison

### Sample characteristics

Three hundred and nine individuals took part in the post-intervention survey compared with 253 in the pre-intervention survey, with a similar proportion of participants taking part in each city centre to the pre-intervention survey (i.e. Swansea pre, 43.1%; post, 47.2%). Only 1.0% (n=3) of post-intervention survey participants had also completed the pre-intervention survey. A significantly higher proportion of survey participants were among the older age groups in the post-intervention survey (Table 2). There was no significant difference between all pre- and post-intervention survey participants in: gender; student status; residence status; or regularity of nights out. However, in Cardiff specifically, significantly less students participated in the post-intervention survey than the pre-intervention survey (pre, 22.1%; post, 35.7%;  $p < .05$ ).

**Table 2: Sample characteristics, pre- and post-intervention survey**

	Pre	Post	p
(n)	253	309	
<b>Age group</b>			
<b>18-21 years</b>	40.6%	28.5%	
<b>22-29 years</b>	40.2%	43.0%	<.01
<b>30+ years</b>	19.1%	28.5%	
<b>Male</b>	60.1%	61.0%	NS
<b>Student</b>	28.5%	21.7%	NS
<b>South Wales resident</b>	85.8%	82.8%	NS
<b>Regular nightlife user*</b>	71.9%	70.5%	NS

Note. NS = not significant. \*Usually go on a night out in the city centre at least once a month.

### Alcohol consumption

Compared with all drinkers in the pre-intervention survey, significantly less post-intervention survey drinkers reported preloading on the night of the survey (pre, 63.2%; post, 54.3%;  $p < .05$ ). When analysed for each city of study separately, this significant reduction in reported preloading was only seen in the Cardiff sample (pre, 61.8%; post, 43.3%;  $p < .01$ ), whilst the Swansea sample reported a non-significant slight increase in preloading (pre, 65.0%; post, 66.7%;  $p = .904$ ). There was no statistically significant difference in the median number of alcohol units consumed while preloading from the pre- to post-intervention survey (pre, 6.0; post, 6.0;  $p = .532$ ). There was no significant difference between the proportion of pre- and post-intervention survey drinkers who drank en route to the city's nightlife (pre, 17.6%; post, 20.3%;  $p = .593$ ) or the number of units they drank while en route (pre, 4.0; post, 4.0;  $p = .493$  [Table 3]).

A significantly higher proportion of post-intervention survey drinkers reported having consumed alcohol that was purchased in pubs, bars, or nightclubs, than pre-intervention survey drinkers (pre, 81.1%; post, 89.7%;  $p<.01$ ). Specifically, this increase in reporting of consuming alcohol in bars, pubs and nightclubs from pre- to post-intervention survey was only seen in the Cardiff sample (pre, 76.7%; post, 94.7%;  $p<.001$ ) whilst there was a non-significant decrease in the Swansea sample (pre, 86.9%; post, 84.0%;  $p=.670$ ). Further, among those that reported drinking in pubs, bars, or nightclubs, the number of median units consumed was significantly higher for post-intervention survey drinkers than pre-intervention survey drinkers (pre, 6.0; post, 8.0;  $p<.005$ ). This increase in unit consumption in pubs, bars or nightclubs from pre- to post-intervention survey was only significant in the Cardiff sample (pre, 6.2; post, 9.0;  $p<.005$ ), with no increase in units consumed in the Swansea sample (pre, 6.0; post, 6.0;  $p=.443$ ). It is important to note that variations in the proportion of people drinking in pubs, bars, or nightclubs and the amount consumed in these locations, may be linked to the time in which surveys were conducted. Compared to all pre-intervention survey drinkers, a significantly smaller proportion of all post-intervention survey drinkers consumed alcohol purchased from an off-licence or supermarket (pre, 14.9%; post, 6.4%;  $p<.005$ ). This reduced consumption of alcohol purchased from an off-licence or supermarket was seen in Cardiff (pre, 14.7%; post, 5.3%;  $p<.05$ ) and Swansea (pre, 15.2%; post, 7.6%;  $p=.110$ ) although the latter was non-significant. There was no significant difference in the median number of units consumed that were purchased from an off-licence or supermarket (pre, 7.4; post, 8.5;  $p=.714$ ). Finally, the median total expected alcohol consumption over the course of the night out did not differ significantly between pre- and post-intervention survey drinkers (pre, 17.9; post, 18.0;  $p=.116$ ).

**Table 3: Alcohol consumption over the course of the night out, pre- and post-intervention survey**

<b>Alcohol consumption</b>		<b>Pre</b>	<b>Post</b>	<b>p</b>
<b>Preloading*</b>	%	63.2	54.3	<.05
	Units	6.0	6.0	NS
<b>En route loading*</b>	%	17.6	20.3	NS
	Units	4.0	4.0	NS
<b>City centre nightlife-purchased bars/pubs/nightclubs*</b>	%	81.1	89.7	<.01
	Units	6.0	8.0	<.005
<b>City centre nightlife-purchased from off-licences/supermarkets*</b>	%	14.9	6.4	<.005
	Units	7.4	8.5	NS
<b>Total units consumed prior to survey completion*</b>	Units	11.0	12.0	NS
<b>Expected units consumed post survey^</b>	Units	8.0	8.0	NS
<b>Total units consumed during the night out<sup>+</sup></b>	Units	17.9	18.0	NS

*Note.* Units presented are median value. NS = not significant. \*Of those who had consumed alcohol pre survey only. ^Of those who reported that they would drink alcohol post survey only. <sup>+</sup>Including reported and, or expected consumption

## **Drunkenness**

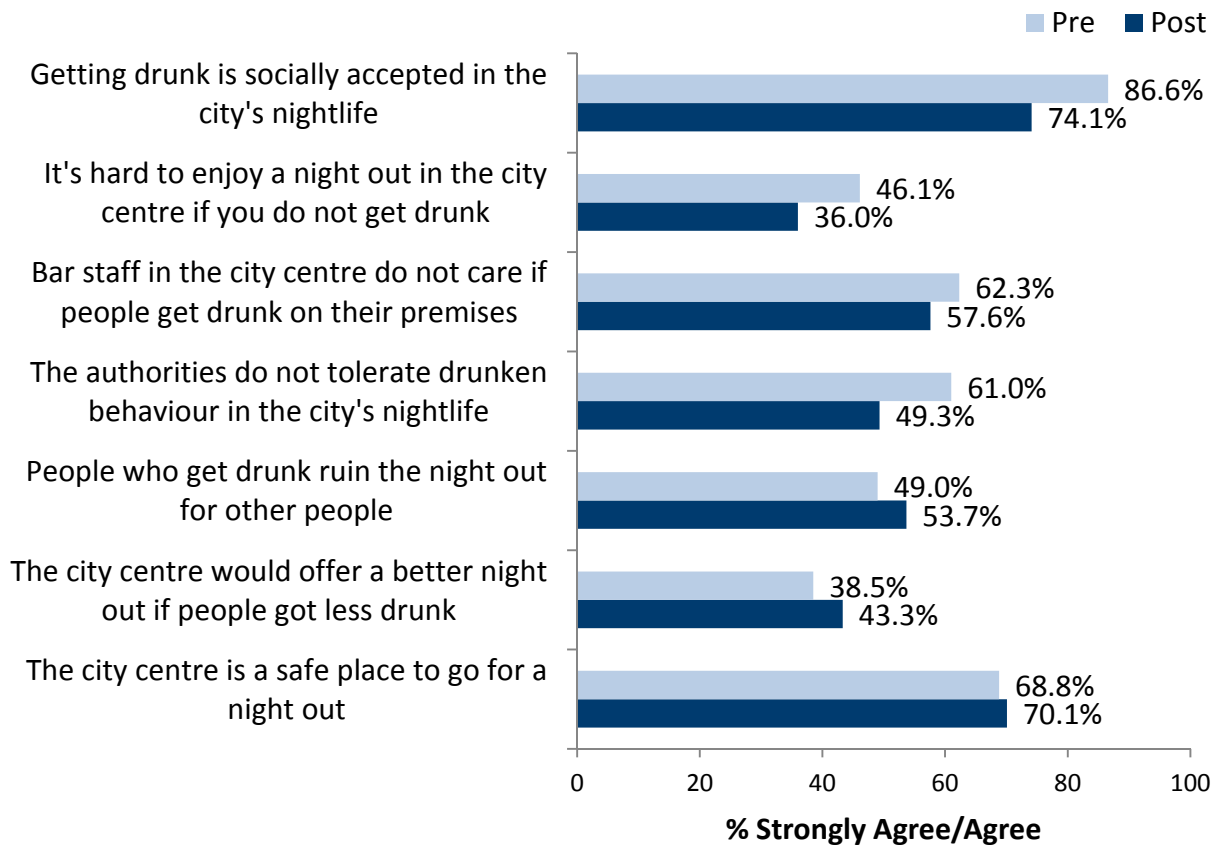
There was no significant difference for survey participants' mean scores for how drunk those who had consumed alcohol felt at the time of the survey or how drunk drinkers (including those who had not yet consumed alcohol but intended to do so during the remainder of their night out) felt they would be when they were leaving the city's nightlife between pre- and post-intervention surveys. There were also no significant differences in the mean ideal level of drunkenness reported by the pre- and post-intervention survey participants or the perceived level of drunkenness that people reach on a night out in the city centre.

Compared with pre-intervention survey participants, a significantly smaller proportion of post-intervention survey participants agreed (strongly agree and agree) that getting drunk was socially accepted in the city's nightlife (pre, 86.6%; post, 74.1%;  $p < .001$ ) and that it's hard to enjoy a night out in the city centre if you don't get drunk (pre, 46.1%; post, 36.0%;  $p < .05$  [Figure 4]). A smaller proportion of post-intervention survey participants also agreed that bar staff don't care if people get drunk on their premises, although this difference was non-significant (pre, 62.3%; post, 57.6%;  $p = .304$ ). Significantly less post-intervention survey participants did however agree that drunken behaviour is not tolerated in the city centre by the authorities (pre, 61.0%; post, 49.3%;  $p < .01$ ). Compared to pre-intervention survey participants more post-intervention participants agreed that: drunk people ruin a night out for others (pre, 49.0%; post, 53.7%;  $p = .312$ ); the city would offer a better night out if people got less drunk (pre, 38.5%; post, 43.3%;  $p = .292$ ); and the city centre was a safe place to go for a night out (pre, 68.8%; post, 70.1%;  $p = .813$ ), although these results were non-significant.

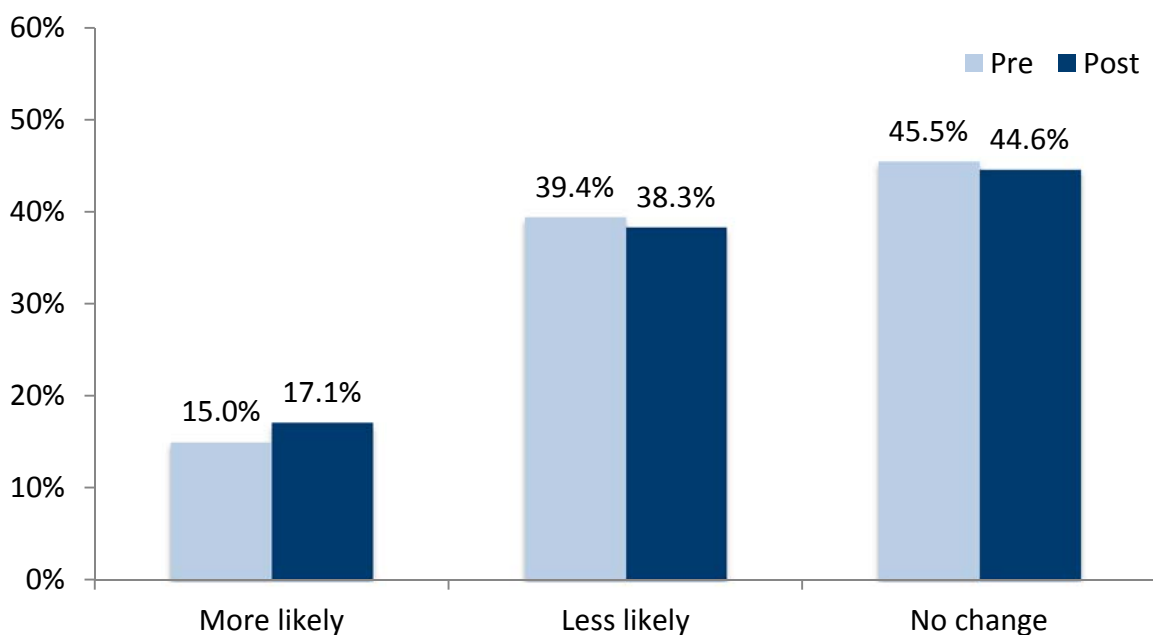
## **Service of alcohol to drunk people**

There was no significant difference between the proportion of pre-and post-intervention survey respondents who believed that if someone was drunk and tried to get served in a bar in the city centre they would usually be served (pre, 55.1%; post, 56.6%;  $p = .783$ ). Further, there was no significant difference between pre- and post-intervention survey respondents reporting on how likely (more likely, less likely, no change) they were to go to a bar if they knew it would not serve alcohol to someone who was drunk (Figure 5).

**Figure 4: Proportion of participants strongly agreeing/agreeing with selected statements on drunkenness, pre- and post-intervention survey**



**Figure 5: Proportion of participants that reported they would be more or less likely (or no change) to go to a bar if they knew it would not serve alcohol to someone who was drunk, pre- and post-intervention survey**

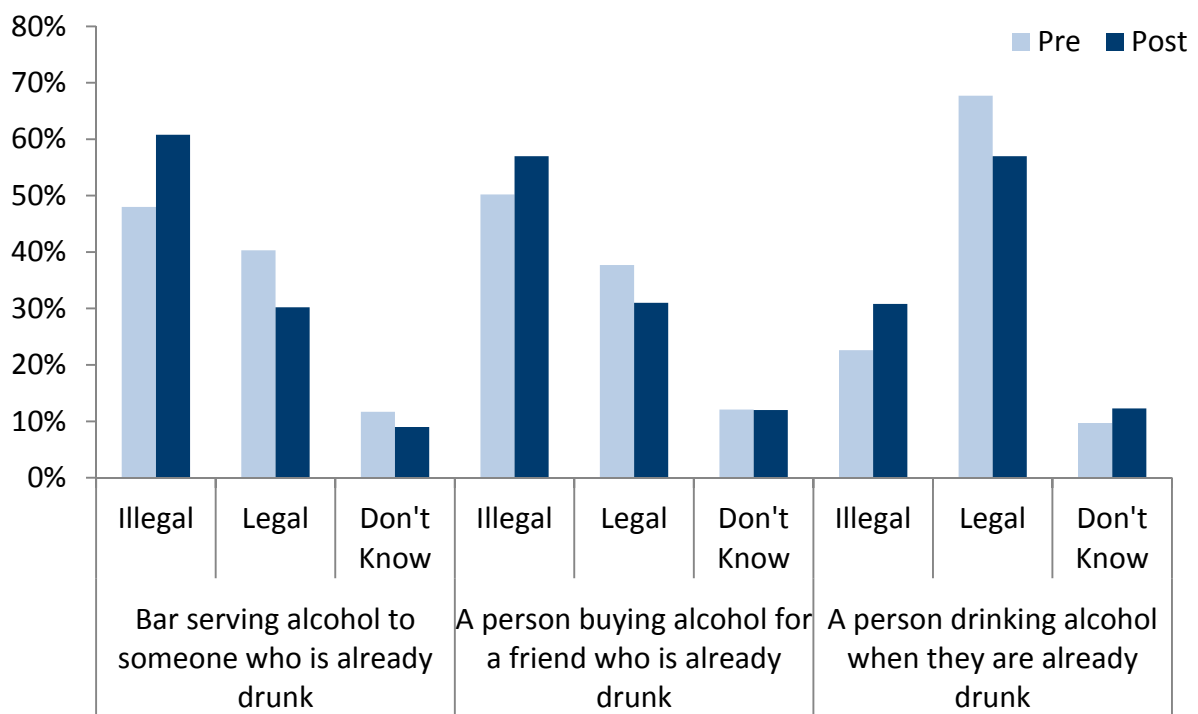




## Perceptions of the law around serving and purchasing alcohol

There was a significant increase in the proportion of survey participants responding that it is illegal for a bar server to sell alcohol to someone who is already drunk from pre- (48.0%) to post-intervention (60.8%) surveys, with a decrease in the proportion of respondents who did not know the answer (pre, 11.7%; post, 9.0%;  $p < .01$ ). The proportion of post-intervention survey participants reporting that it is illegal to buy alcohol for a friend who is already drunk also increased from 50.2% to 57.0% although this was non-significant ( $p = .232$ ). A significantly higher proportion of post-intervention survey participants believed it was illegal for a person to drink alcohol when they were already drunk (pre, 22.6%; post, 30.8%;  $p < .05$ ).

**Figure 6: Participants' perceptions of the law around serving, purchasing and consuming alcohol, pre- and post-intervention survey**



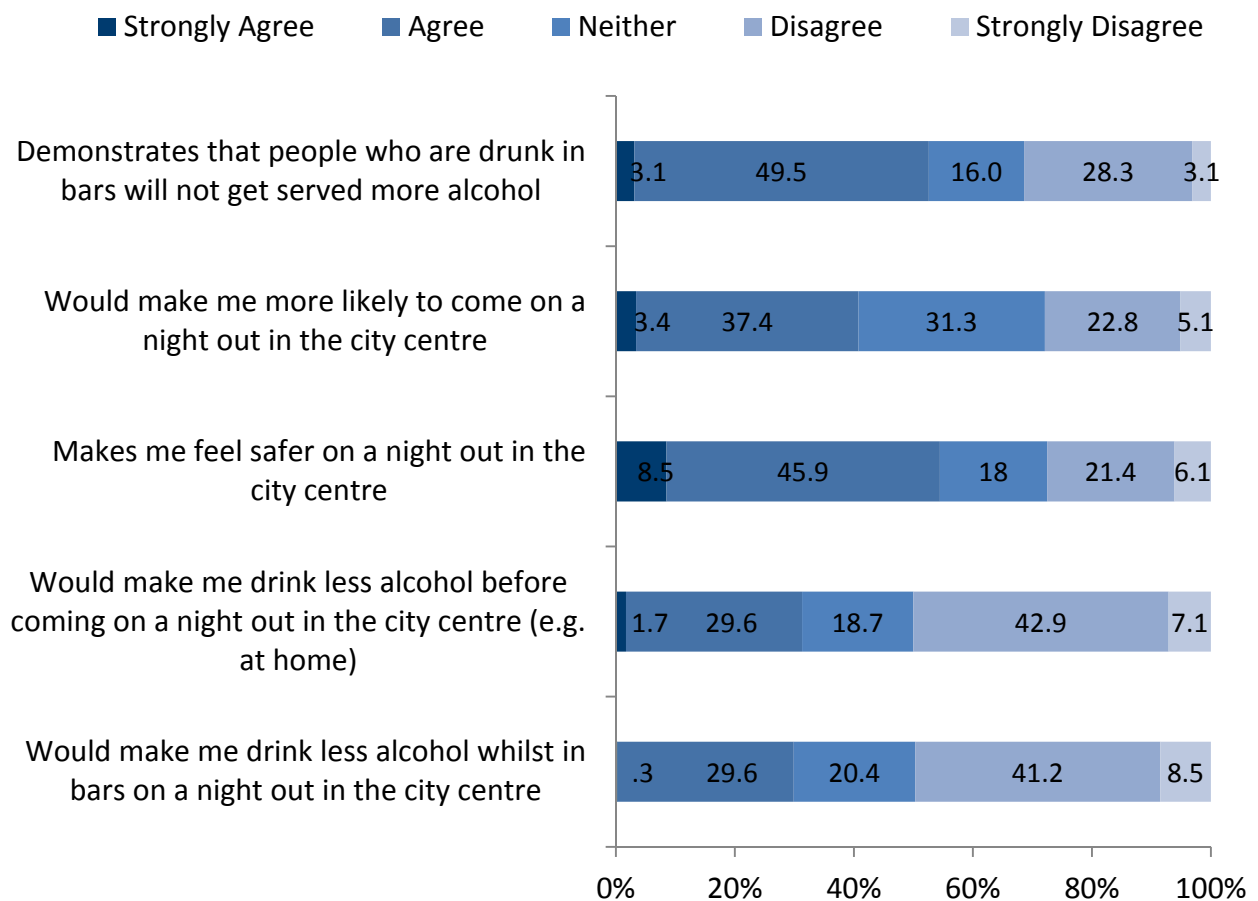
### 3.3. Know the Score intervention awareness

At the end of the post-intervention survey participants were asked if they were aware of the Know the Score intervention. Almost one fifth (17.3%;  $n = 51$ ) of participants initially reported they were aware of the intervention. Further, when participants who reported they were unaware of the intervention were prompted with intervention materials shown by the interviewer (Figure 1; Appendix 1), an additional 11.2% ( $n = 33$ ) reported they were aware. Thus, overall 28.5% ( $n = 84$ ) of post-intervention survey participants were aware of the Know the Score intervention. Of all individuals who were aware of the intervention, 72.6% ( $n = 61$ ) had seen a intervention poster; 17.9% ( $n = 15$ ) had seen a bar staff Know the Score badge, or t-shirt; 6.0% ( $n = 5$ ) had seen the intervention in a newspaper or magazine article; 8.3% ( $n = 7$ )

had heard about it on the radio; whilst 25.0% (n=21) reported being made aware of the intervention by other means such as Twitter or Facebook.

All post-intervention survey participants were then asked how much they agreed or disagreed with a range of statements about the intervention (Figure 7). Over half (52.6%) agreed (strongly agreed/agreed) that the intervention demonstrated that people who are drunk in bars will not get served more alcohol; just over one in three (31.4%) disagreed (strongly disagreed/disagreed); whilst 16.0% neither agreed nor disagreed. Four in ten (40.8%) participants agreed that the intervention would make them more likely to go on a night out in the city centre, with over half (54.4%) of all participants agreeing that the intervention makes them feel safer on a night out in the city centre. Almost one third agreed that the intervention would make them drink less alcohol before coming on a night out in the city centre (31.3%) or whilst in bars in the city centre (29.9%).

**Figure 7: Participants' perceptions of the Know the Score intervention, post-intervention survey**



## 4. Discussion and recommendations

Implemented as part of a broader suite of work on preventing violence, the Know the Score pilot intervention aimed to promote responsible drinking behaviours in nightlife environments and improve awareness of the laws around the service of alcohol to drunks in South Wales. Informed by evidence from previous interventions (e.g. PAKKA programme, Jyväskylä, Finland [Holmila and Warpenius, 2012; Warpenius *et al.*, 2010]; Say No To Drunks, Liverpool, UK [Quigg *et al.*, 2015]), it included two key elements - an awareness raising campaign targeted towards bar staff and the public, and increased police enforcement activity. Interventions with similar components implemented elsewhere have been shown to be effective in reducing alcohol sales to drunks and associated harms, although these interventions also included other components such as bar staff training on service refusal. (Holmila and Warpenius, 2012; Wallin *et al.*, 2005; Warpenius *et al.*, 2010). The pilot intervention was implemented over a seven week period coinciding with the 2015 Rugby Six Nations Championship - a period associated with violence and alcohol-related harms (Bolter, 2010; Sivarajasingham *et al.*, 2005). Thus, support for the intervention was sought and received from the Welsh Rugby Union, along with other key partners with an interest in preventing drunkenness and related harms across Wales. To evaluate the visibility and potential impact of the intervention, and also provide a baseline for evaluating future work, a pre- and post-intervention nightlife user survey was implemented in Cardiff and Swansea, two of the main nightlife areas in South Wales. The surveys aimed to explore: nightlife user exposure to, and perceptions of, the intervention; changes in nightlife user drinking patterns, expectations and tolerance of drunkenness in nightlife settings; and awareness of the laws around the service of alcohol.

Overall, 29% of those who participated in the post-intervention survey reported that they were aware of the Know the Score intervention. To elicit participant views on the intervention, they were all subsequently provided with a short description of it, shown images of the intervention posters and then asked a range of questions on the intervention. Over half agreed that the posters demonstrated that drunk people will not get served more alcohol in bars and that the intervention made them feel safer on a night out. Four in ten agreed that the intervention would make them more likely to go on a night out in the city centre (where they were surveyed) and a third agreed that the intervention would make them drink less alcohol before or during a night out in the city centre. Reported awareness of Know the Score and agreement that it would increase personal use of the night-time economy and, or decrease alcohol consumption before or during a night out, was higher than that reported in an evaluation of a comparable intervention implemented elsewhere in England (Quigg *et al.*, 2015<sup>4</sup>). Whilst this is certainly a positive outcome, understanding the reasons for these differences is important for developing future work across the UK. This is

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<sup>4</sup> E.g. Exposure: Know the Score, 29%; other similar intervention, 17.2%.

particularly so given the increasing focus and emergence of interventions aimed at tackling the service of alcohol to drunks (Bamfield *et al.*, 2014; Morning Advertiser, 2014; Morris, 2015; Nicholls and Morris, 2014; Pubwatch, 2015). Differences in intervention exposure, nightlife user perceptions and potential impact (see below) may be due to variations in intervention location, time period, design/activities, coverage and target population, as well as characteristics of the night-time economy and its users.

The pre- and post-intervention surveys were cross-sectional and thus involved different participants. Further, four in ten nightlife patrons approached declined to take part in the research. Whilst this means that no definitive conclusions can be drawn, a number of positive changes were observed between the pre- and post-intervention survey responses:

- A significantly higher proportion of participants correctly answered that it is illegal for a bar server to sell alcohol to someone who is already drunk;
- A significantly smaller proportion of participants agreed that getting drunk is socially acceptable in the city's nightlife and that it's hard to enjoy a night out if you are not drunk; and,
- The proportion of participants reporting preloading reduced significantly as did the proportion of participants consuming alcohol from an off-licence or supermarket whilst in the night-time economy.

Changing knowledge of the laws around the service of alcohol to drunks is a critical step in improving compliance with the law (Hughes *et al.*, 2014). The positive change in knowledge amongst nightlife users observed in this evaluation was also found in an evaluation of a similar UK city nightlife intervention (Quigg *et al.*, 2015), suggesting that such interventions may be effective in eliciting such change. The impact of Know the Score appears to have gone further than changing knowledge, with an apparent shift in the perceived acceptability of drunkenness in the two nightlife environments studied. This is encouraging and may be related to the observed decrease in preloading drinking behaviour (also seen in the previous study; Quigg *et al.*, 2015). With the links between preloading and harms such as violence and excessive alcohol consumption during a night out (Hughes *et al.*, 2008), a reduction in preloading is likely to have positive impacts on nightlife environments and those using the night-time economy. However, despite the decreases seen, over half of post-intervention survey participants still reported preloading, thus reducing levels of preloading should be a focus of future work.

Whilst the intervention appeared to have no effect on total alcohol consumption over the course of the night out, it is likely that such changes will take time to develop, and will require a long term approach and focus on reducing the service of alcohol to drunks and drunkenness. For example, in Stockholm, reductions in alcohol service to drunks were observed over a seven-year period following on-going work to address server practice and increase awareness of the law (Wallin *et al.*, 2005). Further, our study did not measure changes in the service of alcohol to drunks whereas the Stockholm and other interventions

have (Holmila and Warpenius, 2012; Wallin *et al.*, 2005; Warpenius *et al.*, 2010), so it is unknown if the intervention had an impact on bar server practice. Changes in public perceptions of the service of alcohol to drunks were explored in this evaluation, with findings showing no change. However, truly measuring such changes would require the use of different methods that test bar server propensity to serve alcohol to drunks such as the use of pseudo-intoxicated actors used elsewhere (Hughes *et al.*, 2014).

An additional aim of the evaluation was to support the development of future work by strengthening understanding of nightlife drinking behaviours at a local level. Thus, findings are provided for the full sample (main findings section) as well as for Cardiff and Swansea individually (Appendix 2, 3 and 4). Overall, our findings support the importance and value of implementing the Know the Score intervention. Analyses found that there were high levels of alcohol consumption and drunkenness in the two nightlife environments studied. In the pre-intervention survey, drinkers expected to consume a median of 17.9 units over the course of the night out. Whilst consumption levels were self-reported and could therefore not be verified, levels found here are slightly higher than that reported in a study using similar methods in another UK city (i.e. 15.7 units; Quigg *et al.*, 2015). Crucially however, drinkers in Swansea reported significantly higher levels of alcohol consumption over the course of the night out compared to Cardiff (Swansea, 19.5 units; Cardiff, 14.9 units;  $p < .01$ ). Further, the mean score for perceived level of drunkenness of other nightlife patrons was significantly higher in Swansea (8.6) compared to Cardiff (7.8;  $p < .001$ ). There were also significant differences in knowledge around of the law around serving alcohol to drunks. In Swansea, 45.3% thought that it was legal to serve alcohol to a drunk person, compared to 36.6% in Cardiff ( $p < .05$ ). Such differences may be related to differences in sample characteristics between the two cities (i.e. significantly lower proportions of Swansea participants were male, students and lived outside of South Wales). Further work should explore the potential differences in drinking behaviours and knowledge between cities to understand if more targeted work is required in Swansea, and, or if findings reflect differences in the types of users of each nightlife area. Similar to other research, certain groups were significantly more likely to partake in risky drinking behaviours (Hughes *et al.*, 2008; Quigg *et al.*, 2015; Wells and Graham, 2003). Students and younger age groups were more likely to preload. Expected levels of alcohol consumption over the course of the night out were significantly higher amongst males, preloaders and Swansea survey participants. Future work to prevent excessive alcohol consumption should consider targeting these groups. More broadly, with a number of UK studies demonstrating high levels of alcohol consumption and drunkenness in nightlife environments, and a lack of awareness of, or compliance with, the laws around the service of alcohol to drunks (Bellis and Hughes, 2011; Hughes and Anderson, 2008; Hughes *et al.*, 2008; Hughes *et al.*, 2011; Lenk *et al.*, 2006; Quigg *et al.*, 2015) consideration should be given to implementing future interventions in other areas of Wales.

## Conclusion

The Know the Score pilot intervention presents an important step in working towards preventing the sale of alcohol to drunks and reducing associated harms in South Wales. Whilst no definitive conclusions can be made, the evaluation does suggest that the intervention had a positive impact on increasing knowledge of the laws around the service of alcohol to drunks amongst nightlife users. Further, findings suggest a shift in the perceived acceptability of drunkenness in the two nightlife environments studied, as well as a decrease in preloading drinking behaviour following implementation of the intervention. Despite this, post-intervention surveys illustrated that excessive alcohol consumption and drunkenness remain key features of the night-time economy. Further intervention is therefore required and should form part of a long-term plan to prevent drunkenness and associated harms in South Wales. Know the Score should form a key feature of future work.

## Recommendations

- The Know the Score intervention should continue, and be developed and incorporated into an on-going feature of a broader work programme to prevent violence and alcohol-related harms across South Wales.
- Future work should consider the inclusion of bar/venue staff training on refusing the service of alcohol to drunks, as well as continued enhanced police and licensing activity, and awareness raising both across South Wales and towards at risk groups (e.g. males, students, young people, preloaders).
- Preventing preloading, and levels of preloaded alcohol consumption, should be a focus of future work. This could include consideration of policy options that may influence preloading behaviour, as well as overall alcohol consumption (e.g. minimum unit pricing).
- Differences in drinking behaviours, and thus associated harms, between Cardiff and Swansea should be explored further to identify if more focused work, or different levels and types of intervention, are required in each city. Consideration however needs to be given to differences in the survey sample characteristics between cities, and thus potential differences in nightlife users.
- The evaluation has provided a baseline of drinking behaviours, knowledge of the law, and perceptions and attitudes towards drunkenness that can inform the development of future interventions and be used to assess change. Consideration should be given to how future progress can be monitored and evaluated.
- Used in other European studies evaluating similar interventions, the use of pseudo-intoxicated actors as a method of assessing bar server propensity to serve alcohol to drunks would provide a robust understanding of the extent of the problem, and if repeated, could be used to measure change in bar server practice over time.
- With many areas developing interventions to prevent the sale of alcohol to drunks across the UK, and also a lack of evaluation studies, the positive results found in this

evaluation should be shared widely. Such findings are useful for informing a broader debate around preventing drunkenness and associated harms in nightlife settings.

- Comparisons to other similar interventions should be made to develop understanding around the most effective ways of preventing the sales of alcohol to drunks, drunkenness and associated harms.
- With excessive alcohol consumption and drunkenness a common feature of most UK nightlife areas, consideration should be given to implementing an intervention such as Know the Score across other areas of Wales.



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## 6. Appendices

### Appendix 1: The Know the Score materials

Figure 8: The Know the Score posters



Figure 9: The Know the Score T-shirt logo and example receipt



HAVE A GREAT NIGHT!  
MWYNHEWCH EICH NOSON!

6	BEER / CWRW	£24.00
4	CIDER / SEIDR	£16.00
10	SHOTS / JOCHIAU	£25.00
1	PENALTY FOR BUYING ALCOHOL FOR SOMEONE WHO IS DRUNK / COSB AM BRYNU ALCOHOL I RYWUN SY'N FEDDW	£1000.00

TOTAL/CYFANSWM: £1065.00

**COPIWCH Y GYFRAITH**

Os byddwch yn prynu diod feddwol i rywun sy'n amlwg yn feddw, gallech gael dirwy o hyd at £1,000.

**KNOW THE LAW**

If you buy someone who is clearly drunk an alcoholic drink, you could be fined up to £1,000.



South Wales  
Police and Crime Commissioner  
Comisiynydd yr Heddlu a Throseddau  
De Cymru



**GwYBOD Y SGÔR**  
#YFwchLaiMwynhewchFwy

DON'T WORRY, THIS RECEIPT IS FAKE.  
PEIDIWCH A PHOENI, MAE'R ODERBYNED HON YN FFUG.

## Appendix 2: Swansea

### Swansea pre-intervention survey findings

#### Sample characteristics

One hundred and nine nightlife users took part in the pre-intervention survey. Over half (52.9%) of patron surveys were conducted between 10pm and 11.59pm. Just over half (51.4%) of the participants were male and participants ranged in age from 18 to 64 years, with a mean age of 25 years. The majority (92.7%) of participants were currently living in South Wales and 18.9% of participants were students.

#### Nightlife usage

Over one fifth (22.9%) of nightlife users reported that they typically go on a night out in Swansea City Centre once a week or more, with the same number (22.9%) reporting going on a night out 2-3 times per month and 46.8% once a month or less. Under one in ten (7.3%) were on their first night out in the city. On average, from the time of entry to anticipated home time, survey participants expected to spend almost five and a half hours (5:21) in Swansea's nightlife. At the time of the survey, participants had visited on average two venues (range: zero to 12). Over six in ten (61.1%) participants had arrived in Swansea City Centre for their night out before 10pm. Over a third (37.0%) reported coming into the city centre between 10pm and 11.59pm, while 1.9% reported entering past midnight. The majority (75.5%) of participants intended to leave the city's nightlife between the hours of 12am and 3.59am, whilst 18.9% expected to go home after 4am.

#### Alcohol consumption

The majority (94.5%) of nightlife users had consumed alcohol prior to participating in the survey. Over a quarter (26.0%) of drinkers consumed their first drink before 6pm, whilst 67.0% started drinking between 6pm and 9.59pm, and 7.0% after 10pm. The average time between participant's first drink and participation in the survey was nearly five hours (4:51). Almost two thirds (65.0%) of drinkers consumed alcohol at home or a friend's house before coming into the city centre for their night out (preloading). Younger age groups were significantly more likely to have preloaded (Table 4). Over a fifth (22.3%) of drinkers reported consuming alcohol after leaving home/a friend's house, but prior to arriving in the night-time economy (en route loading). Over half (57.1%) of drinkers reporting en route loading had consumed alcohol at a licensed premise (e.g. local pub, restaurant), whilst 23.8% had drunk on transport/within transport settings (e.g. taxi, train, airport) and 19.0% on the street or other location.

The majority (86.9%) of drinkers had consumed alcohol in a city centre bar, pub or nightclub prior to survey participation. Over one in ten (15.2%) drinkers had consumed alcohol in the night-time economy prior to the survey which was purchased from an off-licence or

supermarket (including alcohol they had brought into the city centre with them), with participants significantly more likely to have consumed alcohol purchased from an off-licence if they were not from South Wales than if they were (Non-residents, 50.0%; South Wales Residents, 12.1%;  $p < .05$ ).

Overall, the median number of units that drinkers consumed prior to survey participation was 12.0 units, with males reporting having consumed significantly more units than females (males, 14.0; females, 11.0;  $p < .05$ ) and participants not living in South Wales consuming significantly more units than those who did currently live in South Wales (Non-residents, 16.0; South Wales residents, 11.0;  $p < .05$ ). The median number of units drinkers consumed over the course of the night out was: 7.0 units while preloading; 2.1 units during en route loading; 6.0 units in bars, nightclubs, and pubs in Swansea City Centre; and for alcohol purchased from an off-licence 14.0 units. There was no significant difference between gender, age groups, student status or residency on the number of units consumed at any of these points over the course of the night out. By the time of the survey, the majority (72.0%) of drinkers had consumed spirits<sup>2</sup>, almost half (48.0%) beer or lager, almost one quarter (24.0%) wine, 10.0% cider and 4.0% alcopops.

Survey participants were asked about their intention to drink any alcohol after the survey, during the rest of their night out. The majority (82.2%) of drinkers intended to consume more alcohol (81.3% of all participants). Of those who intended to consume more alcohol, the median number of units expected to be consumed was 8.0. In total the median expected alcohol consumption over the entire night (including alcohol already consumed and expected to be consumed) was 19.5 units. Male drinkers expected to consume significantly more units over the entire night out than females (males, 24.0; females, 17.2;  $p < .05$ ). Amongst the individuals who had drunk alcohol prior to survey participation, preloaders expected to consume a significantly higher number of units over the course of the entire night than non-preloaders (preloaders, 22.0; non-preloaders, 16.7;  $p < .05$ ). Overall, 26.2% of the total alcohol consumed over the course of the night out was drunk while preloading or en route loading prior to entering the city's nightlife. Finally, 13.2% of all participants intended to consume more alcohol after leaving the city's nightlife (14.0% of drinkers).

### **Drunkness**

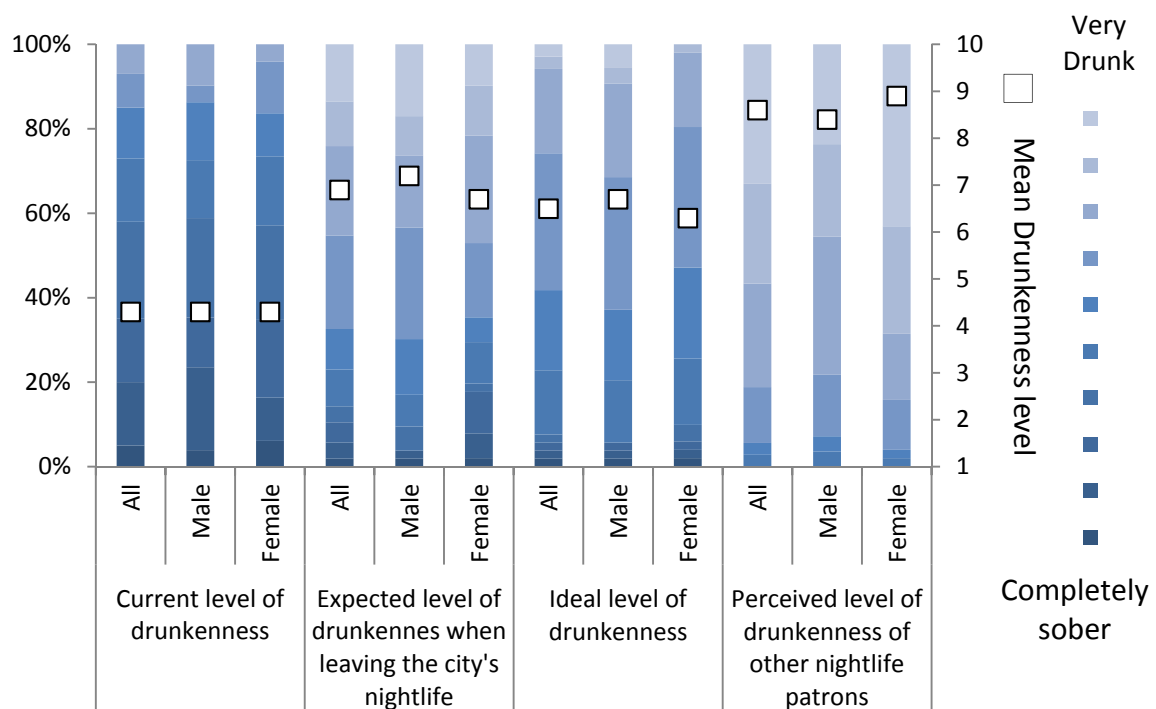
Using a scale of 1 (completely sober) to 10 (very drunk), participants were asked: how drunk they felt at the time of survey; how drunk they thought they would be when they left the city's nightlife that evening; what their ideal level of drunkness is; and what they thought the typical level of drunkness was that people reach on a night out in the city centre (Figure 10). One in twenty (5.0%) of those who had drunk prior to survey participation reported feeling completely sober. The mean score for how drunk drinkers felt at the time of the survey was 4.3; there was no significant difference between the genders. The mean score for how drunk drinkers (including those who had not drunk alcohol prior to the survey

but intended to do so on the remainder of their night out) felt they would be when they left the city's nightlife that night was 6.9; there was no significant difference between the genders. The mean ideal level of drunkenness reported by all participants was 6.5; with no significant difference between the genders. The mean score reported by participants for the perceived level of drunkenness that people reach on a night out in the city centre was 8.6; there was a significant difference between the genders (males, 8.4; females, 8.9;  $p < .05$ ).

These scales of drunkenness were grouped into two levels: low (scores one to five) and high (scores six to 10). At the time of the survey, almost three in ten (27.0%) of drinkers reported their current level of drunkenness as high, while 76.9% of drinkers (including those who had not drunk prior to survey participation but intended to do so during the remainder of the night) expected their level of drunkenness to be high when they left the city's nightlife that night. Three quarters (77.1%) of individuals reported their ideal level of drunkenness as high, whilst the majority (97.2%) thought people on a night out in the city centre typically reached a high level of drunkenness.

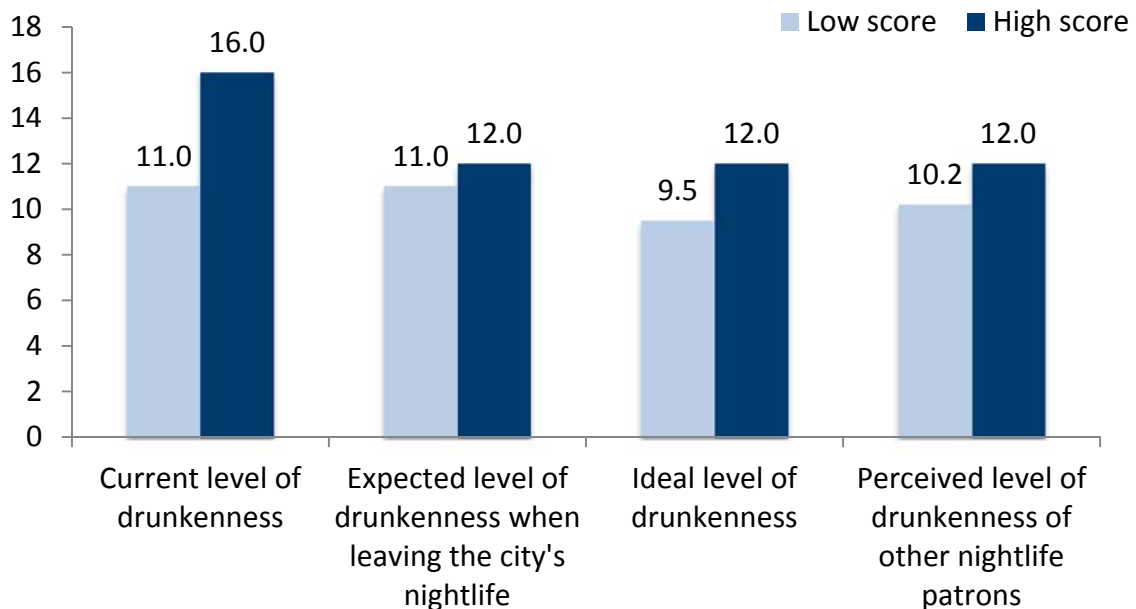
Figure 11 shows the median alcohol units drunk prior to survey participation by drinkers reporting low and high scores for each drunkenness statement. Those who reported high scores for level of current drunkenness drank significantly more units than those reporting low scores (high, 16.0 units; low, 11.0;  $p < .01$ ).

**Figure 10: Participants' perceptions on their and other nightlife users' level of drunkenness, Swansea pre-intervention survey**





**Figure 11: Median alcohol units consumed up to the point of survey of drinkers reporting a low (1-5) or high (6-10) drunkenness rating\* for selected statements on drunkenness, Swansea pre-intervention survey**



\*Drunkenness was rated on a scale of one to 10, with one being completely sober and 10 being very drunk. Scores of one to five were classed as a low rating and six to 10 as a high rating.

Participants were then asked how much they agreed or disagreed with a range of statements relating to drunkenness using a five point scale from strongly agree to strongly disagree<sup>3</sup>. The majority (88.6%) of participants agreed (strongly agree and agree) that getting drunk is socially acceptable in this city's nightlife, whilst over two thirds (69.5%) also agreed that bar staff do not care if customers get drunk on their premises. Almost two thirds (62.9%) of participants agreed the city centre was a safe place to go for a night out with a similar proportion (65.7%) agreeing that the authorities do not tolerate drunken behaviour in the city's nightlife. Whilst less than half (41.9%) of participants agreed it was hard to enjoy a night out in the city centre if you do not get drunk, 51.5% agreed that people who get drunk ruin the night out for other people and 44.8% of participants agreed that the city centre would offer a better night out if people got less drunk.

### **Service of alcohol to drunk people**

Participants were asked two questions relating to the service of alcohol to drunk people in licensed premises in the respective city centres. Over half (59.4%) of all participants believed that if someone was drunk and tried to get served alcohol on a night out in the city centre they would usually be served. Participants were then asked if they knew a bar would not serve alcohol to someone who was drunk would they be more likely or less likely to go there. Four in ten (43.3%) reported that they would be less likely to go there, 10.6% were more likely to go there and 46.2% stated that it would not affect their decision to go there.

### **Perceptions of the law on drinking, serving and purchasing alcohol**

Four in ten (45.3%) participants thought it was legal for a bar server to sell alcohol to someone who was already drunk, with just under half (49.1%) of all participants stating it was illegal and 5.7% reporting they did not know. One third (36.2%) of all participants thought it was legal to buy alcohol for a friend who was already drunk, while half (55.2%) thought it was illegal and 8.6% did not know. Although two thirds of individuals knew it was legal for a person to drink alcohol when they were already drunk (69.8%), one fifth (21.7%) thought it was illegal and 8.5% did not know.

**Table 4: Alcohol consumption over the course of the night out, Swansea pre-intervention survey**

Alcohol consumption		Sex				Age group				Student			South Wales resident		
		All	Male	Female	p	18-21	22-29	30+	p	No	Yes	p	No	Yes	p
<b>Preloading*</b>	%	65.0%	59.6%	70.6%	NS	82.9%	51.3%	54.5%	<.01	65.0%	75.0%	NS	87.5%	63.2%	NS
	Units	7.0	8.0	6.2	NS	7.5	5.3	9.0	NS	6.2	8.0	NS	8.0	6.2	NS
<b>En route loading*</b>	%	22.3%	21.2%	23.5%	NS	19.5%	25.6%	18.2%	NS	27.5%	5.0%	NS	12.5%	23.2%	NS
	Units	2.1	6.0	2.1	NS	2.0	5.0	5.1	NS	3.1	2.0	NS	2.0	3.1	NS
<b>City centre nightlife – purchased in pubs/bars/nightclubs*</b>	%	86.9%	85.7%	88.0%	NS	80.5%	91.7%	95.2%	NS	89.5%	75.0%	NS	100.0%	85.7%	NS
	Units	6.0	7.6	5.0	<.05	5.0	7.1	7.5	NS	6.6	6.0	NS	3.5	6.0	NS
<b>City centre nightlife - purchased from off-licences/supermarkets*</b>	%	15.2%	16.3%	14.0%	NS	17.1%	19.4%	4.8%	NS	15.8%	15.0%	NS	50.0%	12.1%	<.05
	Units	14.0	14.0	8.0	NS	14.0	8.0	18.0	NS	12.6	14.0	NS	19.8	11.2	NS
<b>Total units consumed prior to survey completion*</b>	Units	12.0	14.0	11.0	<.05	12.0	12.0	11.0	NS	12.1	10.0	NS	16.0	11.0	<.05
<b>Expected units consumed post survey^</b>	Units	8.0	10.0	8.0	NS	10.0	8.5	8.0	NS	9.0	8.0	NS	8.0	8.5	NS
<b>Total units consumed during night out†</b>	Units	19.5	24.0	17.2	<.05	20.3	19.3	18.1	NS	20.0	18.5	NS	23.9	19.0	NS

Note. Units presented are the median value. NS = not significant. \*Of those who had consumed alcohol pre survey only. ^Of those who reported that they would drink alcohol post survey only. †Including reported and, or expected consumption.

## Swansea pre- and post-intervention survey comparisons

One hundred and forty six nightlife users took part in the post-intervention survey, compared with 109 in the pre-intervention survey. There were no significant differences in sample characteristics, nightlife usage or alcohol consumption between each wave of survey. There were also no significant differences between the surveys in reported ratings of: current level of drunkenness; expected level of drunkenness when leaving the city's nightlife; ideal level of drunkenness; or the perceived level of drunkenness of other nightlife patrons.

There were several positive changes in attitudes towards drunkenness and perceptions of the night-time economy (Figure 12). Compared with pre-intervention survey participants, a significantly smaller proportion of post-intervention survey participants agreed (including strongly agree and agree) that getting drunk is socially acceptable in the city's nightlife (pre, 88.6%; post, 70.5;  $p < .01$ ). A smaller proportion of post-intervention survey participants also agreed that it's hard to enjoy a night out if you don't get drunk (pre, 41.9%; post, 35.5%;  $p = .377$ ) and bar staff do not care if people get drunk on their premises (pre, 69.5%; post, 58.0%;  $p = .087$ ), although these results were non-significant. Compared to pre-intervention survey participants more post-intervention participants agreed that drunk people ruin a night out for others (pre, 51.4%; post, 56.8%;  $p = .478$ ) and the city centre was a safe place to go for a night out (pre, 62.9%; post, 65.5%;  $p = .774$ ), although these results were non-significant.

**Figure 12: Proportion of participants strongly agreeing/agreeing with selected statements on drunkenness, Swansea pre- and post-intervention survey**

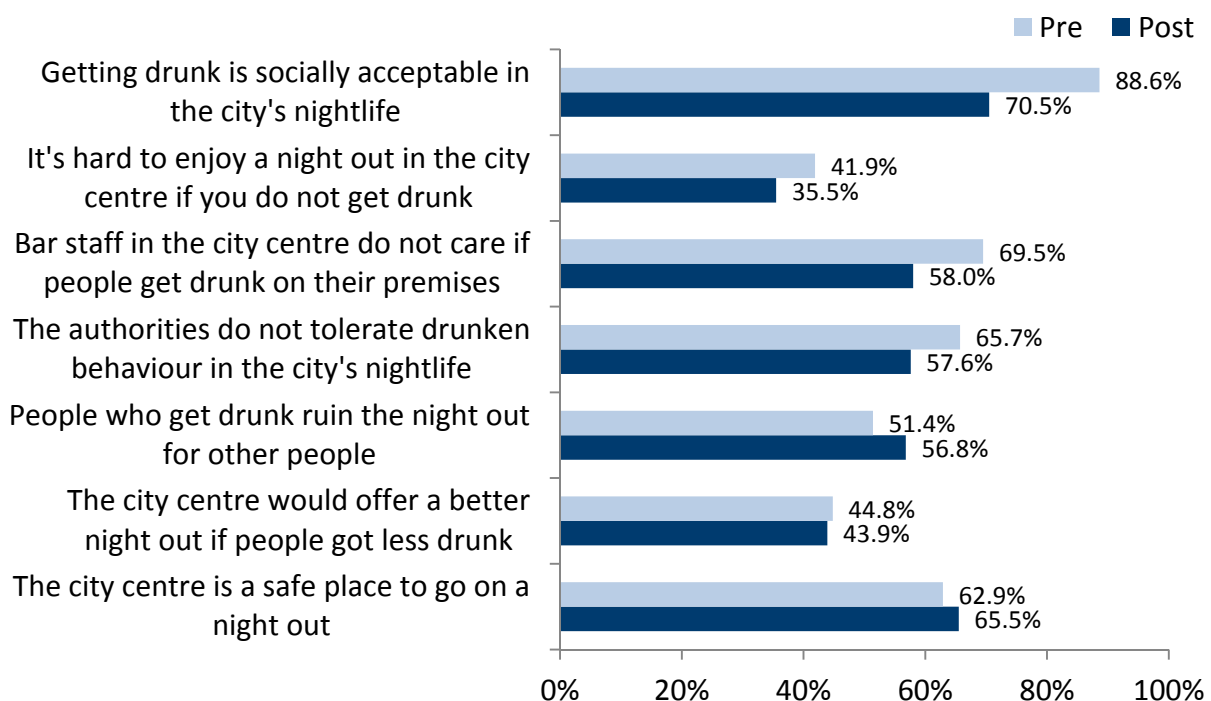
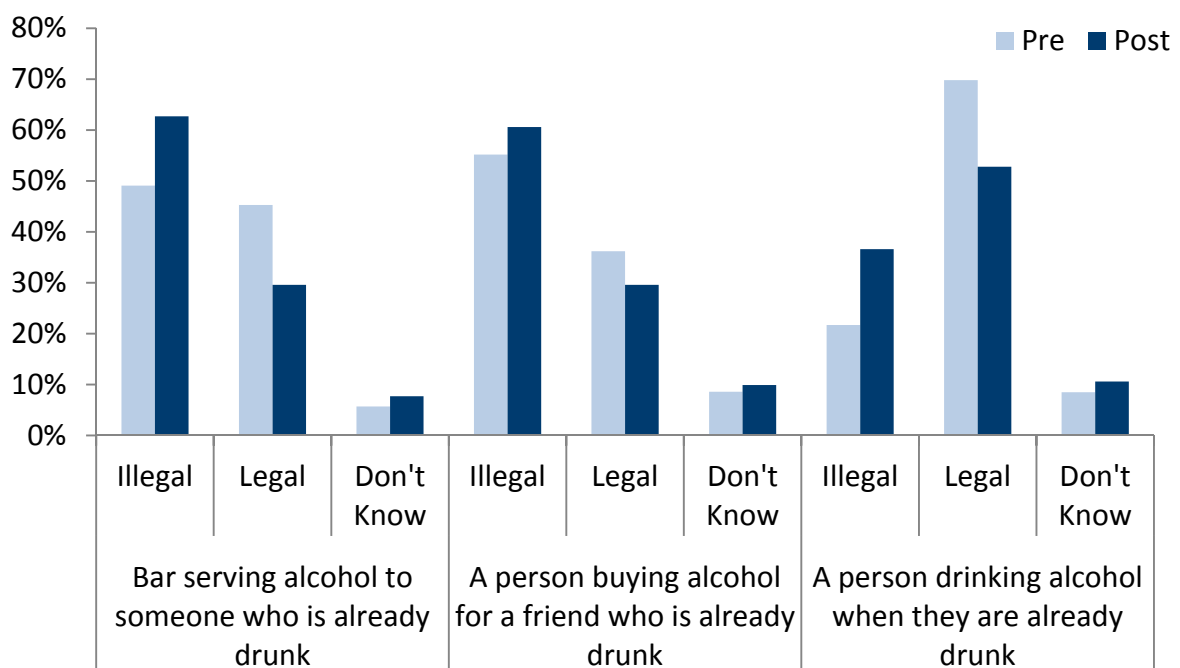


Figure 13 shows there was a significant increase in the proportion of survey participants responding that it is illegal for a bar server to sell alcohol to someone who is already drunk from pre- (49.1%) to post-intervention (62.7%) surveys ( $p < .05$ ). The proportion of post-intervention survey participants reporting that it is illegal to buy alcohol for a friend who is already drunk also increased from 55.2% to 60.6% although this was non-significant ( $p = .544$ ). A significantly higher proportion of post-intervention survey participants believed it was illegal for a person to drink alcohol when they were already drunk (pre, 21.7%; post, 36.6%;  $p < .05$ ).

**Figure 13: Participant perceptions of the law around serving and purchasing alcohol, Swansea pre- and post-intervention survey**

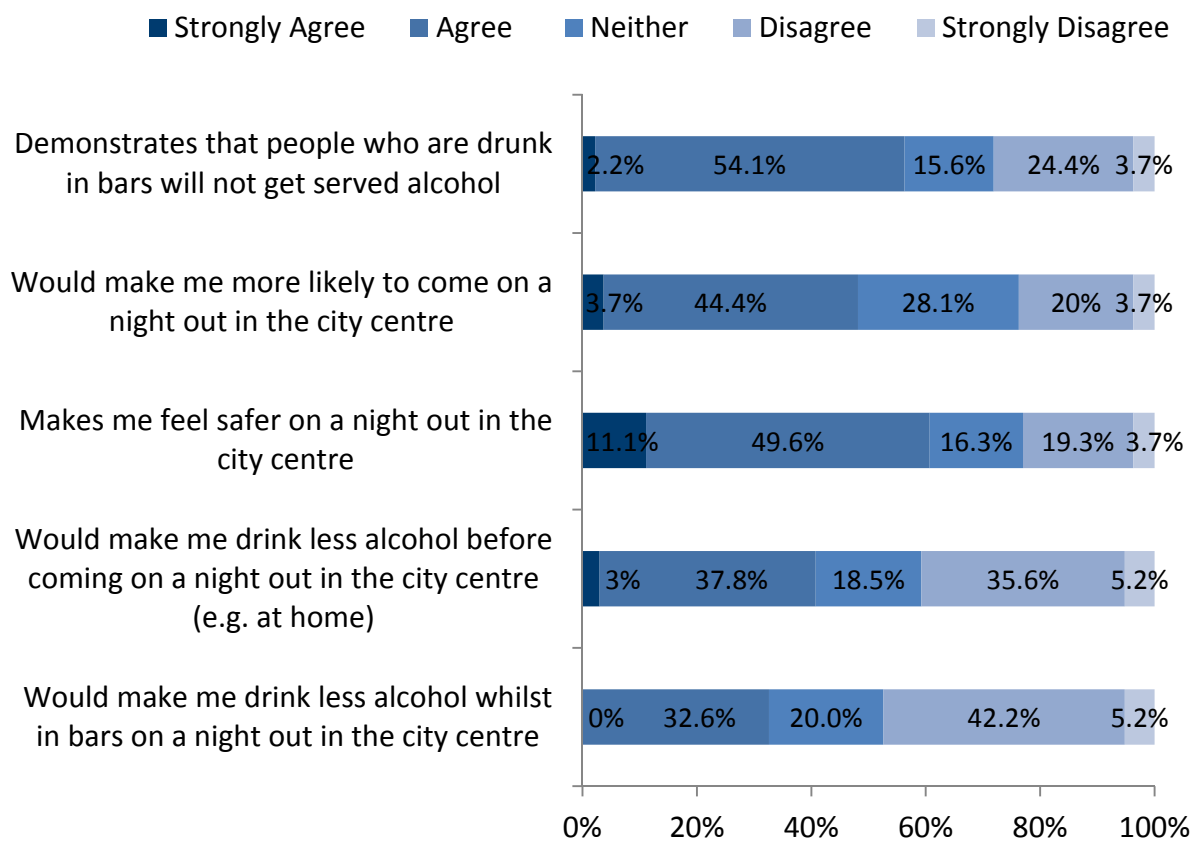


### Swansea Know the Score intervention awareness

At the end of the post-intervention survey participants were asked if they were aware of the Know the Score intervention. One fifth (22.1%;  $n=30$ ) of participants initially reported they were aware of the intervention. However, when participants who reported they were unaware of the intervention were prompted with intervention materials shown by the interviewer (Figure 8, Appendix 1), an additional 10.3% ( $n=14$ ) reported they were aware. Thus, overall 32.4% ( $n=44$ ) post-intervention survey participants were aware of the Know the Score intervention. Of all individuals who were therefore aware of the intervention: 63.6% ( $n=28$ ) had seen a intervention poster; 20.5% ( $n=9$ ) had seen a bar staff Know the Score badge, or t-shirt; 2.3% ( $n=1$ ) had seen the intervention in a newspaper or magazine article; 4.5% ( $n=2$ ) had heard about it on the radio; whilst 13.6% ( $n=6$ ) reported being made aware of the intervention by other means such as Twitter or Facebook.

All post-intervention survey participants were then asked how much they agreed or disagreed with a range of statements about the intervention (Figure 14). Over half (56.3%) agreed (strongly agreed/agreed) that the intervention demonstrated that people who are drunk in bars will not get served more alcohol; almost a third (28.1%) disagreed (strongly disagreed/disagreed); whilst 15.6% neither agreed nor disagreed. Almost half (48.1%) of participants agreed that the intervention would make them more likely to go on a night out in the city centre, with six in ten (60.7%) participants agreeing that the intervention makes them feel safer on a night out in the city centre. More than three in ten agreed that the intervention would make them drink less alcohol before coming on a night out in the city centre (40.8%) or whilst in bars in the city centre (32.6%).

**Figure 14: Participants' perceptions of the Know the Score intervention, Swansea post-intervention survey**



## Appendix 3: Cardiff

### Cardiff pre-intervention survey findings

#### Sample characteristics

One hundred and forty four nightlife users took part in the pre-intervention survey. Over half (52.6%) of patron surveys were conducted between the hours of 10pm and 11.59pm. Two thirds (66.7%) of participants were male and participants ranged in age from 18 to 65 years, with a mean age of 25 years. The majority (80.6%) of participants were currently living in South Wales and 35.7% were students.

#### Nightlife usage

One third (34.0%) of nightlife users reported that they typically go on a night out in Cardiff City Centre once a week or more, with 17.4% reporting going on a night out 2-3 times per month and 41.0% once a month or less. Less than one in ten (7.6%) were on their first night out in the city. On average, from the time of entry to anticipated home time, survey participants expected to spend almost five and a half hours (5:29) in Cardiff's nightlife. At the time of the survey, participants had visited on average two venues (range: zero to 10). Over half (56.6%) of participants had arrived in Cardiff City Centre for their night out before 10pm. Over a third (35.7%) reported coming into the city centre between 10pm and 11.59pm, while 7.7% reported entering the night-time economy past midnight. The majority (66.9%) of participants intended to leave the city's nightlife between the hours of 12am and 3.59am, whilst 23.9% expected to go home after 4am.

#### Alcohol consumption

The majority (92.3%) of nightlife users had consumed alcohol prior to participating in the survey. Nearly a quarter (23.4%) of drinkers consumed their first drink before 6pm, whilst 62.5% started drinking between 6pm and 9.59pm, and 14.1% after 10pm. The average time between participant's first drink and participation in the survey was four and a half hours (4:27). Over six in ten (61.8%) drinkers consumed alcohol at home or a friend's house before coming into the city centre for their night out (preloading). Younger age groups were significantly more likely to have preloaded (Table 5). More than one in ten (13.8%) drinkers reported consuming alcohol after leaving home or a friend's house, but prior to arriving in the city centre (en route loading). Over half (52.9%) of drinkers reporting en route loading had consumed alcohol on transport/within transport settings (e.g. taxi, train, airport), whilst 41.2% had drunk at a licensed premise (e.g. local pub, restaurant) and 5.9% on the street or other location. The majority (76.7%) of drinkers had consumed alcohol in a city centre bar, pub or nightclub prior to survey participation. Over one in ten (14.7%) drinkers had consumed alcohol in the night-time economy prior to survey participation which was purchased from an off-licence or supermarket (including alcohol they had brought into the city centre with them).

Overall, the median number of units that drinkers consumed prior to survey participation was 10.0 units, with males reporting having consumed significantly more units than females (males, 10.2; females, 7.4;  $p < .05$ ). The median number of units drinkers consumed over the course of the night out was: 5.1 units while preloading; 4.0 units during en route loading; 6.2 units in bars, nightclubs, and pubs in Cardiff City Centre; and for alcohol consumed in the nightlife area that was purchased from an off-licence or supermarket 4.0 units. There was no significant difference between gender, age group, student status or residency on the number of units consumed at any of these points over the course of the night out. By the time of the survey participation, the majority (66.7%) of drinkers had consumed spirits<sup>2</sup>, almost half (49.6%) beer or lager, almost one quarter (23.3%) wine, 20.9% cider and 2.3% alcopops.

Survey participants were asked about their intention to drink any alcohol after the survey, during the rest of their night out. The majority (75.4%) of drinkers intended to consume more alcohol (73.8% of all participants). Of those who intended to consume more alcohol, the median number of units expected to be consumed was 7.0, with males (males, 8.5; females, 5.5;  $p < .01$ ) and non-students (non-students, 8.0; students, 5.0;  $p < .05$ ) intending to consume significantly more. In total the median expected alcohol consumption over the entire night (including alcohol already consumed and expected to be consumed) was 14.5 units. Males expected to consume significantly more units over the entire night out than females (males, 19.0; females, 12.0;  $p < .01$ ). Amongst the individuals who had drunk alcohol prior to survey participation, preloaders expected to consume a significantly higher number of units over the course of the entire night than non-preloaders (preloaders, 18.0; non-preloaders, 9.0;  $p < .001$ ). Overall, 26.5% of the total alcohol consumed over the course of the night out was drunk while preloading or en route loading prior to entering the city's nightlife. Finally, 18.3% of all participants intended to consume more alcohol after leaving the city's nightlife (18.3% of drinkers).

### **Drunkenness**

Using a scale of 1 (completely sober) to 10 (very drunk), participants were asked: how drunk they felt at the time of survey; how drunk they thought they would be when they left the city's nightlife that evening; what their ideal level of drunkenness is; and what they thought the typical level of drunkenness was that people reach on a night out in the city centre (Figure 15). Over one in ten (11.5%) of those who had drunk prior to survey participation reported feeling completely sober. The mean score for how drunk drinkers felt at the time of the survey was 4.3; there was no significant difference between gender. The mean score for how drunk drinkers (including those who had not drunk alcohol prior to the survey but intended to do so on the remainder of their night out) felt they would be when they left the city's nightlife that night was 6.7; there was no significant difference between gender. The mean ideal level of drunkenness reported by all participants was 6.4; there was a significant difference between gender (males, 6.6; females, 5.8;  $p < .05$ ). The mean score reported by

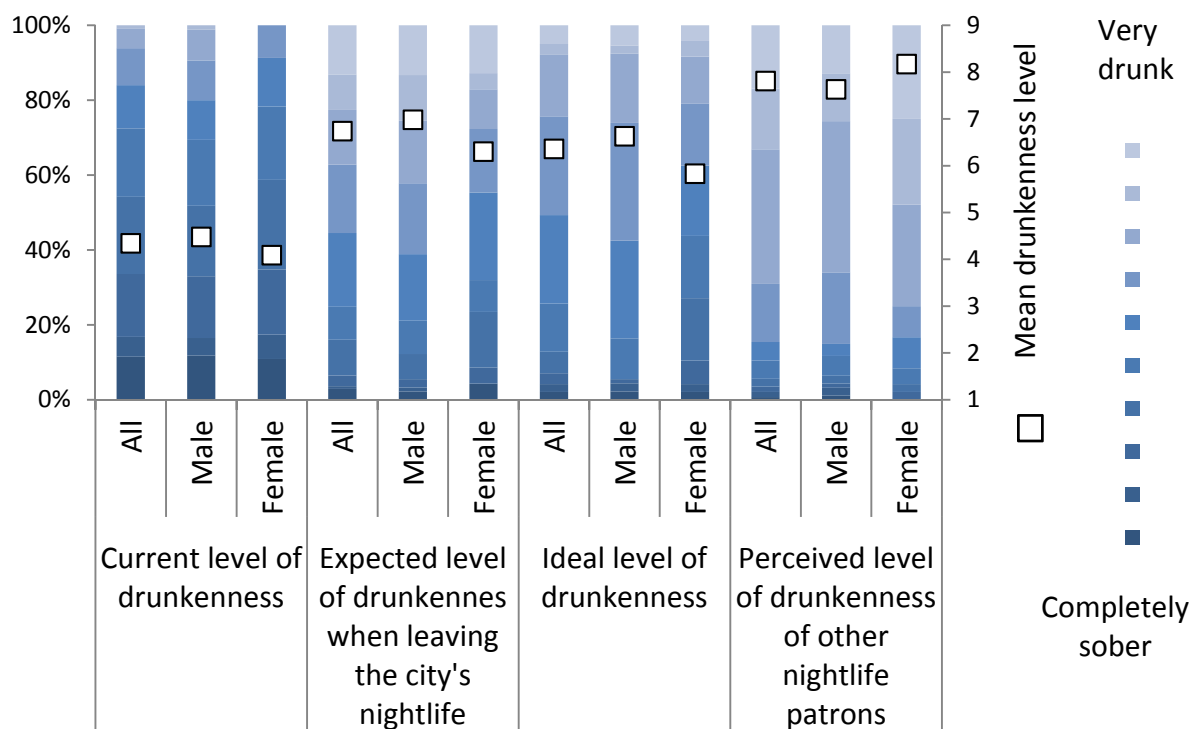


participants for the perceived level of drunkenness that people reach on a night out in the city centre was 7.8; there was no significant difference between genders.

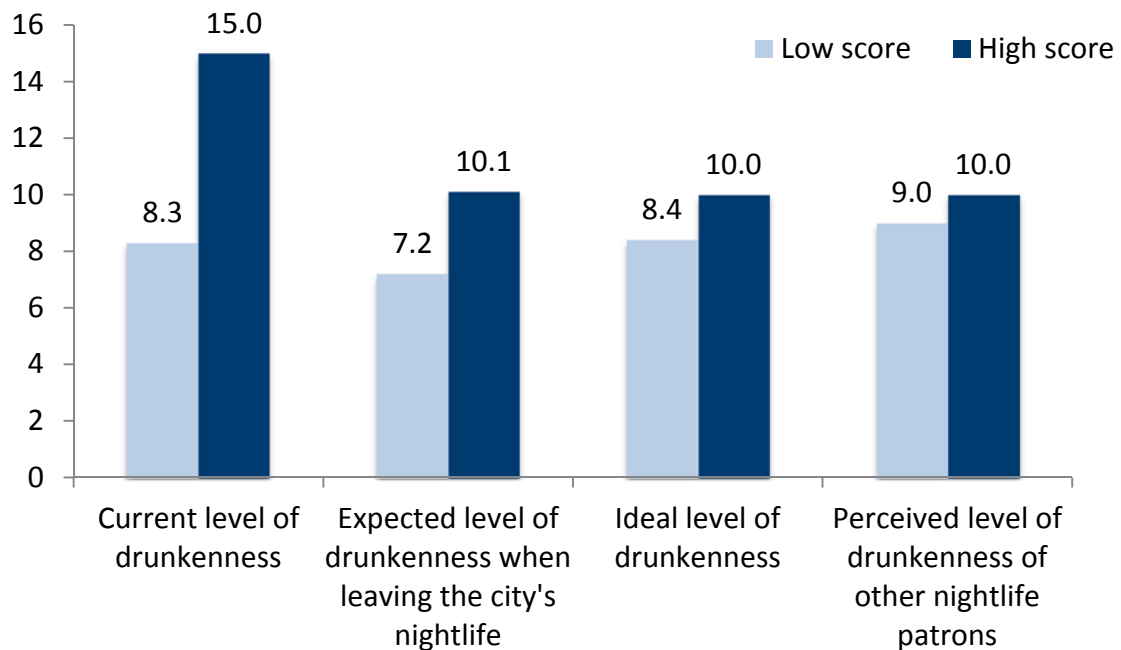
These scales of drunkenness were grouped into two levels: low (scores one to five) and high (scores six to 10). At the time of the survey, almost three in ten (27.5%) of drinkers reported their current level of drunkenness as high, while 75.2% of drinkers (including those who had not drunk prior to survey participation but intended to do so during the remainder of the night) expected their level of drunkenness to be high when they left the city’s nightlife that night. Three quarters (74.3%) of individuals reported their ideal level of drunkenness as high, whilst the majority (89.4%) thought people on a night out in the city centre typically reached a high level of drunkenness.

Figure 16 shows the median alcohol units drank prior to survey participation by drinkers reporting low and high scores for each drunkenness statement. Those who reported high scores for each of the following drunkenness statement drank significantly more units than those reporting low scores: current drunkenness (high, 15.0 units; low, 8.3;  $p < .01$ ) and expected drunkenness upon leaving the city’s nightlife (high, 10.1; low, 7.2;  $p < .05$ ).

**Figure 15: Participants’ perceptions on their and other nightlife users’ level of drunkenness, Cardiff pre-intervention survey**



**Figure 16: Median alcohol units consumed up to the point of survey of drinkers reporting a low (1-5) or high (6-10) drunkenness rating\* for selected statements on drunkenness, Cardiff pre-intervention survey**



\*Drunkenness was rated on a scale of one to 10, with one being completely sober and 10 being very drunk. Ratings of one to five were classed as a low rating and ratings of six to 10 as a high rating.

Participants were then asked how much they agreed or disagreed with a range of statements relating to drunkenness using a five point scale from strongly agree to strongly disagree<sup>3</sup>. The majority (85.1%) of participants agreed (strongly agree and agree) that getting drunk is socially acceptable in this city's nightlife, whilst over half (57%) also agreed that bar staff do not care if customers get drunk on their premises. The majority (73.2%) of participants agreed the city centre was a safe place to go for a night out, whilst 57.4% agreed that the authorities do not tolerate drunken behaviour in the city's nightlife. Less than half of participants agreed that: it was hard to enjoy a night out in the city centre if you do not get drunk (49.3%); people who get drunk ruin the night out for other people (47.2%); and the city centre would offer a better night out if people got less drunk (42.8%).

### **Service of alcohol to drunk people**

Participants were asked two questions relating to the service of alcohol to drunk people in licensed premises in the respective city centres. Over half (51.8%) of all participants believed that if someone was drunk and tried to get served alcohol on a night out in the city centre they would usually be served. Participants were then asked if they knew a bar would not serve alcohol to someone who was drunk would they be more likely or less likely to go there. Over a third (36.6%) of participants reported that they would be less likely to go there, 18.3% were more likely to go there and 45.1% stated that it would not affect their decision to go there.

### **Perceptions of the law on drinking, serving and purchasing alcohol**

Over a third (36.6%) of participants thought it was legal for a bar server to sell alcohol to someone who was already drunk, with just under half (47.2%) of all participants stating it was illegal and 16.2% reporting they did not know. Over one third (38.7%) of all participants thought it was legal to buy alcohol for a friend who was already drunk, while almost a quarter (23.2%) thought it was illegal and 10.6% did not know. Two thirds of individuals thought it was legal for a person to drink alcohol when they were already drunk (66.2%), 23.2% thought it was illegal and 10.6% did not know.

**Table 5: Alcohol consumption over the course of the night out, Cardiff pre-intervention survey**

Alcohol consumption		Sex				Age group				Student			South Wales resident		
		All	Male	Female	p	18-21	22-29	30+	p	No	Yes	p	No	Yes	p
<b>Preloading*</b>	%	61.8%	60.0%	65.2%	NS	82.7%	52.8%	36.0%	<.001	54.5%	76.7%	<.05	64.0%	61.3%	NS
	Units	5.1	6.0	4.0	NS	6.0	6.2	4	NS	4.0	6.0	NS	8.0	5.0	NS
<b>En route loading*</b>	%	13.8%	17.9%	6.5%	NS	17.3%	13.2%	8.3%	NS	16.1%	9.3%	NS	16.0%	13.3%	NS
	Units	4.0	4.0	4.0	NS	4.0	4.0	5.6	NS	4.0	5.0	NS	5.0	4.0	NS
<b>City centre nightlife - purchased in pubs/bars/nightclubs*</b>	%	76.7%	79.5%	71.7%	NS	67.3%	82.7%	87.5%	NS	77.9%	74.4%	NS	92.0%	73.1%	NS
	Units	6.2	6.0	6.3	NS	5.1	6.0	7.5	NS	6.7	5.1	NS	6.8	6.0	NS
<b>City centre nightlife - purchased from off-licences/supermarkets*</b>	%	14.7%	15.7%	13.0%	NS	15.4%	15.4%	12.5%	NS	16.3%	11.6%	NS	20.0%	13.5%	NS
	Units	4.0	6.0	2.6	NS	6.4	2.1	9.0	NS	3.0	8.0	NS	8.0	3.5	NS
<b>Total units consumed prior to survey completion*</b>	Units	10.0	10.2	7.4	<.05	11.0	8.6	7.8	NS	8.8	10.2	NS	10.0	9.5	NS
<b>Expected units consumed post survey^</b>	Units	7.0	8.5	5.5	<.01	6.2	8.0	6.0	NS	8.0	5.0	<.05	8.0	7.0	NS
<b>Total units consumed during night out^</b>	Units	14.9	19.0	12.0	<.01	17.9	14.0	14.0	NS	15.0	14.4	NS	18.5	14.2	NS

Note. Units presented are the median value. NS = not significant. \* Of those who had consumed alcohol pre survey only ^ Of those who reported that they would drink alcohol post survey only. + Including reported and, or expected consumption.

## Cardiff pre- and post-intervention survey comparisons

One hundred and sixty three nightlife users took part in the post-intervention survey, compared with 144 in the pre-intervention survey. There were some significant differences between each wave of survey in sample characteristics and nightlife usage. Post-intervention survey participants were significantly older (pre, 24.9 years; post; 28.0 years;  $p < .001$ ), and significantly less likely to be a student (pre, 35.7% students; post, 22.1% students;  $p < .05$ ), than pre-intervention survey participants. Compared to pre-intervention survey participants, post-intervention survey participants: intended to spend longer in Cardiff's nightlife; had visited more venues by the time of the survey; had come out earlier; and intended to go home later (Table 6).

**Table 6: Nightlife usage, Cardiff pre- and post-intervention survey**

Nightlife usage	Pre	Post	p
Hours in city nightlife	5:29	6:13	<.05
Number of venues visited	1.7	2.4	<.001
Regularity of nights out			
≥Once a month	75.0%	70.4%	NS
<Once a month	25.0%	29.6%	
Time came out			
Before 10pm	56.6%	77.8%	
10pm -11.59pm	35.7%	22.2%	<.001
After midnight	7.7%	0.0%	
Expected time home			
10pm-11.59pm	9.2%	8.2%	
12am-3.59am	66.9%	79.2%	<.05
After 4am	23.9%	12.6%	

There were also significant differences in alcohol consumption between each wave of survey. Significantly more post-intervention survey participants had consumed their first drink before 6pm (pre, 23.4%; post, 32.2%;  $p < .05$ ). Compared with pre-intervention survey participants significantly less post-intervention participants reported preloading (pre, 61.8%; post, 43.3%;  $p < .005$ ) and consuming alcohol purchased from an off-licence or supermarket (pre, 14.7%; post, 5.3%;  $p < .05$ ). Significantly more post-intervention survey participants had consumed alcohol purchased in a city centre bar, pub or nightclub and had also consumed a significantly higher number of units in the city centre venues than pre-intervention survey participants. There were no significant differences between the surveys in reported ratings of: current level of drunkenness; expected level of drunkenness when leaving the city's nightlife; ideal level of drunkenness; or the perceived level of drunkenness of other nightlife patrons.

There were several positive changes in attitudes towards drunkenness and perceptions of the night-time economy (Figure 17). Compared with pre-intervention survey participants, a significantly smaller proportion of post-intervention survey participants agreed (including strongly agree and agree) that: it's hard to enjoy a night out if you don't get drunk (pre, 49.3%; post, 36.5%;  $p < .05$ ); and drunken behaviour is not tolerated in the city centre by the authorities (pre, 57.4%; post, 42.1%;  $p < .05$ ). A smaller proportion of post-intervention survey participants also agreed that getting drunk is socially acceptable in the city's nightlife (pre, 85.1%; post 77.2%;  $p = .113$ ) although this result was non-significant. Compared to pre-intervention survey participants more post-intervention participants agreed that: drunk people ruin a night out for others (pre, 47.2%; post, 51.0%;  $p = .592$ ); the city centre would offer a better night out if people got less drunk (pre, 33.8%; post, 42.8%;  $p = .14$ ); and the city centre is a safe place to go for a night out (pre, 73.2%; post, 74.2%;  $p = .952$ ), although these results were non-significant.

**Figure 17: Proportion of participants strongly agreeing/agreeing with selected statements on drunkenness, Cardiff pre- and post-intervention survey**

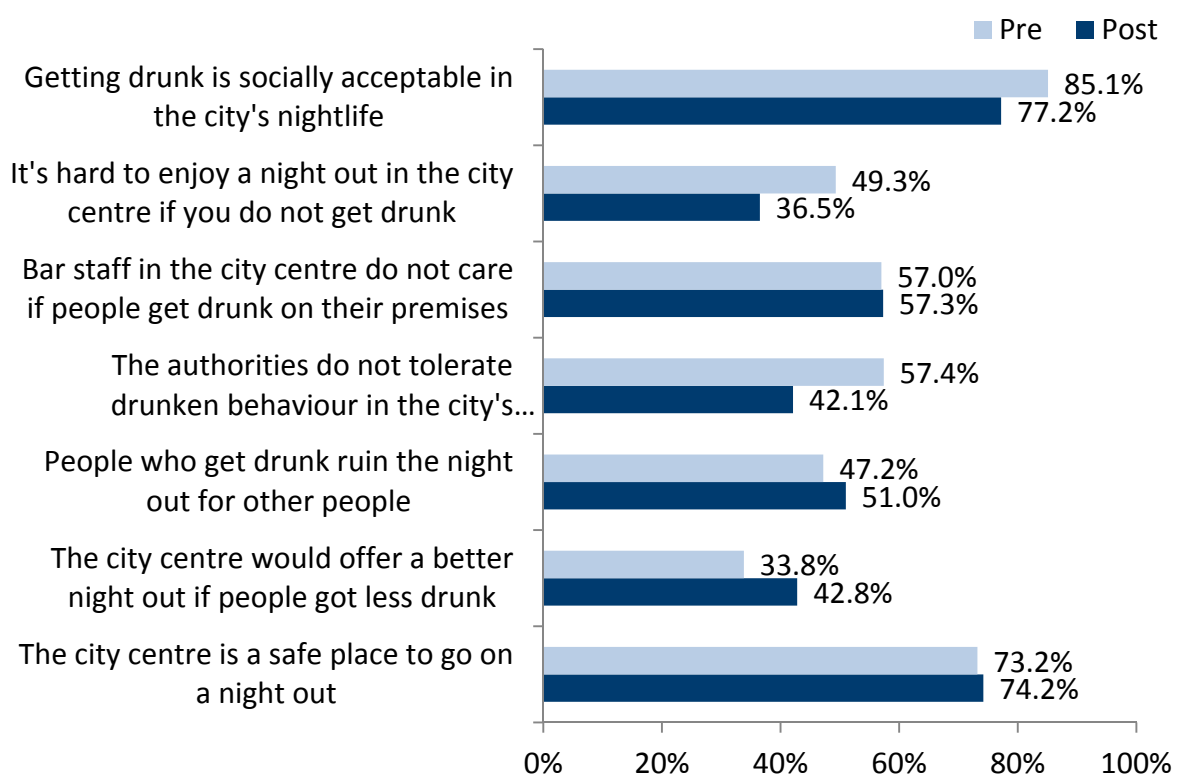
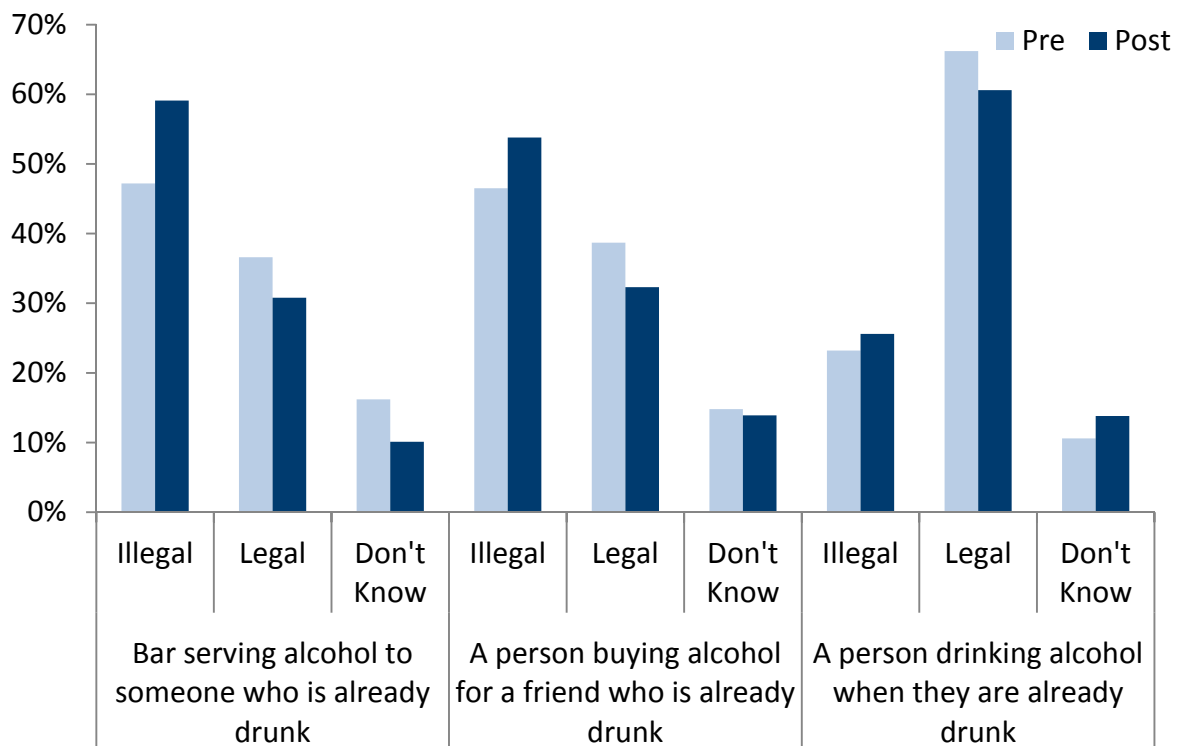


Figure 18 shows a non-significant increase in the proportion of survey participants responding that it is illegal for a bar server to sell alcohol to someone who is already drunk from pre- (47.2%) to post-intervention (59.1%) surveys ( $p = .085$ ). The proportion of participants reporting that it is illegal to buy alcohol for a friend who is already drunk also increased from 46.5% to 53.8% although this was non-significant ( $p = .424$ ). A slightly higher proportion of post-intervention survey participants believed it was illegal for a person to

drink alcohol when they were already drunk (pre, 23.2%; post, 25.6%;  $p=.558$ ), this difference was also non-significant.

**Figure 18: Participant perceptions of the law around serving, purchasing and consuming alcohol, Cardiff pre- and post-intervention survey**



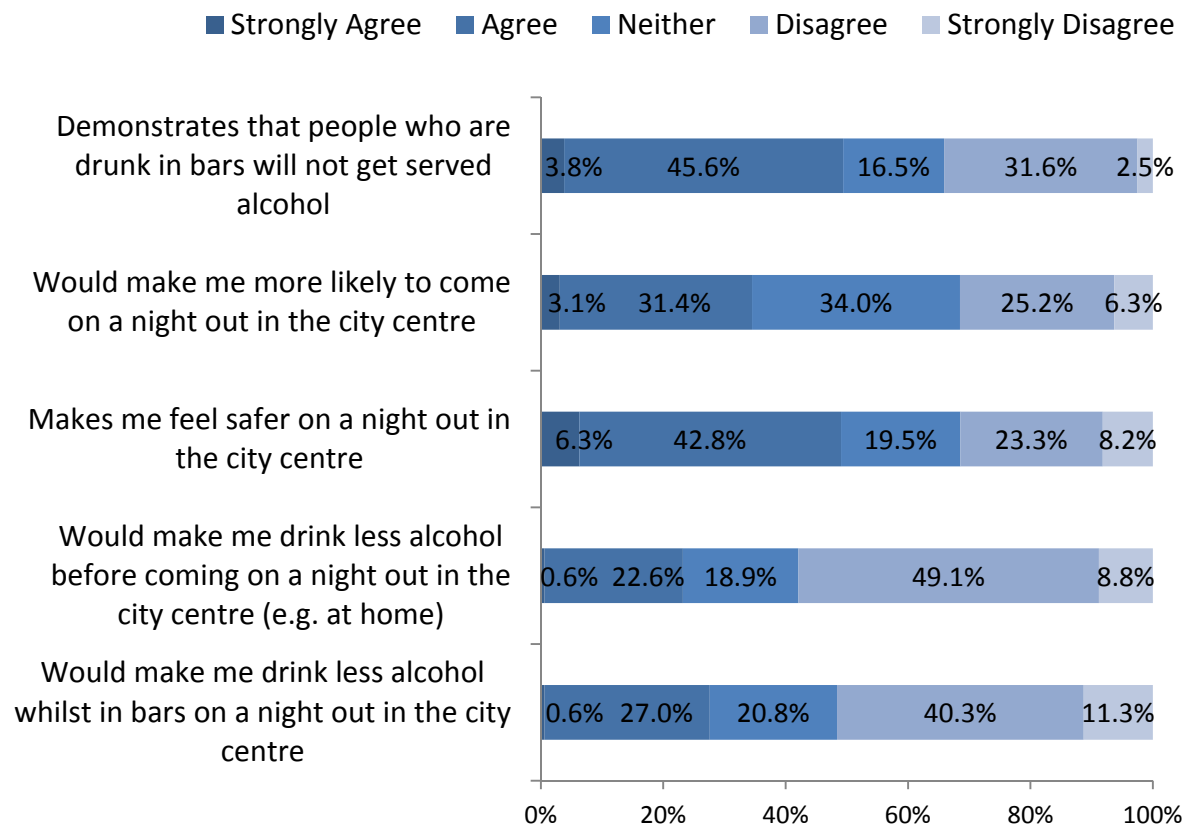
### Cardiff Know the Score intervention awareness

At the end of the post-intervention survey participants were asked if they were aware of the Know the Score intervention. Over one in ten (13.2%;  $n=21$ ) participants initially reported they were aware of the intervention. When participants who reported they were unaware of the intervention were prompted with intervention materials shown by the interviewer (Figure 8, Appendix 1), an additional 11.9% ( $n=19$ ) reported they were aware. Overall 25.1% ( $n=40$ ) post-intervention survey participants were aware of the Know the Score intervention. Of all individuals who were therefore aware of the intervention, 82.5% ( $n=33$ ) had seen a intervention poster; 15.0% ( $n=6$ ) had seen a bar staff Know the Score badge, or t-shirt; 10.0% ( $n=4$ ) had seen the intervention in a newspaper or magazine article; 12.5% ( $n=5$ ) had heard about it on the radio; whilst 37.5% ( $n=15$ ) reported being made aware of the intervention by other means such as Twitter or Facebook.

All post-intervention survey participants were then asked how much they agreed or disagreed with a range of statements about the intervention (Figure 19). Almost half (49.4%) agreed (strongly agreed/agreed) that the intervention demonstrated that people who are drunk in bars will not get served more alcohol. Over a third (34.5%) of participants agreed

that the intervention would make them more likely to go on a night out in the city centre, with almost half (49.1%) agreeing that the intervention makes them feel safer on a night out in the city centre. Around one quarter agreed that the intervention would make them drink less alcohol before coming on a night out in the city centre (23.2%) or whilst in bars in the city centre (27.6%).

**Figure 19: Participants' perceptions of the Know the Score intervention, Cardiff post-intervention survey**





## Appendix 4: Swansea and Cardiff pre-intervention survey comparisons

Table 7: Sample characteristics, Swansea and Cardiff pre-intervention survey

Characteristic	Swansea	Cardiff	p
<b>Age group</b>			
18-21 years	39.8%	41.3%	NS
22-29 years	39.8%	40.6%	
30+ years	20.4%	18.2%	
<b>Gender</b>			
Male	51.4%	66.7%	<.05
Female	48.6%	33.3%	
<b>Student status</b>			
Student	18.9%	35.7%	<.01
Non-student	81.1%	64.3%	
<b>Residency</b>			
South Wales	92.7%	80.6%	<.05
Other	7.3%	19.4%	

Table 8: Nightlife usage, Swansea and Cardiff pre-intervention survey

Nightlife usage	Swansea	Cardiff	p
Hours in city nightlife	5:21	5:29	NS
Number of venues visited	2.2	1.7	<.05
<b>Regularity of nights out</b>			
>Once a month	67.9%	75%	NS
<Once a month	32.1%	25%	
<b>Time came out</b>			
Before 10pm	61.1%	56.6%	NS
10pm & 11.59pm	37.0%	35.7%	
12am or later	1.9%	7.7%	
<b>Expected time home</b>			
10pm-11.59pm	5.7%	9.2%	NS
12am-3.59am	75.5%	66.9%	
4am or later	18.9%	23.9%	

**Table 9: Alcohol consumption over the course of the night out, Swansea and Cardiff pre-intervention survey**

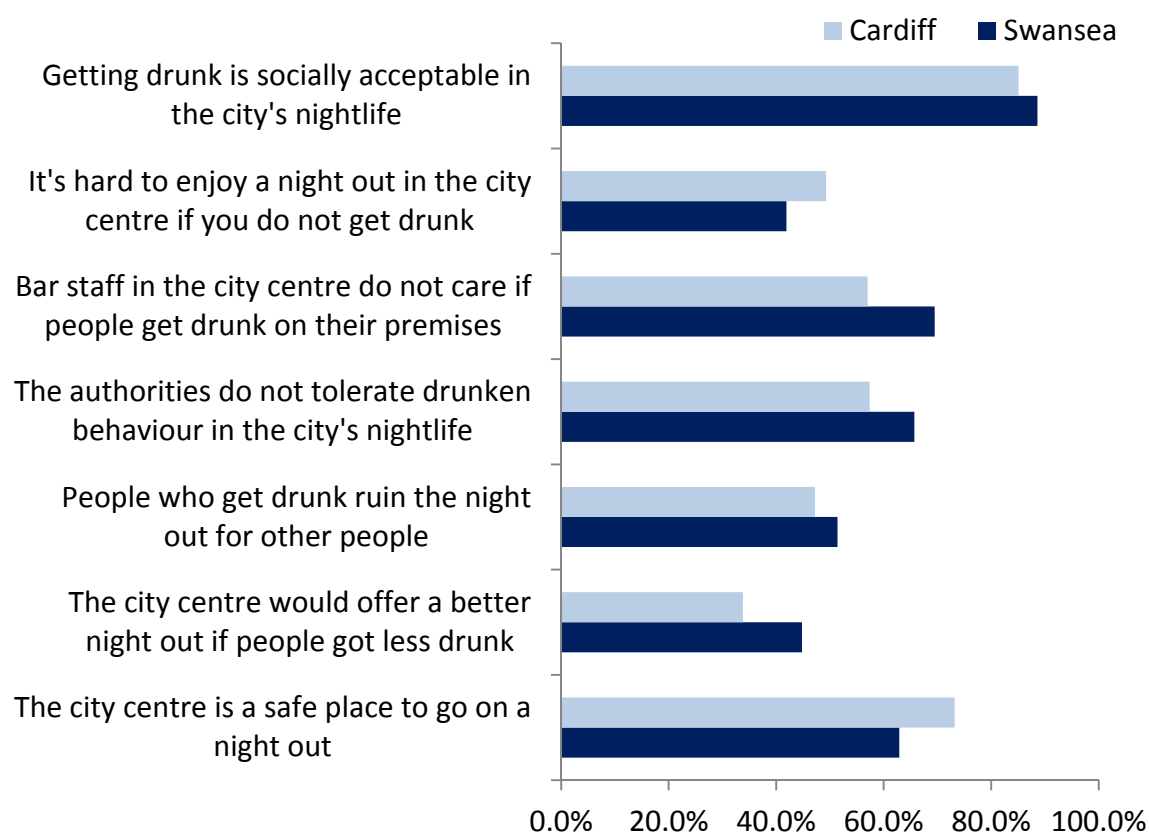
Alcohol consumption		Swansea	Cardiff	p
Consumed alcohol prior to survey		94.5%	92.3%	NS
Time of first drink				
	Before 6pm	26.0%	23.4%	
	6-9.59pm	67.0%	62.5%	NS
	10pm or later	7.0%	14.1%	
Preloading*	%	65.0%	61.8%	NS
	Units	7.0	5.1	NS
En route loading*	%	22.3%	13.8%	NS
	Units	2.1	4.0	NS
City centre nightlife - purchased in pubs/bars/nightclubs*	%	86.9%	76.7%	NS
	Units	6.0	6.2	NS
City centre nightlife - purchased from off-licences/supermarkets*	%	15.2%	14.7%	NS
	Units	14.0	4.0	NS
Total units consumed prior to survey completion*	Units	12.0	10.0	<.05
Expected units consumed post survey^	Units	8.0	7.0	NS
Total units consumed during night out^	Units	19.5	14.9	<.005

*Note.* Units presented are the median value. NS = not significant. \*Of those who had consumed alcohol pre survey only. ^Of those who reported that they would drink alcohol post survey only. + Including reported and, or expected consumption.

**Table 10: Levels of drunkenness, Swansea and Cardiff pre-intervention survey**

Drunkenness level	Swansea	Cardiff	p
Current level of drunkenness	4.3	4.3	NS
Expected level of drunkenness when leaving city's nightlife	6.9	6.7	NS
Ideal level of drunkenness	6.5	6.4	NS
Perceived level of drunkenness of other nightlife patrons	8.6	7.8	<.001

**Figure 20: Proportion of participants strongly agreeing/agreeing with selected statements on drunkenness, Swansea and Cardiff pre-intervention survey**



**Table 11: Service of alcohol to drunk people, Swansea and Cardiff pre-intervention survey**

Service of alcohol to drunks	Swansea	Cardiff	p
<b>Service of alcohol to drunks</b>			
<b>Served</b>	59.4%	51.8%	NS
<b>Refused</b>	40.6%	48.2%	
<b>Bar which serves drunks</b>			
<b>More likely to go there</b>	10.6%	18.3%	NS
<b>Less likely</b>	43.3%	36.6%	
<b>No change</b>	46.2%	45.1%	

**Table 12: Perceptions of the law on drinking, serving and purchasing alcohol, Swansea and Cardiff pre-intervention survey**

<b>Service of alcohol to drunks</b>		<b>Swansea</b>	<b>Cardiff</b>	<b>p</b>
<b>Bar staff serving drunk individual</b>	<b>Legal</b>	45.3%	36.6%	<.05
	<b>Illegal</b>	49.1%	47.2%	
	<b>Don't know</b>	5.7%	16.2%	
<b>Buying alcohol for drunk friend</b>	<b>Legal</b>	36.2%	38.7%	NS
	<b>Illegal</b>	55.2%	46.5%	
	<b>Don't know</b>	8.6%	14.8%	
<b>Drinking alcohol when already drunk</b>	<b>Legal</b>	69.8%	66.2%	NS
	<b>Illegal</b>	21.7%	23.2%	
	<b>Don't know</b>	8.5%	10.6%	



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