

# Selby Alcohol Survey 2015

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Over the last twenty years there have been changes in the UK in relation to venue licensing times and alcohol pricing which have altered the attitudes and behaviour of the general population towards alcohol (Foster & Ferguson, 2014). On a local level North Yorkshire Police have identified that patterns of drinking have changed substantially in the past 10 years. Before the changes in the licensing laws and the relaxation of the licensing hours, individuals traditionally went out at around 7-8pm for a night out in local towns and cities, drinking in local bars and clubs and eventually ending the evening in a night club. The reasons ranged between the fact that night clubs served alcohol the latest, with pubs finishing serving alcohol at 11pm and clubs at 2am and partially because of the entertainment. With the introduction of new licensing laws, pubs and clubs can now remain open well beyond this. Locally, within the Selby District, a small number open until 4am. This has allowed for a change in the behaviour of those engaging in the night life.

Despite extended licensing times drinking at home has become increasingly popular and since 2000 sales of alcohol for consumption at home have increased significantly (Foster & Ferguson, 2012). It has been reported that a greater number of people are drinking cheaper, supermarket bought alcohol, at home, and then entering the night life in local towns later on in the night; this behaviour is known as pre-loading.

Pre-loading is defined in the literature as the 'consumption of alcohol at a domestic residence prior to attending licensed premises' (Foster & Ferguson, 2014, p.213), Although it should be noted that various other terms such as pre-drinking, pre-partying and pre-gaming are used interchangeably to describe the same activity.

Pre-loading has been found to relate to higher levels of alcohol consumption, intoxication and a greater likelihood of engaging in other risky behaviours (Foster & Ferguson, 2014; Pedersen & La Brie, 2007). Excessive drinking is related to a host of negative outcomes. According to government statistics 'high risk drinkers' (8 units a day or 50 units a week) expose themselves to increased risk of mouth, breast, neck and throat cancer, liver cirrhosis, high blood pressure and irregular heart arrhythmia (NHS, 2014). In 2013, 8,416 alcohol related deaths were recorded (66% of which were male). It was estimated that

in 2012-13 the NHS (England) experienced a total of 1,008,850 alcohol related hospital admissions, furthermore it is suggested that alcohol misuse cases cost the NHS around £3.5 billion per year (National Office for Statistics, 2014; Martin *et al.*, 2012). Due to the negative consequences of excessive drinking research has recently started to investigate the role that pre-loading may play in this behaviour.

Bellis *et al.* (2010) focused on drinking patterns during a night out in several UK cities. Participants submitted a breath alcohol test and completed a small survey on drinking patterns which focused on the quantities of alcohol consumed up to that point in the night, whether participants had engaged in pre-loading, whether participants felt drunk, how long they intended staying out for and how much more alcohol they intended to consume. Final blood alcohol levels were then modelled based on the information provided in the survey. The findings of this study highlighted that almost half of participants (49.53%) self-reported as being drunk at the point of completing the survey. Pre-loading led to longer estimated drinking times, increased total units consumed over the night and a later home time.

Bellis *et al.* (2010) also noted that current incentives to develop safer night-time environments focus on managing drunkenness rather than altering perceptions on drunkenness. As a result high cost police presences place further financial pressures on an already stretched public service budget (Bellis *et al.* 2010). It is suggested that in order to help alleviate current financial strains on the NHS and Police forces, research needs to be focused on how to change the already established heavy drinking cultures.

Although a growing body of literature regarding pre-loading is evident (see appendix 2), few studies in the past five years have gathered data from English (non-student) populations. The majority of previous research has focused on the impact of pre-loading in the USA or on college/university students. The concerns reported by North Yorkshire Police relate to the general population in North Yorkshire and as such the majority of published literature would not be relevant due to specific group differences (Foster & Ferguson, 2014).

## Aims of the Current Study

The Selby Alcohol Survey was initiated as part of the North Yorkshire Police's Altn8 program. Altn8 is a North Yorkshire Police project within the Selby District which aims to promote safer alcohol consumption. It is a multi-agency approach working towards the North Yorkshire Alcohol Strategy of:

- Establishing responsible and sensible drinking as the norm;
- Identifying and supporting those who need help into treatment through recovery;
- Reducing alcohol related crime and disorder.

The current study aimed to part replicate research conducted by Bellis et al. (2010) focusing on a specific town in North Yorkshire, in particular to explore; :

To provide a snapshot of drinking habits on a night out in a North Yorkshire town;

1. To establish the level of pre-loading that occurs;
2. To provide information to participants about the true level of alcohol in their system (e.g. actual mg of alcohol not just units);
3. To investigate the alcohol content of participants at the end of the night and draw comparisons between those who did and did not pre-load.

## Method

### Participants:

Participants were selected through opportunistic sampling at the door of pre-selected venue in Selby town Centre. 69 participants completed the survey. The age of participants ranged from 18 years to 67 years with a mean age of 29 years (SD 12.62). There were 31 males (mean age 36 years) and 38 female (mean age 25 years).

### Survey:

Following previous research by Bellis et al. (2010), a short questionnaire was developed. The survey asked participants a variety of questions relating to their alcohol consumption prior to visiting the pre-selected venues, alongside their perception of their level of intoxication. .

### Procedure:

The study received ethical approval from York St John Ethics Committee prior to data collection. Data collection took place in Selby on a Friday and a Saturday night between 8pm and 4am during the summer 2015. Due to the geographical layout of the drinking venues in Selby it was possible to set up an initial data collection point around the venues where the majority of individuals start their night out. Potential participants were approached and the aim of the study was explained to them. If they were interested in taking part they were provided with an information sheet and consent form before completing the initial survey and providing a breath alcohol test. Following completion of the first data collection stage participants were provided with a debrief and they were invited to return to take part in the second data collection phase (the final breath alcohol test) at the end of their night out. Information regarding the location of the second data collection point and a discount voucher for the fast food outlets at the second data collection point were provided. All participants were given a discount voucher irrespective of whether they provided a final breath alcohol test. Police assistance was available throughout the night if required.

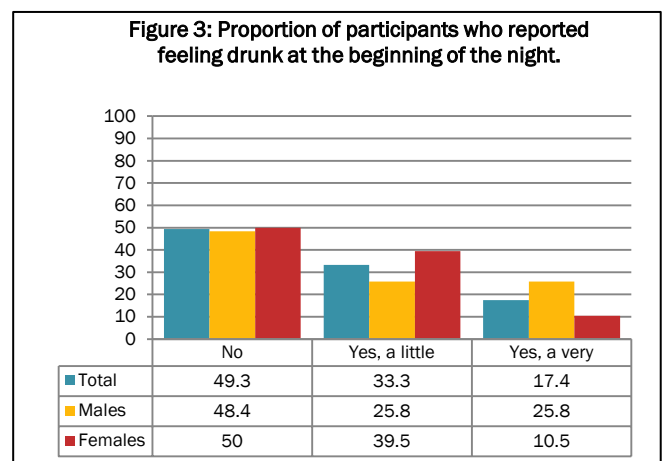
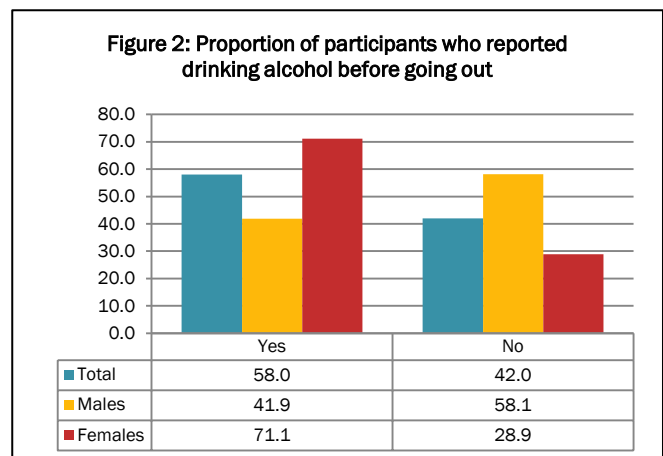
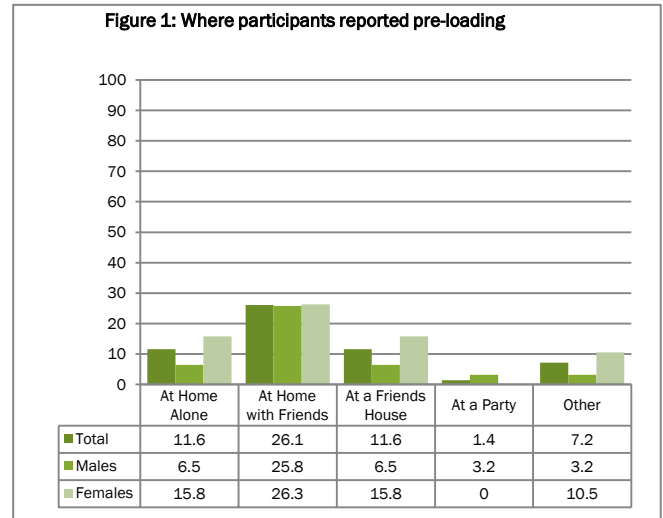
# Self-Reports of Pre-Loading

This section of the report, presents the findings of participants' reports of pre-loading and reports of being intoxicated at the start of their night out. The data are presented for the sample as a whole and split by gender.

## GENDER DIFFERENCES IN PRELOADING

Self-reports of having pre-loaded before the night out are shown in figures 1 to 3. As these figures show:

- Over half the total participants reported pre-loading before their night out.
- Significantly more females reported pre-loading compared to males;  $\chi^2(1)=4.94, p<0.05$
- The most frequently reported location of pre-loading was *at home with friends* and, for females, *at a friend's house*. Other locations where pre-loading occurs included:
  - At work
  - At the Bingo
  - At the Races
  - At Band Practice
- The majority of the overall sample reported that they did not feel drunk before the start of the night. However, more males reported feeling very drunk, compared to females. More females reported feeling *a little* drunk.
- Participants reported on what they had drunk before their night out. These reports ranged from one pint to one person reporting drinking 4 glasses of wine, 2 Desperados and ½ a bottle of prosecco.
- Where it was possible to identify what had been consumed, the data were converted into standard alcohol units (n=27), and responses showed:
  - Between 2 and 27.80 units of alcohol were consumed when pre-loading;
  - The average number of units consumed when pre-loading was 8.32 (sd=6.17);
  - Females self-reported consuming more units when preloading compared to males (M=8.66, sd=6.56 compared to M=7.85, sd=5.83).

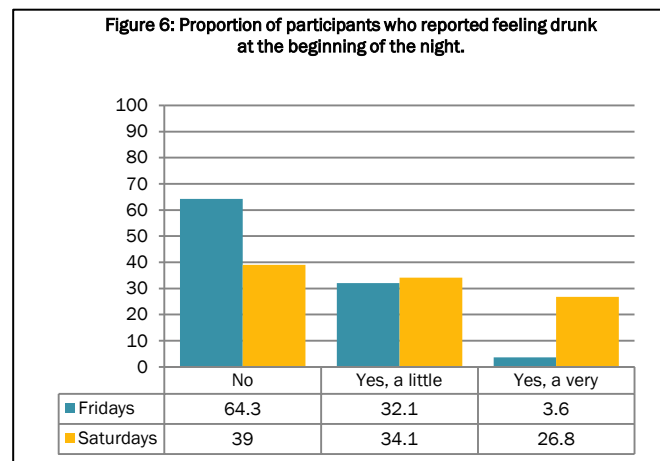
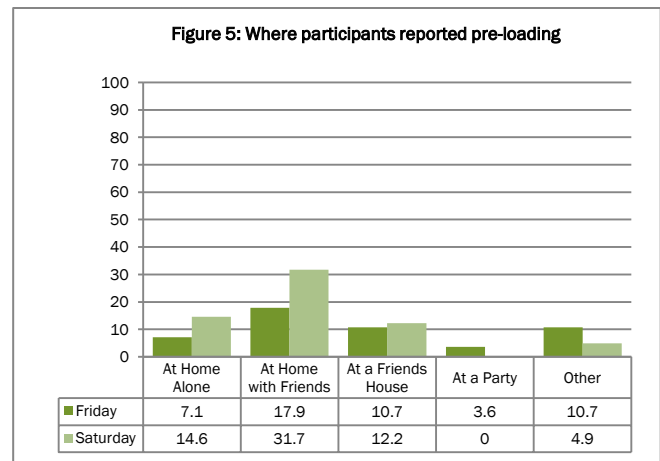
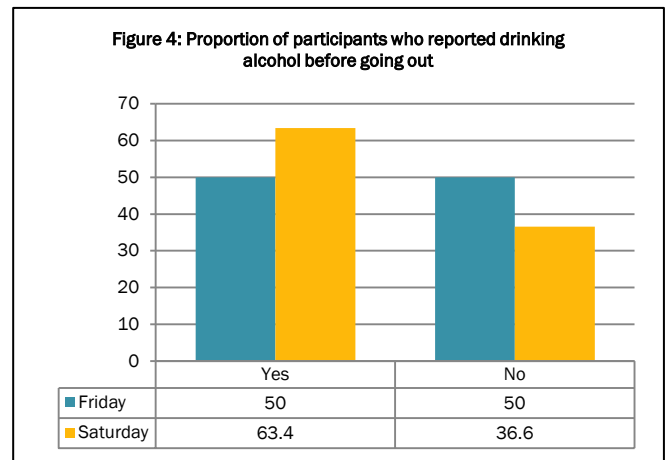


# Self-Reports of Pre-Loading

This section of the report, presents the findings of participants' reports of pre-loading and reports of being intoxicated at the start of their night out. The data are presented split by day of data collection.

## DIFFERENCES BETWEEN FRIDAY & SATURDAY

- Overall, more participants reported pre-loading on a Saturday compared to a Friday.
- More participants reported pre-loading *at home alone* and *at home with friends* on a Saturday compared to on a Friday
- More participants on a Friday reported preloading in *other* locations
- Reports of feeling very drunk at the start of the night were higher on a Saturday night compared to a Friday night.
- In terms of the amount of units consumed when preloading,
  - On the Friday night the mean number of units consumed was 8.58 (SD=8.74)
  - On the Saturday night the mean number of units consumed was 8.16 (SD=3.88)



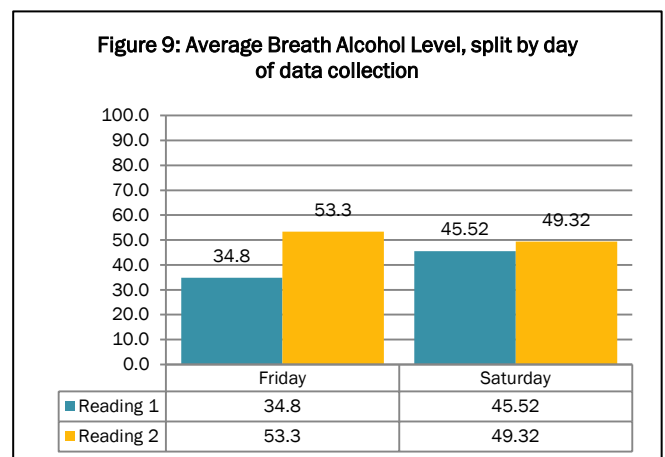
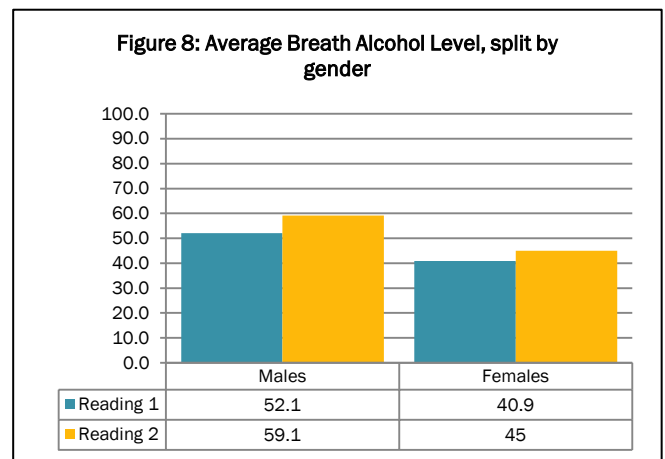
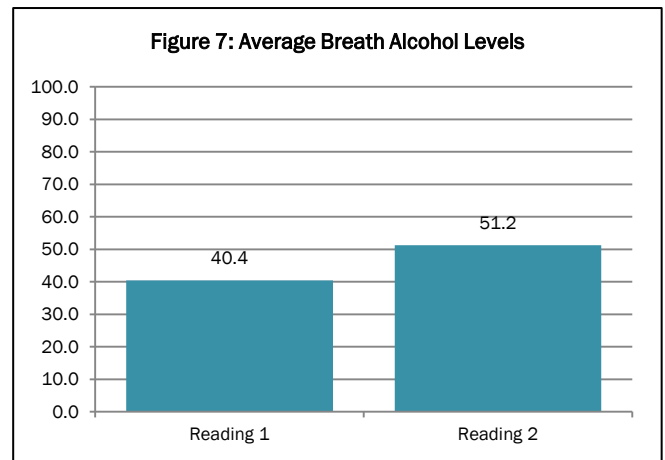
# Breath Alcohol Levels

This section of the report, presents the breath alcohol level data. The data are presented for the sample as a whole and split by gender.

## GENDER AND DAY DIFFERENCES IN BREATH ALCHOL LEVELS

The average breath alcohol levels at the beginning and end of the nights are shown in Figures 7 and 8 as these figures show:

- As Figure 7 shows, for the total sample, breath alcohol levels were significantly higher at the end of the night compared to the beginning,  $t(58)=4.08$ ,  $p<0.05$ .
- Gender differences in mean breath alcohol levels are shown in Figure 8. Overall there was no difference between males and females in their breath alcohol levels at reading 1  $t(67) = 1.44$ ,  $p=ns$ . However, there was a significant differences between males and females in their breath alcohol levels at reading 2  $t(57) = 2.09$ ,  $p<0.05$ ; males were significantly higher.
- Breath alcohol levels at the beginning and end of the night were also analysed by the day of data collection, see Figure 9.
  - Breath alcohol levels were significantly higher at reading 1 on the Saturday night compared to the Friday  $t(67)=2.45$ ,  $p<0.05$ , however there was no significant difference between the levels at reading 2 on a Friday or Saturday night  $t(57)=.58$ ,  $p=ns$ .



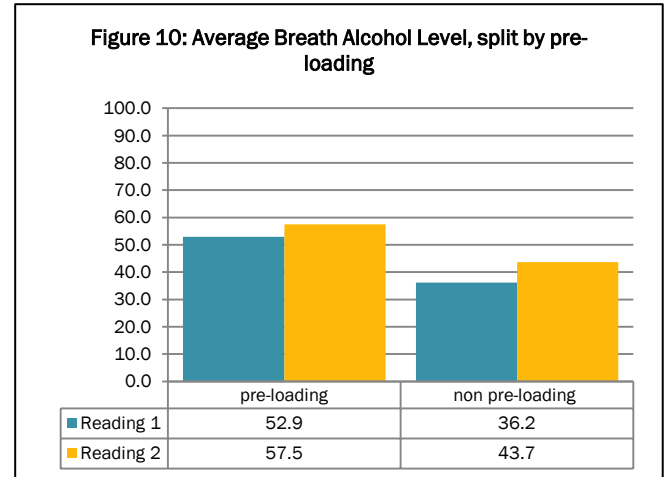
## Breath Alcohol Levels

This section of the report, presents the breath alcohol level data. The data are presented for the sample as a whole and split by gender. The data are presented split by day of data collection.

### BREATH ALCOHOL LEVELS AND PRE-LOADING

The average breath alcohol levels in the group that had engaged in pre-loading and those that had not are shown in figure 10.

- As Figure 10 shows, breath alcohol levels were significantly higher for the pre-loading group at reading 1  $t(67)=2.18$ ,  $p<0.05$  and reading 2  $t(57)=2.05$ ,  $p<0.05$ .
- No relationship was found between self-reported levels of pre-loading and breath alcohol measurements at reading 1 or reading 2.



Following data collection, the research team met to discuss the data collection. From this debrief various identified issues and themes related to the behaviour of individuals' on their night out were discussed and which we felt were important to capture the data to add context to the quantitative data:

One particular venue within the target area had a much older demographic than any other. No music or sport was shown and the closing time was earlier than other surrounding premises. Those who were interviewed from this venue denied pre-loading, alcohol was drunk solely in licensed premises in the company of others. The discussions with these participants highlighted alcohol as a social habit to be engaged in with the company of others and that they came out because they liked to talk to other people. In comparison the vast majority of places where the younger demographic frequented were characterised by loud music and overcrowding. It became too difficult to access these venues so recruitment became limited to those leaving or entering the venue. It was clear from talking to participants that the reasons for drinking were very different. Younger people tended to admit to pre-loading alone or with friends more than those of an older population.

It was noted by all researchers the disturbing amount of violent altercations. Younger people were seen to be rowdy and aggressive towards one another. During the two nights of data collection the team witnessed at least 3 ambulances having to take away young people. One twenty year old male who had participated in the survey prior to an incident in which he had his nose broken by an unknown male because he would not share his takeaway. The second night also saw researchers experience a large scale fight outside of the second data collection point in which one male was knocked unconscious. Though it would be naive to directly link pre-loading and violence through this study, it should be noted that several of those involved had engaged in the survey and admitted pre-loading prior to the event.

The statistical data better represents the gender differences in pre-loading as the qualitative insights into the data collection did not specifically target gender as a major topic of discussion. Very few females were involved in aggressive or violent altercations during the selected nights; one female however was taken to hospital due to a suspected drug overdose. Older females seemed to demonstrate a greater understanding of their level of intoxication in comparison to the male participants. Although, it must be stated that very few participants

could accurately predict their own level of blood alcohol toxicity, regardless of age or gender.

The participant's response to the research as a whole was generally positive, social media campaigns by the police as well as word of mouth meant that the Selby population was aware of the study and appeared keen to take part. Researchers received little abuse in comparison to the police that were on duty; though we did avoid certain venues the police advised us not to visit. Some participants were wary of the study due to the involvement we had with the police though it was explained patiently that all personal information would be kept confidential.



The survey revealed that over half of the participants admitted to pre-loading. Furthermore, despite national trends in relation to alcohol consumption (Office for National Statistics, 2014), significantly more females reported pre-loading than males. In respect of self-reported units consumed; females reported consuming more than males and this consumption was almost half the recommended weekly intake for females. Pre-loading tended to occur at home (with or without friends) or a friend's house. The breath alcohol measurements were significantly higher at the end of the night than at the start. There was no significant difference between males and females at reading 1 although males were significantly higher at reading 2. Individuals that reported pre-loading had significantly higher breath alcohol levels at reading 1 and 2; although there was no relationship between the self-reported amounts of alcohol consumed during pre-loading and breath alcohol readings at the start or end of the night.

The prevalence of pre-loading supports previous research (Foster & Ferguson, 2012). Although speculation can only be provided at this stage it may be due to changes that have occurred relating to the unit price of alcohol available to consume at home. In addition, Barton and Husk (2014) state that home drinking is seen as a social event in its own right and there is a growing home-pub-club trend. Younger people in particular report feeling safer drinking at home compared to pubs and clubs. Other contributing factors to the prevalence of pre-loading include; achieving a level of drunkenness quicker, social bonding and group cohesion, peer pressure and safety (Barton & Husk, 2014; Rollins, 2014; Foster & Ferguson, 2012). It is suggested that in order to avoid confrontational situations in pubs and clubs younger people pre-load for longer, however as Rollins (2014) states the higher level of intoxication achieved through pre-loading increases the risk of violent behaviour in the night time economy.

The data presented here supports previous research which indicates pre-loading occurs in conjunction with a night out rather than as an alternative to a night out. However, it cannot be concluded from the results presented that individuals are pre-loading due to the social element of drinking at home and feeling safer. Further research would be beneficial to establish the reasons why individuals engage in pre-loading. In the current study pre-loading was evident in participants of a variety of ages. Therefore, it can be concluded that pre-loading is not an activity exclusively associated with young people and student populations. Although, from

the qualitative reflections it was evident that individuals choosing to drink at certain venues on their night out were much less likely to engage in pre-loading than individuals visiting other venues within the data collection area. Further research would be beneficial to establish the relationship between locations chosen on a night out and prevalence of pre-loading. Alcohol consumption by the general population has been a source of concern for many years. There are a number of alcohol related strategies aimed at targeting drinking habits. Minimum unit pricing, for example, has attempted to increase the cost of alcohol in hopes to reduce the amount of alcohol purchased. Campaigns such as Dry January have attempted to encourage teetotalism. In line with this the Office for National Statistics (2014) state that there has been an increase in teetotallers within the 16 - 24 age group from 2005 to 2013.

However, the published literature and the current study indicate that alcohol consumption through pre-loading is part of a night out for many. Alcohol consumption may be implicated in the level of aggression and violence that was evident in the local area during the data collection of the current study. In order to tackle some of these issues this research recommends creating a safer night time economy. Increased police presence may help to create a safer feel for local drinkers, particularly those younger drinkers who have identified not feeling safe as a reason to pre-load (Barton & Husk, 2012). However, this is managing behaviour after it has manifested rather than altering perceptions. Therefore, campaigns to help drinkers understand their level of alcohol consumption would be beneficial. The participants in the current study were poor at identifying their current levels of intoxication and many found self-reporting the levels of alcohol consumed during pre-loading difficult. The above points all indicate a need for greater education and awareness around alcohol consumption. Education on units per drink, despite government campaigns, is still needed in order to help the public understand the impact of units on alcohol blood levels.

### **Key Conclusions**

1. Females engage in pre-loading more than males;
2. Individuals that pre-load have higher breath alcohol levels at the start of the night;
3. Individuals that pre-load may also go on to drink more on a night out.
4. Alcohol consumption is greater on a Saturday night;
5. No relationship was found between self-reported amounts consumed during pre-loading and breath alcohol levels at reading 1.

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## Appendix 2: Literature Matrix

Academic Reference	Purpose of study	Methods adopted	Key Findings
Martin, <i>et al</i> (2012)	To measure the prevalence, pattern and associated financial cost of alcohol-related ambulance call outs in the North East of England using routinely collected data from the North East Ambulance Service (NEAS)	<p><b>Data collection:</b> A retrospective patient cohort study over a 1-year time period. The use of patient record forms related to alcohol use (determined by shaded box or free text boxed filled in by paramedics or medical staff)</p> <p><b>Sample:</b> 309,714 ambulance call out records. (To check accuracy a random sample of 2150 patient record forms from the whole 2009/2010 NEAS database were manually checked. They estimated the prevalence with a 95% confidence interval of plus or minus 1%)</p> <p><b>Location:</b> London</p>	<p>This study provides important empirical statistics in the cost of alcohol related incidents.</p> <p>Alcohol-related ambulance call outs in this sample were estimated at £2.24 million in the 1-year time period (IQR £1.93 million-£2.58 million).</p> <p>The figures provide a rationale into the study of alcohol abuse. As noted within this study, pre-loading leads to an increase in excessive alcohol consumption.</p>
Bellis, <i>et al.</i> (2010)	To assess the effectiveness of mixed survey and modeling techniques in examining the impact of various drinking behaviours such as pre-loading.	<p><b>Data Collection:</b> participants completed a short anonymous questionnaire and undertook a breath alcohol test.</p> <p><b>Sample:</b> 214 participants across three cities.</p> <p><b>Location:</b> Liverpool, Manchester and Chester.</p>	<p>Perhaps the most important research as the proposed research will also employ the use of a breathalyzer at two intervals much like in this study.</p> <p>The data collection methods used in this study present a basis for a questionnaire to be used in the proposed study. The questionnaire considered: quantity of alcohol consumed at the point of the survey, as well as if they had preloaded before coming out.</p> <p>The survey also asked if the participants felt drunk, this may be worth considering when constructing the questionnaire.</p> <p>Establishes the foundation that pre-loading and drinking later into the night may be associated with higher levels of drunkenness in city centers.</p>

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Academic Reference	Purpose of study	Methods adopted	Key Findings
Boyle <i>et al.</i> (2010)	To identify whether pre-loading is a risk factor for alcohol-related emergency department attendance	<p><b>Data collection:</b> Anonymous interview-based cross-sectional survey in emergency department.</p> <p><b>Sample group:</b> self-referred patients, including those who arrived by ambulance (excluded, 16 years old, too ill to consent, unwilling to be interviewed alone and unable to communicate in English) <u>self-reported</u>. Over 1000 participants.</p> <p><b>Location:</b> Liverpool Emergency department</p> <p><b>Time frame:</b> 22:00 and 02:00 and 10:00 and 14:00 on Saturday and Sunday, and 22:00 to 02:00 on Friday night over an 8-week period.</p>	<p>The study discusses the phenomena of pre-loading. Discusses and defines important background information in relation to pre-loading.</p> <p>Provides statistical figures for comparative analysis. Despite growing literature and concern from various institutions (policy and gov.), the study found pre-loading was a common issue but NOT a risk factor in alcohol related emergency department attendance.</p> <p>However the data is based on self-reports of pre-loading this is a key weakness in this study and would be addressed by the proposed studies collection methods.</p>
Foster & Ferguson (2014)	To review the international literature concerning pre-loading (PL); this is drinking before going out to pubs and bars.	<p><b>Collection:</b> A literature search conducted in May 2013 using the EBSCO database entering the following search terms 'pre-loading', 'front-loading', 'pre-partying' and 'pre-drinking'</p> <p><b>Sample:</b> 29 articles were reviewed (out of 40)</p> <p><b>Location:</b> UK and US</p>	<p>Provides definitions and trends not only within the UK but America as well, though the majority of the reviewed literature is American, eight UK studies were found and reviewed (Only two were relevant to the past 5 years).</p> <p>It does however provide an analysis of a growing trend in pre-loading. A cultural shift from 'pub-club' to 'home-pub-club' is significant.</p>
Foster & Ferguson (2012)	To explore the trend in the UK to consume alcohol at home rather than at licensed premises.	<p><b>Collection:</b> A Medline literature search entering the terms 'home drinking', 'alcohol' and 'adult' covering the period 2000–2011.</p> <p><b>Sample:</b> 6 studies that met criteria (48 yielded).</p>	<p>Provides contextual information and a variety of previous studies on drinking patterns in the UK up until 2011.</p> <p>Establishes the main reasons for home drinking; convenience, cost, safety, autonomy and stress relief. Also highlights that pre-loading is a growing trend.</p>

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National Office for Statistics (2014).	This statistical report acts as a reference point for health issues relating to alcohol use and misuse, providing information obtained from a number of sources.	Used a revised methodology for estimating alcohol-related hospital admissions following a review by Public Health England, the Department of Health and the Health and Social Care Information Centre	Government document that establishes links between health issues and alcohol misuse. Also gives figures on consumption, costs and habits within England.
Barton & Husk (2012)	The aim of this paper is to focus on the impact of alcohol pre-loading on behaviour in the night time economy.	<p><b>Collection:</b> Questions were asked prior to arrest</p> <p><b>Sample:</b> (2010/early 2011) 597 arrestees</p> <p><b>Location:</b> Devon/Cornwall (UK)</p>	<p>Pre-loading has become a key aspect in the drinking patterns of many of the Night time economy (NTE) population with around 50 per cent of people drinking significant quantities of alcohol prior to entering the NTE.</p> <p>Preloading leads to the self-reporting of higher levels of consumption and by extension higher levels of intoxication.</p> <p>Also provides a basis of what questions were asked to participants of the study. As well as links to other societal issues such as violence.</p>
Barton & Husk (2014)	Adds in depth data to recently published statistics of pre-loading particularly in relation to younger drinkers.	<p><b>Collection:</b> in-depth qualitative interviews</p> <p><b>Sample:</b> 20 (18-23) (Students features, 12/20 of the participants) (8 male, 12 female)</p> <p><b>Location:</b> medium sized UK city</p>	<p>Research has identified that pre-loading is particularly relevant within youth culture. This article provides insight into some of the reasons as to why young people engage in this process.</p> <p>It should be noted that students featured heavily and may have not be a fair representation of non-student drinking cultures.</p>
HM Government (2012) The government's alcohol strategy.	Revise policy in order to tackle the 'source' of binge drinking and its detrimental social effects and costs.	N/A	Documents the governments response to an increase in 'pre-loading' and home drinking before nights out. Changes in policy target cheap off-license products so that supermarket prices increase closing the gap between venue and store prices.

