



Investigating drinking behaviours and alcohol knowledge amongst people resident in Linacre and Derby: An updated evaluation of *It's Your Choice*.

Interim Report

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October 2010

1. Introduction

It has been estimated that alcohol-related harm costs the UK economy up to £25.1 billion per year^[1]. In addition to a range of health-related costs, this also includes the cost of lost productivity, crime and premature mortality. Levels of alcohol consumption and related harms are particularly high in the North West of England. It has the highest level of higher risk drinkingⁱ (6.3%) and the second highest level of increasing risk drinkingⁱⁱ (22.1%) in England^[2]. Furthermore, within the region there are variations in drinking behaviours and experiences of negative alcohol-related consequences. For example certain types of alcohol harm (e.g., higher risk and bingeⁱⁱⁱ drinking) are lower in rural and/or more affluent areas such as Allerdale and Ribbles Valley than in other, more deprived and urban areas such as Blackpool and Liverpool^[2].

Located in North West England, the borough of Sefton experiences levels of deprivation that exceed the regional and English average, with Derby and Linacre wards amongst its most deprived wards^[3]. Binge, increasing and higher risk drinking levels, and hospital admission rates for alcohol-related harm in Sefton are above the average for England^[3, 4]. In 2007, two thirds of alcohol-related hospital admissions in Sefton involved people who lived in the poorest wards of the borough (Derby and Linacre)^[5] and males from these areas accounted for 40% of such admissions^[6].

The Alcohol Strategy^{[7] [8]} proposes directions for policy and practice designed to address alcohol-related harm at both national and local levels. It highlights the importance of education and communication in order to achieve goals such as reducing the harm caused by alcohol (PSA 25^{iv})^[9]. As a response to the issues addressed by these strategic documents, in 2007 NHS Sefton developed and evaluated a social marketing campaign called *It's Your Choice*^[10, 11]. Designed to raise awareness of the negative consequences of alcohol misuse, this campaign sought to educate Derby and Linacre residents about issues such as alcohol units and safer consumption in general. As part of their ongoing commitment to achieving PSA 25 and NI39^v (calling for a reduction in the number of alcohol-related hospital admissions), NHS Sefton have decided to run and evaluate an updated version of the campaign (see below). The Centre for Public Health, Liverpool John Moores University have been commissioned to evaluate this revised campaign, through pre- and post-intervention surveys designed to examine drinking behaviours and alcohol-related knowledge and opinions. This brief report presents the findings of the pre-intervention survey against which the post-intervention data will be compared, thus enabling the impact of the campaign to be explored.

1.1. It's Your Choice

The campaign uses a range of posters and flyers distributed throughout Derby and Linacre, targeting 30-60 year olds. It aims to improve their understanding of alcohol-related harms and to reduce consumption. The material illustrates the alcohol content of certain drinks, provides information about recommended intake and highlights the harms caused by over consumption of alcohol. It also provides contact details for those seeking help.

ⁱ Defined here as drinking >50 units of alcohol per week (males) and >35 units(females)

ⁱⁱ Defined here as drinking 22-50 units of alcohol per week (males) and 15-35 units (females)

ⁱⁱⁱ Defined here as ≥8 units of alcohol per session (males) and ≥6 units (females)

^{iv} Public Service Agreement 25

^v National Indicator 39, the number of alcohol-related hospital admissions, is one of the various indicators used to assess progress toward meeting PSA25.

2. Methodology

Data presented in this report were gathered prior to campaign delivery and provide a baseline measure of alcohol consumption, knowledge and related behaviour amongst the target population. A second survey, using the same questionnaire, will be conducted after the campaign has run. The data from both surveys will then be compared in order to evaluate the potential impact of the intervention. The timeline for the complete project is shown in Table 1.

Table 1: Project timelines

<i>Date</i>	<i>Stage</i>
<i>August 2010</i>	<i>Collection of baseline data through first (pre-campaign) administration of survey</i>
<i>September 2010 - November 2010</i>	<i>Delivery of the 'It's Your Choice' social marketing campaign</i>
<i>December 2010</i>	<i>Second run of survey collecting data for comparison with pre-campaign data</i>

The questionnaire was based on the original evaluation^[10, 11]. However, in light of recent Government discussions around harm reduction strategies incorporating minimum pricing^[12] and alcohol-taxation changes^[13], these issues were added to the questionnaire. The project obtained full ethical clearance from Liverpool John Moores University.

2.1. The survey

During August 2010, four trained researchers administered the questionnaire (appendix 1) in a central shopping area, on surrounding streets and in nearby parks and public spaces (Table 2). Data were collected from an opportunistic sample between 10:00 and 16:00 hours, Monday to Saturday (inclusive). Participants who appeared to fit the age criteria (30-60 years old) were approached and a brief outline of the study was provided verbally (appendix 2). Those who agreed to take part were given a written information sheet (appendix 3) containing further details of the study. If participants fell outside of the stipulated age range, or lived beyond the target areas of Linacre and Derby, the interview was terminated. Questionnaire completion implied consent.

Table 2: Location of participants

<i>Location</i>	<i>Participant</i>	
	<i>n</i>	<i>%</i>
<i>Shopping Centre</i>	340	66.6
<i>Streets near the shopping centre</i>	165	32.4
<i>Other (e.g. parks, local residential streets)</i>	5	1.0
<i>TOTAL</i>		
	510	100.0%

A total of 18,054 individuals were approached, of whom 8511 (47.1%) declined to participate before the study had been explained to them; 3449 (19.1%) refused to participate after receiving an explanation of the project. Of those who agreed to participate (n=6094), 3933 (64.5%) lived outside the target area and 1651 (27.1%) were outside the age range. The final analysed sample was 510

(2.8% of those originally approached). This was less than a quarter of the proportion achieved in the original evaluation (11.7%)^[10]. Where sample size varies slightly due to missing data fields in a particular analysis, the amended sample size is noted. To facilitate comparison with other surveys^[14], alcohol units have been updated from the previous evaluation^[10, 11] and were calculated using the average unit content as found in The General Lifestyle Survey (formerly known as the General Household Survey)^[15]. Further details of average units/drink can be found in appendix 4. Analysis (using SPSS v.17) involved binomial and t-tests to examine differences between groups and chi-square to explore relationships between variables.

2.2. Project limitations

2.2.1. Sampling

As with many street based surveys^[16], a large number of those approached (97.2%) declined to participate. Whilst this may have affected the representativeness of the sample, those that participated were of mixed gender, age and employment status.

2.2.1. Questionnaire

The accuracy of self-report data on alcohol use can be affected by many factors, including: social desirability^[17], interviewer characteristics^[18], and selective recall^[19]. However, as in other studies^[20] this project involved researchers who were trained to elicit honest responses from participants. Also response rates and accuracy may have benefited from not asking for written consent^[21].

3. Findings

3.1. Demographics

The most common age group was 50-60 year olds (36.5% Table 3). Gender was almost equally divided (female: 51.2%). The most common occupational status was unemployed (35.7%), closely followed by full-time employment (33.3%). Males were almost twice as likely as females to be employed full-time (44.1% and 23.0% respectively; $p < 0.001$). Three fifths (59.4%; $p < 0.001$) of participants lived in the L20 post code area.

Table 3: Age, occupational status and gender of the participants*

Age	Gender					
	Male		Female		Total	
	N	%	N	%	N	%
30-39	88	35.3	86	33.0	174	34.1
40-49	72	28.9	78	29.9	150	29.4
50-60	89	35.7	97	37.2	186	36.5
Occupation						
Employed full-time	110	44.2	60	23.0	170	33.3
Employed part-time	39	15.7	92	35.2	131	25.7
Unemployed	91	36.5	91	34.9	182	35.7
Other**	9	3.6	18	6.9	27	5.3
TOTALS						
	249	48.8	261	51.2	510	100.0

Figures may not sum to 100% due to rounding. ** Includes student, housewife, retiree undisclosed.

3.2. Alcohol consumption

3.2.1. Patterns of alcohol consumption amongst those who drank in the week prior to survey

More than eight out of ten participants (425; 83.3%; $p < 0.001$) drank alcohol at least occasionally. Over two-thirds of these (295; 69.4%; $p < 0.001$) had drunk alcohol in the week prior to survey (171 males and 124 females; gender difference significant at $p = 0.007$). More than two thirds of this group (70.5%; $p < 0.001$) had exceeded the weekly and 97.3% ($p < 0.001$) the daily recommended daily limits^{vi vii}. Of those who drank in the week prior to survey, almost nine out of ten (88.8%; $p < 0.001$) reported having binged^{viii} at least once during that period. Whilst males generally consumed significantly more alcohol than females, the median weekly intake of both genders exceeded their respective weekly recommended levels (Table 4). For males the median number of units consumed on the heaviest drinking day was four times their daily maximum^{vii}.

^{vi} Weekly recommended limit is 21 units for men and 14 for women^[22]

^{vii} Daily recommended limit is 3- 4 units for men and 2-3 units for women^[23]

^{viii} Defined here as ≥ 8 units of alcohol per session (males) and ≥ 6 units (females)

Table 4: Median levels (with inter-quartile range [IQR]) of alcohol consumption among those that drank in the week prior to survey

<i>Alcohol consumption: Median units consumed...</i>	<i>Gender</i>					
	<i>Male</i>	<i>IQR³</i>	<i>Female</i>	<i>IQR³</i>	<i>Total</i>	<i>IQR³</i>
<i>... in the last week⁺</i>	38.0	24.0-51.8	16.8	10.1-26.0	26.0	16.0-44.0
<i>... on the heaviest day⁺</i>	16.0	11.2-24.0	8.4	6.0-14.0	13.0	8.1-20.0
<i>... on the average drinking day⁺</i>	5.4	3.4-7.4	2.4	1.4-3.7	3.7	2.3-6.3
<i>Median number of days where alcohol was consumed</i>	3.0	2.0-4.0	2.0	2.0-3.0	3.0	2.0-4.0

⁺= differences between gender, $p < 0.001$

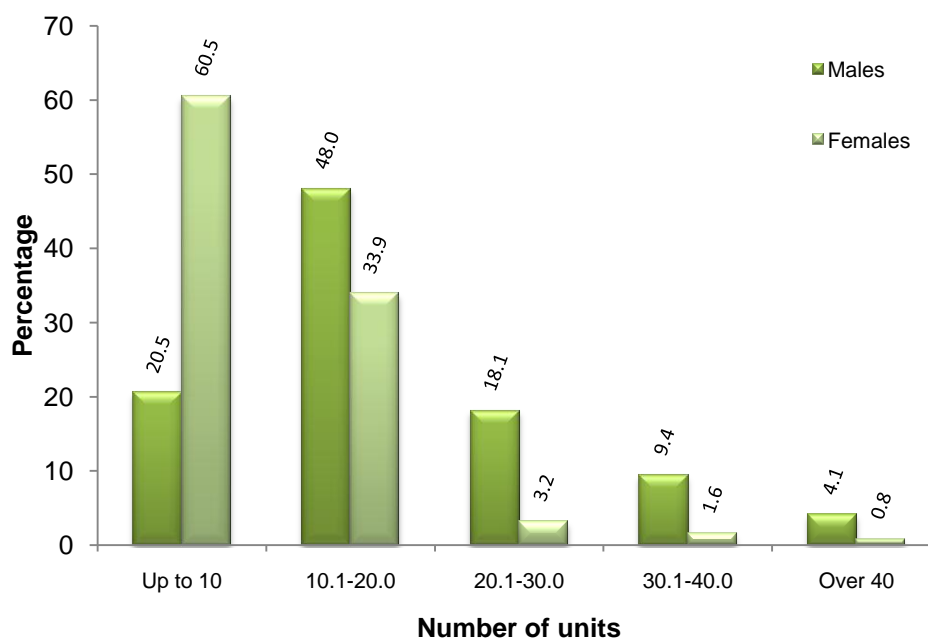
³= Inter-quartile range (points between which middle 50% of sample values lie)

Participants reported a total of 900 drinking sessions in the week prior to survey. Of these, 583 (64.8%; $p < 0.001$) were binge drinking sessions. Among these sessions consumption varied, with the greatest proportion of participants (124; 42.0% of those who consumed alcohol in the last week) reporting drinking between 10.1 and 20.0 units on their heaviest drinking day (Figure 1). This was more common for males (48.0%) than females (33.9%). This gender pattern was found in all consumption categories except for ≤ 10 units. Eight participants reported exceeding their weekly limit in one session.

Over half of the sample drank on between two (28.5%) and three (28.5%) days of the week prior to survey. This varied between genders. Males most commonly drank on three days of the week (34.5%), whilst females most commonly drank on two days (37.1%; Figure 2). Fridays and Saturdays were the most common drinking days (84.7%; $p < 0.001$) for those who had drunk in the week prior to survey. The heaviest consumption day was Saturday for the greatest proportion of participants (41.2%). Females were significantly more likely than males to drink before going out (39.3% and 21.1% respectively; $p = 0.001$)^{ix}. Over half of those that did so were aged 30-39 (52.4%) and almost half were unemployed (46.4%). They were also significantly more likely to have exceeded their weekly limit (83.4% $p = 0.005$) and to have binged at least once in the last week (69.6%; $p = 0.04$).

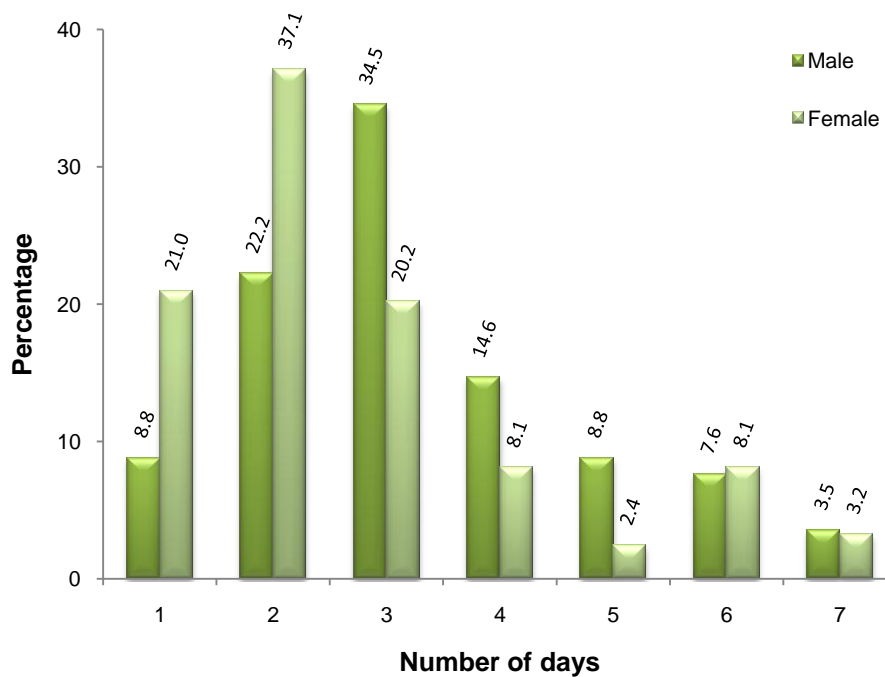
^{ix} Sample size = 293 as two respondents reported not going out to drink.

Figure 1: Units consumed on the heaviest drinking day in the week prior to survey by those who drank during that period*



**Percentage may not add to 100 due to rounding*

Figure 2: Number of days in week prior to survey in which participants consumed alcohol*



**Percentage may not add to 100 due to rounding*

3.2.2. Drink preferences

Participants were categorised according to their drink preference (Table 6). Those who drank more than one type of drink in the week prior to survey were labelled 'mixed drinkers' whilst those who only consumed one type of drink in this period were labelled accordingly (e.g., beer/lager/cider drinker). The majority of males (67.3%) preferred beer/lager/cider whilst the greatest proportion of female drinkers (33.9%) preferred wine or a mixture (32.3%). Overall, more than two fifths of participants (43.1%) were classified as beer/lager/cider drinkers, and this pattern was repeated in each age category individually (Table 6). Females, those aged 30-49 and those not employed were most likely to be classified as mixed drinkers. Those aged 50-60 were more likely than younger age groups (i.e. ≤ 49 years old) to prefer spirits.

Table 6: Drink preferences of those who had drunk in the week prior to survey by age, gender and employment status

Gender	Preferred type of drink					
	Beer/lager/ cider (%)	Spirits (%)	Wine (%)	Fortified wines (%)	Mixed drinker (%)	Total
<i>Male</i>	115 (67.3)	6 (3.5)	3 (1.8)	0 (0.0)	47 (27.5)	171
<i>Female</i>	12 (9.7)	27 (21.8)	42 (33.9)	3 (2.4)	40 (32.3)	124
Age						
<i>30-39</i>	47 (44.3)	8 (7.5)	18 (17.0)	0 (0.0)	33 (31.1)	106
<i>40-49</i>	42 (42.0)	9 (9.0)	18 (18.0)	1 (1.0)	30 (30.0)	100
<i>50-60</i>	38 (42.7)	16 (18.0)	9 (10.1)	2 (0.2)	24 (27.0)	89
Occupation						
<i>Employed full-time</i>	60 (52.6)	8 (7.0)	18 (15.8)	0 (0.0)	28 (24.6)	114
<i>Employed part-time</i>	17 (26.2)	13 (20.0)	17 (26.2)	0 (0.0)	18 (27.7)	65
<i>Unemployed</i>	47 (44.3)	10 (9.4)	7 (6.6)	3 (2.8)	39 (36.8)	106
<i>Other</i>	3 (30.0)	2 (20.0)	3 (30.0)	0 (0.0)	2 (20.0)	10
TOTALS						
	127 (43.1)	33 (11.2)	45 (15.3)	3 (1.0)	87 (29.4)	295

3.2.3. Comparing drinkers

All 510 participants were categorised according to their drinking levels (Box 1):

Box 1: Definitions of types of drinker:

Non-drinker -	Those who reported never drinking;
Lower risk drinker -	Weekly unit consumption (males) between 0-21 or (females) 0-14 in week prior to survey;
Increasing risk drinker -	Weekly unit consumption (males) between 21 and 50 or (females) 14 and 35 in week prior to survey;
Higher risk drinker -	Weekly unit consumption (males) exceeding 50 or (females) 35 in week prior to survey.

Non-drinkers

Eighty-five participants reported not drinking (16.7%). Whilst they were significantly more likely to be female (65.9%; $p=0.004$) and aged 50-60 years (58.8%; $p<0.001$) they were significantly less likely to be employed full-time (18.8%; 0.015; Table 7).

Lower risk drinkers

Almost one third were classified as lower risk drinkers (32.0%) with the majority (65.6%; $p<0.001$) being females. Over half were employed (either part- or full-time) and two fifths were aged 30-39 years (39.3%). The significant majority of this group preferred to drink beer/lager/cider (84.7%; $p<0.001$). Their median weekly unit consumption (11 units) was a little less than a third of that of increasing risk drinkers (29.4 units) and a sixth of that of higher risk drinkers (65 units; Table 8).

Increasing risk drinkers

This group was significantly (the largest at $n=181$; 55.8% males) more likely to be aged 30-49 years and in either full- or part-time employment (66.3%; Table 7). The median number of units (14; Table 8) consumed by this group on their heaviest drinking day was more than three times the recommended male daily limit. Although they were most likely to report a preference for drinking beer/lager/cider (42.5%), consuming a mixture of drinks during the week prior to survey was reported by a further 28.2%.

Higher risk drinkers

Eighty-one participants (15.9%) were higher risk drinkers in the week prior to survey (Table 7). There were significantly more males in this group (77.8%; $p < 0.001$) with the greatest proportion (37.0%) aged 40-49 years. Over two fifths (46.8%) were unemployed. This group consumed a significantly higher median number of alcohol units per week than other types of drinker (65; $p<0.001$; over twice that of increasing risk drinkers; Table 8). They also drank on significantly more days per week than other types of drinker (4; $p < 0.001$). Average consumption on their heaviest drinking day (26 units) was six-and-a-half times the recommended daily limit for males. Whilst 53.1% preferred to drink beer/lager/cider, a further 33.3% reported consuming a variety of drinks in the week prior to survey.

Table 7: Type of drinker by gender, age, occupational status, drink preference and median consumption levels and frequency.[∞]△

Gender	Type of drinker			
	Non-drinker (%)	Lower risk (%)	Increasing risk (%)	Higher risk (%)
<i>Male</i>	29 (34.1)**	56 (34.4)***	101 (55.8)*	63 (77.8)***
<i>Female</i>	56 (65.9)	107 (65.6)	80 (44.2)	18 (22.2)
Age				
30-39	16 (18.8)***	64 (39.3) ⁺	68 (37.6) ⁺	26 (32.1) ⁺
40-49	19 (22.4)	39 (23.9)	62 (34.3)	30 (37.0)
50-59	50 (58.8)	60 (36.8)	51 (28.2)	25 (30.9)
Employment status				
<i>Employed full-time</i>	16 (18.8)*	50 (30.7) ⁺	75 (41.4) ⁺	29 (35.8) ⁺
<i>Employed part-time</i>	29 (34.1)	43 (26.4)	45 (24.9)	14 (17.3)
<i>Unemployed/student/other</i>	40 (47.0)	70 (43.0)	61 (33.7)	38 (46.8)
Preferred drink				
<i>Preferred not to drink</i>	85 (100.0) ^{na}	0 (0.0)	0 (0.0)	0 (0.0)
<i>Beer/lager/cider</i>	0 (0.0)	138 (84.7)***	77 (42.5) ⁺	46 (53.1)*
<i>Spirits</i>	0 (0.0)	6 (3.7)	21 (11.6)	6 (7.4)
<i>Wine</i>	0 (0.0)	9 (5.5)	31 (17.1)	5 (6.2)
<i>Fortified wine</i>	0 (0.0)	<5 (1.2)	<5 (0.6)	0 (0.0)
<i>No preference (Mixed)</i>	0 (0.0)	8 (4.9)	51 (28.2)	27 (33.3)
Total classified sample (n=510; distribution between drinker types significant at p<0.001)				
	85 (16.7)	163 (32.0)	181 (35.5)	81 (15.9)

[∞] = Significance values are for differences within drinker type

^{na} = significance testing not applicable; ⁺ = $p \geq 0.05$; * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$

△ = Percentages for drinker types may not sum to 100 due to rounding

Table 8: Consumption patterns by type of drinker

Consumption measure	Type of drinker		
	Lower risk	Increasing risk	Higher risk
<i>Median (IQR) weekly units consumed</i>	11 (8.4-14.0)	29.4 (22.4-40.0)	65 (54.0-78.0)
<i>Median (IQR) units consumed on heaviest drinking day</i>	8 (5.6-10.0)	14 (10.4-17.0)	26 (20.0-36.0)
<i>Median (IQR) number of days in a week on which alcohol was consumed</i>	2 (1.0-2.0)	3 (2.0-4.0)	4 (3.0-5.0)

* $p < 0.001$ for all test between types of drinker

3.2.4. Usual consumption levels

For the majority of participants (70.4%), the quantities of alcohol reportedly consumed in the last week reflected the usual amount consumed. For 16.8%, their consumption levels in the week prior to survey were higher than usual. The remainder reported a reduced level of consumption. Reasons (where provided) for an increase or decrease in consumption are given in Boxes 2 and 3 respectively.

Box 2: Reasons for increased consumption among those who drank in the week prior to survey (frequency of reason within sample n=38):

Working overtime (3);
 Socialised less (4);
 Illness (3);
 Decided to cut down (2);
 Family commitments (2);
 Had less money to spend on alcohol (3);
 Dieting (1);
 Attending sporting activities (1);
 No particular reason given (19).

Box 3: Reasons for decreased consumption among those who drank in the week prior to survey (frequency of reason within sample n=51):

Sporting activities took priority (11);
 Extra socialising (4);
 Attending weddings/parties (11);
 Stress (3);
 On holiday (3);
 Lack of family commitments (1);
 Rewarded self (1);
 Boredom (1);
 No particular reason given (16).

3.2.5 Going out to drink

Of those who drink alcohol at least occasionally (n=425), 53.4% (n=227) reported (at least once per week) going to drink at pubs or clubs, 41.9% to friends' or family members' houses and 2.4% to other (unspecified) locations. Those attending pubs or clubs at least weekly were significantly more likely to be male (73.6%; $p < 0.001$) and employed (64.3%; part- and full-time combined; $p < 0.001$). They were also significantly more likely to be categorised as increasing risk drinkers than other types of drinker (n=131; 57.8%; $P < 0.001$) with a further 30.4% categorised as higher risk drinkers. The significant majority of those attending pubs/clubs at least weekly did not drink before going out (74.9%; $p < 0.001$) nor continued drinking upon returning home (64.3%; $p < 0.001$). This was particularly marked in males where 80.2% did not drink before going out (compared with 60.0% of females).

3.2.6. Purchasing and drinking locations

Participants were asked to identify where they primarily bought and drank their alcohol (see appendix 1; Boxes 3 and 4).

Box 3: Response categories for primary sources of alcohol following collapsing of original seven categories: Pub or club; Supermarket/corner shop; Specialist alcohol shop/abroad/by telephone/other* source. <i>*Other includes from a friend, a man with a van, the blackmarket and restaurants</i>	Box 4: Response categories for primary drinking locations following collapse of original four categories: Pub or club; Home; Friends' and family members' homes/other (undisclosed).
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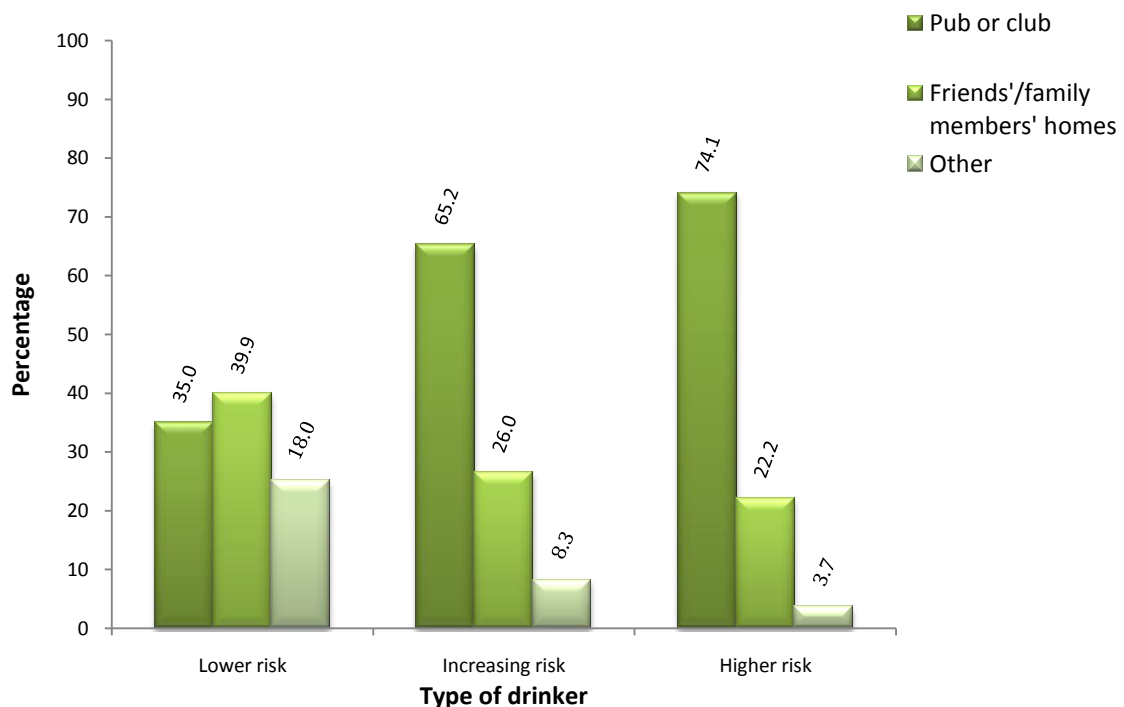
Of those who reported drinking alcohol at least occasionally, 423 provided the requested data. Among these participants:

- ❖ A little more than half of participants (54.4%) reported pubs or clubs as their primary source of alcohol and as primary drinking location (55.3%);
- ❖ Whilst males were significantly more likely to primarily buy their alcohol in pubs or clubs than females (76.4%; $p < 0.001$; Figure 3), supermarkets were the most common source for women (48.8%). Pubs or clubs were the primary drinking location for the significant majority of males (76.4%; $p < 0.001$). For females, home was the most common primary drinking location (44.4%);
- ❖ Both increasing (63.5%) and higher risk drinkers (74.1%) were significantly more likely to report pubs or clubs as their primary source of alcohol than lower risk drinkers (34.8%; $p < 0.001$). Increasing risk (65.2%) and higher risk drinkers (74.1%) were both significantly more likely to report pubs or clubs as their primary drinking location than lower risk drinkers (35.0%; $p < 0.001$; Figure 4);



- ❖ Of those who usually drink at home before going out (n=114), 47.4% reported their primary source of alcohol as pubs or clubs, with a further 35.1% mainly obtaining alcohol from supermarkets/corner shops. Of those that continue drinking at home after having been out (n=421), a significant majority (61.4%; $p<0.007$) mainly obtained their alcohol from pubs or clubs;
- ❖ Age was not significantly associated with either primary source of alcohol or drinking location.

Figure 4: Primary drinking location by type of drinker*



*n=425

3.3. Alcohol related harms

Participants were asked to indicate how many times in the month prior to survey they had experienced any of a range of alcohol-related harms/negative consequences (see Box 5). Of those that drank at least occasionally, 100 participants (24.2%) reported having experienced at least one alcohol-related harm/negative consequence in the month prior to survey. Amongst these:

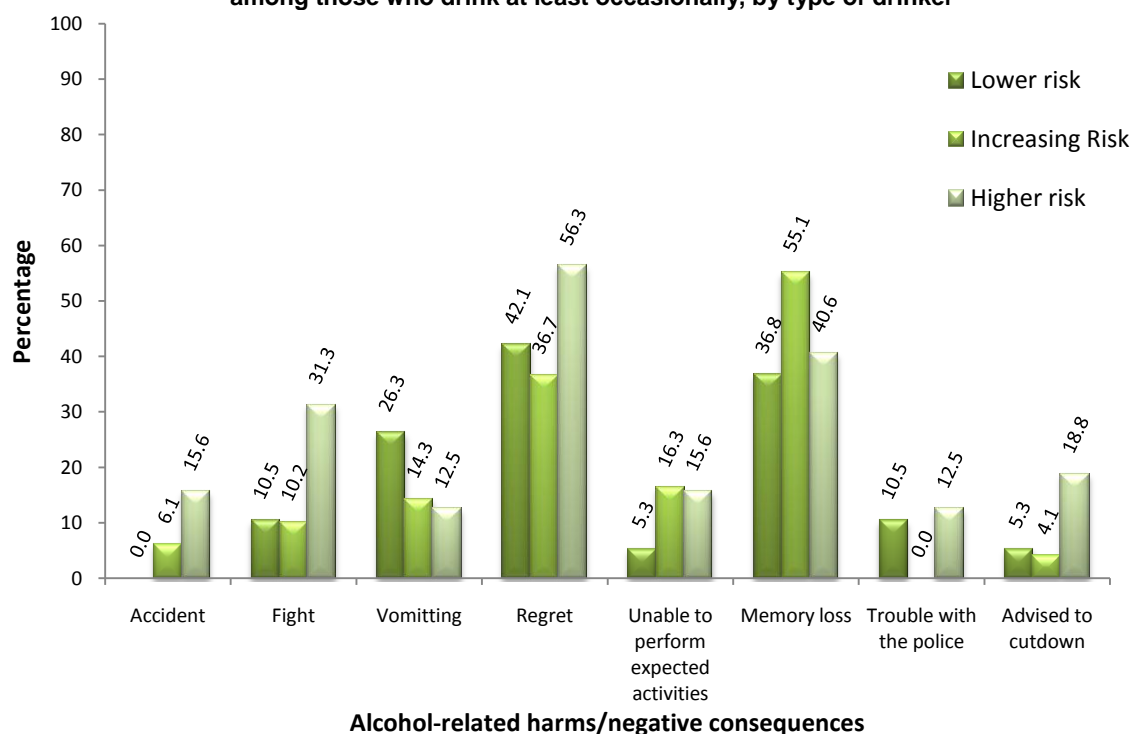
- ❖ Males were significantly more likely to experience harms (63.7%; $p=0.01$);
- ❖ Over half (55.0%) were aged 30-39 yrs, with older participants (50-60 yrs) significantly less likely than other age groups to report experiencing *any* negative effects (91.9%; $p<0.001$);
- ❖ A significant majority reported experiencing *only one type* of any such incident (59.8%; $p<0.001$). The greatest number of *different types* of alcohol-related harms/negative consequences experienced by any one person was three;
- ❖ A significant majority of participants also reported only one experience of such harms/consequences in the month prior to survey (59.9%; $p<0.001$). The greatest number of experiences by any participant during this time period was 10;
- ❖ Males were significantly more likely than females to report experiencing *two or more* types of alcohol-related harm/negative consequence (47.7% and 27.0% respectively; $p=0.04$);

- ❖ Whilst females were significantly more likely to report vomiting than were males (27.0% and 9.2% respectively; $p=0.01$), males were significantly more likely than females to report having been unable to carry out expected activities due to alcohol (21.5% and 2.7%; $p=0.01$);
- ❖ Those who were not in some form of employment were significantly more likely to report having regretted actions after consuming alcohol (53.3%; $p=0.04$) than were those who were employed (33.3%);
- ❖ Whilst younger participants (30-39 yrs) were significantly more likely to have reported alcohol-related vomiting than older participants (24.6% and 4.4% respectively; $p=0.006$), those aged 40 yrs and over were more likely to have been advised to reduce their alcohol consumption levels (15.6% compared to 3.5% of those aged under 40yrs; $p=0.03$);
- ❖ Whilst the majority of experiences were less serious (e.g., regret, memory loss) there were nonetheless 17 fights, eight accidents and six incidents resulting in being in trouble with the police. Higher risk drinkers were significantly more likely than other types of drinker to report having been in an alcohol-related fight (31.3%; $p=0.03$; Figure 5). Surprisingly, whilst 12.5% of higher risk and 10.5% of lower risk drinkers reported being in trouble with the police, no increasing-risk drinkers reported this type of alcohol-related negative consequence.

Box 5: Response categories for investigation of alcohol-related harms/negative consequences experienced in month prior to survey:

Accidents;
Fights;
Vomiting/being sick;
Regretted actions;
Inability to carry out expected activities;
Loss of memory;
Being in trouble with the police;
Being advised by friends/family/health professional to reduce alcohol consumption.

Figure 5: Alcohol-related harms/negative consequences experienced in month prior to survey among those who drink at least occasionally, by type of drinker



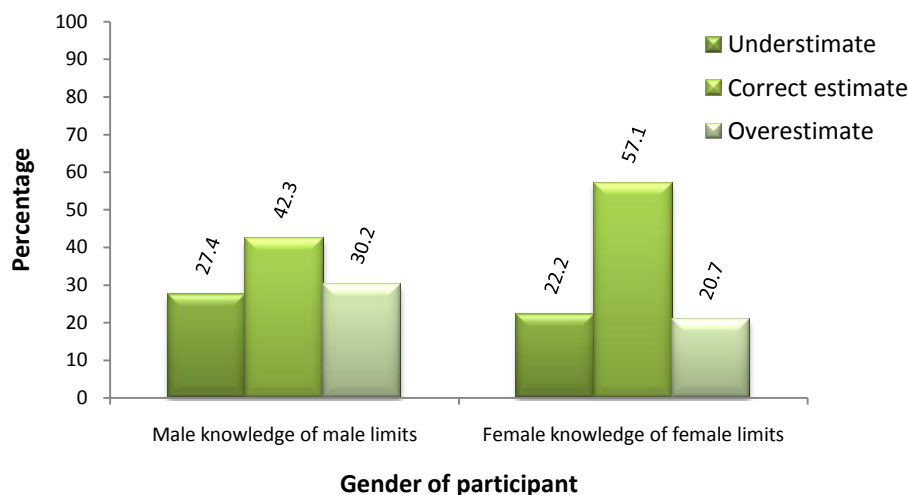
Percentages do not sum to 100 as a participant could report more than one harm

3.4. Alcohol knowledge

3.4.1. Recommended daily consumption limits

When asked about knowledge of daily consumption, a little over a third of the total sample (35.9%; $p < 0.001$) knew the limits for both genders. Whilst the significant majority of the sample (60.6%; $p < 0.001$) knew the female daily limit (2-3 units), a similar proportion (57.1%; $p < 0.001$) did not know the male daily limit (3-4 units). When asked about daily limits for their own gender, females were significantly more likely to respond correctly than were males (57.1% and 42.3% respectively correctly identified the limits for their own gender; $p = 0.001$). Irrespective of the actual number of units believed to be the correct daily limit, the significant majority (72.9%; $p < 0.001$) knew that the daily limit for males was higher than for females. Under-estimating was more common amongst male participants than females (Figure 6).

Figure 6: Knowledge of own gender's recommended daily alcohol limits



*Percentage may not add to 100 due to rounding

There was no significant association between knowledge of daily limits and either age or drinker type. However, the greatest proportion of higher risk drinkers (40.7%) correctly identified limits for both genders. A small number of participants (<5) stated that their estimates were pure guesses.

3.4.2. Unit content of common drinks

Participants were significantly more likely to overestimate the unit content of wine (67.1%) and spirits (78.0%) whilst underestimating that of stronger/premium (53.3%) and standard lager/beer (43.0; all $ps < 0.001$; see Figure 7 and Box 6). Although not statistically significant, the greatest proportion of accurate unit estimates for all four drink types were made by increasing risk drinkers whilst higher risk drinkers were the least likely to correctly estimate the unit content of wine, spirits and standard beers. Employed participants were significantly more likely to accurately estimate the unit content of Stella Artois/premium lagers (30.1%, compared to 18.1% of non-employed; $p = 0.008$). Employment status was not associated with accurate unit content estimation for any other type of drink.

Box 6: Calculating the unit contents of four typical drinks

Based upon the unit calculations in Appendix 4, the following average unit contents (rounded up to nearest whole unit) were considered the correct answers (Appendix 1);

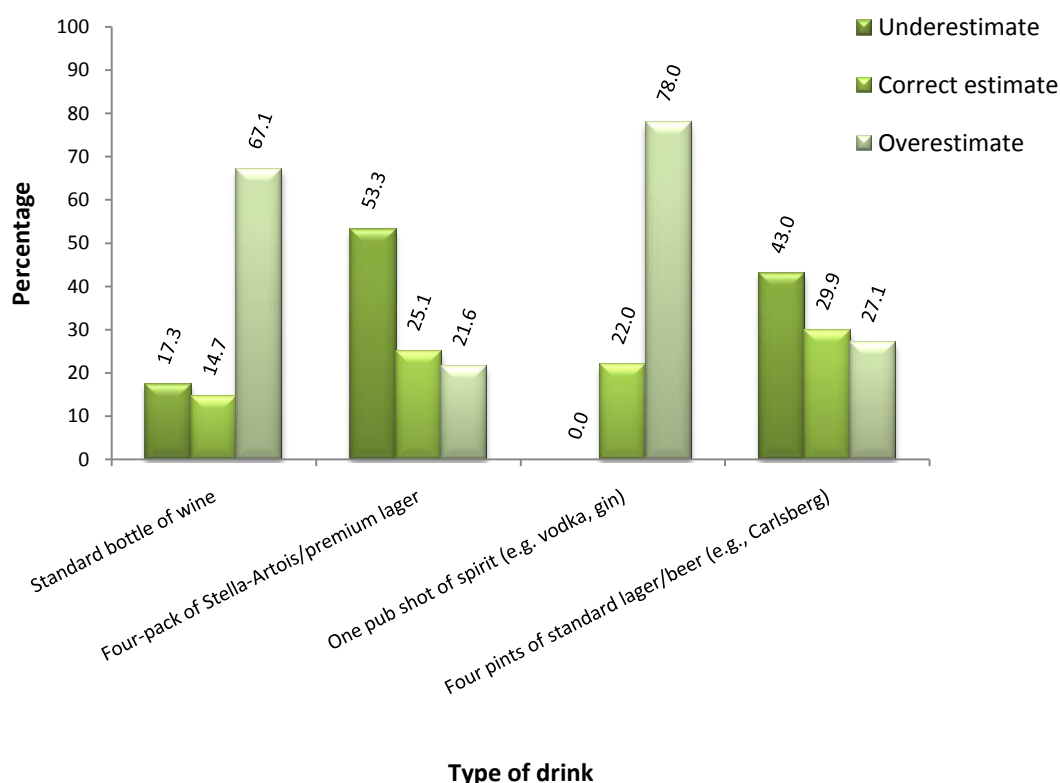
A standard bottle of wine (ABV 13%, 75cl) = 9 units

A 4-pack of Stella-Artois/premium lager = 12 units

One pub measure of spirits (e.g., vodka, gin) = 1 unit

Four pints of standard lager/beer = 8 units

Figure 7: Accuracy of estimates of alcohol unit content in a range of drinks*



*Percentage may not add to 100 due to rounding

3.5. Alcohol and driving

Participants were given a number of typical alcoholic drinks and asked which they could consume in an hour and still legally be allowed to drive. Accurate quantification of amounts of alcohol an individual can drink before driving is difficult (see Box 7), consequently there is no absolute correct amount. However, a significant majority of participants believed a pint of lager would not put them over the legal drink drive limit (73.1%; $p < 0.001$) whilst the reverse was true for wine and alcopops (Figure 8).

Box 7: Alcohol and driving

The UK drink driving limit is currently 80mg/100ml blood. Because of individual variations in metabolic rate alcohol can be absorbed at various rates. Food, gender, weight and age can also affect the rate of absorption. Consequently various sources advise differently on the issue of drink driving; e.g., www.80mg.org.uk suggest not exceeding your daily limit for your gender, whilst Government advise the only safe option is not to drink and drive at all (see www.thinkroadsafety.gov.uk).

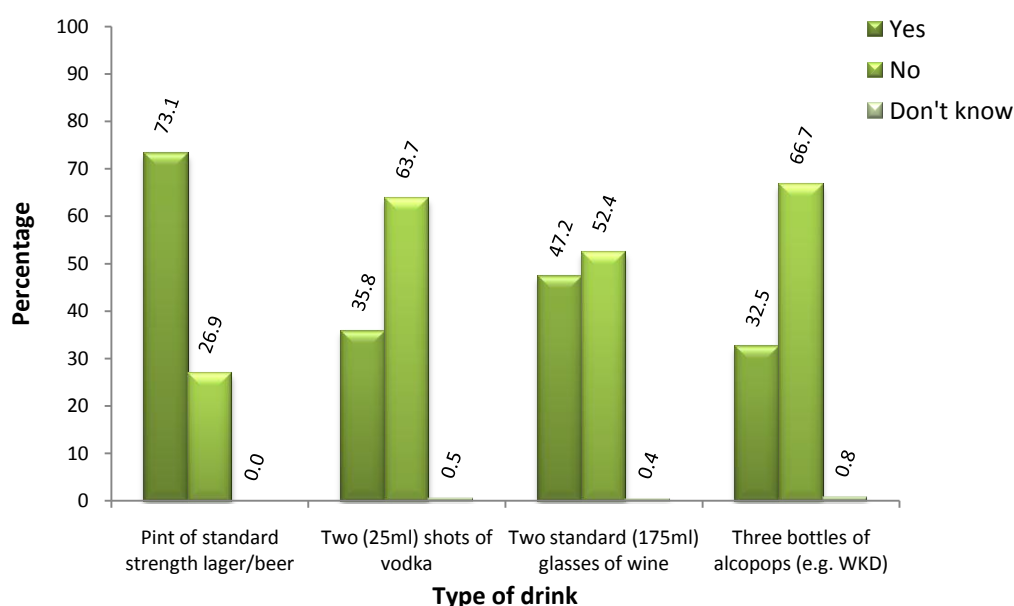
Based upon the average unit content described in Appendix 4, the following unit values were assumed for the following drinks:*

- * One pint of medium strength beer/lager = 2 units;
- * Two standard (175ml) glasses of wine = 4 units;
- * Two (25ml) shots of vodka = 2 units;
- * Three bottles of alcopops = 4.5 units.

Using these values, drinking the stated amount of standard beer/lager or vodka would be less likely to result in exceeding the drink driving limit.

*Units were not displayed on the questionnaire.

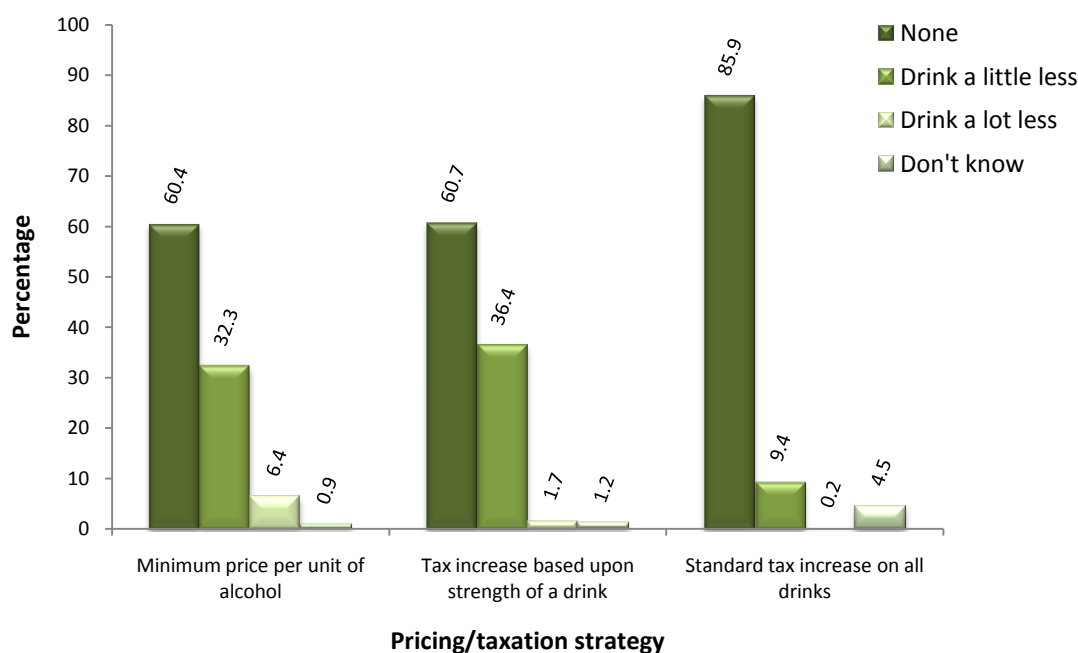
Figure 8: Perception of what can be drunk in an hour whilst remaining legally permitted to drive



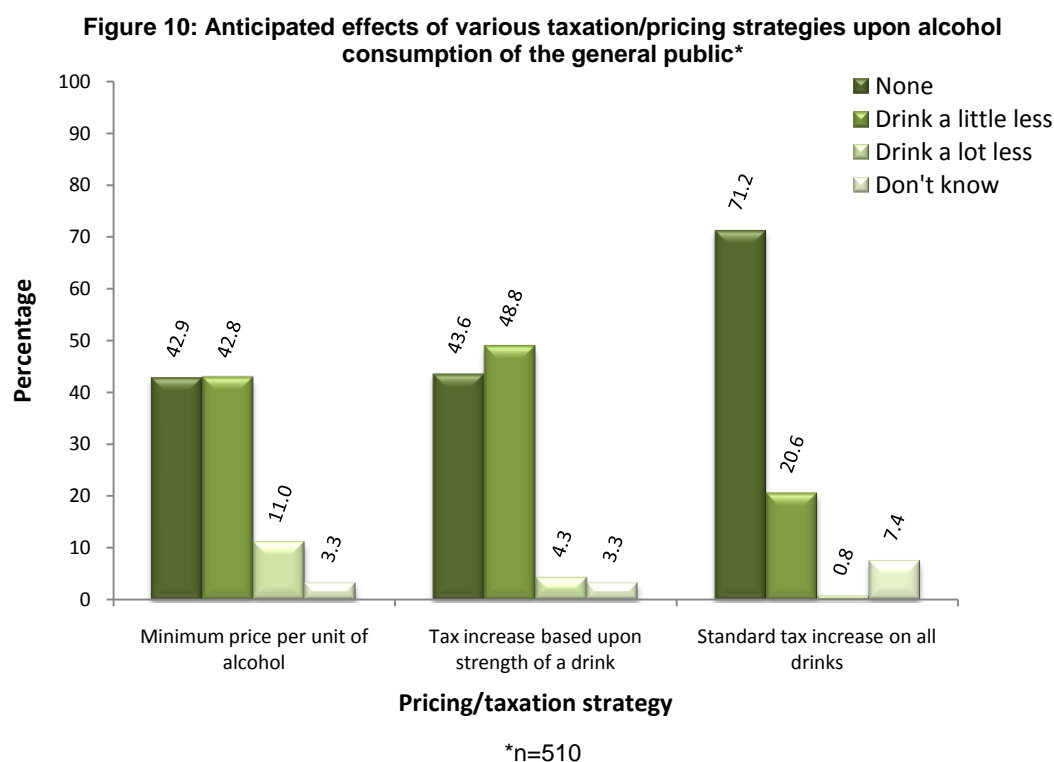
3.6. Alcohol and pricing/taxation

Participants were asked about perceived effects of a variety of taxation/pricing strategies upon both their personal consumption and that of the general public. In general, participants doubted that a standard increase on all alcoholic drinks would have any effect on their personal consumption levels (85.9%) or that of the general public (71.2%). A strength-based tax increase was perceived as the most effective means of reducing both personal and general public consumption. Participants felt their personal consumption was less susceptible to the effects of taxation and pricing strategies than that of the general public (Figures 9 and 10).

Figure 9: Anticipated effects of various taxation/pricing strategies upon personal alcohol consumption of those who drink at least occasionally*



*n=425



When asked which of the various pricing/taxation strategies they would support, 72.1% of participants (n=367) stated they would not support any. Males were significantly more likely to hold this opinion than females (76.3% and 68.1% respectively; $p=0.03$). Where any support was reported, it was predominantly for the introduction of a minimum price per unit (22.5%; Table 8). Whilst more than half of those questioned (53.8%) felt his strategy would reduce consumption among the general public (Figure 9), only 38.7% felt it would reduce their personal consumption (Figure 10).

Table 8: Extent of support for various pricing/taxation strategies*

Strategy supported	n (%)
Minimum price per unit	115 (22.5)
Strength-based tax increase	82 (16.1)
Standard tax increase	78 (15.3)
None of the above	367 (72.1)

*n=509 (one participant failed to answer this question)

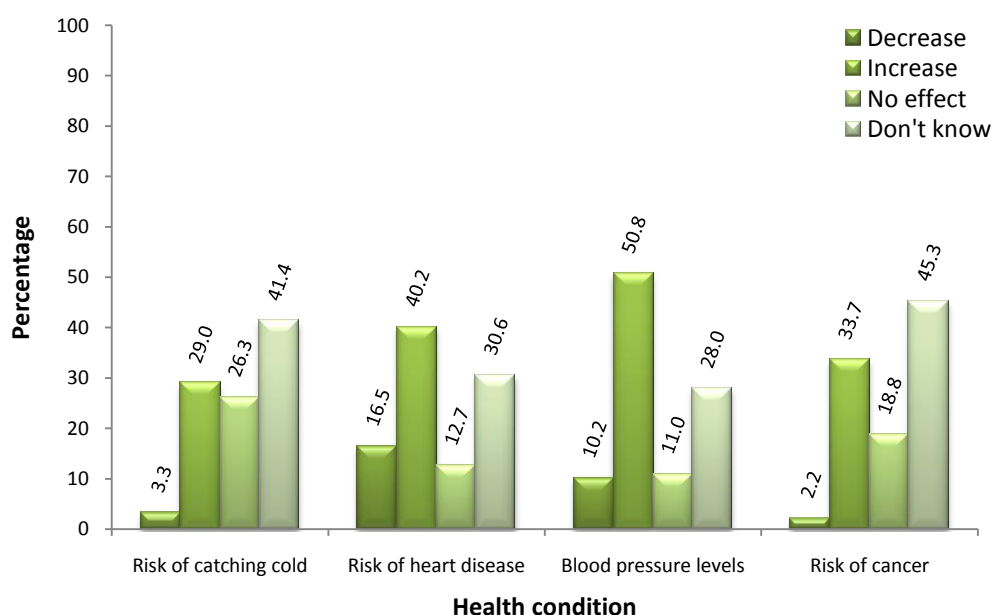
Percentages do not sum to 100 as participants could support more than one strategy

3.7. Alcohol and health

3.7.1. Effects on personal health

Participants clearly felt that small amounts of alcohol on a regular basis could increase the risk of heart disease (40.2%) and raise blood pressure (50.8%; both $ps < 0.001$; Figure 11). They were most unsure about the effects of such drinking patterns on the risk of cancer (45.3%) and catching colds (41.4%; both $ps < 0.001$), the latter revealing the most mixed opinions.

Figure 11: Anticipated effects on various health conditions of drinking a glass of red wine three times per week



3.7.2. Awareness of alcohol-related health information/campaigns

Almost three-quarters of participants (73.7%; $p < 0.001$) had not seen any alcohol-related health information in the three months prior to survey. Those that had seen such information reported seeing it in a variety of locations (Table 9). Participants were better able to recall the location than the format, and the format better than the content or message of the information. Of the 134 participants who reported having seen alcohol-related health information in the target period, only three were able to give a rough estimate of when they saw the information (e.g., 'a few weeks ago' or 'recently').

Table 9: Health information seen by participants in the three months prior to survey*[∇]

<i>Location</i>	<i>Format</i>	<i>Content/message/campaign etc.</i>
<i>At work (2)</i>	<i>Advert on TV (13)</i>	<i>Drink-driving(1)</i>
<i>Outside The Strand Shopping Centre (10)</i>	<i>Information (verbal) from GP (1)</i>	<i>Relationship between alcohol and football (1))</i>
<i>GP surgeries (29)</i>	<i>Leaflets (7)</i>	<i>Underage purchasing (1)</i>
<i>TV (67)</i>	<i>Posters (33)</i>	
<i>Newspapers (1)</i>		
<i>Bus stops (4)</i>		
<i>Pub (1)</i>		
<i>Through letterbox (1)</i>		

*n=134

[∇]Participants may have not provided any details of said information, or reported on more than one instance/type

Asked if they had seen the *It's Your Choice* campaign in the month prior to survey, 3.1% claimed to have done so. Of these participants the most common location of this campaign was at a GP's surgery/medical centre (reported by six participants), followed by three participants reporting having seen it around their local streets/bus stops. None could recall any details of the content. This is perhaps to be expected as the campaign did not begin until after data collection had ended. Responses to this part of the questionnaire provided insight into the accuracy of participants' reports across the survey.

4. Next steps

Once the social marketing campaign has been completed this survey will be re-run using the same questionnaire and the same protocol. The new data will be compared against the baseline measures presented in this report, thus enabling researchers to identify any changes in alcohol-related behaviour and knowledge amongst the target population.

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Appendix 1

The questionnaire

Full postcode:

Sex: Male ☐ Female ☐

Age: 30-39 ☐ 40-49 ☐ 50-60 ☐ 61+ ☐

Occupation: Employed—full-time ☐ part-time ☐ Unemployed ☐ Student ☐ Other

NHS Sefton **liverpool JMU**

1. Do you drink alcohol? Yes ☐ If yes, please go to Q4 No ☐

2. When did you stop drinking?

3. Do you intend to maintain this? Yes ☐ No ☐ For less than 6 months ☐ Now please go to question Q14

4. Have you drunk alcohol in the past 7 days? Yes ☐ No ☐ (If no please go to Q8)

5. In the past 7 days, on which days did you drink alcohol and how many drinks (e.g., pints/cans/glasses) did you consume?

Alcohol	Mon	Tue	Wed	Thurs	Fri	Sat	Sun
Lager/beer/bitter/cider etc. What is your usual brand?							
Glass of spirit e.g. vodka. Circle your usual measure (single, double, don't know).							
A glass of wine. Circle your usual measure (small - 125ml; Standard - 175ml; Large - 250ml; don't know).							
A glass of fortified wine e.g. sherry, port, martini etc.							

6. Is this more or less than you would usually drink in a week? More ☐ Less ☐ About the same ☐ If more or less, is there a reason?

7. How many units of alcohol do you think you drank on your most recent drinking day?

8. Where do you most often drink your alcohol? Pub/club ☐ Home ☐ Friends' or family's home ☐ Other

9. During the last month, how many times have you had the following happen to you due to drinking?

Been involved an accident ☐

Been involved in a fight ☐

Been sick (i.e. threw up/vomitted) ☐

Regretted something you have said or done ☐

Been unable to do something that was expected of you ☐

Been unable to remember the night before ☐

Been in trouble with the police ☐

Been advised by a friend/family member/health professional to reduce your drinking? ☐

10. Where do you most often buy your alcohol? Pub/club ☐ Specialist alcohol shop (e.g., Oddbins or Bargain Booze) ☐ Supermarket ☐ Abroad/duty free ☐ Corner shop ☐ Telephone delivery ☐ Other

11. How often do you go out to the following?

Never (if never then please go to Q15) ☐

Less than once a month ☐

1-3 days a month ☐

Once a week ☐

2-4 days a week ☐

5 or more days a week ☐

12. Do you normally drink alcohol before going out? Yes ☐ No ☐

13. Do you normally continue drinking when you get back home after a night out? Yes ☐ No ☐

14. Approximately how many units of alcohol would you estimate are in:

A standard bottle of wine

A 4 pack of Stella Artois or such lager/beer

A pub measure of spirit (e.g., whisky, gin etc)

4 pints of lager/beer (e.g., Carlsberg)

15. Which of these examples do you think an average person could drink in an hour before being over the legal drink driving limit? (please tick all that apply)

- One pint of medium strength (e.g. Fosters) lager ☐
- Two standard (175ml) glasses of wine ☐
- Two (25ml) shots of vodka ☐
- Three alcopops (e.g. WKD) ☐

16. What do you think are the recommended daily alcohol limits for males and females?

	1 unit or less	2-3 units	3-4 units	4-5 units
Males	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Females	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

To reduce alcohol consumption, the government could either increase tax on alcoholic drinks or set a minimum price per unit of alcohol in a drink. If they chose to set a minimum price of 50p per unit of alcohol, a bottle of wine would then cost *at least* £4.70 and a 4-pack of standard beer *at least* £3.60. With this in mind....

17. What effect do you think the following would have on alcohol consumption by the general public?

	None	Drink a bit less	Drink a lot less	Don't know
A minimum price per unit of alcohol in a drink	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A tax increase based upon drink strength	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A standard tax increase	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. What effect do you think the following would have on your personal alcohol consumption?

	None	Drink a bit less	Drink a lot less	Don't know
A minimum price per unit of alcohol in a drink	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A tax increase based upon drink strength	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A standard tax increase	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. Which of the following would you support?

- Increase the tax on all alcoholic drinks by the same amount ☐
- Increase the tax on stronger drinks more than on weaker ones ☐
- Set a minimum price per unit of alcohol for all alcoholic drinks ☐
- None of these ☐
- Other

20. How do you think drinking small amounts of alcohol regularly (e.g. one glass of red wine three times a week) affects the following?

	Increases	Decreases	Has no effect	Don't know
Risk of catching colds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Risk of heart disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blood pressure levels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Risk of cancer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. Have you seen any health information on alcohol in the last 3 months? Yes ☐ No ☐

If yes, please give details (e.g., where, what, when?):

22. Have you seen/heard of the *It's Your Choice Campaign*? Yes ☐ No ☐

If yes, please give details (e.g., where, what when?):

For drinkers only

23: In the last month has the amount you drink: Yes No

- Increased ☐ ☐
- Decreased ☐ ☐
- Stayed the same ☐ ☐

24: Do you think in the next 6 months the amount you drink will: Yes No

- Increase ☐ ☐
- Decrease ☐ ☐
- Stay the same ☐ ☐

For interviewer use

Date and time: _____ Interviewer: _____ location: _____

Thank you

Appendix 2

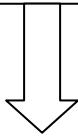
Verbal Briefing Note



(To be read by researcher to participant prior to giving out information sheet)

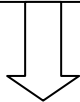
- Hi, I'm from John Moores University and I was wondering if you had a few minutes to run through a very quick alcohol survey?

If YES/NOT SURE/DON'T KNOW



- It's to help your local NHS understand how people use alcohol and what they think about it.
- It takes about 10 minutes to do.
- It's completely anonymous and confidential and your answers can help Sefton NHS plan services better.
- You can ask questions, change your mind or even withdraw at any point if you want to.
- Might you be interested in taking part?

If YES



If NO



OK, thanks for stopping anyway.

If NO



OK, thanks for stopping anyway.

- That's great. Can I just give you this information sheet (*give a participant information sheet to the person*) to look at to help you make sure you're ok with doing it? It just tells you more about the project and how you are under no obligation, won't be identified etc.
- It also has my contact details on it, and contact details of some alcohol advice services if you feel you need any more info about drinking etc.

Appendix 3

LIVERPOOL JOHN MOORES UNIVERSITY PARTICIPANT INFORMATION SHEET



Title of Project:

Investigating drinking behaviours and alcohol knowledge amongst people resident in Linacre and Derby: An updated evaluation of *It's Your Choice*.

Name and contact details of researcher:

Kevin Sanderson-Shortt
Public Health Researcher – Alcohol
Centre for Public Health, Research Directorate
Faculty of Health and Applied Social Sciences
Liverpool John Moores University
Henry Cotton Campus (3rd Floor)
Trueman Street
Liverpool L3 2ET

e-mail: k.r.sanderson-shortt@ljmu.ac.uk
Tel: 0151 231 4421

You are being invited to take part in a research study. Before you decide it is important that you understand why the research is being done and what it involves. Please take time to read the following information. Ask us if there is anything that is not clear or if you would like more information. Take time to decide if you want to take part or not.

What is the purpose of the study?

Alcohol use can cause problems for some people (e.g., health problems, social problems, trouble with authorities etc). To help us understand how people use alcohol and what they know about it, this study aims to investigate the drinking behaviours and alcohol knowledge of people from the Linacre and Derby wards of Sefton.

Do I have to take part?

It is up to you to decide whether or not to take part. Refusing to take part will not affect your rights/any future treatment/services you receive.

What will happen to me if I take part?

If you take part you will be given this information sheet. We won't ask you to sign a consent form because answering the questions will be considered as consent. You will be asked to take 5-10 minutes to complete an anonymous and confidential questionnaire. In addition to questions about alcohol knowledge and use, you will be asked for your postcode, age and gender. None of this will be used to trace you or contact you. You will be able to withdraw from the survey at any time and/or ask the researcher any questions whilst you are doing the survey or after.

Are there any risks / benefits involved?

There are no risks but your answers will help shape future services for those who use alcohol and may have problems with it.

Will my taking part in the study be kept confidential?

Everything you tell us will be kept completely confidential and anonymous. Because we haven't asked for your name or date of birth there will be no way to identify your answers in the data we collect. Paper questionnaires will be kept in a locked filing cabinet and all the electronic data will be kept on a computer with a password that only the researcher will know.

If you have any further questions please contact the researcher as detailed above.

Thank you.

Appendix 4

Average alcohol unit content of various types of drinks

Type of drink	Average alcohol units contained*
<i>Bottle of small alcopops (275ml)</i>	1.5
<i>Bottle or can of standard lager/bitter/cider (assuming average quantity = 385ml bottle/can multiplied by units in a standard strength pint).</i>	1.4
<i>Pint of standard strength beer/lager/cider</i>	2.0
<i>Bottle or can of strong lager/bitter/cider (assuming average quantity = 385ml bottle/can multiplied by units in a pint of typical strong cider).</i>	2.7
<i>Pint of strong bitter/lager/cider</i>	4.0
<i>Glass of wine - 125mls (small)</i>	1.4
<i>-175mls (medium)</i>	2.0
<i>-250mls (large)</i>	2.8
<i>Fortified wine etc.,</i>	1.0
<i>Shot (spirit)</i>	1.0

*The units of alcohol per drink type (e.g., per bottle of alcopops, pint of standard lager) are derived from methodology used in The General Lifestyle Survey^[24]. This kept unit content in line with other surveys such as the Big Drink Debate (Cook and Morleo 2008). These unit contents were then multiplied by the number of bottles/cans/shots or glasses consumed by an individual to arrive at an estimated number of units consumed.