

**Young people's beliefs about the health effects of different alcoholic beverages:
An exploratory comparison of the UK and France**

By

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Abstract

Different kinds of alcoholic drink have different connotations for drinkers in terms of their potential to produce intoxication and their effects on health. These connotations are likely to be important influences on drinking behaviour. This mixed methods study examined how young people (18 to 24 years old) in two countries with different drinking cultures (France and the UK) perceive the costs and benefits of consuming particular kinds of alcoholic beverage, specifically contrasting beers (blonde and dark), wines (red and white) and spirits (clear and dark). More broadly, the project evaluated young peoples beliefs about the different beverage types, and the factors that influence their choices of beverage, including, peer influence, beliefs about drink-specific effects and how different kinds of drink affect body weight. A pilot study of online drinking diaries was conducted to establish drinking trends among young adults in the two countries. A number of key difference were found between the two countries which informed areas of discussion in the focus groups, including beverage preferences, the difference in levels of preloading and mixing drinks, as well as the relationship between alcohol and food. The qualitative part consisted of sixteen structured focus groups (8 in each country), which examined participants' understanding and beliefs about the health consequences of consuming different kinds of alcoholic beverage. They also explored how different drinks are related to drinking styles. In both countries, participants highlighted 'getting drunk' as a reason for drinking, and they adopted similar justifications for their drinking behaviours. UK participants tended to view all drinks (except wine) as equally problematic for health, whereas French participants had more diverse beliefs about the health effects of different beverages. The quantitative phase consisted of a large survey distributed across the two countries (UK= 555 participants and France= 401), which looked further into people's health beliefs about different beverage types. The notion that wine is healthier than other beverages was widely held in both countries, but was stronger in France than the UK and it had different determinants in the two countries. Also, in France, spirits were identified as particularly problematic for health, much more so than in the UK. In the UK, apart from wine, all beverages were considered to have a similar potential for causing health problems. Liver damage was identified as a key problem linked to chronic alcohol consumption; in France, it was most strongly associated with drinking dark spirits, whereas in the UK it

was not linked to any particular beverage type(s). In both countries, the acute effects on health were more salient than the chronic effects, and the primary concern relating to long-term consumption was addiction rather than damage to physical health. Lastly, 14 semi-structured interviews were conducted in the two countries (7 in each country) exploring the impacts of public information, media reports and peer influence on beliefs about different beverage types. Across the two countries the participants believed that there was a lack of information about the long-term health effects of alcohol, and expressed a lack of trust in the media (i.e. newspapers and television advertising). They believed that information should be more accessible through the internet, i.e. social media sites, and they also suggested the use of images to illustrate the major health impacts of alcohol consumption. To conclude: drinking practices and views about alcohol's health effects appear to be converging across the two countries. Participants showed a limited understanding of (and concern about) long-term health problems associated with different drinks, and their views were confounded with stereotypes about typical consumers and beliefs about the "naturalness" or "authenticity" of different drink types.

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1 Chapter 1: General Introduction

1.1 The place of alcohol in society

Alcohol has an important and often positive part to play in daily life in the UK and internationally. For many people, it is part of their everyday family and social lives, it is present at many culturally significant celebrations, and if consumed in moderation it can lead to feelings of relaxation and mild euphoria (British Medical Association [BMA] Board of Science, 2008).

People have been consuming alcohol for recreational purposes for over 7,000 years, and concerns about drunkenness and its effects have also been documented throughout history (Plant, 2009). Whilst most of the adult population consume alcohol at a low-risk level most of the time or abstain completely, the broad patterns of consumption from daily heavy drinking to occasional hazardous drinking, create significant public health and safety concerns across most countries (World Health Organisation [WHO], 2011).

The harmful use of alcohol is a major contributing factor to death, disease and injury, through alcohol dependence, cancers, liver cirrhosis and alcohol related injuries. The UK Department of Health states that “people who become drunk are much more likely to be involved in an accident or assault, be charged with a criminal offence, contract a sexually transmitted disease and, for women, are more likely to have an unplanned pregnancy” (Department of Health [DH], 2007 p.3). There are also a growing number of societal effects that are of concern including drink driving, violence and foetal damage (World Health Organisation [WHO], 2011).

1.2 Alcohol consumption in the UK and Worldwide

1.2.1 Patterns of alcohol consumption

As previously noted, alcohol has been consumed throughout the world for centuries, however alcohol consumption patterns and drinking cultures vary across different countries (Plant, 2009).

Worldwide, the average level of alcohol consumption reported in 2010 was equal to 6.2 litres of pure alcohol consumed per person aged 15 years of age or older. Worldwide, 16% of drinkers aged 15 and over engage in heavy episodic drinking (HED) or binge-drinking, which is defined as 60 or more grams of pure alcohol (5 or more drinks) on at least one single occasion at least monthly (WHO, 2014), which is double the recommended 'safe limit'. The highest consumption levels are found among the developed world, in particular in the WHO European Region (EUR) and the WHO Region of the Americas (AMR). Intermediate levels of consumption are found in the WHO Western Pacific Region (WPR) and the WHO African Region (AFR), while the lowest consumption levels are found in the WHO South-East Asia Region (SEAR) and particularly in the WHO Eastern Mediterranean Region including, Afghanistan, Egypt and Libya, which represent large populations of the Islamic faith and therefore have a very high rate of abstention due to religious beliefs (WHO, 2014).

Among 14 European countries, survey data for 20- to 64-year-olds (Mäkelä et al., 2006) reported alcohol consumption frequency as being the highest in central and southern Europe (Austria, Germany, Switzerland, France, and Spain), where men reported drinking on average every 2 to 3 days and women every 4 to 6 days. Northern Europe and Hungary had a lower drinking frequency. The number of abstainers was low throughout Europe (1-14%), with Spain as an exception at 27%, and female abstainers were less common among the Northern European countries (e.g. 8% female abstainers in Finland, compared to 23% in Italy). In the Czech Republic and Hungary (men and women) and in the UK and Spain (women only) the proportion of abstainers increased with age. It is worth noting that the survey data were collected between 1993 and 2003 so may not be representative of the current levels of European drinking frequency; however, to the researcher's knowledge no equivalent, more recent data are available.

In terms of units consumed, an assessment of average weekly alcohol consumption from the Health Survey for England (HSE) in 2013 revealed that 62% of men drank up to 21 units a week and 61% of women drank up to 14 units a week, which was the level of drinking defined as lower risk at that time. The report also revealed that 67% of men and 53% of women drank alcohol in the last week and that 18% of men and 10% of women drank on five or more days in the week (Lifestyle Statistics, 2015). In the UK, a unit is equivalent to one centilitre or 8 grams of pure ethanol; this equates to approximately half a pint of normal strength beer, lager, stout, cider; a glass of wine; or a single bar measure of spirits (Plant, 2009). It is worth noting that there is no international consensus on the measurement of a unit, therefore there are variations between different countries; in France a unit is measured as 10g, in the USA it is 14g, in Japan it is 19.75g, and in Italy it is 12g (International Centre for Alcohol and Policy, 2003).

Although there is concern about the levels of alcohol being consumed in the UK, there has been a long-term downward trend in the proportion of adults consuming alcohol: 75% of men and 59% of women consumed alcohol in 1998 compared to 68% of men and 54% of women in 2010. Data from the 2010 General Lifestyle Survey (GLS), which is a national survey covering adults aged 16 years and over living in private households in Great Britain, indicated that the average weekly consumption of alcohol in the UK was 15.9 units for men and 7.6 units for women. In the same survey, 26% of men reported drinking more than 21 units a week and 17% of women reported drinking more than 14 units a week (Lifestyle Statistics, 2012). This decline has been particularly marked among adults aged between 16 and 24 years old, with the exception of Ireland, where there has been a marked increase since 1986. These results are supported by Goddard (2006), where 60% of men aged between 16 and 24 years old reported drinking on at least one day in the last week, compared to 70% in 1998; similarly, 53% of women aged 16 to 24 years old reported drinking at least one day in the last week, compared to 62% in 1998 (Goddard, 2006).

It is not clear why alcohol consumption has fallen over the last 10 years but it could be due to a number of factors, including, the increase in people abstaining from alcohol, the growth in ethnic minority groups, such as Muslims who typically abstain from alcohol, the increase in older populations who typically drink less and/or an increase in moderate alcohol consumption and a decrease in heavy drinking.

1.2.2 Purchases and affordability of alcohol

Purchases of alcoholic drinks for consumption at home have increased since 1992 from 527 millilitres (ml) per person per week, with a peak in 2003/04 at 792 ml per person per week. By 2012 the figure had declined to 700 ml per person per week (but still represents a 33% increase since 1992). Overall there was a 1.3% increase between 2009 and 2012 of household spending on alcohol, whilst alcohol bought for consumption at home fell by 9.8% (Lifestyle Statistics, 2015).

In the UK the cost of alcohol, as measured by the alcohol price index (API) between 1980-2014 has increased by nearly 24% more than retail prices generally (Alcohol price index relative to Retail price index). However, household disposable income increased by nearly 90% over the same period and alcohol in 2014 was 53.8% more affordable than it was in 1980, indicating the trend of increasing affordability (Lifestyle Statistics, 2015).

1.2.3 Patterns of drinking among young people

There is a growing concern about young people's drinking in the UK and worldwide; they are adopting a style of drinking known as 'binge-drinking'. There is no internationally agreed definition of binge-drinking and therefore various definitions occur across countries, for example in the USA it is defined as drinking five or more drinks for men and four or more drinks for women, in approximately two hours (US Department of Health and Human Services, 2004).

Regular daily drinking is most common in Southern Europe, however the UK has the highest level of alcohol consumed per drinking occasion, with 40% of men and 22% of women in the UK reporting binge-drinking occasions over the last 12 months, compared to 9% of men and 5% of women in France (Institute of Alcohol Studies, 2009).

Data from the Opinions and Lifestyle Survey (OPN; an omnibus survey that collects information from people living in private households in Great Britain) in 2013 revealed that the proportion of adults who binged at least once in the week before the survey actually decreased by 3% between 2005 (18%) and 2013 (15%). Young adults (aged 16 to 24 years old) were responsible for much of this decrease, and to a lesser extent those aged from 25 to 44 years old. Binge-drinking among young adults fell from 29% in

2005 to 18% in 2013, and fell from 25% to 19% among those aged 25 to 44 years old. Despite these falls, binge-drinking continued to be more common in these age groups. Although binge-drinking fell among both men and women between 2005 and 2013, binge-drinking continues to be more common among men (19% for men, compared to 12% for women) (Office of National Statistics [ONS], 2015a). However, binge-drinking rates almost doubled among women, from 8% in 1998 to 15% in 2006, with a pronounced increase in women aged from 25 years and older. Binge-drinking among men aged 16 to 24 years old decreased from 39% in 1998 to 30% in 2006 (Smith & Foxcroft, 2009).

Figures from the National Institute of Prevention and Health Education (INPES) revealed that binge-drinking in France is becoming increasingly common among young people between the ages of 18 to 25 years. Around 46% of French people in that age group have participated in binge-drinking at least once in the last year, compared to just 33% ten years ago. Meanwhile, those in that age group who have done it three times in the last year has almost doubled from 15 to 29% (“Young French women turn to ‘le binge-drinking’”, 2015).

Binge-drinking is not exclusive to young drinkers (despite being most prevalent in this group), it also continues on a diminishing scale throughout adult life. Yet evidence has also suggested that those who binge drink in their 20’s are more likely to do so in their 40’s, with the risk doubled in men and increased by half in women (Institute of Alcohol Studies, 2009; Jefferies, Power, & Manor, 2005). In the UK there is currently a Government strategy in place to tackle the UK’s binge-drinking culture, and this is discussed in more detail in Chapter 1.6.

Despite binge-drinking being a huge public health concern, there is a lack of research into beverage preferences among binge drinkers. It is important to identify beverage preferences among binge drinkers in order to inform a better understanding of motivating factors behind dangerous drinking styles. Evidence suggests that preferences towards particular beverage types are associated with different drinking patterns. This will be discussed in more detail in Section 1.6.2.

1.3 Alcohol and its effects on health

Alcohol consumption and problems related to alcohol vary widely around the world, but the burden of disease and death remains significant in most countries (WHO, 2011). Therefore there is a worldwide concern about the health and social effects of alcohol consumption (deVisser & Birch, 2012).

In 2012, 5.9% of global deaths were attributable to alcohol, with 33.4% being from cardiovascular disease and diabetes, 17% from unintentional injuries, 16.2% from gastrointestinal disease, and 12.5% from cancer (WHO, 2014). In Europe, 6.5% of deaths maybe attributed to heavy alcohol consumption (Rehm, Taylor, & Patra, 2006). In England, in 2013 there were 6,592 alcohol-related deaths, a 1% increase from 2012 (6,495) and a 10% increase from 2003 (5,984) (Lifestyle Statistics, 2015).

In the UK between 2013 and 2014, there were an estimated 1,059,210 hospital admissions attributable to alcohol consumption, where an alcohol-related disease, injury or condition was the primary reason for hospital admission, or a secondary diagnosis. This figure is 5% higher than the estimated admissions in 2012/13 and 115% higher than the estimated admissions in 2003/04 attributable to alcohol. Of these 1,059,210 admissions, 48% (511,260) of admissions were due to cardiovascular disease in 2013/14 (Lifestyle Statistics, 2015). In France the number of those aged under 25 years old being admitted to hospital due to excessive alcohol consumption doubled between 2004 and 2007 (European Alcohol Policy Alliance, 2016).

Recent medical research has contributed substantially to our understanding of the relationship between the consumption of alcohol and the likelihood of developing specific diseases and disorders. Research has demonstrated that the relationship between alcohol consumption and health outcomes is complex and multidimensional. Not only the volume of consumption, but the patterns of drinking, especially irregular heavy drinking have been shown to determine burden of disease (Room, Babor, & Rehm, 2005). Some evidence that certain alcoholic beverages may have benefits when consumed in moderation further complicates the picture; the most commonly reported benefit being alcohol's (perhaps specifically, red wine's) protective effects against coronary heart disease (CHD) and other atherosclerotic diseases (Gunzerath, Zakhari, & Warren, 2004). Other benefits of different drink types have been reported and these will

be discussed later in this chapter, as well as the negative health effects of different alcoholic drinks.

1.3.1 Negative health effects of alcohol consumption

1.3.1.1 Physical illness

While research into the effects of alcohol in general (i.e. not beverage-specific) has conclusively shown an association with increased rates of illness and death, studies of beverage-specific associations with different illnesses have been less conclusive.

Historically, very significant associations have been found between alcohol consumption and the incidence of cirrhosis (Schmidt & Bronetto, 1962) and there is evidence suggesting that the consumption of three to five drinks a day or more can lead to the development of cirrhosis (Sørensen et al., 1984; Sørensen, 1990; Becker, Grønbæk, Johansen, & Sørensen, 2002). Moreover, some studies have found beverage-specific differences in the likelihood of cirrhosis. For example, spirit consumption compared to beer or wine was associated with cirrhosis mortality in the UK, Canada, New Zealand, United States and Australia (predominantly beer drinking countries). The analysis was comprised of cirrhosis mortality rates per 100,000 of a standardised population 15 years of age and older and per capita consumption of total ethanol, spirits, wine and beer. Cirrhosis and alcohol rates per capita were gathered between 1953 and 1993 (Kerr, Fillmore, & Marvy, 2000).

In support of these findings, two studies found an association between spirit consumption and cirrhosis mortality from data in the United States as a whole during the period 1949 to 1994 (Roizen, Kerr, & Fillmore, 1999) and using data from 50 states in the United States during 1975 to 1986 (Gruenewald & Ponicki, 1995). Both of these studies used combined cross-sectional and time-series data. However, other studies have found no significant differences between beverage types in terms of cirrhosis (Lelbach, 1975; Tuyns & Pequignot, 1984). It is worth noting that, to the researcher's knowledge, there is no more recent data available and therefore the results may be different if replicated.

Studies have also provided definitive evidence that drinking alcohol can increase the likelihood of getting cancer (WHO, 2010) and a causal association has been established between alcohol consumption and cancers of the oral cavity, pharynx, larynx, oesophagus, liver, colon, rectum, and, in women, breast (Ng, Kabat, Wynder, 1993;

Castellsague et al., 1999; Bosettie et al., 2001; Carrao, Bagnardi, Zambon, Vecchia, 2004). Furthermore, an association is suspected for cancers of the pancreas and lung (Boffetta & Hashibe, 2006; Zheng et al., 1993).

The evidence concerning the role of alcohol in breast cancer is becoming more consistent and indicates a linear increase of risk with increasing volume of alcohol consumption (Smith-Warner, Spiegelman, & Yaun, 1998; Bagnardi, Blangiardo, La Vecchia, & Carrao, 2001; Ellison, Zhang, McLenna, & Rothman, 2001). Two meta-analyses estimated an increased risk (10%) of breast cancer with every additional drink (10 g of alcohol) per day, regardless of beverage type (Ellison et al., 2001; Key et al., 2006). Data from a prospective observational study of over 100,000 women followed up from 1980 to 1998 in the USA, found that three glasses of wine per week led to a significantly increased risk of breast cancer (Chen, Rosner, Hankinson, Colditz, & Willett, 2011). A study of 154 premenopausal women observed an increase of breast cancer among those who consumed less than 4 litres of red wine per month, or less than one drink per day (Viel, Perarnau, Challier, & Faivre-Nappez, 1997). A further study reported a lower risk of breast cancer among women in France who consumed 10 to 12g of wine a day compared to non-wine drinkers. The risk of breast cancer did increase above 12 g per day of wine, but the association was non-significant (Bessaoud & Daures, 2008). It is worth noting that this study did not analyse the effects of red and white wine separately.

However, data derived from a study of 6,327 women aged between 20 and 69 years who had been diagnosed with invasive breast cancer between 1995 and 2000 found that alcohol was associated with a significantly increased risk of breast cancer among postmenopausal spirit drinkers but there was no association found for red or white wine drinkers (Newcombe et al., 2009). A limitation of this study is that the participant's drinking patterns were not recorded (i.e. steady drinkers versus binge drinkers), alcohol intake was limited to recent use, and patterns may have changed over time.

The amount of a specific beverage consumed, in particular wine and spirits, seems important in terms of the alcohol-breast cancer association. However, low and regular wine consumption does not seem to increase the risk of breast cancer, and may even reduce the risk.

Wine and spirits have been shown to increase the risk of prostate cancer among men; a study conducted in Washington State among men aged between 50-76 years old using the Vitamins and Lifestyle (VITAL) cohort found that white wine (not red wine) consumption was associated with an increased risk of prostate cancer (Velicer, Kristal, & White, 2006). In contrast, another study found an increased risk of prostate cancer with moderate (3 times a week to < 3 a day) consumption of spirits but not of wine or beer (Sesso, Paffenbarger, & Lee, 2001). Some studies have found no link between wine consumption and prostate cancer (e.g. Chao et al., 2010; Platz, Leitzmann, Rimm, Willett, & Giovannucci, 2004; Velicer, Kristal, & White, 2006), therefore there is limited and conflicting evidence of a link between these drinks types and an increased risk of prostate cancer.

The results of a population-based cohort study in Denmark, made up of 15,491 men and 13,841 women aged between 23 and 95 years observed a dose-response relationship between alcohol and rectal cancer after a 14.7 year follow up. Those who consumed more than 14 drinks of beer and spirits a week (not wine), had a higher risk of rectal cancer compared with non-drinkers, while those who consumed the same amount of alcohol but included more than 30% of wine had less risk of rectal cancer (Pederson, Johansen, & Grønbaek, 2003). A further study found that spirit consumption, compared with non-spirit consumption, was associated with an increased risk of rectal cancer in men (Bongaerts, Geobj, Brandt, & Weijenberg, 2006). Therefore it could be suggested that beer and spirit drinking, but not wine drinking, may be linked with rectal cancer and possibly colon cancer. An early study in Japan found that consumption of sake (fermented product of rice) and beer increased the risk of adenomatous polyps of the sigmoid colon, a well-established precursor lesion of adenocarcinoma. Data were derived from 86 men with adenomatous polyps of the sigmoid colon and 1184 men with normal colonoscopy. Participant's drinking habits, including beverage preference and frequencies, were obtained (Kono, Ikeda, Yanait, Shinchit, & Imanishi, 1990).

Data derived from three longitudinal studies conducted between 1964 and 1992 in Denmark found that heavy consumption (more than 20 drinks a week) of beer and spirits in one study was associated with an increased risk of lung cancer, but no association was found for low to moderate consumption (Prescott, Grønbaek, Becker, & Sørensen, 1999). Data from a dose-specific meta-analysis study on the association between beer, wine and liquor and lung cancer risk found that the consumption of one

drink of beer per day or greater was associated with an increased risk of lung cancer. This association was found in both men and women but was only significant in men. An inverse association was observed for both average wine consumption of less than one drink per day and one drink or greater per day. Average liquor consumption of one drink or greater per day was found to be associated with increased risk in men but no association was observed in women (Chao, 2007).

The relationship between cancer and alcohol is becoming clearer and there is good evidence suggesting that alcohol plays a significant role in a variety of cancers, with some of the most established links being between alcohol and breast cancer. However, there is also some evidence for the protective effects of alcohol at low levels of intake for breast cancer. Other links have been made between alcohol and prostate, rectal and lung cancer. However the evidence suggesting beverage-specific roles in different forms of cancer is less convincing, as the majority of the studies do not compare all beverage types when assessing the link between alcohol and cancer. But stronger links have been found for the consumption of beer and spirits and the risk of cancer, compared to the consumption of wine.

1.3.1.2 Cognitive function

Whilst the adverse effects of excessive alcohol consumption on cognitive function are well established, the effects of moderate alcohol consumption are less so (Stampfer, Kang, Chen, Cherry, & Grodstein, 2005). Excessive alcoholic consumption is well known to cause cognitive impairment via Korsakoffs syndrome (alcohol dementia), but studies have also suggested that moderate alcohol consumption may be associated with Alzheimers disease (Letenneur, 2004). A very recent study assessed the relationship between beer, wine and spirit consumption midlife and the risk of dementia for up to 43 years after baseline data collection. Spirits consumed at a rate of 12 g of alcohol (1-2 units) a day were related to an increased risk of dementia. Data were derived from over 12,000 members of the population-based Swedish Twin Registry born during 1907-1925, who had responded to items regarding alcohol consumption (Handing, Ande, Kadlecova, Gatz, & Pedersen, 2015). However studies have also reported no association between dementia and light-to-moderate alcohol consumption (Graves et al., 1991; Hebert et al., 1992; Leibovici, Ritchie, Ledesert, & Touchon, 1999), and some have claimed a protective effect (Orgogozo et al., 1997; Ruitenberg et al., 2002; Huang, Qui, Winblad & Fratiglioni, 2002). Therefore the evidence of a link between moderate

alcohol consumption and dementia is unclear and more research into beverage specific effects is needed.

1.3.1.3 Weight gain

Alcohol has also been suggested to play a role in the development of obesity but the literature in this area is still unclear. A French study found a J-shaped relationship between wine consumption, body mass index (BMI) and waist to hip ratio (WHR) which showed that men consuming less than 100 g of wine per day had a lower BMI and men and women had a lower WHR than non-drinkers or those consuming more than 100 g per day. Spirit consumption was positively associated with BMI in both men and women in a linear fashion; an increase of 25 g (one glass) of spirit was associated with an increase of BMI and WHR. No relationship was found between beer consumption and BMI or WHR (Lukasiewicz et al., 2004). This could be explained by low consumption of beer among the participants in this study and that the mean beer intake was too low to show an association. An earlier study of French men (n = 1778) and women (n = 1730) aged 35- 64 years old reported that both wine and beer were positively associated with WHR in women, but no association was found for men (Dallongeville et al., 1998). However, a study conducted in the Czech Republic among beer drinkers, found that the intake of beer was positively associated with WHR among men, and negatively related to BMI in women (Bobak, Skodova, & Marmot, 2003). Among Swedish women, a study found that WHR correlated negatively with consumption of beer and wine (Rosmond & Bjorntorp, 1999). In The Atherosclerosis Risk in Communities (ARIC) study conducted in the USA, consumption of beer and spirits were positively associated with WHR among both male and females aged 45 to 64 (Duncan et al., 1995). Additionally, in a study of USA young adults (18 to 24), beer was also positively associated with WHR in both genders (Slattery, McDonald, Bild, Caan, Hilner, Jacobs, Liu, 1992).

The link between obesity and the role of different beverage types is inconsistent but the research suggests that low amounts of wine consumption may reduce men's BMI and women's WHR, spirits may increase men's and women's BMI and WHR and beer may also increase WHR. The evidence also suggests that drinking culture affects associations with BMI and WHR.

Beer and spirits have been shown to increase serum uric acid levels (also known as hyperuricemia), which can be a precursor of gout. Furthermore, the association with beer was stronger than with spirits. The opposite was found for consumption of wine, since wine decreased serum uric acid levels (Choi & Curhan, 2004).

From these studies it is clear that even moderate amounts of alcohol consumption can increase the risk of certain diseases, in particular increasing the risk of cirrhosis, and that the consumption of spirits may be especially problematic. There is also strong evidence suggesting that alcohol may increase the risk of developing various cancers including breast cancer in women and prostate cancer in men. Spirits are particular risk factors for these two cancers. The studies analysing the effects of alcohol on cognitive function, including dementia and Alzheimer's, are contradictory, with some results suggesting no effect, others suggesting beneficial effects and some reporting detrimental effects. However, for all of these diseases there are some studies suggesting beverage-specific protective effects, therefore making it hard to identify simple roles for different drink types in increasing the likelihood of certain diseases.

1.3.2 Possible health benefits associated with moderate drinking

While heavy episodic consumption of alcohol has been consistently associated with increased incidence of disease, moderate alcohol consumption has sometimes been shown to be associated with some health benefits. Perhaps the most well-known of these is the relationship between moderate alcohol consumption and reduced risk for fatal and nonfatal coronary heart disease (CHD) and cardiovascular disease (CVD) (e.g. Mäkita et al., 2012; Brugger-Anderson, Ponitz, Snapinn, & Dickstein, 2009; Sinn et al., 2014). A U-shaped relationship between daily alcohol consumption and incident CVD has been reported, in that high risk is associated with both abstainers and excessive drinkers when compared with moderate consumers (Bryson et al., 2006). A U-shaped relationship was also observed between moderate alcohol consumption and systolic dysfunction, with the lowest prevalence (0.9%) in light drinkers (< 1 drinks a day) compared to the highest prevalence (5.5%) in heavy drinkers (> 2 drinks a day) (Yousaf et al., 2014). In the majority of studies there is a consensus that the beneficial effects on CVD occur for moderate alcohol consumers, around one drink per day for women and two drinks per day for men (e.g. Hines and Rim, 2001; Perret et al. 2002). However some studies have shown a uniform, inverse association between alcohol intake and

cardiovascular risk, in which increasing alcohol consumption is correlated with a continually decreasing risk (e.g. Mukamal, Ding, & Djousse, 2006).

The reduction in risk of CVD is generally attributed to alcohol's effects on lipids and haemostatic factors (Rimm, Williams, Fosher, Criqui, & Stampfer, 1999) and an increase in high-density lipoprotein cholesterol (HDL-C) caused by alcohol consumption (De Oliveira et al. 2000). A further mechanism suggested to reduce CVD is that moderate alcohol consumption reduces the incidence of diabetes, a strong risk factor for CVD (e.g. Vegt et al., 2002; Koppes, Dekker, Hendricks, Bouter, & Heine 2005).

1.3.2.1 Specific drink types

It is uncertain whether different beverage types have specific effects on health, as some studies have found that the protective effects of alcohol are independent of beverage type (e.g. Rimm et al., 1991; Di Castelnuovo, Rotondo, Iacoviello, Donato, & De Gaetano, 2002), whereas other studies have suggested that red wine confers greater cardiovascular benefits, perhaps due to its high polyphenolic content, which down-regulates the expression of chemokines and adhesion molecules (Chiva-Blanch et al., 2012). A study in France observed a comparatively low mortality rate from ischemic heart disease amongst the French population, despite a diet high in saturated fats. This paradox was thought to be linked to the 'Mediterranean diet', which typically includes significant consumption of red wine, thus the term 'French paradox' became common from the 1990's (Renaud & Lorgeril, 1992). Chiva-Blanch et al. (2012) also found that moderate consumption of red wine improved participants' glucose metabolism and decreased lipoprotein (a risk factor for CV) in men with high cardiovascular risk. Beer (an intermediate polyphenolic content beverage) has been shown to have a similar effect on the likelihood of getting diabetes. One study found that the combined effect of moderate beer and wine consumption over spirits (no polyphenolic content) was associated with a lower 10-year diabetes risk (Koloverou et al., 2014). Beer alone has been reported to produce favourable changes in the blood lipid profile of healthy Spanish adults. After a 30-day abstinence period 57 healthy volunteers (25-50 years of age) consumed a daily moderate (330 ml for women and 660 ml for men) intake of beer for a further 30 days. Blood samples were taken at the beginning of the study, after one month of alcohol abstinence and after one month of beer consumption. Among the males, after the month of beer consumption a decrease in HDL-cholesterol levels was

observed. However, among the females an increase in HDL- cholesterol was observed (Romeo, Gonzalez-Gross, Warnberg, Diaz, & Marcos, 2008).

A further trial among 40 healthy men observed that, compared to gin, consumption of 30 g of ethanol a day as red wine reduced superoxide dismutase (SOD) and malondialdehyde (MDA) levels. Lag phase time of low-density lipoproteins (LDL) oxidation was significantly longer after wine than after gin, and peroxide concentration in LDL particles decreased after wine as did plasma oxidized LDL concentration. To conclude, red wine had a greater antioxidant effect compared to gin (Estruch et al., 2011). Moderate white wine consumption has also been shown to reduce risk of CVD by altering the functioning of the hypothalamic–pituitary–adrenal (HPA) axis (e.g. Kokavec & Crowe, 2001).

In terms of moderate alcohol consumption and overall mortality, wine has been shown to reduce the risk of dying in both men and women, whereas moderate beer consumption has been associated with increased mortality in males only, and no significant associations were found with the consumption of spirits (Baglietto, English, Hopper, Powles, & Giles, 2006)

Light-to- moderate alcohol consumption has also been shown to reduce rates of stroke. A recent meta-analysis found a J-shaped relationship between moderate alcohol consumption and ischaemic stroke risk, but a linear positive association for haemorrhagic stroke, in that participants who consumed < 12 g or between 12 and 24 g a day of alcohol (one to two drinks a day) were attributed a significantly reduced risk compared to teetotallers; more than 60 g a day consumption (5 drinks a day) was associated with a significant increase of both ischaemic and haemorrhagic stroke (Patra et al., 2010).

As discussed in the previous section, small amounts of wine in low doses may reduce the risk of breast cancer in women. Bessaound and Daures (2008) found that women in France who consumed 10 g to 12 g of wine a day compared to non-wine drinkers had a lower risk of breast cancer. In support, a study in Greece found that low concentrations of polyphenols and consumption of wine, could have beneficial effects on breast cancer cell growth (Damianaki et al., 2000). Additionally, moderate amounts of alcohol have also been linked to a reduction in the prevalence of oral cancer among women (e.g. Takacs et al., 2011). However these findings are limited and controversial, as the

majority of studies propose that women in general are more vulnerable to carcinogenesis than men.

Moderate alcohol consumption may also have some psychological benefits, such as reducing depression (e.g. O'Donnell, Wardle, Dantzer, & Steptoe, 2006), increasing quality of life (measures used: The Quality of Wellbeing scale, Kaplan, Bush, & Berry, 1975 and The Satisfaction with Life survey, Diener, Emmons, Larsen, & Griffin, 1985) and mood in older men and women (e.g. Chan, Muhlen, Kritz-Silverstein, & Barrett-Connor, 2009), dementia (e.g. Mukamal et al., 2003) and improving long-term cognitive functioning (El-Guebaly, 2007; Yueng et al., 2010; Lang, Wallace Huppert, & Melzer, 2006). One of the first and possibly the most comprehensive reviews of the psychological benefits of alcohol identified five areas of benefit including stress reduction, mood enhancement, cognitive performance, reduced clinical symptoms (primarily of depression) and improved functioning in the elderly (Baum-Baicker, 1985).

It is worth noting that within this extensive literature there are substantial differences in the definition of 'moderate' alcohol consumption and the measure of a typical drink. Some researchers present their data in terms of numbers of drinks and others in terms of how many grams of alcohol are in the drink. There are also differences in beverage types in terms of alcohol content and drink size. A further problem arising from measuring alcohol consumption is that participants' recall in many studies may also be inaccurate, whether intentionally or not.

It is clear that moderate alcohol consumption can have some benefits on health, with the most consistent relationship being with reducing the risk of CVD and CHD. Other probable benefits of moderate drinking include reducing the risk of stroke, diabetes, breast cancer in women, lowering cholesterol and psychological benefits including reduced likelihood of depression, anxiety and dementia. However, the situation is less clear when trying to establish differential beneficial effects of different drink types. The most consistent results show that red wine in particular reduces the risk of CVD, but some studies have found that beer reduces HDL-cholesterol and that white wine reduces the risk of CVD by altering the functioning of the HPA axis.

1.4 Alcohol and its cost to society

As previously noted there is a global burden related to alcohol consumption, both in terms of morbidity and mortality, which also brings with it a huge economic cost. It is estimated by the DH that excessive use of alcohol in the UK costs the National Health Service (NHS) approximately £3.5 billion a year, which is equivalent to £120 for every taxpayer. This cost is also steadily increasing, with a 2.1% increase since 2009/2010 (Lifestyle Statistics, 2014). In addition, the Net Ingredient Cost (NIC) of prescriptions for the treatment of alcohol misuse was £3.13 million in 2013, an increase of 0.2 million since 2012 (Lifestyle Statistics, 2015). In France in 1997 a \$22,506 million total economic cost of alcohol was reported and in Scotland in 2001-02 the total economic cost was reported as \$1813 million (Rehm, Mather, Popova, Thavorncharoensap, Teerawattananon, & Patra, 2009). Similarly, according to US federal health care professionals, people who drink too much cost the economy \$223.5 billion a year, with the government paying more than 60% of their health care costs (Fox, 2011).

In addition to health care costs, alcohol-related crime in the UK is estimated to cost between £8 billion and £13 billion a year (National Institute for Health and Clinical Excellence [NICE], 2012). Approximately 29% of violent crimes between 2013 and 2014 took place outside a pub or club (ONS, 2015b) and 8,270 casualties of drink driving accidents were reported in the UK in 2013, including 240 fatalities and 1,100 people suffering serious injuries (Department for transport, 2015). The cost of employer absenteeism due to alcohol was estimated at £1.7 billion in 2009 (NICE, 2012).

1.5 Government strategy and advice

The threat of disease, injury and death attributed to alcohol can be reduced through careful and correctly implemented prevention schemes and treatment policies (WHO, 2011). The first of its sort was formed as early as 1979, when the World Health Assembly (WHA) called on WHO Member States to develop preventative programs, appropriate legislation and other action measures to reduce the harmful use of alcohol, which shortly after became a priority for the Member States (WHO, 2011).

In the 1990's however new evidence emerged that moderate alcohol consumption may have certain health benefits, by specifically reducing cases of coronary heart disease

(CHD). This discovery prompted a review of the UK drinking guidelines, which then brought about the 1995 “Sensible Drinking” guidelines for individuals. A sensible maximum drinking amount was set as 21 units of alcohol a week for men and 14 for women (Science and Technology Committee, 2012).

Later in 2004, the UK Government published the Alcohol Reduction Strategy for England, which was a strategy to significantly reduce the harms and costs of alcohol misuse over the next 10 years. It was the first attempt to combine government interventions to prevent, minimize and manage alcohol-related harm (Cabinet Office, 2004). This brought about numerous strategies and schemes, including “Safe, Sensible, Social: The next steps in the National Alcohol Strategy” which was launched in 2007 by the Department of Health and the Home Office, and set out goals and actions to promote sensible drinking and reduce alcohol related harms. “Talk to Frank”, which is a national drug education service jointly established by the DH and the Home Office in 2003, and provides a friendly and confidential telephone service to anyone seeking information or advice about drugs. “Change 4 Life” is an on-going television campaign launched by the DH in 2012, which aims to communicate the health consequences and harms of drinking above the healthy drinking guidelines and provides a range of tips and tools to encourage people to drink responsibly.

In the UK there are newly established “Sensible Drinking” guidelines in terms of units per week; adult men and women should not regularly drink more than 14 units of alcohol per week and should have three or more alcohol free days per week. ‘Regularly’ is defined as drinking every day or most days in a week (Drinkaware, 2016). It is too early to assess the effectiveness of the new drinking guidelines but research suggests that public knowledge of units is very low in the UK (Buykx, Gavens, Lovatt, Gomes de Matos, Holmes, Hooper, & Meier, 2015; de Visser & Birch, 2011) and would therefore suggest that unit based guidelines will not be an effective way of monitoring alcohol intake.

Although the French Government does not set official drinking guidelines, they recommend that women should not exceed more than two standard drinks a day (20 g) and men no more than three (30 g) (Science and Technology Committee, 2012). In addition, there are occasionally nationwide campaigns to raise awareness of WHO guidelines on alcohol consumption, for example 2340 France (<http://www.2340.fr>).

Currently the UK Government has an established alcohol strategy to crack down on the binge-drinking culture, with specific aims to cut out alcohol fuelled violence and disorder and reduce the number of people drinking to a damaging level. It works in partnership with businesses including the drinks industry, which has offered to play its part in promoting responsible drinking. Initially the strategy included a 45p minimum unit price (MUP), the banning of multi-buy alcohol offers, implementing a levy for late-night licenses, providing clearer information on unit and calorie content and more responsible placement (e.g. on supermarket shelves) and marketing. The supermarket Marks and Spencer has already delivered plans to reduce their customers' alcohol unit consumption, by launching a wider range of lower alcohol wines and offering smaller (25 cl) bottles of wine (Her Majesty's Government, 2012). However, in July 2013 the Government stated that there was not enough evidence that the MUP would reduce alcohol related harm without penalising responsible drinkers; therefore it is still under review. Instead in 2014 they enforced a ban on the sale of alcohol below cost price (level of alcohol duty plus VAT), for example a can of average strength lager cannot be sold for less than 40p and a standard bottle of vodka cannot be sold for less than £8.89 (Woodhouse and Ward, 2014). However, alcohol charities and public health groups continue to argue for the introduction of a minimum unit price, claiming that this would have more of an impact on alcohol-related harm than the ban on below cost selling. In Canada assessments of implemented minimum price changes for alcohol have suggested a minimum price unit would reduce deaths and hospital admissions related to alcohol (Zhao, Stockwell, Martin, Macdonald, Vallance, Reno et al., 2013; Stockwell, Zhao, Martin, Macdonald, Vallance, Treno et al., 2013). A UK policy appraisal based on the Sheffield Alcohol Policy Model (SAPM), which accounts for alcohol purchasing and consumption preferences for population subgroups including income and socioeconomic groups, suggests that a minimum unit price would have more of an effect on heavy drinkers than on moderate drinkers, because heavy drinkers on low incomes purchase more alcohol under the MUP compared to other groups (Purshouse, Meier, Brennan, Tayloe & Rafia, 2010; Holmes et al., 2014).

As part of the Public Health Responsibility Deal (RD) in 2013, the Government worked with the alcohol industry and partners to support the core commitment to foster a culture of responsible drinking, which will attempt to help people to drink within lower risk alcohol guidelines. One pledge was to monitor and reduce the number of units of

alcohol sold by the retailers by removing a target of one billion units of alcohol sold annually from the market by December 2015, principally through improving consumer choice of lower alcohol products. Between 2011 and 2013 the number of units of alcohol in the market reduced by 1.9 billion. Of this, it is estimated that 1.3 billion was due to reductions in the percentage alcohol-by-volume (%ABV) in alcohol products and it was estimated that 1.2 billion of this was due to a reduction in the strength of beer. The only drink category that didn't contribute to the reduction was spirits, which in fact saw an increase in percentage ABV, adding 23 million units to the market (Public and International Health Directorate, 2014). An evaluation of this pledge found that it was unlikely that the RD contributed to reducing alcohol consumption, as most organizations (65%) signed pledges that involved actions to which they appear to have been committed already, regardless of the RD. However, a small but influential group of alcohol producers and retailers reported taking measures to reduce alcohol units available for consumption in the market but these measures involve launching and promoting new lower-alcohol products rather than removing units from existing products (Knai et al., 2015).

In a further attempt to promote sensible drinking, Alcohol Concern recently set up The Zero Alcohol Awards during the 'dry January' period (not consuming alcohol for the 31 days of January) in 2016, to recognise and reward the range of zero-alcohol drinks provided by retailers, bars and pubs across the country. This was produced in response to the growing number of people in the UK choosing to drink alcohol free drinks, for example in the form of 'mocktails' (alcohol free cocktails) (Alcohol policy UK, 2016). It is too soon to evaluate the impact of this scheme but it could be predicted that the increase in the availability of alcohol free drinks would impact the amount consumed and could quite possibly become replacements for alcoholic drinks.

There have also been changes to alcohol policies worldwide to reduce harmful use of alcohol, with WHO member states making commitments and changes in five main areas; leadership, awareness and commitment, drink-driving countermeasures, regulating availability, marketing restrictions, and reducing negative consequences of drinking (WHO, 2014).

1.6 Beverage type

1.6.1 Beverage preference patterns and stability across different countries

There are geographical differences in peoples' preferences for alcohol types including beer, wine, spirits and other types of beverages. In 2011 the WHO reported that in Asian and eastern European countries spirits are the most consumed beverage type in terms of litres (L) of pure alcohol. Globally, more than 45% of people consume alcohol in the form of spirits, predominately in the South-East Asian (71%) and Western Pacific (54%) regions, with African regions having the lowest (12%). It is estimated that 36% of people globally consume alcohol in the form of beer; with the highest quantity of beer being consumed in the United States (54.7%).

Within England, data from the Health Survey for England (HSE) in 2012, which provides data on the types of drink consumed on the day of maximum alcohol consumption in the last week, reported that; 62% of men drank normal strength beer, lager, shandy or cider; 33% had consumed wine; and 22% had drunk spirits. In contrast; 64% of women had drunk wine; 26% had drunk spirits; and 19% had drunk normal strength beer, lager, shandy or cider. Spirit consumption was most common among those aged between 16 and 34 years old and among men aged 75 years and over. The proportions of men and women consuming wine increased with age. Two per cent of both men and women had drunk alcopops (defined by ONS as flavoured alcoholic drinks and pre-mixed spirits, 2009), but these were most likely to be aged 16 to 24 years old (14% of young men and 10% young women) (Lifestyle Statistics, 2015).

An earlier report by The Omnibus Survey in 2009, which reports on the average weekly alcohol consumption of specific beverage types in Great Britain reported that beer was the most popular drink among men of all ages (47% normal strength beer), followed by wine (25%), and spirits (12%). For women wine was the most popular choice of beverage (57%), followed by spirits (16%), beer (15%), alcopops (16%), and strong beer or cider (4%) (see Table 1.1). The amount of spirits as a proportion of men's total consumption was highest among those aged 16 to 24 years and 65 years and over, and among women aged 16 to 24 years, with spirits and wine being the most popular drink types. Overall alcohol consumption was the highest among the 16 to 24 year age groups

(19%) and the 65 and over age group (18%) (ONS, 2009).

Table 1.1

Average weekly alcohol consumption in percentage of different types of drink in Great Britain: split by gender and age, 2009

	Men					Women				
	Age (years)					Age (years)				
	16-24	25-44	45-64	65+	Total	16-24	25-44	45-64	65+	Total
Strong beer, lager and cider	23	10	12	8	13	11	4	3	3	4
Normal strength beer, lager and cider	45	54	46	35	47	12	18	17	9	15
Spirits	19	9	8	18	12	37	16	8	15	16
Fortified wine	0	0	1	1	1	2	1	1	9	2
Wine	4	25	32	35	25	22	58	70	63	57
Alcopops	8	1	1	2	2	16	3	1	0	4

Source: Drinking: Adults Behaviour and knowledge in 2009. Opinions Survey, Office of National Statistics (ONS, 2009)

From a European perspective, wine is the most consumed beverage type with 26.4 % recorded adult per capita consumption. In Spain beer is currently the most consumed beverage in litres of pure alcohol and in Sweden it is wine. Worldwide, spirits account for 45% of total recorded alcohol consumed and approximately 36% is consumed in the form of beer (WHO, 2011). A further study by Mäkelä et al. (2006) found differences in both the frequency (see Table 1.2) and quantities (see Table 1.3) of beverage preferences across 14 countries in Europe. It is worth noting that only the overall alcohol frequency was reported in the UK, as beverage specific frequencies were not available. France and Switzerland had the highest frequencies of wine drinking, whilst Northern Europe and the Czech Republic had the lowest. Men in Northern Europe consumed beer in the highest frequency. The highest frequency of spirit consumption was reported among men in France, Switzerland, Czech Republic and Norway. For beer the largest quantity was consumed by men in Sweden, Austria, Czech Republic, Hungary, Germany and Switzerland; French men drank wine in the highest quantity and Norwegian, Finnish and Icelandic men drank the highest quantity of spirits. Among women, wine was reported as being consumed in the largest quantity in Sweden, Austria, Czech Republic, Germany and France. Overall, men consumed beer and spirits more often and in higher amounts and wine was reported at a similar rate among men and women, however males in France reported a higher quantity when wine was consumed. See Table 1.2 and 1.3.

Table 1.2

Mean frequency of drinking in Europe (times per year) by beverage type

	Men			Women		
	Beer	Wine	Spirits	Beer	Wine	Spirits
Sweden	26	27	18	8	32	8
Czech Republic	112	23	28	27	27	12
Germany	114	41	21	32	50	10
Switzerland	95	113	34	19	82	13
France	69	146	50	16	77	21
Norway	47	22	21	19	22	9
Finland	65	16	18	21	16	7
Iceland	40	20	14	17	18	7

Source: Drinking patterns and their gender differences in Europe (Mäkelä et al., 2006)

Table 1.3

Mean quantities (grams of pure alcohol) per drinking day by beverage type

	Men			Women		
	Beer	Wine	Spirits	Beer	Wine	Spirits
Sweden	61	35	45	29	35	27
Czech Republic	57	49	44	26	41	29
Germany	37	33	15	19	37	12
Switzerland	95	113	34	19	82	13
France	69	146	50	16	77	21
Norway	41	36	62	29	31	32
Finland	39	26	49	21	21	24
Iceland	36	29	49	21	21	24
Austria	40	36	29	24	25	22
Hungary	31	19	22	15	10	14

Source: Drinking patterns and their gender differences in Europe (Mäkelä et al., 2006)

Evidence has shown that some traditional European differences in beverage preference are diminishing. In the past, evidence suggested that beer-producing countries like Northern Europe had a preference for beer while wine-producing countries like Southern Europe had a preference for wine. However, beer is now the most consumed beverage type in Spain, while in Sweden it is wine (Ritchie & Valentin, 2011). Wine consumption is also on the rise in the UK, and traditional wine drinking countries in Europe, particularly France, are witnessing a marked decrease in wine consumption and an increase in beer consumption (Ritchie, 2009). The rise in wine consumption in the UK has been suggested to be down to a number of reasons. Firstly, Ritchie (2009, 2011) suggests that the interaction with wine consumption started in the 1970's and 1980's when wine became more accessible by being available in the supermarkets. Secondly, the research is pretty consistent when it suggests the link between food and wine (Charters, 2006; Olsen et al. 2007). In the UK there has been a marked increase in eating-out over the last 20 years, and this has therefore influenced and normalised wine purchasing in non-traditional venues such

as pubs. Wine is also the preferred drink type when eating a meal at home (Ritchie, 2011). Thirdly, because of the unit size, wine allows for sharing and inclusivity amongst peers, particularly among women. Lastly, it has been suggested that wine purchasing among young adults (18-24 years old) is for consuming at home, often pre-loading before going out and consuming other types of alcoholic drink (Ritchie, Ritchie & Ward, 2009a; Ritchie, Ritchie & Ward, 2009b).

1.6.1.1 Adolescent beverage preferences

The 2011 European School Survey Project on Alcohol and Other Drugs (ESPAD) included data from over 100,000 students aged between 15 and 16 years across 36 European countries. Overall, they reported that the most commonly consumed beverage type consumed in the past 30 days was beer (47% on average), followed by wine and spirits (37-38%), alcopops (32%), then cider (27%). Belgium, Bulgaria, the Czech Republic and Germany scored the highest in beer consumption. Cider was most common in Denmark (59%), followed by the Baltic countries of Estonia, Latvia and Lithuania (approximately 40%). Cyprus, Denmark, Germany and Italy scored particularly high in the use of alcopops. A preference for wine was reported by 63% of the students in Monaco, 55% in Croatia, Hungary, Moldova and Malta. For spirits the rate was the highest in Malta (63%), closely followed by the Czech Republic, Denmark and Greece at around 57%. Iceland scored the lowest or second lowest for all beverage types (Hibell et al., 2011).

A study in Italy administered self-report questionnaires on drinking motives and amount of alcohol consumed to 784 adolescents, aged between 15 and 19. They found that 15 to 19 year olds had a preference for spirits (77%) or beer (73%), followed by wine (69%), then alcopops (62%). Preference was calculated by how many times the adolescents reported drinking that beverage type at least 2 times a month in the last 6 months (Graziano, Bina, Giannotta, & Ciairano, 2012).

Finally, a study conducted in the USA analysed data from a 2007 Youth Risk Behavior Survey (YRBS) (a school-based questionnaire survey of 9th to 12th grade students, in eight states: Arkansas, Florida, Georgia, Hawaii, New Mexico, North Dakota, Utah, and Vermont), and included a question on the type of alcohol usually consumed for those respondents who reported consuming alcohol in the last 30 days prior to the survey. They found that among 7723 youths aged between 12 and 18

years old, spirits was the preferred beverage type (43.8%), followed by beer (19.2%), malt beverages (17.4%) and a very low preference for wine (7%) (Siegel et al., 2011).

It can be concluded that there are different and changing patterns of alcohol preference across countries and regions. In non-European countries spirits seem to be the predominant beverage consumed in South East Asia, Western Pacific countries and by 12 to 18 year olds in America. However across Europe, wine is the most consumed beverage type, with women in Sweden, Austria, Czech Republic, Germany and France consuming wine in the largest quantity along with French males; and males in Switzerland, France, Czech Republic and Norway also having a preference for beer. Spirits are the most consumed beverage type in Eastern European countries, followed by France, Switzerland and Norway. Among the adolescent populations the evidence shows a preference for beer and spirits across Europe and America.

1.6.2 Behaviours associated with beverage preference

Researchers have examined the relationship between young people's preferences for different beverages and potentially risky behaviours, including heavy drinking patterns, the use of illicit drugs, smoking cigarettes, and drink driving. This section will explore young people's use of different beverage types, specifically wine, beer and spirits, and how their choices are associated with potentially risky behaviours.

Consistently, tobacco and alcohol use co-occur; drinkers are more likely to smoke than non-drinkers, and smokers are more likely to drink than non-smokers (Jackson, Colby & Sher, 2010). Evidence also suggests that certain beverages have a stronger relationship with these potentially risky behaviours. Sutherland and Wilner (1998) found among a sample of 11 to 16 year olds in England, that alcohol was combined more with the use of illicit drugs and cigarettes. Spirit and alcopop drinkers, when compared to beer or wine drinkers, were more likely to be cigarette users, take drugs, and reported being drunk more frequently, particularly among 11 to 13 year old girls. Similarly, Miller and Plant (2003) found that in the UK 15 to 16 year olds with a preference for beer or spirits were more likely to be heavy drinkers, smoke cigarettes, use illicit drugs, and truant from school, compared to wine drinkers. Similar results were found in Finland where smokers were more likely to choose beer or spirits than wine or cider, and drug use was more common among those with a preference for beer and spirits (Lintonen & Konu, 2003). A study in New Zealand found that a

preference for alcopops was associated with higher typical occasion alcohol consumption and heavier drinking than any other beverage type in females aged 14 to 17 years (Huckle, Sweetsur, Moyes, & Casswell. 2008).

More recently a study of 12 to 18 year olds in America by Siegal, Naimi, Cremeens and Nelson (2011) observed that in general, spirit drinkers engaged in more risky behaviours; 48.4% of spirit drinkers reported being in a physical fight and 49.9% admitted carrying a weapon. Additionally, a preference for spirits was associated with the use of cigarettes and marijuana. An association with beverage preference and risk behaviours was also found in a Swedish study by Kuntsche, Knibbe, Gme and Engles (2006), where 15 year olds with a preference for beer and spirits liked to have fun, feel the effects of alcohol and drink to get drunk, behaviours that are all associated with an unhealthy and risky pattern of drinking.

Links have also been found between beverage preferences and dangerous levels of drinking among older adults. For example, a Danish study found that male beer drinkers and female spirit drinkers were at a higher risk of becoming heavy drinkers (more than 21 drinks a week) or excessive drinkers (more than 35 drinks a week). Women who included beer in their alcohol intake also had a higher risk of heavy and excessive drinking, compared to abstainers and moderate wine drinkers, who appeared to be at lower risk of becoming heavy drinkers or excessive drinkers (Grønbaek, Jensen, Johansen, Sorensen, & Becker, 2004). In Canada, Devolulyte, Stewart and Theakston (2006) also supported the link with beverage specific preference and a heavy drinking pattern, observing that levels of consumption were significantly higher amongst female spirit drinkers (mean age 38.4 years), compared to wine drinkers.

An Australian study found that among 25 to 40 year olds, cask wine (boxed wine) and high strength beer was significantly associated with the rates of night-time assault. Contrastingly, low alcohol beer, spirits and bottled wine had no association with assaults (Stockwell et al. 1998). The beverages that had the association with assault were those with the lowest federal taxation per standard drink in Australia, adding to the debate over the relationship between alcohol pricing and consumption rates.

Some studies have compared the personality characteristics of wine, beer and spirit drinkers. For example, McGregor, Murray, & Barnes (2003) found among a sample

of over 1000 adults in Canada that higher consumption of beer among males was associated with higher levels of neuroticism. The female wine drinkers scored low on the Vando (1969) reducer-augmenter scale, which is a scale measuring levels of stimulation and sensation seeking and infers that participants who score low have lower pain tolerance, and avoid high intensity stimulation (McGregor et al, 2003). This suggests that women who consume wine are less likely to search out stimulating situations and to sensation-seek.

Although the evidence is limited, beverage preference has also been related to the pattern of drinking known as 'binge-drinking' (drinking 5 or more drinks on one occasion). For example Naimi, Brewer, Miller, Okoro and Mehrotra (2007) in a study of 14,150 adults aged between 18 and 56 years in the USA observed that over 70% of binge drinkers consumed beer exclusively or predominantly, compared to 21.9% being spirit drinkers, and 10.9% wine drinkers. Beer drinkers were also rated as being at a higher risk of causing or incurring alcohol-related harm, with 67% of those aged between 18-20 years old.

Researchers have also noted a link between specific beverage preference and suicide rates. Suicide is an escalating public health problem, with a global 60% increase in the last 45 years (Bertolote et al., 2005). In the UK in 2013 6,233 suicides were registered and 78% were male and 22% were female (ONS, 2015c). There is evidence to suggest an association between chronic alcohol abuse, alcohol dependence and increased suicide risk through depression, which is known to have a reciprocal relationship with alcohol abuse. In a recent Japanese study, the consumption of spirits was significantly related to male suicide rates, and this risk was higher compared to any other beverage types (beer, wine and other alcohol); there was no significant association in women. More specifically, the researchers suggested that a one litre per capita increase in spirit sales would lead to more than a 20% increase in suicide rates among Japanese males (Norström, Stickley, & Shibuya, 2012). It is worth noting that the researchers controlled for unemployment, which could be seen as another risk factor for suicide, however other factors such as mental illness were not controlled for.

A similar study in America observed a particularly strong association between female acute and chronic drinking and suicide rates, estimating that a litre of ethanol from

spirits would increase suicide rates by 6% in the current year and 9% in the years to come. An association was also found between chronic beer and wine drinking in men and suicide rates in the US from 1950 to 2002. Overall, all beverage types were significantly related to suicide with a 5% effect size per litre of ethanol for beer, 9.1% for wine and 2.9% for spirits. (Kerr, Subbaraman, & Ye, 2011).

In Russia where alcohol consumption and suicide rates are among the highest in the world, studies have found a strong link between specific alcoholic beverages and suicide rates. This link has been suggested to be a result of Russia's drinking culture, with a preference for distilled spirits, binge-drinking, socio-cultural tolerance for heavy drinking and concomitant behaviour (Nemtsov, 2000), traits that have been shown to be related to suicide (Razvodovsky, 2003). Pridemore (2006) found a positive and significant association between heavy drinking and suicide rates in Russia amongst males and females in the 1990's. A further study using time-series analysis (from 1970 to 2005) found that a one litre increase in overall alcohol sales would result in a 4% increase in male suicide rates and a 2.8% increase in female suicide rates. Additionally, a one-litre increase in vodka consumption would increase the suicide rate for men by 9.3% and 6% for women (Razvodovsky, 2009). A later study by Razvodovsky (2011) supported an overall association between alcohol consumption and suicide rates in Russia for both men and women. Binge-drinking has also been found to be associated with suicide occurrence in Russia. Again in a time series analysis Stickley, Jukkala and Norström (2011) found that binge-drinking was significantly associated with the occurrence of suicide in Russia.

In summary, beverage preference is highlighted here as an important factor when attempting to tackle unhealthy levels of drinking as well as harmful patterns of drinking in the UK and throughout the world. Evidence shows that young people's beverage preferences influence certain types of behaviour, including risky and potentially life threatening behaviour. The literature review highlights the importance of understanding the relationship between certain drink types and associated negative behaviours, as well as preventative measures that could be used to reduce alcohol related harm and mortality. There is a need for further research in order to ensure that policies are evidence based and lead to accurate interventions for alcohol misuse. The types of alcohol that have been shown to be of most concern are alcopops and spirits,

especially when consumed by adolescents, which have been associated with smoking, the use of illicit drugs and other risky behaviours including truancy from school and heavy drinking (Sutherland & Wilner, 1998; Miller & Plant, 2003; Huckle et al., 2008; Lontonen & Konu, 2003). Among 18 to 24 year olds a preference for beer and spirits has also been shown to be associated with risky behaviours, including being at higher risk of becoming a heavy drinker (Grønbaek et al., 2004; Devolulyte et al., 2006), partaking in crime such as night time assault and being involved in a physical fight and smoking marijuana (Stockwell et al., 1998; Siegel et al., 2011). A preference for spirits has also been shown to have a strong association with rates of suicide in Japan, Russia and America (Norström et al., 2011; Kerr et al., 2011; Razvodovsky, 2003, 2009, 2011). In addition, beverage-specific findings suggest that all beverage types are related to suicide risk in the US population, with spirits being particularly associated with risks from both acute and chronic drinking for women and beer and wine being associated with risks from chronic drinking for men (Kerr et al., 2011). It is interesting to note that the evidence shows a weak link between these risky behaviours and wine consumption, compared to beer and spirit consumption. This could be explained by beer and spirit drinking being a marker of a specific drinking culture or socio-economic status and differences in life-style characteristics possibly associated with specific types of preferred alcohol. For example it has been suggested that wine is perceived as a civilised or sophisticated drink and therefore associated with similar behaviour (Charters, 2006). This could also support the evidence of low morbidity and mortality among wine consumers compared to beer and spirit drinkers (Grønbaek, Deis, Sørensen, Becker, Schnohr, Jensen, 1995; Theobald, Bygren, Carstensen, Engfeldt, 2000; Klatsky & Armstrong, 1993). It is also worth noting that the majority of the literature in this area does not include cider consumption when comparing behaviours.

1.7 Young people's knowledge of the alcohol content of drinks

As discussed in the previous section, the UK and other countries have issued government guidelines for 'sensible drinking' in terms of drinks or units per day. If people are to adhere to such guidelines then accurate knowledge of units and typical drink measures is expected. However, recent research suggests that these attributes are lacking amongst most drinkers. Studies of the general public (ONS, 2015b) and university students (deVisser & Birch, 2012) in the UK have revealed, despite an

overall awareness of government drinking advice, a lack of accuracy in understanding the unit-based guidelines. Data from opportunistic samples amongst Scottish supermarket shoppers also revealed that, despite a good knowledge of the definition of a unit, they could not accurately recall the guidelines for sensible drinking, nor did they use units as a way of monitoring their alcohol intake (Gill & O'May, 2006). In addition, deVisser and Birch (2012) found that university students (18 to 25 years old) were more likely than school students (16 to 18 year olds) to know the volume of a unit, however only 25% of their estimates were close or equal to the actual content, and the majority of the estimates were underestimates (52% among school students and 65.3% among university students). Another UK study found that university students (18 to 30 years old) tended to underestimate the unit content of beer and wine but overestimate the unit content of spirit-based drinks; women were less accurate than men and typically made more underestimates of commonly consumed drinks (Walker, Higgs, & Terry, 2016). In support, a study conducted in Australia (Hasking, Shortell & Machalek, 2005) revealed that university students (18 to 42 year olds) tended to overestimate both the alcoholic content of a standard drink, and the national guidelines for low risk drinking. A further study conducted in Australia found that students (18 to 24 years old) had a high level of inaccurate beliefs about responsible drinking practices, i.e. the identification of standard drinks and knowledge regarding the safe and legal driving limit (Dowling, Clark & Corney, 2006).

It has also been reported that most people misperceive the alcohol content of drinks that they pour themselves. deVisser and Birch (2012) found that when participants were asked to pour their 'usual' drink (wine, beer and vodka), 85.9% of the drinks they poured contained more than one unit, and only 21% were close to or equivalent to a unit. Additionally, when asked to pour a unit of alcohol, 52% of the units poured were greater than a unit. A similar study in the USA found that college students (18 to 25 years old) overestimated appropriate volumes when asked to free-pour alcoholic drinks (White et al., 2005).

It is clear from the research that many people and particularly young people have inaccurate knowledge of alcohol content and safe levels of drinking. They also have poor knowledge of the alcohol contents of drinks that they pour themselves. This is

concerning as this lack of knowledge and understanding could result in the underestimation of alcohol intake and drinking in excess of safe drinking guidelines.

1.8 Beliefs and attitudes towards the health effects of alcohol

Consumers are exposed to a range of contradictory views in the scientific and popular press surrounding the health effects of alcohol. This complexity means that an overall view of the health benefits or costs is hard to determine, but it is paramount to understand and elucidate these perceptions in order to decrease the incidence of alcohol related health problems.

Despite the inconsistent views and recommended government guidelines, it is suggested that many people worldwide have a positive perception of moderate drinking and associated health benefits (Green et al., 2007). Ogborne and Smart (2001) conducted a national health survey in Canada with adolescents aged 12 years and older. They found that 57% agreed that moderate drinking can have health benefits, 29.1% disagreed with this statement and 13.2% did not know. Moderate drinking was defined as having one drink or less a day. Differences were also found with respect to age and gender; 60% of people over the age of 45 believed that moderate drinking had health benefits but only 44.4% of those aged 16-24 and (including 62.5% of males and 53% of females) believed in any health benefits. In conclusion those who agreed with the statement were most likely to be men, older people, frequent and heavy drinkers and those who have a higher probability of alcohol dependence.

A study conducted in Australia in 1989 amongst 500 men and women (aged 18 to 65 years) found that a major perceived health benefit of alcohol consumption was relaxation. Alcohol abuse was also perceived to have a number of major health problems, including brain and liver damage, as well as negative social impacts, including domestic violence and family problems. The quantities that the participants perceived alcohol could be consumed with a low risk to health were close to National Health recommended levels of safe consumption (Hall, Flaherty, & Home, 1992). It is worth noting that this study is quite old, therefore the findings may be different if the study was replicated.

Similarly, Hall (1995) in Australia found that just under half (46%) of the population believed that alcohol can be beneficial to health, 52% believed that there was no benefits from alcohol consumption and 2% did not know. The most common benefits reported were; relaxation (54%), stress reduction, improved psychological wellbeing and cardiovascular benefits (39%) (including: reduced heart rate, improved circulation, reduced cholesterol and reduced blood pressure). This study also compared data from a previous survey in 1989 (Hall et al., 1992), which was also conducted to find out the current population's perceptions of the health benefits of alcohol. Hall found a 28% increase in participants identifying any health benefits of alcohol between 1989 and 1995. However, the data from this study was collected almost 25 years ago and may therefore not be representative of current beliefs if replicated.

A more recent study carried out across 27 European Union states found that 58% of the survey participants (over 12,000; 15-24 years old) perceived alcohol to pose a 'medium risk' to a person's health, followed by 22% perceiving it as 'high risk', 18% 'low risk' and 15.5% 'no risk' (Boluarte et al., 2011). It is worth noting that most of the research was conducted in Canada and Australia, therefore it may not represent perceptions of young people in the UK, due to the lack of research in the area. However, recent data released by the DH reported that 83% of people who regularly drink above the guidelines do not think their drinking is putting their long-term health at risk (DH and the Home office, 2015).

1.8.1 Beliefs and attitudes towards specific alcoholic beverages

It has been outlined in the previous section that the concern over young people's consumption of alcohol is not limited to alcohol in general but also to the types of alcohol consumed. It is important to understand and explore their perceptions of different beverage types. The literature around young people's perceptions of the health effects of alcohol is very limited, but researchers have started to compare people's beliefs about and attitudes towards different beverage types.

Two important and novel studies were conducted to find out the perceptions that both beer and wine drinkers have concerning the health effects of alcohol. Firstly, Wright, Bruhn, Heymann, and Bamforth (2008a) conducted a study in America using focus groups and questionnaires, to examine beer consumers' perceptions of a range of

alcoholic beverages in terms of their nutritional value and health benefits. The participants ranged from 21 to 61 years of age. The beverages included light beer, regular beer, light coloured beer, dark coloured beer, red wine and white wine. A consumer survey was conducted at three large commercial breweries across the country to recruit beer drinkers, as it was hypothesized that the majority of those that visit a brewery would be beer consumers. They were asked to rate the beverages in terms of how healthy they thought they were when consumed in moderation (1 being not at all healthful, and 5 being extremely healthful). It is important to note that a definition of 'moderate' was not provided to the participants in this study. The wine (red and white) was considered healthier than all the beer types and the light beers and light coloured beers were perceived as healthier than the dark coloured or regular beers. Overall both the males and females rated the six beverage types in the same order and perceived red wine to be the healthiest. This suggests that alcohol content is not the deciding factor when rating healthfulness. In addition, when the participants were asked to rank the importance of 14 factors when choosing an alcoholic beverage, taste was considered the most influential factor and carbohydrate content was the least influential.

The second study (Wright, Bruhn, Heymann, & Bamforth, 2008b) adds support to these findings and additionally reported on the impact of providing nutritional information about the beverages. This study looked at wine as well as beer consumers' perceptions of alcoholic and non-alcoholic beverages. Wine consumers were recruited in the same way as the previous study, by conducting surveys in wineries around the country. The consumers were asked to rank 7 beverages (using a seven point scale) including non-alcoholic beverages (soda, diet soda, beer, light beer, red wine, white wine and brewed tea). The subjects were then shown the nutritional information (labels, including total calorie, fat, cholesterol, sodium, carbohydrate, protein and vitamin content) of each beverage type and then asked to re rank each beverage type. They found that both male and female beer drinkers ranked red wine as the healthiest, followed by brewed tea, white wine, beer and light beer, diet soda, and soda. Results from this study confirm the previous findings that alcohol content is not the deciding factor when ranking the healthiness of alcohol. It also builds on the results of the previous study, by finding that the presentation of the nutritional information influenced consumer's perceptions, in that the perception of the

healthiness of red wine was significantly lower in both the wine and beer drinkers. However the perceptions of the healthiness of beer increased among beer and wine consumers, and the healthiness of light beer increased among only the beer consumers after having been shown the nutritional information. These results suggest that nutritional information influences consumer perceptions of the healthfulness of beverages and that beer drinkers were more heavily influenced by nutritional information than wine drinkers.

A study conducted in Australia found that among 1050 18 to 90 year old (mean age 50.9 years) 'wine drinkers' approximately 25% thought wine was healthy compared to 47% disagreeing to some extent and 28% were undecided. Additionally, they found that the frequency of wine consumption increased with higher levels of perceived healthiness while the overall volume consumed decreased (Saliba & Moran, 2010). This suggests that perception of the health effects of wine increases the frequency of consumption but does not necessarily increase volume consumed overall. It is worth noting that the researchers in this study did not ask if people thought wine was unhealthy, therefore the participants who disagreed that wine was healthy might have seen wine independent of health, rather than being unhealthy.

A study in America by Pederson, Neighbors, and Larimer (2010) was conducted to investigate a number of positive (e.g. increased sociability, relaxation) and negative (e.g. aggression, impairment) expectancy effects of specific beverage types (beer, wine and shots of distilled spirits) among university students (mean age was 18.70 years). Overall, wine was rated as having more positive effects including tension-reducing effects and was rated more positively than the shots of distilled spirits. Regarding negative effects, there was less agreement that wine would lead to impairments in cognitive and behavioural functioning, and participants rated the effects of wine less negatively than those of beer and distilled spirits. This study suggests that some positive and negative expectancies may be beverage specific, and that different beverages are expected to have different outcomes. Only young adult students were recruited in this study and therefore it may not be representative of the older adult populations. A further limitation is that in the shots of distilled spirits condition both straight distilled spirits (i.e. shots) and spirits in mixed drinks were included. Participants may have perceived these two drinks types differently in terms

of there negative expectancy if they were assessed separately.

A concern about weight gain has also been found to have an effect on beverage choice amongst adolescents and younger adults in the UK (13 to 25 year olds), but with the majority of the concern expressed by women, although men did express some concern as well. For example a male respondent chose “gin and slim line tonics, because I’m also watching my weight as well, so I don’t want too many beers to fatten me up (p.15)” (deVisser, Smith, Abraham, & Wheeler, 2012). They also noted a lack of concern from participants of all ages about the long-term health effects of alcohol. Those who were aware of the health consequences often denied any personal relevance and health concerns were more focused on the short-term effects not directly linked to alcohol e.g. sleep loss and feeling hung over (deVisser et al., 2012).

It is clear from this research that wine and specifically red wine is perceived to be the healthiest drink type when compared to beer and spirits and that alcohol content is not necessarily the deciding factor when ranking the healthiness of different beverage types. In addition the research shows that beverage preferences influence perceptions of beverage specific effects of alcohol, as does nutritional information. Overall, the research highlights the importance of understanding the between-beverage differences in perceived effects of alcohol. It is also worth noting that most of the research discussed in this section was conducted outside of the UK, so may not be representative of UK attitudes and beliefs about different beverage types.

1.9 Aims of the thesis

The aim of the project is to examine how young people in two European countries with different cultures of alcohol consumption (France and the UK) perceive the health risks and benefits associated with particular alcoholic beverages, specifically contrasting beers, wines and spirits. Different kinds of alcoholic drink hold different connotations, for example in terms of how people perceive their potential to produce intoxication, their appropriateness in different drinking contexts and their acute and chronic effects on well-being. These connotations are likely to be important influences on drink choice and drinking behaviour. However, very little empirical research has been conducted to examine how young drinkers perceive different kinds of alcoholic beverage, and how these perceptions influence their drinking.

Additionally, little is known about how public information, media reports and peer influence contribute to current beliefs about different drink types. Positive health benefits of consuming moderate amounts of alcohol, wine in particular, has entered the public discourse, and wine is now widely considered as a “healthier” drink type (Wright et al., 2008a; Saliba & Moran, 2010). Therefore fashions in drink selection, beliefs about the health effects of different drinks, and the lifestyles associated with them, can have very significant implications for public health. Further research into young peoples’ attitudes and beliefs about the specific health effects of alcohol is highlighted. This is an important issue to understand in order to inform policies and guidelines to help reduce alcohol consumption and alcohol related harm in the UK and worldwide.

Culture is likely to have a strong influence on beliefs and perceptions of different drink types; therefore it will be informative to contrast these perceptions and beliefs across socioeconomically similar countries that differ broadly in terms of beverage preferences and drinking practices. In this regard, a comparison of the UK with France will be instructive, since the UK is widely characterised as a “beer-drinking” nation whereas France is characterised as a “wine-drinking” nation. The research will explore how culture influences young people’s perceptions of the relative “healthiness” of different beverage types.

After a pilot study to examine general drinking choices and practices, the first main study will use focus groups conducted in the UK and France to understand young peoples' attitudes towards alcohol consumption, their perceptions of the health effects of different types of alcoholic drink, specifically contrasting beer, wines and spirits. The focus groups will also aim to explore how these perceptions impact on their behaviour, as well as identify the relative strengths of particular beliefs and attitudes. The second main study will be a quantitative survey phase, which will aim to further explore any issues found in the focus groups, including patterns of use, knowledge of alcohol content, what determines the "healthiness" and "un-healthiness" of different drinks by asking questions about the natural and artificial ingredients in different drinks. Finally, a qualitative interview phase will be conducted to address key issues that arose from the previous two studies (focus groups and survey) and to explore areas that might be relevant to alcohol health interventions.

Ethical approval was obtained from the Faculty of Arts and Social Sciences Research Ethics Committee (FREC) at Kingston University for all of the studies under one application. Confirmation of approval is given in Appendix A.

2 Chapter 2: Phase 1: Pilot study online diaries

2.1 Introduction

As discussed in the previous chapter there are different and changing patterns of alcohol consumption and preference across countries, ages and genders. However, binge-drinking has been identified as the characteristic style of drinking for young adults (Office of National Statistics [ONS], 2015a), with rates of binge-drinking being particularly high in the UK (Institute of Alcohol Studies, 2009) and steadily increasing in France (“Young French women turn to ‘le binge-drinking’”, 2015). Given that binge-drinking in your 20’s increases the chances of binge-drinking in your 40’s for both men and women (Institute of Alcohol Studies, 2009; Jefferies, Power, & Manor, 2005) these trends indicate significant future harm for the UK and neighboring European countries. Current beverage preferences among this age group is also important to understand as evidence suggests that young people’s beverage preference influences certain types of behaviour, including risky and potentially life threatening behaviour. For example, a preference for beer and spirits has been shown to be associated with being at higher risk of becoming a heavy drinker (Grønbaek et al., 2004; Devolulyte et al., 2006), partaking in crime such as night time assault and being involved in a physical fight and smoking marijuana (Stockwell et al., 1998; Siegel et al., 2011). A preference for spirits has also been shown to have a strong association with rates of suicide in Japan, Russia and America (Norström et al., 2011; Kerr et al., 2011; Razvodovsky, 2003, 2009, 2011). It is therefore important to identify beverage preferences and other drinking trends among binge-drinkers in order to inform a better understanding of motivating factors behind dangerous drinking styles.

Therefore the aim of this study is to gain an insight into the contemporary drinking styles and habits of young people (18 to 24 year olds) in different regions across the UK and France to inform the development of the two main data-acquisition phases (focus groups and survey). Specifically the researcher wanted to find out what types of beverages they were consuming, the quantities consumed, the location they were consuming the alcohol, with whom they were consuming alcohol with, as well as any unusual drinking styles, behaviours or beliefs towards different alcoholic beverages.

The data gathered in this study informed the language used in the focus groups and shaped the questioning format.

2.2 Method

2.2.1 Participants

A total of forty young drinkers (18 to 24 years old) were recruited across the two countries (UK = 19 and France = 21). Male and female participants were recruited from four regions in each country London, Birmingham, Manchester and Cardiff in the UK and Marseille, Paris, Lyon and Toulouse in France (see Table 2.1). These regions were selected due to their geographical positioning, the three largest cities in each country by population and one additional location. Recruitment was arranged by a commercial provider *Research Now*, which maintains a large pool of volunteers across the world who are paid in kind to participate in surveys of this type. See: <http://www.researchnow.com/>. All participants were required to provide informed consent (see Appendix B) before completing the project and had to consume alcohol at least once per week (See Appendix C for recruitment questionnaire).

Table 2.1

Participant profiles by country, region and gender

	Country				
	UK		France		
	<i>Male</i>	<i>Female</i>		<i>Male</i>	<i>Female</i>
London	2	2	Paris	2	3
Cardiff	3	3	Toulouse	3	3
Birmingham	3	2	Lyon	3	2
Manchester	2	2	Marseille	2	3
Total	10	9	Total	10	11

2.2.2 Design

The online diary study was completed in two phases, consisting of two weeks for each stage. The four weeks were split into two parts to ensure that the project would not fall over a public holiday period, in order to be more representative of typical drinking behaviour, particularly among the student sample.

The set up and management of the website was provided by a specialist commercial agency, *The Thinking Shed*, who were based in London, Islington, see: <http://www.thethinkingshed.com>. The website developers and researcher designed the layout of the site. The instructions and procedures that the participants had to follow in order to update their drinking diaries were decided in discussion with the commercial agency. A separate site was developed for each country. Training in how to use the site was provided by *The Thinking Shed* and for each site the moderator (the researcher) was given a unique login code, so they could access the site at any time before, during and after the project was complete. One day before the first diary period, an email was sent out to the 24 participants in the UK and the 24 participants in France. The email included a link to the website and instructions on how to register. Once the participants had registered with a username and password they were able to upload their reports of drinking occasions onto the site for the preceding 14 days. The researcher and the website developers had access to the participants' usernames, however it was up to the participants to reset their password if they had forgotten it. In response to this problem the researcher re-sent emails with the necessary website links and instructions.

The participants in each country were asked to update their diaries after every drinking occasion. For each entry they were instructed to include *what* alcoholic drink they consumed, the *brand* of alcoholic drink (wine, beer, spirits, liqueurs, cider, other), the *volume*, *where* they were (home, type of outlet), *who* they were with (family, friends, partner etc.), *why* they chose that type of alcoholic beverage(s) and *why* they chose that particular brand(s) (see Appendix D for a screen shot of a diary entry). Participants responded to online questions over the four-week period, so that the researcher could inquire more broadly about peer group drinking trends and attitudes towards and knowledge about key brands within each beverage type.

A reminder email was sent to any participants who had failed to register (six in the UK and eight in France). In the UK four of the participants then went on to register and upload their diary entries, and two never registered. In France six of the participants went on to register and upload their diary entries and two never registered.

One day before the second diary period a reminder email was sent out to all of the participants, instructing them to log back in to the site and update their alcohol diaries over the following two weeks, using the same login details they had created in first part. The participants who did not register in part one were not contacted and did not participate in the second part of the study.

All of the data was stored on the host company website and in Excel files that were accessible only via the principal researcher's password-accessible computer.

2.3 Data analyses

The researcher produced an Excel spreadsheet and a column was created for each of the details that the participants were asked to provide about each drinking occasion. A column for comments was also included so that popular issues or themes could be used to further inform the development of the questions in the focus group phase.

2.4 Results

A total of 40 participants took part in the full online diary phase, across a period of four weeks. There was a 15.7% dropout rate in the UK and 14.2% in France between the two stages (see Table 2.2). The dropout rate across both countries was most likely due to problems with the online logging in process i.e. the participants having difficulties with their username and/or password.

Table 2.2

Participant profiles by country, gender and occupation across both phases of the study

	UK	France	Total
Participants PART 1	19	21	40
Participants PART 2	16	18	34
Gender part 1			
<i>Male</i>	10	11	21
<i>Female</i>	9	10	19
Gender PART 2			
<i>Male</i>	8	9	17
<i>Female</i>	8	9	17
Occupation PART 1			
<i>Full time employment</i>	11	8	19
<i>Student</i>	8	13	21
Occupation PART 2			
<i>Full time employment</i>	8	5	13
<i>Student</i>	8	13	21
Mean Age across both parts, years (SD)	21.4 (2.4)	22 (1.7)	

The total number of drinking occasions reported across both parts was 80 in the UK and 96 in France. In the UK the mean number of drinking occasions per person across both parts of the study was 7.8 ($SD= 4.7$) and 7.4 ($SD =4.5$) in France. The range of the number of drinking occasions was 2 to 22 in the UK and 1 to 16 in France.

2.4.1 Trends in beverage types consumed

Table 2.3 shows that beer was the most consumed beverage type among males in the UK (as well as cider) and also in France, followed by vodka, as well as white wine for French males. In contrast, the UK males rarely consumed wine. Beer was also the most consumed beverage type among the females in France, followed by white wine. A slightly higher number of females in France reported consuming beer compared to the males across both countries. In the UK, among the females cider was the most consumed beverage type, followed by vodka.

No ale or bitter was reported to be consumed in France, and in the UK males reported consuming it on two occasions only. The lack of reported ale and bitter consumption is almost certainly because participants classified “ale” and “bitter” as beer.

The females in both the UK and France consumed more cocktails compared to the males. Overall, champagne was consumed more in France, compared to the UK.

Table 2.3

The number of reported drinks consumed by each drink type, across both phases in both countries: split by male and female

Alcohol type	Proportion of alcohol that was consumed					
	UK		Total	France		Total
	Male	Female		Male	Female	
Beer	9	4	13	9	10	19
Ale	2	0	2	0	0	0
Bitter	2	0	2	0	0	0
Cider	9	7	16	0	2	2
Wine						
White	2	5	7	7	8	15
Red	1	2	3	6	3	9
Ròse	0	3	3	3	5	8
Unspecified	1	2	3	1	3	4
Champagne	1	2	3	5	5	10
Spirits						
Vodka	6	6	12	7	6	13
Rum	3	3	6	6	5	11
Whiskey	2	1	3	7	2	9
Gin	1	3	4	0	0	0
Cocktail	2	5	7	3	6	9

2.4.2 Brands consumed

Brand identification within beverage types was similar for the two countries.

Jägermeister was the most commonly mentioned spirit and Smirnoff was the most commonly mentioned brand of vodka in both countries (see Appendix E). Not all of the participants specified the brand of alcohol they were consuming and therefore these findings may not be representative of the most popular brands across the two countries.

2.4.3 Location

Table 2.4 shows that both males and females in the UK consumed alcohol at home the most compared with other locations. At home, cider was the most consumed type of alcohol for the males, compared to white wine for the females. The second most popular location for drinking alcohol was the pub for both males and females.

Table 2.4

In the UK sample, the number of reported types of drink consumed in each location: split by male and female

Drink type	Home		Pub		Bar		Club		Restaurant	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Beer	2	19	0	19	0	9	3	0	2	6
Ale	0	1	0	1	-	-	-	-	-	-
Bitter	-	-	0	2	-	-	-	-	-	-
Cider	7	26	6	16	1	5	2	1	1	2
Wine										
White	10	2	2	1	-	-	2	0	3	0
Red	2	3	1	0	0	1	-	-	-	-
Röse	1	0	1	0	1	0	-	-	-	-
Unspecified	1	1	-	-	-	-	-	-	1	0
Champagne	-	-	0	1	0	0	1	0	1	0
Spirits										
Vodka	7	5	3	3	1	1	1	14	-	-
Whiskey	1	2	0	1	-	-	-	-	-	-
Rum	1	1	1	2	1	2	0	2	-	-
Gin	0	1	1	0	-	-	2	0	1	0
Liquor	1	4	3	3	0	1	7	2	-	-
Cocktail	5	0	3	0	4	2	1	0	-	-
Total	38	65	21	49	8	21	19	17	9	8

Table 2.5 below shows that for the females in France the most commonly reported location where alcohol was consumed was in a bar, followed by at home, a restaurant, a pub and then a club. For the males it was also in a bar, followed by at home, a pub, a club and then a restaurant. For both the males and females beer was the most commonly consumed type of alcohol, consumed at a bar.

Table 2.5

In the French sample, the number of reported types of drink consumed in each location: Split by male and female

Drink type	Home		Pub		Bar		Club		Restaurant	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Beer	7	20	6	13	15	17	0	3	4	1
Ale	-	-	-	-	-	-	-	-	-	-
Bitter	-	-	-	-	-	-	-	-	-	-
Cider	-	-	0	0	1	0	-	-	1	-
Wine										
White	12	4	1	2	3	4	-	-	4	-
Red	5	8	0	2	0	5	-	-	1	1
R�ose	2	1	0	0	2	4	-	-	4	1
Unspecified	3	0	0	1	2	1	-	-	-	-
Champagne	6	4	0	0	0	4	-	-	2	1
Spirits										
Vodka	2	2	0	1	8	12	1	2	4	0
Whiskey	2	7	0	4	1	3	0	1	1	1
Rum	1	0	-	-	2	4	-	-	1	0
Gin	0	0	-	-	-	-	-	-	-	-
Liquor	4	3	0	1	4	6	0	1	3	1
Cocktail	4	3	1	0	14	8	0	1	1	0
Total	48	52	8	24	52	68	1	8	26	6

These results suggest some gender differences within each country and some overall differences between the two countries. Perhaps the most interesting contrast is that alcohol was reported to be consumed mostly at home in the UK for both genders, compared to at a bar for the French sample. However, when interpreting this data it is important to consider cultural differences between types of drinking locations, for example in the definition of a bar and a pub.

2.4.4 With whom is alcohol consumed?

Table 2.6 shows that in the UK the males consumed alcohol mostly with their friends, followed by family, self, partner and lastly with colleagues. Beer was the most common type of alcohol consumed with friends, followed by cider. Similarly, Table 2.7 shows that the French males mostly consumed alcohol with their friends, followed by family. They also, like the UK males, consumed beer mostly with their friends, followed by vodka.

Table 2.6

UK sample: For each drink type the number of drinks consumed paired with who they are drinking with: Split by male and female

Drink type	Friends		Partner		Self		Family		Colleagues	
	<i>Female</i>	<i>Male</i>								
Beer	4	45	-	-	1	2	2	5	0	1
Ale	0	1	-	-	-	-	0	1	-	-
Bitter	0	2	-	-	-	-	-	-	-	-
Cider	13	36	-	-	0	4	4	9	0	1
Wine										
White	16	1	0	1	-	-	1	1	-	-
Red	3	0	0	3	-	-	0	1	-	-
Ròse	3	0	-	-	-	-	-	-	-	-
Unspecified	2	1	-	-	-	-	-	-	-	-
Champagne	1	1	-	-	-	-	1	0	-	-
Spirits										
Vodka	25	7	-	-	-	-	2	2	-	-
Whiskey	0	2	-	-	0	1	1	0	-	-
Rum	3	7	-	-	-	-	-	-	-	-
Gin	3	1	0	1	-	-	-	-	-	-
Liquor	11	10	-	-	-	-	-	-	-	-
Cocktail	13	1	0	1	-	-	-	-	-	-
Total	97	115	0	6	1	7	11	19	0	2

Females in the UK also mostly consumed alcohol with their friends, followed by family, self and never reported consuming alcohol with a colleague/s or with a partner. The most common type of alcohol consumed with their friends was vodka and then white wine. In the French sample the females mostly consumed alcohol with their friends, followed by family; beer was the most consumed type of alcohol with friends, followed by cocktails.

Table 2.7

French sample: For each drink type the quantity of drinks consumed paired with who they are drinking with: Split by male and female

Drink type	Friends		Partner		Self		Family		Colleagues		Unspecified Location	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Beer	28	42	1	3	-	-	1	5	1	4	1	-
Ale	-	-	-	-	-	-	-	-	-	-	-	-
Bitter	-	-	-	-	-	-	-	-	-	-	-	-
Cider	1	-	-	-	-	-	-	-	1	-	-	-
Wine												
White	12	7	2	-	-	-	6	3	-	-	2	-
Red	5	7	-	2	-	-	6	1	-	1	-	-
Ròse	6	5	-	-	-	-	2	1	-	-	-	-
Unspecified	3	-	-	-	-	-	3	0	-	-	-	-
Champagne	3	13	1	2	-	-	6	4	-	-	-	-
Cocktail	16	9	-	-	-	-	0	1	1	-	1	-
Spirits												
Vodka	13	16	-	-	-	-	-	-	-	-	1	-
Whiskey	3	13	-	-	1	-	1	2	-	-	-	-
Rum	3	5	-	-	-	-	-	-	1	-	-	-
Gin	-	-	-	1	-	-	-	-	-	-	-	-
Liquor	11	8	-	1	-	-	-	2	-	1	-	-
Total	104	125	4	9	1	0	25	19	4	6	5	0

2.4.5 Quantity of alcohol consumed

Table 2.8

The number of drinking occasions where 1, 2, 3 or more different types of drink were consumed: split by country

Number of types of drinks consumed	Country: number (percentage) of drinking occasions			
	<i>UK no.</i>	<i>UK %</i>	<i>France no.</i>	<i>France %</i>
1	85	62.5%	74	48.3%
2	28	20.5%	44	28.7%
3 or more	23	16.9%	35	22.8%

French participants more often consumed two, three or more types of drink on one occasion, compared to the UK sample; more participants in the UK consumed only one drink type. This may suggest that the French have a greater tendency to drink more than one type of alcohol during a typical drinking occasion, typically known as ‘mixing’.

2.4.6 Pre-loading

Accounts of pre-loading were recorded and defined as the number of participants that consumed alcohol at home and then consumed alcohol at a different location (i.e. bar, pub or club). In France only three participants showed evidence of pre-loading, compared to 16 in the UK. Wine was reported in the UK as a popular drink to consume when pre-loading (6 mentions). Participants in the French diaries did not mention specific drinks with their reports of pre-loading.

2.4.7 Reasons given for beverage choice

Some of the male participants in the UK reported not choosing a drink due to it producing a feeling of ‘bloating’ or making them feel too ‘gassy’ (3 mentions). One female participant in the UK reported choosing slim-line tonic due to its low fat content. In France, none of the participants reported being influenced by any of these factors, but they often mentioned choosing an alcoholic beverage to suit the type of food they were consuming, and reported changing drink to match a food during a course of a meal (6 mentions). Some of the UK participants also mentioned choosing a drink to match a meal type (6 mentions).

In the UK some of the participants reported being influenced by the cost of their drinks, with some reporting choosing the cheapest available (11 mentions). This was not mentioned in the French diaries.

Speed of drunkenness was also reported in UK as a reason for choosing a specific beverage; some participants reported that some drinks were “easy to drink” and therefore quick to consume (5 mentions). Only one participant in France reported that they chose a drink because it was high in strength and would therefore get them to a state of drunkenness quickly.

2.5. Discussion

In comparison to the UK, participants in France reported consuming more than one type of alcoholic drink per occasion more often, typically known as ‘mixing’; this could reflect the traditionally closer links between alcohol and food in France.

Alcohol was consumed mostly at home in the UK, compared to at a bar among the French participants, which may reflect the frequent reports of pre-loading among the UK participants. This finding is consistent with the report that purchases of alcoholic drinks for consumption at home have increased in the UK and that the cost of alcohol in the UK has decreased in recent years (Lifestyle Statistics, 2014). In the UK wine seemed to be a popular choice of beverage when pre-loading. This is consistent with the findings that young adults purchase wine for consumption at home and specifically for pre-loading (Ritchie, Ritchie, & Ward, 2009a; Ritchie, Ritchie, & Ward, 2009b).

In terms of beverage preference, very little cider was consumed in France compared to the UK, where cider was a commonly reported drink choice among both male and female participants. In both the UK and France, beer (along with cider in the UK) was the most consumed beverage type among the males and the French females. Wine was consumed more by French males than by UK males. The consumption of beer among the UK males is consistent with the ONS (2009) report of the average weekly alcohol consumption of 16-24 year olds in the Great Britain, where beer was reported to be the most consumed beverage type among males. However, the ONS reported that wine was the most consumed beverage type among females, in comparison to cider in the current studies results. The French results also differ from a report by Mäkelä et al. (2006), where wine was the most consumed drink type among French males and females. However, the females’ preference for beer in France is reflective of the decrease of overall wine consumption in France (Ritchie, 2009). On the other hand, the increase in wine consumption in the UK is not necessarily reflected in the reports in this study.

There were no direct mentions of the health implications of drinking by participants in either country, apart from (indirectly) linking beverage type and food in France (in particular), but it was unclear whether this was a result of a perception that alcohol possesses health benefits when consuming certain foods or (perhaps more likely)

whether it is a cultural aspect of drink consumption. However, price and whether or not the drink got them drunk quickly was more commonly reported as a reason for choosing a certain beverage type. This was more evident in the UK but was also mentioned by the French participants. The literature suggests that the cost of alcohol shapes drinking attitudes and behaviours around excessive drinking, particularly among young adults. For example, a focus group study in the UK reported that 63% of 16 to 24 year olds agreed or strongly agreed that cheap alcohol promotions encouraged alcohol consumption and ‘drinking to get drunk’ (Alcohol Concern and Balance, 2012). This will be discussed in more detail in Section 6.2.1.

By characterizing young people’s drinking habits and brand choices, the data in this study informed areas of discussion in the focus groups, in particular by identifying beverage preferences among young people and common patterns of behaviour during drinking occasions. It also highlighted some areas of difference between the two countries that could be explored further (e.g. links between food and beverage type; levels of cider consumption; the importance of the cost of alcohol; pre-loading; ‘mixing’; speed of drunkenness). These issues, particularly, consuming cheap alcohol, pre-loading and getting drunk fast are important to understand as they have potentially dangerous health implications and have been suggested to increase the chances being admitted to hospital or getting in a fight (Foster & Ferguson, 2013). Pre-loaders have also been found to drink significantly more alcohol overall, compared to non pre-loaders, and as a result suffer more negative consequences, such as assault, injury and arrest (Hughes, Anderson, Morleo, & Bellis, 2008).

3 Chapter 3: Phase 2: Focus groups

3.1 Introduction

As previously discussed (Section 1.8.1) the literature around young people's perceptions of the health effects of alcohol is very limited, but researchers have started to compare people's beliefs and attitudes towards different beverage types. For example, Wright et al. (2008a) found that adult beer drinkers rated wine as the healthiest drink type compared to light and dark beers. Wright et al. (2008b) in a further study found that beer and wine drinkers rated wine as the healthiest beverage type, followed by brewed tea, white wine, beer and light beer, diet soda and soda. Wine has been reported as having more positive expectancy effects compared to beer and spirits (Pederson, Neighbors, & Larimer, 2010). A concern about weight gain has also been found to have an effect on beverage choice amongst adolescents and younger adults in the UK (deVisser et al., 2012). These studies indicate how people rank different drink types in terms of healthiness but they do not explore the reasons and influences behind these perceptions. Additionally, the majority of the literature in this area explores beliefs across a wide age range (i.e. adults aged between 18 and 70 years). As previously discussed (Section 1.2.2) young adults are known to participate in risky drinking styles, for example young adults are reported as the highest age group to binge-drink (ONS, 2015a) and there is also evidence to suggest that those who binge drink in their 20's are more likely to binge drink in their 40's (Institute of Alcohol Studies, 2009). This highlights the importance of understanding the motives behind binge-drinking in young adults to inform appropriate interventions in order to reduce the risk of binge-drinking among young adults and prevent the likelihood of binge-drinking occurring in later life. It has also been reported that young adults are among the highest consumers of spirit consumption (as well as wine consumption for females) compared to other age groups (ONS, 2009). Spirit consumption as discussed previously (Section 1.6.2) has been shown to have the strongest association with risky behaviours, including, cigarette using and drug taking (Sutherland & Wilner, 1998; Miller & Plant, 2003; Siegal, Naimi, Cremeens & Nelson, 2011), becoming heavy and excessive drinkers (Devolulyte, Stewart, & Theakston, 2006; Grønbaek, Jensen, Johansen, Sorensen, & Becker, 2004), and an increased risk of suicide (Norström, Stickley, & Shibuya, 2012; Razvodovsky, 2009). This highlights the need to

understand better beverage preferences among young adults, as well as the perceptions of different drink types, as these perceptions are likely to influence health beliefs. Therefore this study was conducted to understand 18 to 24 year olds attitudes towards alcohol consumption, their perceptions of the health effects of different types of alcohol and how these perceptions impact on their behaviour.

Focus groups were chosen as this approach was considered to be the most effective way of exploring attitudes, behaviours, opinions and perceptions concerning the issue of interest. Focus groups also create a non-threatening environment where sensitive issues, such as alcohol use can be discussed (Alulis & Linn, 2013) and focus group research aids in the understanding of cultural values and cultural norms, which can contribute towards developing successful health prevention interventions (Kitzinger, 1995; Sim, 1998). The focus groups were conducted across three regions in each country (Paris, Toulouse and Lyon in France and London, Manchester and Cardiff in the UK) so that beliefs and attitudes could be compared across regions as well as countries. The capital cities in the two countries (London and Paris) were considered key regions in this research, as they were likely to be culturally dominant and therefore likely to set drinking trends and behaviours.

The beverage preference results from the online diary phase (Section 2.4) informed which drink types were discussed in the focus groups and the differences in cider consumption between the UK and France highlighted the need to focus on beliefs associated with specific drink types in each country.

The focus groups aimed to explore further pre-loading behaviour and ‘mixing’ behaviours among young adults in the two countries, due to the online diary results (Section 2.4) highlighting differences between the two countries in terms of these features. To explore these drinking trends the line of questioning focused on locations in which drinking usually occurred, when the drinking occurred (i.e. during the week or at the weekend), and in what quantity the alcohol was consumed. In addition, the questions explored how drinking behaviour changed across different locations (i.e. pub, bar, club, at home), and the reasons for choice of drink, perceptions of drink type and how drinks fit into the occasions during which they are consumed. These

questions were intended to highlight any additional drinking behaviours that the online diaries may have missed.

A further aim was to explore key associations with each category of drink (beer, red and white wine, and white and dark spirits) in terms of taste and lifestyle associations, as well as an exploration of the level of knowledge (i.e. alcohol content) about the different drink types and which drink types are used for pre-loading and binge-drinking. The drink types were chosen in line with the drink types given in study 1 (Chapter 2.4). The researcher also intended to find out more about the participants' knowledge of units and drinking guidelines. Evidence suggests a lack of knowledge about the alcohol strength of different alcoholic drinks (Hasking, Shortell, & Machalek, 2005), measures of alcohol units (deVisser & Birch, 2012; Walker, Higgs, & Terry, 2016), as well as sensible levels of drinking in terms of government advice (Gill & O'May, 2006; deVisser & Birch, 2012; Dowling, Clark, & Corney, 2006). This section also included questions regarding participants' knowledge of the production process of the different drink types to explore the accuracy of their knowledge and whether these beliefs influenced health perceptions.

With the aim of exploring participants' perceptions of the health effects of different beverage types, the participants were asked to discuss and rate the main drink types in terms of perceived healthiness i.e. which drink types are perceived as healthier or less healthy. They were also asked to explain their reasoning behind these perceptions of health. Here the aim was to explore how the participants defined healthiness (i.e. ingredients, calorie levels, artificiality, process of manufacture or naturalness) and unhealthiness and whether "unhealthy" is actually the opposite of "healthy". Also examined were the roles of peer group pressure, as well as whether memories of bad drinking occasions and experiences play a role in defining what is unhealthy. In addition the aim was to establish whether healthiness is a factor that is considered when consuming alcohol and when choosing particular beverage types. As previously discussed (Section 1.8), a recent study suggested that the risk of long-term health effects from alcohol consumption is typically not a concern for many young people in the UK (DH and the Home office, 2015).

Lastly, the focus groups aimed to explore the role of packaging (i.e. colour, logo, brand, look, feel) on participants perceptions of health. While packaging design has been widely studied in the context of general perceptions, there are few studies that address health perceptions and even fewer in the alcohol market. The research suggests that consumer perceptions are particularly influenced by package shape (e.g. Clement, Kristensen, & Gronhaug, 2013; Garber Jr., Hyatt, & Boya, 2009; Westerman et al., 2012), colour (e.g. Kauppinen-Raisanen & Luomala, 2010; Labrecque & Milne, 2012), typography (Baik, Suk, Suh, & Kim, 2011; Celhay, Boisselle, & Cohen 2015), graphics (e.g. Bone and France, 2001) and imagery (e.g. Underwood, Klein, & Burke, 2001).

3.2 Method

3.2.1 Participants

A total of 96 participants took part in the study (48 in each country) (see Table 3.1). The participants in the UK were recruited by *Chris Barnham Research and Strategy* (<http://chrisbarnham.com/>) and in France by *Christian Gatard et Associes*, a Paris-based qualitative research agency. Half of the participants in each group were living at home and half had their own accommodation, half were in full time education and half were working full/part time or in vocational training. The recruitment criteria in terms of their drinking behaviour was that they must drink alcohol on a weekly basis (or more often), drink a range of alcohol types (at least two different drink types) and drink both at home and on trade premises (at least once a week). All participants were required to provide informed consent (see Appendix F) before completing the focus groups.

Table 3.1

Participant profiles by region: split by country and region

	Country								
	UK				France				
	Male		Female		Male		Female		
	18-21 years	22-24 years	18-21 years	22-24 years		18-21 years	22-24 years	18-21 years	22-24 years
London	6	6	6	6	Paris	6	6	6	6
Cardiff	0	6	6	0	Toulouse	0	6	6	0
Manchester	6	0	0	6	Lyon	6	0	0	6
Total	12	12	12	12	Total	12	12	12	12

3.2.2 Design

A total of 16 structured focus group sessions were conducted in the UK and in France (three locations in each country; Paris, Toulouse and Lyon in France and London, Manchester and Cardiff in the UK). In London and Paris four sessions each lasting an hour were conducted; one female group aged between 18 to 21 years and one female group aged between 22 to 24 years and the same for the two male groups. In the remaining four locations only, two one-hour sessions were held, one female and one male group. Each session consisted of six participants. There were more sessions held in the two countries' capitals as they were considered to be culturally dominant compared to other regions in the countries.

In the UK the focus groups were held in a house that was specifically hired for the purposes of the sessions. In France a professional viewing facility was used and a simultaneous translator translated the discussions into English. All sessions were recorded using an audio recorder.

The UK focus groups were facilitated by *Chris Barnham Research and Strategy* (see: <http://chrisbarnham.com/>) following extensive briefing and discussion with the researcher, and in France they were facilitated by *Gatard et Associes*, a Paris based qualitative research agency in collaboration with the researcher.

3.2.3 Procedure

On arrival, the researcher and facilitator introduced themselves. Each participant was then asked to introduce themselves to the other participants, using first names only. Participant names were not used in the transcripts to protect the participants' identities. The research team developed a series of questions so that the discussion would follow a certain structure and explore the issues relevant to the research question (see Appendix G). The guide was not there to rigidly dictate the line of questioning but it was intended to provide a flexible structure.

The session started with the participants disclosing what types of beverages they consumed on a regular basis, where, when and who they are typically with when they consume different drink types.

They were then asked as a group to organise 22 alcohol types using alcohol type name cards (see Appendix H for full list) in groups of association and asked to explain the key associations with each of the main alcohol types, including the types of occasion on which they were consumed, the imagery they create, and who typically consumes them. This activity was to encourage spontaneous discussion of health when categorising drink types and to encourage inclusivity and camaraderie amongst the participants, with the intention of producing richer conversation and data

Following on from this, they were asked to rate the healthiness of the different drink types from the least healthy to the healthiest, and asked to explain how these values of healthiness are assessed. Do they ever worry about the health effects of alcohol and if so what specifically do they worry about, do they think in the short term and/or the long term? They were also asked about their knowledge of the strengths of the different drink types (i.e. alcohol content, units) and where they access this knowledge (i.e. from school, parents, peers). Also, knowledge of each of the drink types was discussed in terms of alcohol units and the process of production.

Lastly, in London and Paris only the participants were shown two brands of the same drink type; two bottles of vodka (one premium, one cheaper), two bottles of white wine (one French, one New World), two bottles of cider (one apple, one pear), one can of lager and one bottle of lager. They were asked to compare the two beverages

one drink type at a time, explaining which one they thought looked the healthiest and what role the packaging had on these perceptions of health (i.e. colour, logo, brand, look, feel). The drinks were chosen in line with those identified during the diary phase (Section 2.4).

The researcher then finished with a summary of questions related to their perceptions of the healthiness of alcohol, whether it is a concern of theirs and whether there is a tradeoff between perceived healthiness and desirability.

In order to strengthen the analysis process and to gather the most appropriate data, the researcher listened back after each day of recordings so that they could familiarise themselves with the data and review the procedures employed in the focus groups. The drink packaging section was removed from the four regional locations (Manchester, Cardiff, Toulouse, Lyon), as it was considered too time demanding and often directed conversation towards issues more closely linked to marketing and aesthetics rather than health perceptions. The additional time was used to explore health perceptions more extensively throughout the sessions; the participants were shown eight statements relating to perceptions of different alcoholic drinks and asked whether they agreed or disagreed with the statements. For example ‘naturalness is really important to me in a drink and I want to drink more natural ciders, beers and wines’ (see Appendix I for a full list of the statements used). The statements reflected beliefs that came out of the Paris and London focus groups.

3.2.4 Data Analyses

Verbatim transcripts (an account of all verbal and some nonverbal [e.g., laughter] utterances) were written up for each of the focus groups. All of the transcripts were checked against the original recordings for accuracy and consistency.

In order to help answer the research question, ‘young peoples beliefs about the effects of different alcoholic beverages’ it was decided that the focus for this stage in the research should be on identifying themes in the participants’ responses in the focus groups. This would then allow the researcher to investigate these themes further in the survey phase. It was therefore decided that Thematic Analysis was the most appropriate method of analysis. This style of analysis provides a flexible research tool

that can potentially produce a rich and detailed, yet complex account of the data (Braun and Clarke, 2006). The analysis was conducted using Braun and Clarke's (2006) guidelines of conducting thematic analysis successfully.

A 'data-driven' approach was chosen for this analysis; the themes were led by the data. Firstly, all transcripts were read thoroughly so that the researcher became familiar with the data and preliminary notes were made including any initial ideas about codes. Secondly, all transcripts were read and initial codes were generated in the margins of the transcripts across the entire data set. Codes were features of the data that were of interest to the analyst and referred to either a small segment of the data, a single sentence or group of sentences. The coding was reviewed and refined by the researcher with the supervisory team, and the reliability of the coding was assessed through a series of review meetings between the researcher and supervisors. Thirdly, initial themes were generated by rigorously sorting the codes into broader themes; each transcript was colour-coded to signify the country, age group and gender. Then individual segments of data in all of the transcripts were copied and pasted into a separate document and placed under the appropriate theme. The initial themes were reviewed and those that captured something important related to the research question were placed into a table. Themes were defined, named and superordinate and subordinate themes were identified and finalised. Finally the themes were written up in a report format.

3.3 Results: focus groups

The thematic analysis revealed five superordinate themes: (1) *drinking to get drunk*; (2) *judgments about the drinker and the drink*; (3) *justifications for drinking style and behaviour*; (4) *what stops me drinking too much*; (5) *perceptions of the health effects of alcohol*, which will be discussed in turn. A full list of superordinate themes, subordinate themes and sub themes can be seen in Table 3.2 below.

Table 3.2

Table of the five main superordinate themes, subordinate and sub themes

Superordinate theme	Subordinate theme	Sub theme
Drinking to get drunk	Selecting drinks to get you drunk	The taste of alcohol is disguised Price and availability
	Drinking rituals and strategies for getting drunk	Pre-loading
	Saving yourself for the weekend	
Making judgments about the drinker and the drink	Gender stereotypes	
	Lifestyle associations	
	Being young versus being old	
Justifications for drinking style and behaviour	Parental/family influences on drinking behaviour	
	Feeling in control of my drinking	
	Lack of education and knowledge about alcohol	Knowledge of units
	‘I don’t drink excessively’	
What stops me drinking too much	Feeling embarrassed	
	Responsibilities	
	Physical effects	
Perceptions of the health effects of alcohol	Calories and dieting	
	Production and origin	Natural verses Chemical Industrial verses Artisanal
	Positive health effects	
	Negative health effects	‘I just don’t think about health when I’m drinking’

3.3.1 Drinking to get drunk

This superordinate theme concerns the intentionality of the drinker, and in particular drinking alcohol with the intention of getting drunk. This theme includes participants' reflections on the behaviours and styles of drinking that they had employed in order to speed up the process of 'getting drunk'. This theme was prominent for participants from both countries, and includes four subordinate themes; *selecting specific drinks to get you drunk, drinking rituals and strategies for getting drunk, pre-loading, and 'saving yourself for the weekend'*.

3.3.1.1 Selecting specific drinks to get you drunk

To achieve a state of drunkenness specific drink types were chosen and this choice centered on two main considerations: whether the alcohol could be tasted when consumed, and the price and availability of the drinks.

3.3.1.1.1 The taste of alcohol is disguised

This sub-theme concerns drinks that can be easily and quickly consumed without the drinker being able to taste the alcohol. The taste of alcohol is often naturally masked, typically by high sugar content and may then taste like a soft drink, 'they do literally taste just like a panda pop' (Cardiff, older male). They also described how the taste of alcohol could be masked by a mixer (e.g. Coca-Cola). This theme was apparent among participants from both countries, with the exception of the older male and female participants in Paris, the younger males in Manchester and the females in Toulouse, who did not mention disguising the taste of alcohol.

They don't really taste like alcohol either, like alcopops you could drink 20 of them and it wouldn't even taste like you were drinking alcohol. And the same with cocktails you sometimes don't even taste the alcohol in them you can have more jugs and more jugs. (London, older female)

The participants reported that they chose these particular drinks with the perception that they could consume large quantities throughout a drinking occasion, and feel drunk as a result.

You know it's the whole point you get a mixer, for something to fill it to the top and you drink it. You don't want to taste it. (London, younger female)

Here the use of mixers was reported as a way of disguising the taste of alcohol. Also, cider was repeatedly reported as a drink that could be consumed without tasting alcohol.

Cider...it almost doesn't taste like alcohol and it looks like apple juice with bubbles. (Lyon, older female)

Drinking cider is like drinking squash it's like an enjoyable drink. (Cardiff, older male)

The males in Toulouse discussed mixing their drinks with flavoured liquors to disguise the taste of alcohol.

Sometimes it's mixed with other flavours such as strawberry or raspberry so it can be consumed at other times of the day. For example in the early evening, instead of a beer. (Toulouse, older male)

3.3.1.1.2 Price and availability

The price and availability of alcoholic drinks was another consideration reported by participants from all of the regions in both countries when the aim of consuming alcohol was to get drunk. The only exception to this theme was in Lyon, where the participants did not report the importance of cost and availability when purchasing alcohol.

It's about intent. Someone who wants to get pissed will buy a cheap product. (Toulouse, older male)

Well you have free access to these products and we don't really think about it we just drink it...it's simplicity and we choose based on the price. (Paris, younger female)

Offers and promotions on alcohol were also reported by participants as being influential when choosing a type of alcoholic drink.

If I went out to a club or a bar and if it was three Smirnoff Ices for a fiver then I'd definitely be on it but I'd ask for an extra glass with vodka in it because they don't have a lot of booze in them do they. (Manchester, older female)

For the participant above, the strength of alcohol was also considered when purchasing alcohol and despite the promotion of the alcopops a higher strength drink

(spirit) was also chosen to increase the likelihood of getting drunk. The cost and the ease of purchasing a drink influenced participants' preferences for particular drink types. However, the older females in London, along with the Parisians, reported spending more money on alcohol because of a belief that it would taste better, it would be better quality and would not result in a hangover.

I don't really use the price to find my way around even if I know certain vineyards, and then, for hard liquor, the more expensive it is, the better it tastes, and the headache the next morning lets me know which ones are low end. (Paris, older females)

Both female and male participants in Cardiff reported that wine was a popular, cheap and accessible drink to get drunk on.

I only ever drink cheap wine cos it's cheaper than everything else so it's like something if you wanna go out and get absolutely smashed it's a studenty drink like a bottle of Lambrini. (Cardiff, younger female)

You can buy a bottle of wine for very cheap so you get in and you get it down you to get drunk and you could be with the boys cos everyone gets a glass of one. (Cardiff, younger male)

For this male participant in Cardiff the fact that you can share a bottle of wine with friends was also an important factor.

3.3.2 Drinking rituals and strategies for getting drunk

When on a *night out* participants discussed how they would sometimes engage in particular rituals throughout the course of an evening when the intention was to get drunk. These behaviours may have been learnt on previous drinking occasions and the successful strategies were then repeated on other nights out when the intention was to get drunk and maintain a certain level of drunkenness. The rituals usually involved different drink types being favored at different times throughout the course of a drinking session. Participants reported that they would often start with a low alcohol strength drink (typically beer or cider), and then move onto stronger drinks, most commonly clear spirits with a mixer or shots of straight spirits. However, in Manchester both the male and female participants reported favoring wine as a drink to start on followed by the higher strength drink types.

I mix, I start off on wine and then go to vodka and then it's a slippery slope

and then the shots start and then it's water. (Manchester, older females)

Yes. It goes beer or wine, and then liquors (Toulouse, younger females)

Shots played a big role in these rituals, and were regarded as a drink that could be shared amongst friends, with the sense that the shot facilitated a feeling of camaraderie and shared experience.

This is something that one has in common, we put small glasses and everyone serves tequila and we all do together is friendly. (Lyon, younger male)

Drinking rituals were particularly salient among younger males in London. They talked a lot about what drinks, how many and when they consumed certain drink types throughout a drinking occasion.

That's why then it always comes beer first, as once you have had a bit of alcohol in your system the taste sort of goes of how strong your alcohol is in your drink so you can take more of your vodka and stuff you can have stronger drinks and you don't even realize you are actually doing it. (London, younger male)

The older females in London, Paris and Lyon did not mention these behaviours as frequently. However, they still reported that they would drink to get drunk on occasions, more commonly these older females tried to drink more slowly and would choose drinks for taste and enjoyment, rather than drinks that would get them drunk quickly.

I did not drink the same thing four years ago as I do now, then we were more focused on strong alcohol but now I enjoy wine and things a little softer. (Lyon, older female)

These female participants recognised a shift in drinking style and preference from when they were younger to their current consumption. High strength alcohol and speed of drunkenness was reported as less important in their current drinking style.

3.3.2.1 *Pre-loading*

The subtheme of pre-loading was predominantly observed in the London focus groups but was also reported among the younger males in Manchester and the older females in Cardiff but no reports of pre-loading were found in France. This theme focuses on drinking with friends (never alone) and often at home before going on a big *night out*. The main reasons that were given for pre-loading were the ease and speed of drunkenness, and also the lower cost of imbibing alcohol at home. Clear spirits and wine (rosé in particular) were popular choices when pre-loading.

Yeah usually before we go out we'll drink some wine (Cardiff, older female)

Yeah I think well for me anyway with my friends we will share a bottle of vodka and a couple of glasses of wine and whatever. And then when we go out (London, older female)

Pre-loading was also reported as an opportunity to socialise and share a bottle of something before heading out. Drinking games were a commonly-reported activity whilst pre-loading.

No it is more the atmosphere if I am at home I am more likely to play a drinking game or people are more up for dancing and stuff (London, younger males)

Participants reported that pre-loading put them in the right frame of mind for when they entered a club or bar and 'it's like get as much in you as you can before you go out' (Manchester, younger males); so that they are already feeling the effects of the alcohol, and can dance and chat to friends or strangers.

3.3.2.2 *Saving yourself for the weekend*

This subordinate theme explores how drinking, and especially drinking to get drunk, was usually saved for the weekend as opposed to the weekday. It was notable that although alcohol was consumed during the week, the drink type and quantity was different from the drinks consumed at the weekend. This was a strong theme mentioned by participants from both countries, with the exception of the older females in Lyon and younger females in Toulouse.

Beer mainly during the working week and hard liquor on weekends. (Paris, older male)

The thematic analysis revealed that participants reported that a greater quantity of alcohol was consumed in a short space of time and stronger alcohol was preferred at the weekend. Some participants reported abstaining from alcohol completely in the week and then will 'go absolutely crazy at the weekend' (Manchester, older Male).

And we don't drink during the week any more only during the weekend. (Toulouse, older male)

Usually I'll be lying down afterward with a bottle of Carling but (group laughter) I won't get hammered unless it's the weekend. (Cardiff, younger male)

For a participant in Manchester her abstinence in the week was due to the inability to limit herself to just one alcoholic drink during a drinking occasion.

Whereas I struggle and this is probably why I don't drink that much during the week, I really struggle just to have one. If I'm having one then we're on it. (Manchester, older female)

3.3.3 Making judgments about the drinker and the drink

This superordinate theme represents participants' perceptions of *the drinker*, alcohol types, brands and packaging. These perceptions include: *gender stereotypes*, *lifestyle associations* and *being young versus being old*.

3.3.3.1 Gender stereotypes

Participants in both countries (with the exception of Paris, the males in Manchester and older males in Toulouse), reported perceptions about their own gender and their opposing gender, in terms of the drinks consumed, styles of drinking and behaviour around drinking for men and women. Participants reported a distinction between masculine and feminine drinks.

I would say the more fruity ciders, the pear ciders are more aimed at women. It's only women that drink them, whereas kind of stronger ciders tend to be more of a guy thing. (London, younger female)

Cider was often reported as a ‘girly’ drink (Cardiff, younger Female) among all the regions in the UK and in Lyon vodka was reported to be the more feminine drink type.

Vodka is for girls I think. (Lyon, older female)

Beer was reported among the participants in Cardiff and London as a masculine drink.

For me I know I said about the can of beer and stuff but beer for me all I see is that it is a man’s drink because men tend to drink it more. (London, younger female)

It doesn’t appeal that much to me it’s more of a kind of man’s drink (*referring to beer*), like manly boys drinking it. (Cardiff, younger female)

Among the females in Toulouse they reported that there has been a shift in perceptions of beer, from a masculine drink to a common drink for females.

It’s actually normal for a girl to drink beer (Toulouse, younger females)

It was a bit masculine before. Now it’s in the culture. (Toulouse, younger females)

The strength of alcohol and its sweetness was reported as a distinguishing factor of what constitutes a feminine or masculine drink. A male participant in London reported that he would not be seen drinking a ‘feminine’ drink in front of his friends.

If I’m seen drinking cocktails, well it can’t happen. (London, younger male)

One female in London also reported a feeling of embarrassment when consuming a ‘masculine’ drink.

I know a lot of the time I feel like everyone else has a glass of wine and I am like I will have a pint of beer please... it makes me feel like a bit of a bloke but it is not my fault that’s just what I like. (London, older female)

In London the male participants reported a perception of a difference between the amounts a female can consume compared to males before they feel the effects of alcohol.

I'll have beer, I can go into the pub and drink like 10 pints of beer and then I will go out after that and after 10 pints you are in the toilet every 5 minutes so. Girls can have a couple of glasses of wine and feel tipsy. (London, younger male)

3.3.3.2 *Lifestyle associations*

The subordinate theme concerns the ways in which participants associated certain drink types, brands and drink containers (e.g. glass bottle, can) with specific lifestyles. For the younger participants in London, Cardiff, Lyon and Toulouse these associations affected their drink choice and for some, influenced perceptions of the healthiness of certain beverages.

I wouldn't drink canned beer because I would think of men drinking in the day. (London, younger female)

Drinking from the can is something you do on the streets (Toulouse, older male)

This participant's association of canned beer with a 'male' drink affected her drink choice because she associated drinking from a can with the negative lifestyle of drinking during the day. Participants also reported an association between drinking out of a can with problem drinking and homelessness.

The can just reminds me of drunk people you see on the bus or on the street. (London, younger female)

I agree. Classless, yes. Unhealthy, I'm not sure. It makes me think of homeless people on the street (*referring to a can*). (Toulouse, younger females)

One participant in Lyon reported an association between a specific beer brand and someone who drinks on the street.

Amsterdamer is the same, it is more visual, yet this is a horrible drink, it is the beer for a beer bum. (Lyon, younger male)

These associations were also reported to influence perceptions around health.

Yeah it definitely can have an effect on how you feel about it and if I saw someone who, like is posh, like if I saw someone in a suit drinking Peroni in a pub and then I saw someone in trackies drinking a Carling, I think in my mind I would associate Peroni more with healthiness. (London, younger male)

Who is drinking the drink and what they are wearing, as well as the brand influenced this participant's perceptions of the healthiness of the person consuming the beer.

In Cardiff the younger female participants reported that they associated a positive lifestyle with the consumption of cocktails.

I tend to get them on a girls night out, you'll go for a cocktail, you feel more sophisticated and you dress up. (Cardiff, younger female)

There's something like sex in the city like there is something in the media that cocktails are. (Cardiff, younger female)

Here a cocktail is associated with a sophisticated lifestyle and is a drink to be consumed with friends, as well as a feminine drink. The older males in Toulouse reported making a similar link with whiskey and with, 'somebody who knows what they want' and 'the business man'.

3.3.3.3 Being young versus being old

This subordinate theme reflects on the associations and judgments surrounding specific drink types and the age of the drinker. Thematic analysis has revealed that specific drink types are often associated with either *being young* or *being old* in all regions across both of the countries, with the exception of Paris.

I wouldn't really drink alcopops because they make me think of 13 year olds, first time drinking. (London, younger female)

I think of old men, when I think of gin, bourbon and scotch whiskey and stuff. (London, older male)

Drink choice was affected by these judgments, as participants did not want to be associated with either being *too young* or *too old*. The participants also reported differences in drinking styles and behaviours for the *younger* and *older* drinker.

I did not drink the same thing four years ago as I do now, then we were more focused on strong alcohol, but now I enjoy wine and things a little softer, but back then it was always hard liquor. (Lyon, older female)

This participant mentioned that *young* people do not drink alcohol for pleasure, yet *older* people perhaps do. This supports the previous theme of drinking with the intention to get drunk. Participants reported that they drink in a different way to when they were younger. The participants in the current study did not define the age of a younger and older drinker.

Maturity I think when you are young you want to have fun, there are the friends that we made who like getting really drunk, but I think that over the years it takes a lot of awareness of the importance of the dangers around drinking. (Lyon, older female)

When you get older you appreciate what you drink more. Now I drink a good wine or a good beer for pleasure, not just to get drunk (Toulouse, older male)

In the UK some of the participants reported red wine as a drink that would be consumed when participants got older as opposed to consuming it in early adulthood.

I could potentially see myself drinking red wine as I get older. (Cardiff, older male)

This theme highlights the importance of comparing different age groups drinking styles and behaviours due to the contrasting characteristics of the younger and the older drinker.

3.3.4 Justifications for drinking style and behaviour

A prominent superordinate theme revealed by the thematic analysis was the justifications for the drinking behaviours and styles that participants reported. Four types of justifications were noted, including *parental influences*, *feeling in control*, *lack of education and knowledge about alcohol, units*, and *'I don't drink excessively'*. Each will be discussed in turn.

3.3.4.1 Parental and family influences on drinking behaviour

This subordinate theme was only prominent among participants in the French regions of Lyon and Paris. Participants reported that their introduction to alcohol was at

home, with their parents and that they were taught how to drink responsibly: ‘My parents raised me to drink alcohol the right way’ (Paris, Younger Females). This introduction to and acceptance of alcohol consumption at home was seen as an important influence on participants’ perceptions of the health effects of alcohol and their views that moderate alcohol consumption is healthy.

My mother has one glass per meal, she’s always told me that it was very healthy, that it helps with digestion. (Paris, older male)

I tie it in with the familial aspect, wine, a healthy product, if my parents gave some to me, then that means it wasn’t unhealthy. (Paris, older female)

Wine was reported as the most popular drink type for consuming alcohol at home with parents and was often reported being consumed with a meal.

I think it's really a family thing, my home is really something rooted in family traditions, so we drink wine with ritual meals. (Lyon, older female)

The participants also reported that they did not consume strong alcohol at home with their parents.

My father has been teaching me to love good wine for years, ever since I was 14 years old even 12. At home, we also drink beer. Not that much strong liquor, even if he likes a whisky or a gin in the evening. I have a beer, there’s no problem. My mother gives me the same speech as Claire’s mum ‘you can drink as long as it’s within reason’. (Paris, younger male)

The male participants reported beer, as well as wine as the most popular drink type to consume at home with the family. However, one younger male participant in Paris mentioned gin as a popular familial drink.

My favourite things to drink are Heineken and Gin (group laughter) Gin is sort of a family thing so I’ve got a good taste for Tanqueray’s. (Paris, younger male)

In the UK regions participants did not report their parents influencing their drinking styles or behaviour. They also did not report being introduced to alcohol through their parents or other family members, with the exception of one participant in London.

I will start off with the rum, Captain Morgan I have always liked rum I think it's because my dad has always drunk rum so it's like a Caribbean sort of thing and it's like 50-60%. (London, older male)

Here this participant's drink choice was influenced by his father's drink of choice.

3.3.4.2 *Feeling in control of my drinking*

This subordinate theme was only prominent in the Paris focus groups and it involves the participant's feelings of being in control during a drinking occasion, especially in relation to justifications for being drunk. Some participants felt that as long as a level of personal control was maintained when drunk, then there was no concern.

Well we've held on to a rather puerile relationship with alcohol, we're looking to drink quickly or to get drunk to have fun whilst still remaining standing. (Paris, older male)

Although the motivation here remains drinking to get drunk, participants reported feeling that they were in control of the drinking. They also reported that control is something that you can learn.

I think we drink more today because we can keep it under control, we know how to drink better now. Whereas we'd start off really quickly, and now we're better at drinking. (Paris, older male)

Again comparisons were made between drinking styles, in terms of speed when you are *young* and when you are *older*.

3.3.4.3 *Lack of education and knowledge about alcohol*

Participants in London and Paris, as well as older males in Toulouse reported that there was a lack of education about the health effects of alcohol. They reported that drug education and government campaigns outweighed education about alcohol: 'More drugs than alcohol' (Paris, younger females). They also reported that 'there is not much awareness about alcohol' (London, older males) and that current awareness campaigns focus more on cigarettes and the dangers to health, as well as the dangers of drink-driving.

There is the cigarette one with the tumor coming out of it, which is horrible; they don't do the equivalent with drinking (London, older female)

There is loads about drink-driving which is obviously important but they don't take as much care in terms of your health and alcohol the way they do with cigarettes'. (London, older female)

Participants also mentioned the lack of education and awareness about alcohol during school, college and their university education.

In terms of awareness, anything done after college is too late. Awareness should be raised in high schools and colleges. Obviously they haven't found how to convey the message clearly yet, because any high school student who starts to go clubbing will start by drinking way too much. Maybe they don't convey a shocking enough message. (Toulouse, older males)

Two participants reported that information about the health risks associated with drinking can be contradictory.

I don't know if this is ignorance but you hear these sorts of things and ignore them anyway as the amount of times I will hear dry cider is linked to throat cancer then the next day red wine is good for your heart so it is completely conflicting stuff so ignore it and booze through it. (London, older male)

Well it has already change in that direction, advertisements for alcohol companies used to be banned, now you can but with a disclaimer. It sends mixed messages, really. (Toulouse, older males).

3.3.4.3.1 Knowledge of units

The thematic analysis for this subtheme revealed that participants lacked any clear understanding about units as a measure of alcohol. Participants often could not quantify a unit of alcohol, and this was particularly prominent among the Parisian participants: 'I don't really know what a unit is'. (Paris, younger male). Participants in London were aware that units existed as a measure of alcohol content but they also could not quantify a unit when they were asked to.

I had to ask the bar tender, I will say I am driving how many units is this? And they will say take the other one back...they will say you can have one drink or one cider. (London, older female)

The participants in London associated units with driving and this seemed to be the only time they thought about units when drinking. However, the majority of

participants in Paris were not even aware that units existed as a measure of alcohol intake.

If it's there, it's mandatory, but I don't know what it expresses, it has to do with health probably, some sort of prevention I think there must be some reason otherwise it wouldn't be there. (Paris, older female)

3.3.4.4 'I don't drink excessively'

This subtheme includes the fourth justification revealed by the thematic analysis. This concerns the view held by participants who perceived that their current level of consumption was not at an unhealthy level, therefore they did not have concerns over the health effects of alcohol: 'I don't think I drink enough to worry' (London, younger female). This theme was only evident across London, Paris and Lyon.

It's not so much that it's unhealthy, because I avoid overdoing it, I don't ask myself the question. My consumption is frequent but not excessive. (Paris, younger female)

The participants reported that the health effects of alcohol only become a concern if they were to drink excessively or become an alcoholic.

But you're not doing this like the alcoholics you see and doing all of this every day. (Lyon, older female)

However, the participants in the current study did not quantify what *excessive* drinking was.

3.3.5 What stops me drinking too much?

Participants expressed three main influences on what stopped them drinking too much alcohol on a *night out* including, *feeling embarrassed*, *responsibilities* and *physical effects*.

3.3.5.1 Feeling embarrassed

Participants reported that the fear of doing something embarrassing whilst drunk stopped them drinking too much on a *night out*. Again, *too much* alcohol was not

quantified by the participants in the current study. This theme was only evident among the older participants in London and Manchester.

I think for me when I used to drink a lot couple of years ago I used to do stupid things and act like a bit of an idiot, so now when I drink I get to a point when I am like I need to stop otherwise I will embarrass myself. (London, older female)

I think you've got like you're a bit more aware of yourself when you're older and you don't wanna be that person that falls over and makes a fool out of themselves. (Manchester, older female)

The older participants made comparisons to their drinking behaviour when they were younger, implying that learning when they have had enough to drink comes with age. It is also reported that this feeling of embarrassment overpowered any concerns about the health effects of consuming alcohol.

When it comes to health it's more the stupid things I do when I am drunk. (London, older male)

I think you've got like you're a bit more aware of yourself when you're older and you don't wanna be that person that falls over and makes a fool out of themselves. (Manchester, older female)

There was belief that a certain point is reached when people start to think about the consequences of their behaviour and make a decision whether to carry on or stop drinking altogether.

3.3.5.2 Responsibilities

This subordinate theme explores a second influence on stopping drinking too much, which was reported by some participants. This concerned the idea of personal responsibilities affecting how much alcohol participants consume on a *night out*. The participants in London and Paris, as well as the younger females in Toulouse, reported that the fewer responsibilities they had, the more they drank. Participants in the remaining regions did not report that personal responsibilities influenced their level of alcohol consumption.

You don't challenge it because everybody does that and as long as we have no responsibilities, we'll keep going. (Paris, older female)

It's a way of life too. We are still studying, or just starting our job. (Toulouse, younger females)

One participant in London reported that the responsibilities of not living at home and having a boyfriend influenced how much she drank.

For me I think it's just growing up really, becoming more responsible I live with my boyfriend now, I am not living at home and going out every weekend with my friends. I would just say growing up. (London, older female)

This theme is linked to the earlier theme *being young versus being old*, in that there is a perception that drinking behaviour and styles change with age and the responsibilities that come with age, such as work commitments, university lectures and living away from home.

You have more free time in the summer to do stuff, like people worrying about getting up for work in the morning or getting up for their lessons you don't really have that I mean you still worry about work but when you go on holiday in the summer you won't have a care so they can go out every night and drink. (London, younger male)

3.3.5.3 Physical effects

The third and final subordinate theme about factors that prevented excessive drinking was the physical effects that followed from the drinking sessions. The older participants in London, Paris, Lyon and younger females in Toulouse expressed the idea that concerns about the physical effects of alcohol influenced what they drank and how much they consumed on a night out. A common physical effect reported in this study was feeling bloated: 'it makes you bloated, you mustn't overdo it' (Paris, older female). Beer was reported as the most likely to cause this physical effect. In order to help reduce some of these physical effects, participants reported the need to change to a different drink type or avoid certain drink types altogether on a drinking occasion.

I try not to mix too much as it gets me a lot drunker and gives me a much worse hangover the next day, so generally say if I had wine before I went out I would probably then switch on to vodka and just stick to that and not drink anything else. (London, older female)

Getting a hangover or a headache was also a commonly reported influence on decision making about consumption. Sticking to one or two drink types was expressed here as a way of reducing a hangover. Nonetheless, despite acknowledging the effects of mixing drinks, this participant did not mention any concerns about the quantity of consumption or any potential health effects.

I don't think about health I certainly do think about hangovers. I will not touch cider as they give me a bad hangover and also I don't in terms of mixing wines they say this and that and cheap vodka gives you bad hangovers but I don't really believe it they are all bad. (London, older male)

Every time I have a hangover, I promise myself it was the last. (Toulouse, younger females)

Getting a hangover after a drinking occasion was more of a concern for these participants than any short or long-term health effects. Fatigue and feeling sick on a night out was also reported by participants in Lyon as a way of monitoring alcohol consumption on a night out.

I'll stop precisely when I have alcohol fatigue, so when I feel that I am beginning to tire I prefer to stop drinking and go to drink water or coke, because if I continue I fall asleep on the couch. (Lyon, older female)

3.3.6 Perceptions of the health effects of alcohol

This superordinate theme concerned participants' perceptions of the health effects of different beverage types. This theme was prominent across both countries, and includes five subordinate themes; *calories and dieting*, *product and origin*, *positive health effects*, *negative health effects*, "I just don't think about health when I'm drinking".

3.3.6.1 Calories and dieting

This theme was more prominent amongst the participants in the UK, particularly London and Manchester. The participants in both countries perceived certain drink types to have more calories than others. Beer, cocktails and mixers (i.e. Coca Cola) in spirit mixer drinks were reported as being the most calorific by all of the participants, and vodka as the least calorific in London, Manchester and Cardiff, with the addition

of red wine. Participants in Toulouse and Lyon did not mention calories and dieting at all.

...so that could be coke, lemonade or like a drink that is not good for you whereas the straight stuff there is nothing mixed with it. It is just straight and obviously vodka is calorie-less isn't it so if you just drink straight vodka... (London, older female)

Yeah I wouldn't think as much, it will be more about the mixers that you are mixing with the spirits that will put on your calories. (London, younger male)

Contrastingly, in Paris wine was reported as the least calorific; 'wine is the alcohol with the fewest calories' (Paris, older female). The female participants in London and Manchester reported avoiding certain drink types when on a diet and that calorific value influences beverage preference.

When you are on a diet they always say cocktails avoid cocktails and they give you versions that you can do with them. (London, younger female)

If I was on a diet I'd go for vodka with like lime and soda or something. (Manchester, older female)

However, participants reported not thinking about calories when the aim of a drinking occasion was to get drunk.

I also think when it comes down to you going out and getting drunk you don't even think about calories.... at all. (London, older female)

I know that it should but sometimes I'll drink it anyway like I know I'm drinking like 3000 calories worth of this but it doesn't stop me from drinking it when I want to get drunk. (Manchester, younger male)

3.3.6.2 Production and origin

This sub-theme is about how different drink types are produced, where they are made and how they affect perceptions about health. Participants reported that the 'naturalness' of a product in terms of ingredients and additives was important when distinguishing between an un-healthy and a healthier drink type. The production process was also reported as an important consideration when determining the healthiness of a drink. This theme was prominent among the participants across all of the regions in both countries, with the exception of Lyon where the issue of natural drinks was not mentioned.

3.2.6.2.1 *Natural versus artificial*

There were some differences between participants in the two countries and regionally in terms of what drink types are regarded as “artificial” and which are more “natural”. In the UK, cider, wine and spirits (particularly vodka) were reported as being more natural in comparison to other drink types.

I think spirits as well if you think of natural it’s probably been made from.... so I think it would be more natural (London, older male)

I would say the cider, wines and all that lot are more natural because I assume they’ve been making them a lot longer when they didn’t have the big industries we have now. (Cardiff, younger female)

In contrast, amongst the older males in London and the younger males in Manchester, cider was reported as being artificial.

That’s why I stopped drinking the ciders cause you get a cider baby all the sugar and sugar is the worst thing for your body too much of it and it builds up so much so I couldn’t really drink it anymore. (London, older male)

I think some of it could be natural and some of it not so much like the sweet cider like Rekorderlig is nice as they are they seem like they could be enhanced as oppose to the just pure apple ciders. (Manchester, younger male)

The male participant in Manchester reported that the sweeter the cider the more un-natural it is and that it must contain more additives to obtain the sweetness.

Naturalness was not as salient amongst the participants in Toulouse but the younger female participants reported that wine, beer and cider were the most natural drink types and spirits were the most un-natural.

What is mostly unhealthy is those liquors, rum and juices. They add stuff to them, and they don’t do it to wine, beer and cider so it has that image of a natural drink (Toulouse, younger females)

In Paris, wine and beer were reported to be the most natural drink types, but spirits, in contrast to the UK, was reported as the most artificial.

Beer and wine, you know what it’s made of, if you want something healthy the healthiest alcohol would be these. (Paris, older female)

Gin is more artificial and chemically. (Paris, older female)

Participants in all of the regions in the UK and France shared similar perceptions of what constitutes an artificial drink and a more natural drink. The amount of sugar, additives, sweeteners and “chemicals” in a drink were commonly reported as a way of determining how natural a drink was. This was an exception in Toulouse as the participants did not discuss their perceptions of the contents of an “artificial” drink apart from the fact that things are added to an un-natural drink.

Less added sugar and things, so no added chemicals. (London, younger female)

Yeah it's almost like they use the sugar to mask the taste of the chemicals. (Cardiff, older male)

In addition, amongst the males in London and Cardiff, price was reported as a way of distinguishing between a natural and artificial drink.

In order to make them cheaper they probably just put a bunch of artificial stuff to try and re-create it. (London, younger male)

I can imagine there are less chemicals in the higher end ones like Grey Goose than Asda priced vodka. (Cardiff, older male)

The males reported that the cheaper the drink the more artificial it will be and that it will contain more chemicals.

3.3.6.2.2 Industrial versus artisanal

This theme was only evident among participants in France and was most prominent in Paris. Participants reported that the production of different drink types in terms of the scale and process of production affect perceptions of healthiness. A drink type that evokes artisanal production was favored and was perceived to be healthier in comparison to a drink that is industrially produced. Cider and wine were reported by participants in Paris and Lyon as artisanal healthy drink types.

More artisanal, an old wives' recipe so it is bound to be healthier because of the craftsmanship. (Paris, younger female)

Wine is well done, with no love but craftsmen, while the vodka is made in large factories, I do not think this is done the same way, it is not the fact that it is done with fruit that makes a healthy product, it is how it is done. (Lyon, younger male)

Proximity of production was also reported to influence perceptions of how healthy a drink was and artisanal drinks were reported as being typically produced more locally.

The good thing about cider is that it is typically artisanal and from local areas. (Paris, older male)

The French participants reported the importance of knowing where and how the drink was produced and that with industrially produced drinks it is harder to know the production process.

That's why I tend to favor wine or higher end beers because you're quasi-assured that they're made more artisanal. For example, for wine, I have family that makes some, I know how it's all organized and I know what's in it. However, industrial beers, industrial wines, or sparkling wines when it comes to champagne, we don't know as much about them because they're made in large quantities in factories. (Paris, younger male)

With industrial manufacturing, the products are manufactured in a factory and are stored in machines, in certain materials. With artisanal production, you have the image of the wooden barrel, of fresh air, etc. (Paris, younger male)

Artisanal drinks were also reported as having fewer additives and therefore perceived to be healthier in comparison to industrially-produced drinks. However, participants in Toulouse did not confer this link; they reported a preference for local artisanal production but they did not relate this preference to health.

I would choose the one that looks more artisanal, so the Chablis there is a greater chance of there being fewer things added, because if it seeks to look really good, like the Chardonnay, it could be very industrial, and thus likely have more things added to it. (Paris, older male)

Overall, the process of an artisanal drink compared to an industrially-produced drink was strongly favored.

3.3.6.3 *Positive health effects*

Participants from all of the regions in both countries perceived wine as the healthiest drink type.

Wine is healthier... it seems a glass of wine a day is good for your health.
(Paris, younger female)

Two glasses of wine a day it can be beneficial to health, it can lengthen life expectancy I believe. (Lyon, younger male)

Red wine in particular was reported as the most beneficial to health and the perceived benefits of red wine were often reported in relation to the blood and the heart.

The tannins in red wine are good for you. It contains antioxidants and anticancer agents. It's proven, everybody knows. Two glasses of red wine for a man, and one for a woman, every day, is good for you. Other alcohols, you drink them just for pleasure. (Toulouse, younger female)

I think red wine just makes myself feel better, it's good for your heart and it's been scientifically proven that it can reduce your risk of having a heart attack.
(Manchester, older male)

The participants were very convinced that red wine in moderation had health benefits and these views seemed to be have been shaped by scientific based information that they had retrieved. In addition to wine, beer was perceived as having beneficial health effects among the younger females in Paris and one female participant in Toulouse.

Beer is diuretic, you pee a lot, it makes you pee and so it releases it so that's healthy but it's not practical of course. (Paris, younger female)

Beer is good for your kidneys. It makes you go to the bathroom (Toulouse, younger females)

Stout was another addition in Manchester as a healthy drink type among the older females and older males in London.

That's why I started drinking Guinness as I found out it was good for you.
(London, older male)

I would say like stuff like Guinness and stuff then because it's full of iron and stuff apparently. (Manchester, older female)

Although these drink types were perceived as having beneficial health effects, some of the participants reported that they are only beneficial in moderation, for example one or two glasses a day, and that there are negative effects to drinking too much.

It's all about moderation like big quantities are going to do big damage whereas like one or two beers like every two days or something has been proven to be like good for you like two units or something. (Manchester, younger male)

3.3.6.4 Negative health effects

This subordinate theme is about the perceptions of the detrimental effects that alcohol has on both physical and mental health. This theme was more prominent amongst participants in London and Paris. With the exception of participants in Cardiff and the older females in Lyon, the effect that alcohol has on the liver was reported as the most common concern.

I think liver is my main fear out of all of them. (London, older male)

Vodka is healthy it's not as fattening as cider but what's vodka gonna do to your liver it's gonna ruin it. (Manchester, older female)

Participants in the UK and in Paris, as well as the younger females in Toulouse often associated clear spirits with detrimental effects on health due to the high alcohol content.

Gin attacks your neurons and makes you sick, as the alcohol content is higher, it must ravage the brain whereas a glass of wine doesn't. It is to do with the alcohol content. (Paris, older female)

For equal doses, stronger alcohol are worse for your health than lighter ones. You feel it when you drink it, that burning sensation. It gets close to ninety percent ethanol (Toulouse, younger female)

In addition to the detrimental effects of alcohol on physical health, participants in Paris reported alcohol's detrimental effects on mental health.

Alcoholism can alter mental health. (Paris, younger male)

The unhealthy aspect of regular drinking is that it can lead to addiction and that isn't looked upon favorably by society and by yourself too (Paris, younger female)

The Parisian participants also reported concerns over the inability to socialize without consuming alcohol, which was seen as unhealthy.

I don't find it unhealthy, but it's the need to get drunk on alcohol in order to interact with others that I don't find healthy at all. (Paris, older female)

3.3.6.5 "I just don't think about health when I'm drinking"

This theme was prominent across the focus groups in all of the regions in both countries and was about the lack of thought about the health effects of alcohol. The participants reported that they did not think about the health effects of consuming alcohol, and any concerns they did have were short-term, such as whether or not they would get a hangover.

I don't think about my health when I drink. (Cardiff, older male)

In the short-term we see not too many effects, just the toilet a few times, not long-term cirrhosis but we do not think about it at our age. (Lyon, younger male)

The participants in Lyon and Toulouse reported that they did not need to think about the effects of alcohol at their age. It is a concern that will come later in life.

I do think there will be a time when there will be an awareness at a certain age possibly when you have a family life, then we make many resolutions and stop. (Lyon, younger male)

It's true that if you drink regularly, it's worse for your health, but I tell myself I won't be a student any more soon, so my behaviours will have to change eventually. My above average consumption is only temporary. (Toulouse, older male)

Their current drinking style and behaviour is discussed as being temporary and there is a perception that they would be likely to experience a change in these patterns of behaviour as they matured.

3.4 Discussion

In both countries, the participants reported an importance of ‘getting drunk’ and that specific drink types were chosen to enhance the state of drunkenness. There were no accounts of pre-loading in France compared to the UK where pre-loading was a strong theme, particularly among participants in London. This is in line with the results from the pilot study results (Section 2.4.6) where very few accounts of pre-loading were reported in France, compared to the UK. Wine and spirits were popular choices of drink during a pre-loading session. Pre-loading was a way of speeding up drunkenness and a cost effective way of being intoxicated before entering a bar or club- being intoxicated before entering a club enhanced socialisation. Beverage preference was influenced by the speed of intoxication, the taste of the alcohol being disguised, and the cost and the availability of the alcohol. Cost was also a factor that influenced drink choice in the previous study (Section 2.4) and as previously discussed, the literature suggests that the cost of alcohol heavily influences alcohol consumption among young adults (Alcohol Concern and Balance, 2012). The reported importance of taste is also not surprising, as previous research has found that taste is the most influential factor when choosing an alcoholic beverage (Wright et al., 2008a; Glanz, Basil, Maibach, Goldberg, Synder, 1998). This finding is concerning due to the potential impact on the amount of alcohol consumed. This will be discussed in more detail in Chapter 6. In both countries cider was reported as a drink that can be consumed quickly and without tasting the alcohol, and beer and wine were the cheapest drink types to consume when getting drunk was the aim. Wine, as previously discussed (Section 1.6.1) has been reported as a popular drink during pre-loading (Ritchie, Ritchie & Ward, 2009a; Ritchie, Ritchie & Ward, 2009b), which suggests that wine is a cheap option for pre-loading and getting drunk. Wine consumption during pre-loading is concerning due to the high alcohol content, compared to beer or cider. However, it has also been suggested that beer consumers are more likely to binge drink, and are at a higher risk of causing or incurring alcohol-related harm, compared to spirit or wine drinkers (Naimi, Brewer, Miller, Okoro and Mehrotra, 2007). There is a lack of evidence that assesses the risks associated with cider although the current study suggests that cider is a very popular drink type when drinking to get drunk. This highlights the need for further research comparing a wider range of drink types, particularly cider.

At no point during a drinking occasion did the participants report making a beverage choice with specific health effects in mind, nor did they choose a beverage type due to its low alcohol value. This is concerning due to the potential quantity of alcohol that could be consumed and will be discussed later on in this chapter. However, some of the UK participants did mention that when on a diet they would choose a white spirit and avoid cocktails and ciders, but they also reported that once they were consuming alcohol on a *night out* these concerns were ignored. This theme of concerns over calorie content was also stronger in the UK, where beer, cocktails and mixers (such as Coca Cola) in spirit mixer drinks were perceived as being the most calorific, and vodka as the least calorific. In Paris, wine was perceived as the least calorific drink. Obesity is a public health concern and obesity has increased among children and young people, with approximately 35% of children and young people being reported as overweight or obese in Europe (Lobstein & Jackson-Leach, 2011). Conversely, young people's dieting and weight control behaviours are a public health concern: approximately 3% of adolescent females are thought to have a clinical eating disorder (Favaro, Ferrera, & Santonastaso, 2003). In response to these trends there has been an increased focus on early intervention and understanding the determinants of these behaviours (Pearson, Goldklang, & Streigel-Moore, 2002). Providing nutritional information on alcoholic beverages, particularly in the form of calorie content has recently entered the public discourse, as way of reducing obesity rates and informing better choices (LGA, 2016.). This will be discussed in more detail in Section 6.2.1. In light of the findings in the current study and the public health concerns around dieting and weight control behaviours among young people, further exploration into young people's beliefs about how different drink types contribute to weight gain are warranted.

The analysis revealed that knowledge of units in France (particularly in Paris) was poor, with most of the participants expressing that they were not aware of units as a measure of alcohol intake. In the UK unit awareness was greater but was often expressed in relation to driving, as opposed to a tool in monitoring alcohol intake. As previously discussed (Section 3.3.4.3.1) research has shown that despite an overall awareness of government drinking advice, the public in the UK share a lack of accuracy in understanding the unit-based guidelines (ONS, 2015b; deVisser & Birch, 2012). The lack of awareness of units in France could reflect the current lack of

requirement for alcohol content in units to be displayed on alcohol labelling in France, compared to the UK where unit labelling on alcohol packaging is widely used (Farke, 2011). This will be discussed in more detail in terms of implications to policy in Section 6.2.1.

Drinking behaviour was reported across both countries as being different during the week and at the weekend. Higher quantities of higher strength alcohol were consumed at weekends compared to a weekday. Some of the participants reported that the reason for abstaining from alcohol was due to the lack of ability to consume only one alcoholic drink on a drinking occasion, therefore choosing not to consume any alcoholic beverage if they were not planning on getting drunk. This reinforces the notion of consuming alcohol with the sole intention of getting drunk.

All of the participants in both countries had strong sets of justifications for their drinking styles and drinking behaviours. Among the participants in London and Paris a key justification was the lack of education during their school days (and currently in the media) regarding the health effects and other consequences of alcohol; they believed that education about drugs and cigarettes dominates health awareness campaigns. They also declared a concern and a need for current awareness to change but it was unclear whether this concern was a way of shifting the burden of responsibility or an excuse for their current drinking style and behaviour.

In both countries, irrespective of location, wine was perceived as the healthiest beverage type (particularly red wine). This supports the literature that wine (red and white) was rated as the healthiest beverage type compared to other beverage types (Wright et al., 2008a; Wright et al., 2009b; Pederson et al., 2010). In France the positive perception of wine reflected a strong cultural relationship with wine, reinforced by parental and family tradition. Contrastingly, in the UK, positive beliefs about wine tended to reflect media reports about the beneficial effects of wine on specific aspects of health, such as promoting a healthy heart.

The participants in both countries showed a lack of emphasis on alcohol content (% ABV) of different beverage types as a key health issue; instead, thoughts about the hazards of drinking were shifted towards concerns over specific drinks' "naturalness"

or “artificiality” as well as the production process (and to a lesser extent, to problems of addiction). In France, beer, cider and wine were perceived to be healthier than spirits because they were associated with artisanal production. Conversely, spirits had some negative connotations in part because their production was considered less “natural”. The association between healthiness and natural production was strongest in the two capitals, London and Paris. In the UK, spirits (as well as wine) were perceived to be relatively healthy because they were regarded as having fewer additives and were therefore less “artificial”, but interestingly in the UK spirits (white and dark) were also reported as the most likely to cause liver damage. Therefore it is unclear what factors they believe to be the most concerning and influential when considering specific beverage types’ effects on health. In the UK, beer and cider were seen as the least healthy drinks due to perceptions of them having high sugar and additive content, as well as producing feelings of “gassiness”. It is well established in the food literature that many consumers prefer natural products (Rozin et al., 2004), and assume that products based on natural ingredients (i.e. without additives) are healthier (e.g. Evans, Challemaison, & Cox, 2010). The lack of concern over the alcohol contents of different beverage types when determining healthiness has also been reported in the literature. As previously stated (Section 3.1) Wright et al. across two studies found, firstly, that wine was rated the healthiest compared to the light and dark beers, as well as light and dark in coloured beers (2008a) and secondly participants rated wine as the healthiest beverage type, followed by brewed tea, white wine, beer and light beer, diet soda and soda (Wright et al., 2008b). Rozin (2006) also suggested that the process of production dominates content in judgements of food naturalness and acceptability. This important issue will be discussed in more detail in Chapter 6.

“Drinking alone” was seen as a marker for problem drinking, resulting in exclusion from society. Participants in both countries (and all regions) highlighted liver damage as a primary long-term health concern of alcohol consumption. This supports the finding by Hall et al. (1992) where participants perceived liver damage to be a major long-term health concern of alcohol abuse. However, when consuming alcohol on a “night out” little thought was given to the health effects of alcohol. Health concerns were related to acute impacts on the individual: vomiting, the consequences of loss of control and (most commonly) feeling hung-over. Other concerns not related directly

to health were doing something embarrassing whilst drunk and responsibilities such as work or study. This supports the finding that 13 to 25 year olds showed a lack of concern about the long-term health effects of alcohol and concerns were focused on the short-term effects of alcohol e.g. feeling hungover (deVisser, Smith, Abraham, & Wheeler, 2012).

The participants believed that they would eventually ‘grow out’ of their current style of drinking and that it is a phase that every young person goes through in their lives. They also believed that the binge-drinking style of drinking will eventually decline once they get to a certain age and they will develop a ‘healthier’ style of drinking. This ‘healthier’ style of drinking was not defined in the current study. The concept of ‘maturing out’ of substance use has been widely supported in research and suggests that usage rates of most substances decline during the mid-twenties due to the significant changes in living arrangements, job responsibilities, marriage and children (e.g. Bachman, Wadsworth, O’Malley, & Schulenberg, 1997). This process will be discussed in more detail in Chapter 6.

To conclude, drinking behaviours and beliefs in the two countries were similar in terms of when heavy alcohol consumption took place, the influences of beverage preference, in terms of the perceived levels of intoxication of different drinks, the cost and availability and a preference for taste of alcohol being disguised during consumption. Liver damage was seen as a primary long-term effect of alcohol consumption across both countries. The two countries also shared a lack of thought about the healthiness of different drink types, particularly when consuming alcohol on a ‘*night out*’. Any concerns about alcohol consumption were related to acute and short-term effects. However, the theme of calories and dieting (Section 3.3.6.1) in relation to alcohol consumption was more salient in the UK than France. The lack of concern was attributed to a lack of education about the health effects of alcohol, and this theme was more prominent in Paris and London. The two countries differed in terms of how they perceived the healthiness of the different beverage types, with the exception of wine. There was a lack of emphasis on the alcohol content when determining the healthiness of different beverage types, across both countries. Instead, any thoughts relating to health were centered on the perceived “naturalness” and

“artificiality” of different drink types, as well as the production process, although this was more prominent in the two capitals.

Therefore in light of these findings, the following study aimed to examine in more detail some of the most concerning issues that arose from the focus groups. The survey phase (Chapter 4) used a quantitative approach with a large sample of respondents to explore further how young people determine the healthiness of different drinks types in relation to perceived naturalness and artificiality, as well as the participants’ understanding of different drink types in terms of alcohol and sugar content, and how young people relate alcohol consumption and beverage types to specific diseases.

4 Chapter 4 Phase 3: Survey

4.1 Introduction

To date, no one has compared young people's perceptions of the health effects of alcohol across the UK and France, but comparisons have been made, as discussed in Section 1.2, in terms of patterns of consumption. According to the most recent study available, compared to 36 other European countries including the UK, France has the highest (across all ages) reported frequency of wine drinking; spirit consumption was also reported to be highest among French men; and among the women, wine was reported as being consumed to the greatest extent in France (Mäkelä et al., 2006). Research also suggests that drinking trends in the two countries are converging, in terms of consumption levels, with France consuming more beer and the UK consuming more wine (Ritchie, 2009). Previous research also shows that adults rank beverage types differently in terms of healthiness, with wine, typically being the healthiest drink, compared to beer, spirits or even some non-alcoholic drink types (Wright et al., 2008a; Wright et al., 2008b; Pederson, Neighbors, & Larimer, 2010). However, these studies do not explore the reasons and influences behind these perceptions.

Therefore the main aim of the survey was to examine in more detail some of the most concerning issues that arose from the previous study and to further explore young adults health beliefs concerning different beverage types, the same drink types discussed in the focus groups: beer, wine (red and white), spirits (white and dark), and alcopops. Some of the questions also compared perceptions of energy drinks (caffeinated soft drinks), as there has been an increase in consumption of these types of drink and particularly among young people (Brache & Stockwell, 2011). The increase is particularly marked for the combination of energy drinks with alcohol. This is of great concern as the evidence suggests an increased risk of alcohol-related harm as a result of this combination, including alcohol poisoning (Marcinski & Fillmore, 2006; Reissig, Strain, & Griffiths, 2009).

It was evident through the online diaries (Section 2.4.6) and in the focus groups (Section 3.3.2.1) that pre-loading was much more common in the UK than in France.

Therefore, the survey aimed to establish further whether these drinking styles exist among young adults in the two countries by asking whether alcohol was consumed before going out to a bar, pub or club.

Participants in the focus groups related “healthiness” more readily to beverage “naturalness” and “artificiality” rather than to issues of alcohol content and alcohol related illnesses (Section 3.3). Therefore, as well as patterns of use and beliefs about patterns of use in the other country, the study aimed to explore the issue of what determines “healthiness” and “un-healthiness” in a drink, by asking questions about the extent to which the different drink types contained natural and artificial ingredients. The focus group results also revealed that the UK participants’ perceptions of “naturalness” were influenced by beliefs concerning the sugar contents of different beverage types (Section 3.2.6.2.1). Therefore the survey asked participants to estimate how much sugar they believed to be in each of the drink types (see Appendix J, question 16). Additionally, the study aimed to determine how they judge the extent to which a drink is natural or artificial (e.g. taste, colour, price, label, packaging).

The finding in the focus groups that both countries showed a lack of emphasis on alcohol content (% ABV) to determine the “healthiness” of a drink, as well as evidence suggesting that young people have poor accuracy when determining alcohol percentage of different drink types (Hasking, Shortell, & Machalek, 2005; Dowling, Clark, & Corney, 2006), lead to the survey aiming to establish young adults knowledge of alcohol contents (in percentage) of different alcoholic beverages.

In the focus groups participants reported that wine, particularly red wine, was the healthiest beverage type, but there were differences across the two countries regarding the perceived healthiness of the other drink types. In France, beer and cider were perceived to be healthier than spirits; conversely, in the UK, spirits were perceived to be relatively healthy in comparison to beer and cider. Therefore the survey aimed to understand how participants in the two countries rank each drink type in terms of the perceived beneficial effects on health, detrimental effects on health and negative effects on appearance. It was also evident from the focus groups that the participants thought that their levels of alcohol consumption were not “un-healthy”, therefore

estimates of how many drinks would correspond to “moderate” alcohol consumption and the maximum amount of alcohol that they thought could be consumed without risking one’s health was explored.

As previously discussed (Section 1.4), it is well known that alcohol is a major contributing factor to mortality and morbidity, with strong evidence suggesting a significant association between alcohol consumption and liver cirrhosis (e.g. Schmidt and Bronetto, 1962; Sørensen et al., 1984; Sørensen, 1990; Becker, Grønbaek, Johansen, & Sørensen, 2002), cancers, specifically breast (in women) (e.g. Smith-Warner, Spiegelman, & Yaun, 1998; Bagnardi et al., 2001; Ellison, Zhang, McLenna, & Rothman, 2001; Key et al., 2006) and lung (e.g. Prescott, Grønbaek, Becker, & Sorensen, 1999). Liver damage was also mentioned in the focus groups (Section 3.3.6.4) as a primary long-term health concern of consuming alcohol. However, previous research has also suggested some beneficial effects on certain diseases, particularly in terms of reducing the incidence of stroke (Patra et al., 2010) and cardiovascular disease (e.g. Mäkita et al., 2012; Brugger-Anderson, Ponitz, Snapinn, & Dickstein, 2009; Sinn et al., 2014). Among these diseases, beverage-specific differences are reported (Section 1.4); therefore the survey aimed to establish how participants rate different drink types according to their involvement in each of these diseases. Weight loss and weight gain were also included, as some participants in the focus groups reported being influenced by drink types due to a perceived low calorie content and made associations between some drink types and dieting (Section 3.3.6.1). Participants in the focus groups also mentioned that concerns of fatigue, feeling sick and getting a headache influenced the quantity and the types of drinks they consumed on a *night out*, therefore participants were asked to rate different drink types according to their involvement in these physical effects. A question was also formed regarding the effects that alcohol has on mental health (i.e. depression and negative effects on mood, sadness), as some of the participants in the focus groups perceived mental illness, in the form of addiction, as a negative health effect of alcohol (Section 3.3.6.4).

Therefore the following study was conducted to explore participants’ health beliefs concerning different beverage types, including how they relate different beverage types to specific diseases and knowledge of the amounts of alcohol in each beverage

type. The survey also examined further the issue of what might contribute to perceptions of “healthiness” or “un-healthiness” in a drink, by asking questions about the extent to which the different drink types contained natural and artificial ingredients, as well as asking them for estimates of sugar content.

4.2 Method

4.2.1 Participants

The participant recruitment company “Maximiles” was hired to recruit 1000 participants in the UK and France; 18-24 years old, who drink on at least one day per week, and matched for employment status (half in full time education and half working/part-time working or in vocational training) (see Table 4.1). Maximiles is a European leader for online loyalty programs with over 3.5 million members; they incentivise their members to complete online surveys through rewarding them with online currency, which can be redeemed online for a wide selection of gifts. See Appendix K for website layout.

Table 4.1.

Numbers of participants who completed the survey: Levels of occupation and monthly incomes split by gender and nationality

		UK			France		
		Male	Female	Total	Male	Female	Total
Gender		84	117	201	91	100	191
Occupation	Student	55	54	109	57	37	94
	Full/part time work	29	63	92	34	63	97
Monthly Income	-Less than £500	43	56	99	43	37	80
	Between £500 and £1000	24	27	51	32	29	61
	£1000 and above	17	34	51	14	34	48

4.2.2 Design

The survey was developed in collaboration with the University of Toulouse (Jean Jaures/Le Mirail) and they had some influence on the questions and the formatting of the survey, specifically: Q3, Q4, Q5, Q6, Q12, Q14, Q17, Q18, Q19, Q22, Q24, Q25, Q33, Q40, Q41, Q49. Two versions of the survey were created using Qualtrics (see www.qualtrics.com) an online software; one in English and one in French (see Appendix L for UK survey screen shot and Appendix J for the survey question).

The researcher liaised with the recruitment agency throughout the survey process, informing them when the target data set was complete or if respondents did not meet criteria for inclusion. These were participants who completed the survey too quickly (researchers agreed that 20 to 30 minutes was the expected completion time), did not complete the survey sincerely (i.e. writing gibberish or selecting the same answer for each question) and did not fit the recruitment criteria (18 to 24 year olds who consume alcohol at least once a week). A filter was applied so that participants who were under 18 years of age or over 24 and who consumed alcohol less than once a week could not complete the survey. This meant that the researcher had to check the Qualtrics website daily and calculate the number of valid surveys that could be used for analysis.

A Cronbach's alpha reliability test was conducted on the Likert questions within the survey. The naturalness subscale consisted of 8 items ($\alpha = .72$), the artificiality subscale consisted of 8 items ($\alpha = .68$), the contribution to physical problems subscale consisted of 24 items ($\alpha = .94$), the alcohol types most involved in physical problems subscale consisted of 24 items ($\alpha = .97$), the beneficial effects of alcohol subscale consisted of 6 items ($\alpha = .85$), the detrimental subscale consisted of 6 items ($\alpha = .89$), the physical appearance subscale consisted of 6 items ($\alpha = .92$), and the development of a health condition subscale consisted of 7 items ($\alpha = .86$).

The survey was divided into sections and each section will be described below.

4.2.3 Procedure

Each participant was sent (via email) an informed consent (see Appendix M). The participants sent the completed forms back to the researcher via email.

4.2.3.1 Age and drinking frequency

Participants were asked to select their current age and select their current frequency of alcohol consumption; these items were used as filters so that only 18 to 24 year olds who consume alcohol regularly (at least once a week) could complete the full survey. This filter was not applied initially as the recruiters were directed to recruit only within this specification; however, participants outside of this age range and/or who drank less regularly than one day per week were being recruited and completed the survey so they were removed from the data set. After the filter was applied, if a participant did not fit the criteria, the survey would automatically end.

4.2.3.2 Cultural representations

Participants were asked about the associations of the different drink types with the two countries (UK and France), where each drink type was believed to be most consumed, and beliefs about which country consumes the most alcohol. This information was included for the Toulouse colleagues and was not analysed in this study.

4.2.3.3 Pre-loading

Participants were asked if they ever consumed alcohol before going out to a bar, pub or club, by selecting on a Likert scale between “never” (1) and “all of the time” (5). They were also asked to state the number of drinks (typical measures) they consumed if they did consume alcohol before going out.

4.2.3.4 Perceptions of “naturalness” and “artificiality”

They were asked to select on a scale from 1 to 6 (1 being “not at all” and 6 being “totally”) the extent to which each drink type contains natural or artificial ingredients. Additionally, they were asked to select from a list (including taste, colour of liquid, price) how they judge the extent to which an alcoholic beverage is natural or artificial.

4.2.3.5 Beliefs about different drinks involvement in specific emotional effects (including mental health)

They were asked to rate on a scale from 1 to 10 (1 being “not at all” and 10 being “extremely”) the extent to which a number of effects are related to alcohol (e.g. “Relaxing”, “euphoric”, “calming”, “depressing”) and then asked to identify which alcoholic beverage type is mostly associated with a range of effects (e.g. “Relaxing”, “euphoria-producing”, “exhilarating”). They were also asked to enter the number of drinks they believed corresponded to moderate alcohol consumption and the maximum amount of alcohol that can be consumed without risking ones health.

4.2.3.6 Estimates of alcohol and sugar content

They were asked to estimate the percentage (0-100%) of alcohol by volume in each drink type, as well as the sugar content of each drink type (0 being “none at all” and 6 being “very much”). Additionally, they were asked to estimate the legal blood alcohol level allowed for car drivers in both countries (0.2 g/L to 0.9 g/L). This was for Toulouse colleagues and was therefore not analysed in this study.

4.2.3.7 Beliefs about physical health effects of alcohol

Participants were asked to rate on a scale from 1 to 6 (1 being “not at all” and 6 being “very high”), the extent to which alcohol in general is involved in a number of diseases and physical health issues (e.g. liver cirrhosis, hair loss, weight gain) and asked to select which of the beverages they think are most involved.

A separate question asked them to rate on a scale from 1 to 6 (1 being “not at all involved and 6 being “extremely” involved), the extent to which each drink type has beneficial, detrimental effects on health and bad effects on physical appearance (1 being “not at all” to 6 being “extremely agree”).

They were also asked to rate on scale from 1 to 6 (1 being “much less likely” and 6 being “much more likely”) how likely it would be to develop a health condition (e.g. heart disease, dementia, cancer) when consuming moderate amounts of each of the beverage types.

Participants were asked whether they had ever experienced a situation where they had been the initiator or the victim in a list of situations when under the influence of alcohol, (e.g. road accidents, brawls, un-protected sex). This question was included for the Toulouse collaborators.

4.2.3.8 Beliefs about the psychological health effects of alcohol

They were asked to rate on a scale from 1 to 6 (1 being “none at all” and 6 being “very much”) the extent that alcohol can contribute to a list of 14 psychological issues (e.g. depression, isolation, decreased concentration). This question was included for the Toulouse collaborators.

4.2.3.9 Alcohol’s effects at a societal level

Participants were asked to rate on a scale from 1 to 6 (1 being “not at all” and 6 being “very much”) how much alcohol consumption can be involved in marital problems, reduced productivity (work, school), violence and aggression. This was for the Toulouse colleagues.

4.2.3.10 When and where alcohol is consumed

Details of their drinking occasions (never to always), including who they drink with (e.g. alone, with partner, friends) location of consumption (e.g. bar, pub, home), when they usually consume alcohol (e.g. in the morning, afternoon, evening) and average cost of alcohol per week (entered as pounds/euros), beverage preference and the frequency consumed.

4.2.3.11 Biographical information

Participants were asked to provide their gender, nationality, relationship status, occupation type and monthly income level. Participants were also asked whether they held a car license and the occupation of their mothers and fathers (this was for Toulouse colleagues).

4.2.4 Data analyses

All analyses were conducted using SPSS software (Version 16.0). A 2 (Gender: male versus female) x 2 (Country: UK versus France) x 6 (Drink type: red wine, white wine, beer, cider, clear spirits, dark spirits) mixed-model ANOVA was conducted.

4.3 Results

In the UK a total of 806 participants started the survey and 555 completed it. In France 730 started the survey and 401 completed the survey and of those only 346 responses could be used after the correct filters were applied; 18-24 years old, drank alcohol on at least one day per week (UK, 106 removed; France, 89 removed). The data were inspected closely to eliminate any participants who did not answer the survey questions appropriately e.g. selected the same response for each question and/or wrote gibberish in text entry questions (UK, 123 removed; France, 74 removed). Data were also rejected if the respondent took less than 13 minutes to complete the survey (UK 125 removed; France 47 removed); the researchers agreed that it was not possible to answer all the questions with accuracy in this time (20-30 minutes was the expected completion time). The average completion time in the UK was 25.3 minutes and 24.7 minutes in France.

Full data were provided by 201 participants from the UK (117 females and 82 males) and 191 from France (100 females and 91 males) (See Table 4.1). The mean age in the UK was 21.1 years ($SD = 2.1$ years) and 22.5 years ($SD = 1.9$ years) in France. An independent sample t-test revealed that there was no significant difference between the mean ages in the two countries, [$t(390) = .29, p = .77$].

4.3.1 Drinking frequency

The majority of the females in both countries reported drinking alcohol on one day per week, which was similar to the report by Goddard (2006), where 53% of women reported consuming alcohol on at least on one day per week. See Table 4.2.

Table 4.2

Percentage of participants within each drinking frequency band: Split by gender and nationality

	UK		France	
	Males	Females	Males	Females
Every day	4.8%	1.7%	5.5%	3%
2-6 days per week	50%	47%	53.8%	34%
One day per week	45.2%	51.3%	40.7%	63%

4.3.2 Pre-loading

Table 4.3 shows that the majority of male and female participants in both the UK and France pre-loaded before going to a pub, bar or club. However, there was no significant association between frequency of pre-loading and nationality among the male participants [$X^2(5) = 5.38, p = 0.37$] or the female participants, [$X^2(5) = 3.36, p = 0.5$].

Table 4.3

Percentage of participants who consumed alcohol before going out to a bar, pub or club: Split by country and gender

	UK		France	
	Males	Females	Males	Females
Never	4.8%	2.6%	6.6%	7%
Rarely	11.9%	10.3%	11%	7%
Sometimes	29.8%	36.8%	26.4%	33%
Often	34.5%	30.8%	24.2%	34%
All of the time	19%	19.7%	30.8%	19%

4.3.3 Drinking patterns

In both counties, beer was the drink most frequently consumed by the males, closely followed by cider for the UK males and wine for the French males. Beer was also the most frequently consumed drink type among the females in France, closely followed by wine. However, for the UK females wine was the most frequently consumed drink type, closely followed by vodka, which was consistent with the online diary data (Section 2.4). See Figures 4.1 and 4.2.

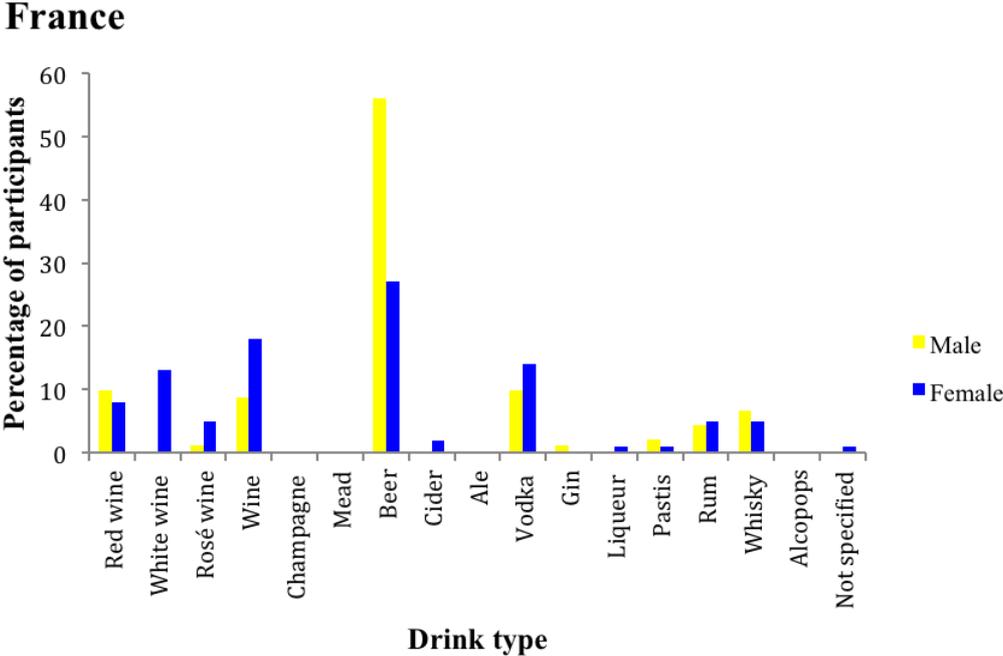


Figure 4.1. French participants' ratings (in percentage) of the drink that they consume the most: Split by gender

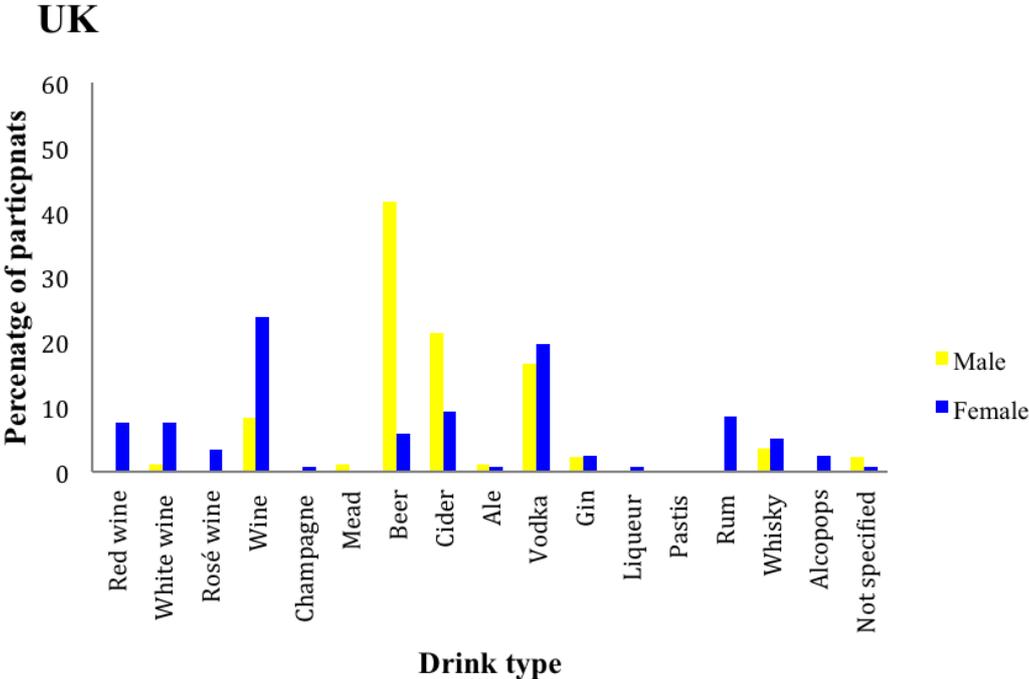


Figure 4.2. UK participants' ratings (in percentage) of the drink that they consume the most: Split by gender

4.3.4 Estimates of moderate alcohol consumption and the amount of alcohol that can be consumed without risking one's health (in terms of drinks per day)

A one-way ANOVA revealed that the UK male participants gave significantly higher estimates of what constitutes “moderate” alcohol consumption (in terms of drinks per day) in comparison to the French male participants ($M = 2.3$, $SD = 1.2$ and $M = 1.6$, $SD = 1$, respectively), [$F(1, 173) = 18$, $p < 0.001$]. The UK female participants also gave significantly higher estimates of what constitutes “moderate” alcohol consumption, compared the French females ($M = 2$, $SD = 1.6$ and $M = 1.2$, $SD = 1$, respectively), [$F(1, 215) = 22.4$, $p < 0.001$].

But there was no significant difference between male participants in the UK and France in terms of beliefs about the maximum number of daily alcoholic drinks that can be consumed without risking one's health ($M = 4.9$, $SD = 3.8$ and $M = 4.6$, $SD = 2.9$, respectively), [$F(1, 173) = .33$, $p = .57$]. A similar profile was found for the female participants across the two countries, ($M = 4.5$, $SD = 3.5$ and $M = 4.5$, $SD = 5.1$, respectively), [$F(1, 215) = 2$, $p = .16$].

4.3.5 Participants' estimates of percentage alcohol content of different drink types

The participants in both the UK and France overestimated the percentage alcohol content of red wine, beer, cider and alcopops. An independent samples t-test revealed a significant difference between the two countries' estimates for cider, [$t(373) = -12.2$, $p = .000$]: The participants in France estimated a higher percentage of alcohol content than the UK participants. There was a significant difference between the two countries' estimates for white wine: only the UK participants overestimated the alcohol content for white wine, [$t(390) = 4.2$, $p = .000$].

There were also significant differences between the countries for estimates of the alcohol content of vodka, [$t(368) = 7.9$, $p = .000$]: The French participants estimated a lower percentage of alcohol content for vodka than UK participants, a value that was further from the actual value. However, estimates of the alcohol content of gin were similar in both countries. A similar profile existed for the dark spirits, [$t(390) =$

18.8, $p = .000$): The French participants estimated a lower percentage of alcohol content to whisky and rum, [$t(390) = 9.8, p = .000$]. See Figures 4.3 and 4.4.

4.3.6 Beliefs about different drinks involvement in specific emotional effects (including mental health)

A chi-squared test of independence showed a significant association between the male UK and French participants and different drink type's involvement in relaxing effects, [$X^2(8) = 44.3, p = 0.000$]. The UK males were more likely than the French males to link the consumption of red wine with relaxing effects ($n=28/43.8\%$), whereas the French males linked both red ($n=25/27.5\%$) and white wine ($n=25/27.5\%$) with relaxation. A significant association was also found among the females, [$X^2(8) = 34.5, p = 0.000$]: the UK females linked red wine ($n=40/34.5\%$) to feelings of relaxation and the French females linked it to white wine (19/19%).

There was a significant association between country and different drink type's involvement in euphoria producing effects, [$X^2(8) = 21.9, p = 0.005$] among the males: the French males were more likely to link cider ($n=30/33\%$) with feelings of euphoria, where as the UK males linked clear spirits ($n=21/33\%$) more with euphoria. A similar profile was found for the females, [$X^2(8) = 49.5, p = 0.000$]: the French females were more likely to link cider ($n= 42/42\%$) to feelings of euphoria, whereas the females in the UK linked clear spirits ($n=40/34.5\%$).

For feelings of exhilaration, there was a significant association [$X^2(8) = 51.3, p = 0.000$] among the males. The French male participants were more likely to link cider ($n= 36/39.6\%$) to the feeling of exhilaration, whereas the males in UK linked it more with clear spirits ($n=17/27\%$). A similar profile was found among the females, [$X^2(8) = 35.5, p = 0.000$]: cider was linked more readily to exhilaration in the France ($n=28/28\%$), whereas UK females linked it with clear spirits ($n=39/33.6\%$).

There was a significant association between country and the different drink types' effects on depression, among the male participants, [$X^2(8) = 47.5, p = 0.000$]: the UK males did not tend to link depression with any particular drink: 15/23.8% selected

“none”, but closely followed by dark spirits (n=14/22.2%), whereas the French males tended to link depression with clear spirits (13/14.3%). A significant association was also found among the females, [$X^2(8) = 94.6, p = 0.000$]: UK females linked dark spirits more with depression (n=22/19%), followed by clear spirits (n=21/18.1%) more readily to depression, and the French females tended to link energy drinks more with depression (n=51/51%).

There was a significant association between country and the effects of the different drink types on negative mood [for males: $X^2(8) = 56, p = 0.000$]: the French participants linked energy drinks (n=37/40.7%) more to negative mood, whereas the UK males tended to link negative mood to clear spirits (n=16/25.4%). A similar profile was found for the females, [$X^2(8) = 80.5, p = 0.000$], whereby the French females linked energy drinks (n=42/42%) and UK females linked clear spirits (n=39/33.6%) to negative mood.

There were also significant associations between country and the effects of different drink types on positive mood among the male participants, [$X^2(8) = 24.3, p = 0.002$]: French males linked cider more with positive mood (18/19.8%), whereas UK males linked alcopops more with positive mood (n=10/15.6%), as well as beer (n=10/15.6%). A significant association was also found among the females, [$X^2(8) = 32.2, p = 0.000$]: UK females linked clear spirits more with positive mood (32/27.6%), whereas French females tended to link cider (n=26/26%) more readily to positive mood.

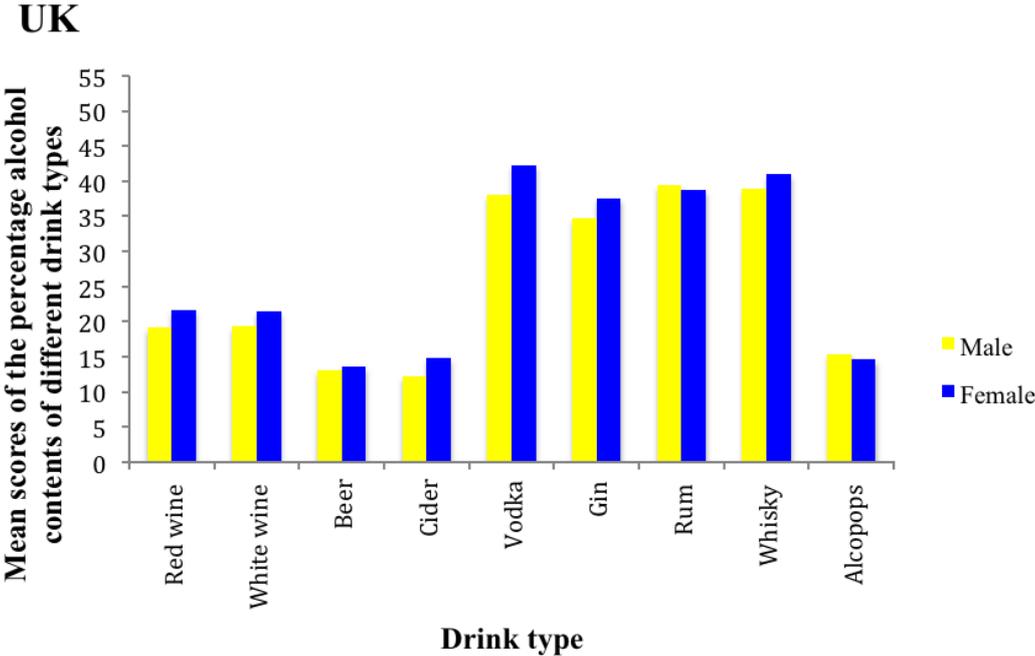


Figure 4.3 UK participant’s estimates of the percentage alcohol contents of different drink types: Split by gender

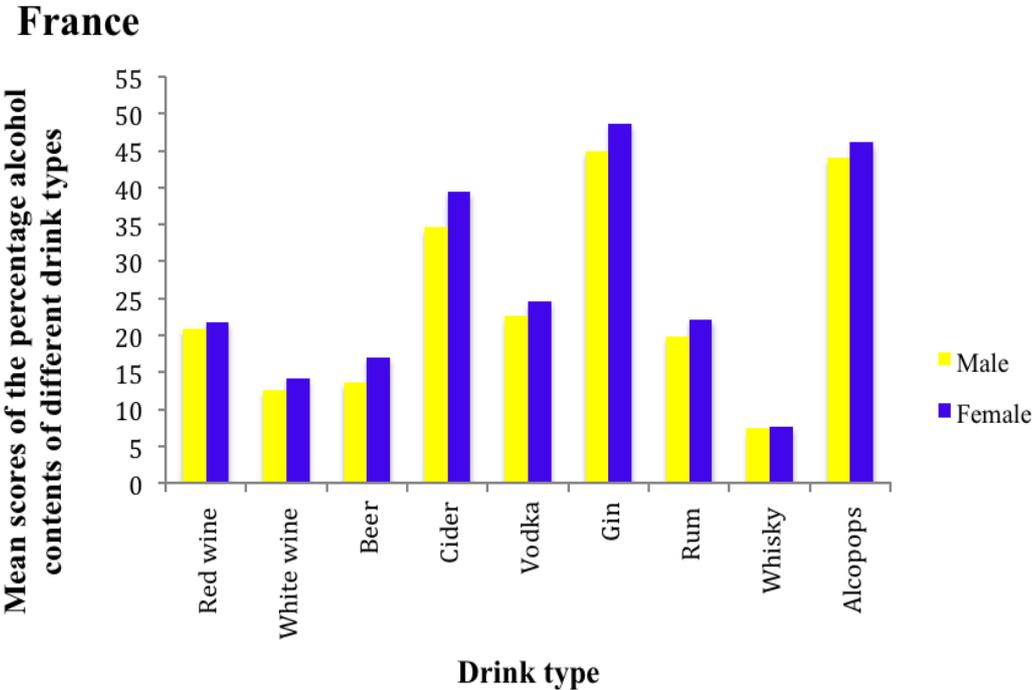


Figure 4.4 French participants’ estimates of the percentage alcohol contents of different drink types: Split by gender

4.3.7 Beliefs about beneficial effects of the six main drink types on health

For the six main drink types (red and white wine; beer; cider; white and dark spirits), analysis of variance revealed that there was a significant difference between drinks in terms of the extent to which they were considered potentially beneficial to health. The assumption of sphericity was not met ($p < .001$) therefore the Lower-bound test was used and there was a significant main effect of drink on beliefs of the potential beneficial effects on health, [$F(1, 388) = 156.8, p < .001$]: Red wine was rated highest in France and in the UK ($M = 3.8, SD = 1.7$ and $M = 3.2, SD = 1.4$, respectively), with white wine close behind ($M = 3, SD = 1.5$ and $M = 2.6, SD = 1.3$, respectively). Clear spirits in both countries were rated as having the least beneficial effects on health ($M = 1.7, SD = 1.1$ and $M = 2, SD = 1.4$). See Table 4.4

Table 4.4

Participants' mean scores for different drinks types' beneficial effects on health: Split by country and gender, on a scale of 1 to 5 (1 being "not at all" and 5 being "extremely")

Drink type	UK		France	
	Male	Female	Male	Female
	Mean score (SD)		Mean score (SD)	
White wine	2.6 (1.2)	2.5 (1.3)	2.95 (1.5)	3.1 (1.5)
Red wine	3.2 (1.3)	3.2 (1.4)	3.8 (1.7)	3.9 (1.7)
Beer	2 (1.3)	2.1 (1.3)	2.5 (1.4)	2.3 (1.4)
Cider	2 (1.2)	2.1(1.3)	2.7 (1.5)	2.5 (1.4)
Clear spirits	1.9 (1.5)	2.0 (1.4)	1.8 (1.1)	1.7 (1.1)
Dark spirits	1.9 (1.3)	2.2 (1.5)	1.99 (1.3)	1.7 (1)

There was a significant interaction between drink and country, [$F(1, 388) = 16.9, p < .001$]: In France both white wine ($M = 3, SD = 1.5$) and red wine ($M = 3.8, SD = 1.7$) were rated as being more beneficial to health compared to the UK participants ($M = 2.6, SD = 1.3, M = 3.2, SD = 1.4$, respectively). The French participants rated both spirits (white and dark) lower than all the other drink types ($M = 1.7, SD = 1.1$ and $M = 1.8, SD = 1.2$, respectively), compared to the UK participants ($M = 2, SD = 1.4$ and $M = 2.1, SD = 1.4$, respectively). The UK participants rated all of the drink types similarly apart from the wines (red and white). However, there was no significant interaction between drink and gender, [$F(1, 388) = 0.2, p = 0.62$]. Suggesting that men and women's ratings of different drinks beneficial effects on health were similar.

4.3.8 Beliefs about detrimental effects of the six main drink types on health

A similar but inverse profile was found for the potential “detrimental effects” of the six main drink types. Approaching the issue of alcohol's health affects in two different ways leads to very similar outcomes, supporting the reliability of the effects.

Repeated measures ANOVA revealed that there was a significant difference between drinks in terms of the extent to which they were considered potentially detrimental to one's health. The assumption of sphericity was not met ($p < .001$) therefore the Lower-bound test was used and there was a significant main effect of drink on participant's beliefs of the detrimental effects on health, [$F(1, 388), 156.8, p < .001$]. There was a significant interaction between drink and country, [$F(1, 388), 16.9, p < .001$]. However, there was no significant interaction between drink and gender, [$F(1, 387), 0.25, p = 0.6$]. Suggesting that men and women's ratings of different drinks detrimental effects on health were similar. See Table 4.5.

Table 4.5

Participants mean scores of different drinks types detrimental effects on health: Split by country and gender, on a scale of 1 to 5 (1 being “not at all” and 5 being “extremely”)

Drink type	UK		France	
	Male	Female	Male	Female
	Mean score (SD)		Mean score (SD)	
White wine	3.2 (1.2)	3.4 (1.4)	2.9 (1.6)	2.9 (1.5)
Red wine	3.2 (1.2)	3.2 (1.4)	2.8 (1.5)	2.9 (1.6)
Beer	3.7 (1.2)	3.8 (1.4)	3.2 (1.4)	3.6 (1.5)
Cider	3.7 (1.3)	3.7 (1.4)	2.9 (1.6)	3 (1.6)
Clear spirits	4.3 (1.3)	4.1 (1.4)	4.2 (1.5)	4.5 (1.4)
Dark spirits	4.2 (1.3)	4.1 (1.4)	4 (1.5)	4.5 (1.3)

4.3.9 Beliefs about how the six main drink types may adversely affect physical appearance

Repeated measures ANOVA revealed that there was a significant difference between drinks in terms of their potential to adversely affect physical appearance, [F (1, 388), 65.3, $p < .001$]. The assumption of sphericity was not met ($p < .001$) therefore the Lower-bound test was used. In both France and the UK clear spirits were rated the highest (i.e. most likely to adversely affect physical appearance: $M = 3.8$, $SD = 1.6$ and $M = 3.7$, $SD = 1.4$, respectively), closely followed by dark spirits ($M = 3.8$, $SD = 1.6$ and $M = 3.6$, $SD = 1.4$, respectively). There was a significant interaction between drink and country, [F (1, 388), 9.7, $p = .002$]. Beer ($M = 3.6$, $SD = 1.5$), cider ($M = 3.5$, $SD = 1.4$) and spirits (white $M = 3.6$, $SD = 1.4$ and dark $M = 3.6$, $SD = 1.4$) were rated similarly (worse than wine) by the UK participants. In France, cider ($M = 2.9$, $SD = 1.7$) was rated alongside white wine ($M = 2.9$, $SD = 1.6$) and red wine ($M = 3$, $SD =$

1.6). However, there was no significant interaction between drink and gender, [F (1, 388), 1.9, $p = 0.17$]. See Figures 4.5 and 4.6.

UK

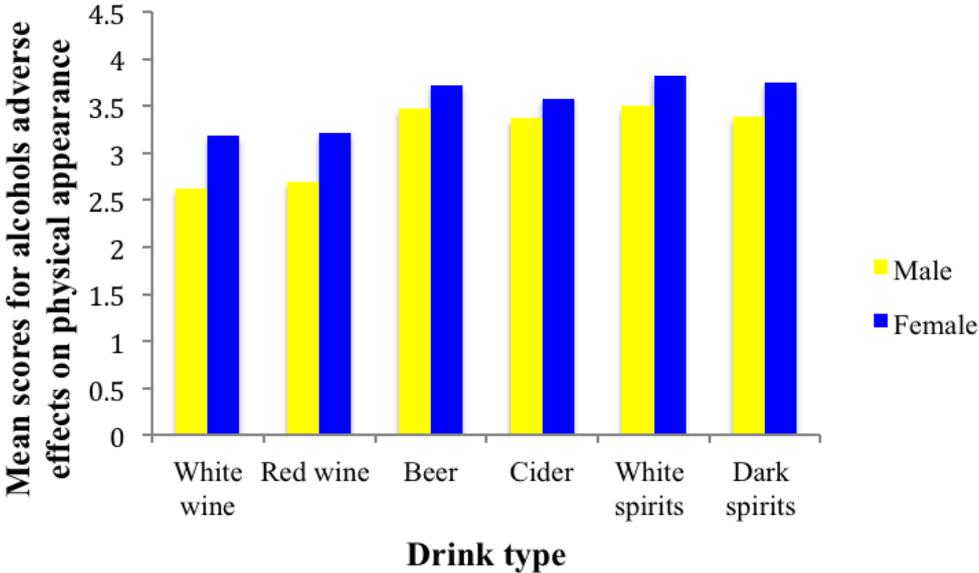


Figure 4.5 UK participants' mean scores for beliefs of the six main drinks types' adverse effects on physical appearance: Split by gender

France

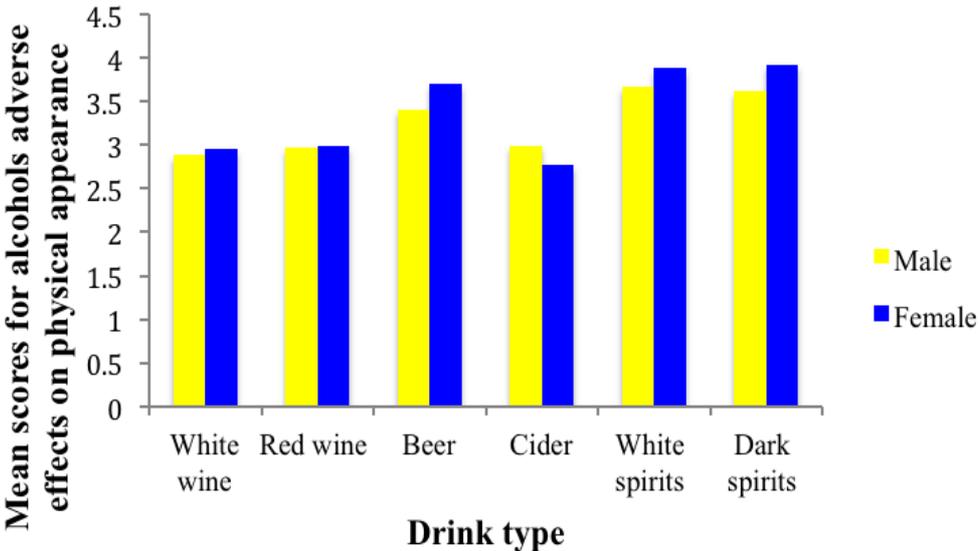


Figure 4.6 French participants' mean scores for beliefs of the six main drinks types' adverse effects on physical appearance: Split by gender

4.3.10 Beliefs about alcohol's involvement in specific physical health risks (disease) and the drinks types that are most involved

Among the male participants, repeated measures ANOVA revealed that there was a significant main effect of disease, [F (1, 172), 67.5, $p < .001$]. The assumption of sphericity was not met ($p < .001$) therefore the Lower-bound test was used. Amongst the six diseases (liver cirrhosis, cardiovascular problems, stroke, liver cancer, lung cancer, breast cancer), the male participants in both countries rated liver cirrhosis as the highest risk. There was no significant interaction between disease and country, [F (1, 172), 2.5, $p = 0.114$]. See Table 4.6.

A similar profile existed for the female participants; there was a significant main effect of disease, [F (1, 214), 98.7, $p < .001$]. The assumption of sphericity was not met ($p < .001$) therefore the Lower-bound test was used. Again liver cirrhosis was rated as a significantly higher risk than the other diseases, and there was no significant interaction between disease and country, [F (1, 214), .71, $p = 0.401$]. See Table 4.6.

Table 4.6.

Participants' mean rankings of alcohol's contribution to different types of diseases: Split by country and gender, on a scale of 1 to 5 (1 being "not at all" and 5 being "extremely")

	UK		France	
	Male	Female	Male	Female
Disease	Mean rank (SD)		Mean rank (SD)	
Liver cirrhosis	5 (1.3)	4.8 (1.4)	4.9 (1.6)	5.3 (1)
Cardiovascular problems	4 (1.3)	3.9 (1.5)	4 (1.1)	4.5 (1.3)
Stroke	3.4 (1.7)	3.4 (1.6)	3.9 (1.4)	3.7 (1.6)
Liver cancer	4.3 (1.6)	4.6 (1.5)	4.4 (1.2)	4.6 (1.2)
Lung cancer	2.6 (1.5)	2.8 (1.6)	2.6 (1.6)	2.6 (1.6)
Breast cancer	2.6 (1.6)	2.6 (1.5)	2.4 (1.5)	2.2 (1.5)

In terms of the drinks that are most involved in these diseases, a chi-squared test of independence showed a significant association between country and beliefs about different drink types' involvement in disease among the males, [$X^2(8) = 27.5, p = 0.001$]. The male participants in France were more likely than the male UK participants to link liver cirrhosis with consumption of dark spirits ($n = 24/26.4\%$); the UK participants rated risk equally across all drink types (selected "all of them", $n = 31/36.9\%$). There was also a significant association differentiating the females in the UK and France, [$X^2(8) = 51, p < 0.001$]: Female participants in France linked liver cirrhosis with dark sprits ($n = 31/31\%$) and UK females (like the UK males) rated risk equally to all of the drink types (selected "all of them", $n = 64/55.2\%$).

For the male participants, there was a significant association between nationality and rankings of the drinks' involvement in cardiovascular problems, [$X^2(8) = 38.4, p < 0.001$]: Male participants in France rated clear spirits ($n = 21/32.1\%$) as the drink type most involved, whereas the male UK participants did not discriminate between drink types (selected "all of them": $n = 32/38.1\%$). A similar profile existed among the female participants, [$X^2(8) = 28.4, p < 0.001$]: Female participants in France rated clear spirits ($n = 24/24\%$) as the drink type most involved, whereas the female UK participants did not discriminate between drink types (selected "all of them": $n = 62/53.4\%$).

A similar profile emerged in relation to stroke, [$X^2(8) = 37.6, p < 0.001$]: Male participants in France rated clear spirits ($n = 24/26.4\%$) as risky, whereas the male UK participants did not discriminate between drink types ($n = 43/52.4\%$). The female participants in France rated white ($n = 26/26\%$) and dark spirits ($n = 24/24\%$) as risky, whereas the females in the UK did not discriminate between the drink types ($n = 67/57.8\%$), [$X^2(8) = 41.4, p < 0.001$].

In terms of the participants' beliefs about alcohol's involvement in liver, lung and breast cancer, there was a significant association between the UK and French male participants rankings of drinks involvement in liver cancer, [$X^2(8) = 38.7, p < 0.001$]: Male participants in France rated clear spirits ($n = 22/24.2\%$) as the drink type most

involved in liver cancer, followed by dark spirits (n=19/ 20.9%), whereas the male participants in the UK did not discriminate between drink types (selected “all of them”: n = 37/44%). A similar profile existed among the female participants, [$X^2(8) = 37.4, p < 0.001$]: Female participants in France rated clear spirits (n = 27/27%) as the drink type most involved in liver cancer, whereas the female UK participants did not discriminate between drink types (selected “all of them”: n = 68/58.6%).

There was a significant association between the UK and French male participants' rankings of the different drinks' involvement in lung cancer, [$X^2(8) = 21.1, p = 0.007$]: Male participants in France rated clear spirits (n = 20/22%) as the drink types most involved in lung cancer, whereas the male participants in the UK did not discriminate between drink types (selected all of them, n = 18/45%). A similar profile existed among the female participants, [$X^2(8) = 39.1, p < 0.001$]: Female participants in France rated clear spirits (n = 24/24%) as the drink type most involved in lung cancer, whereas the female UK participants did not discriminate between drink types (selected “all of them”: n = 68 /58.6%), however the next highest rating among the female participants in France was for all of the alcohol types having involvement in lung cancer (n = 23/ 23%).

There was a significant association between the UK and French male participants rankings of different drinks' involvement in breast cancer, [$X^2(8) = 40, p < 0.001$]: male participants in France rated clear spirits (n = 17/18.7%), closely followed by dark spirits (n= 15/16.5%) as the drink types most involved in breast cancer, whereas the male participants in the UK did not discriminate between drink types (selected “all of them”, n = 40/49.4%). A similar profile existed among the female participants, [$X^2(8) = 37.9, p < 0.001$]: Female participants in France rated clear spirits (n = 21/ 21%), closely followed by all of the alcohol types being involved (n= 20/20%), whereas the female UK participants did not discriminate between drink types (selected “all of them”, n = 69/59.5%).

In terms of beliefs about how different drink types contribute to weight gain, a chi squared test of independence showed a significant association of drink and nationality

among the male participants, [$\chi^2(8) = 22.7, p = 0.004$]. Male participants in both countries tended to identify beer as the most likely to promote weight gain ($n=42/53.2\%$ in the UK and $n=37/40.7\%$ in France). French participants linked both white ($n=10/11\%$) and dark spirits ($n=10/12.1\%$) to weight gain much more than did the UK participants ($n = 5/6\%$ and $n= 0/ 0\%$, respectively), who after beer rated all drinks types similarly in terms of weight gain (selected “all of them”: $n=22/26.2\%$). A significant association was also found among the female participants, [$\chi^2(8) = 25.9, p = 0.001$]. The female participants in the UK did not discriminate between drink types and the risk of weight gain (selected “all of them”: $n= 46/39.7\%$), whereas the French female participants rated beer as the most likely to promote weight gain ($n= 46/46\%$).

4.3.11 Beliefs about the “naturalness” of different drink types

Repeated measures ANOVA revealed that there was a significant difference between drinks in terms of the extent to which they were considered to contain natural ingredients, [$F(1, 173), 117, p < .001$]. The assumption of sphericity was not met ($p < .001$) therefore the Lower-bound test was used. Among the male participants red wine was rated as containing the most natural ingredients in both countries (UK, $SD= 0.8$ and France $SD= 0.9$) and alcopops were rated the least natural drink type ($SD= 1.4$ and $SD= 1.4$, respectively). There was a significant interaction between drink and country, [$F(1,173), 16, p < .001$]: Male participants in France ($SD = 0.9$) rated red wine as more natural than the male UK participants ($SD= 0.8$). Also, participants in France had a much stronger tendency to associate naturalness with beer ($SD = 1.1$) compared to participants in the UK ($SD = 1.2$). See Figure 4.7.

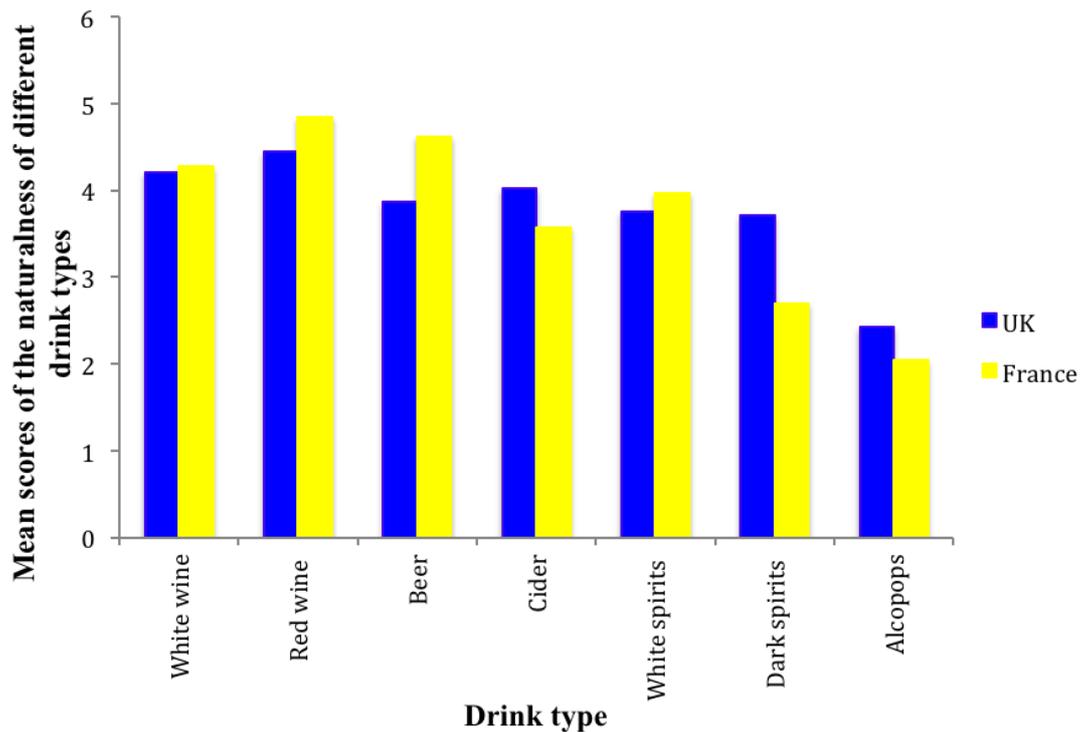


Figure 4.7. Mean scores of male participants' ratings of the naturalness of the seven main drink types: Split by country

A similar profile was found among the female participants, [$F(1, 214), 174.3, p < .001$]. The assumption of sphericity was not met ($p < .001$) therefore the Lower-bound test was used. Red wine was rated as containing the most natural ingredients in both countries and alcopops were rated the least natural drink type. There was a significant interaction between drink and country, [$F(1,214), 16, p < .001$]: Female participants in France rated red wine as being more natural than the UK female participants. The female participants in France had a much stronger tendency to associate naturalness with beer compared to participants in the UK. See Figure 4.8.

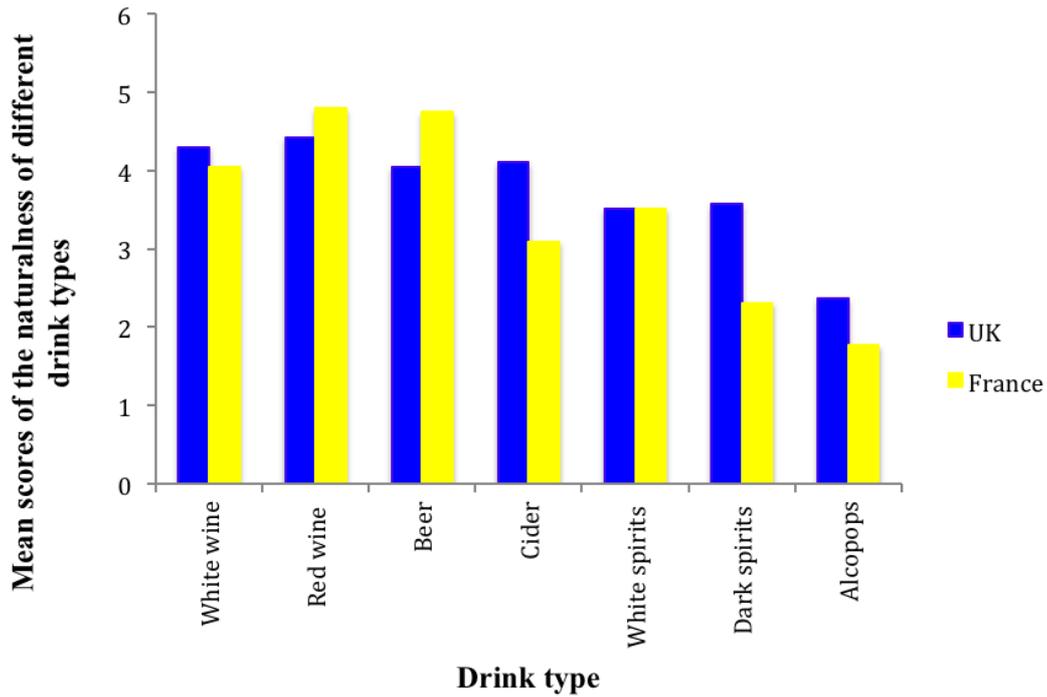


Figure 4.8. Mean scores of female participants' ratings of the naturalness of the seven main drink types: Split by country

In terms of how participants judged the extent to which an alcoholic drink is natural, the only factor that discriminated the UK and France samples was a stronger tendency for the French sample to use taste and labeling as indicators and the UK participants to use packaging. See Table 4.7.

Table 4.7.

Participant numbers (and percentages) reporting the different ways they judge the naturalness of an alcoholic drink: Split by country

	UK		France	
	Number	Percentage	Number	Percentage
Taste	127	63.2%	146	76.4%
Colour of the liquid	92	45.8%	94	49.2%
Price	52	25.9%	48	25.1%
Label	69	34.3%	97	50.8%
Where it was purchased	29	14.4%	16	8.4%
Packaging	52	25.9%	30	15.7%
Brand	70	34.8%	53	27.7%
Other	18	9%	8	4.2%

Some of the other ways that participants judged the naturalness of an alcoholic drink were (from “other, please state” option); the ingredients, drink type, texture, smell, information from the internet and information from others.

4.3.12 Participants’ estimates of the sugar contents of the six main drink types

The participants in both the UK and France produced similar ratings of the percentage sugar contents of red wine, white wine, beer, clear spirits and alcopops. However, an independent samples t-test revealed significant differences between the two countries’ estimates for cider, [$t(390) = 4.3, p = .000$]: The participants in the UK estimated a higher percentage sugar content than the French participants. There was also a significant difference between the two countries’ estimates for dark spirits, [$t(375.8) = -6.7, p = .000$]: The French participants estimated higher percentage sugar content than the UK participants. Additionally, there was a significant difference between the countries for estimates of the sugar content of energy drinks, [$t(369) = 14.8, p =$

.000]: The French participants estimated lower percentage sugar content than UK participants. See Figures 4.9.

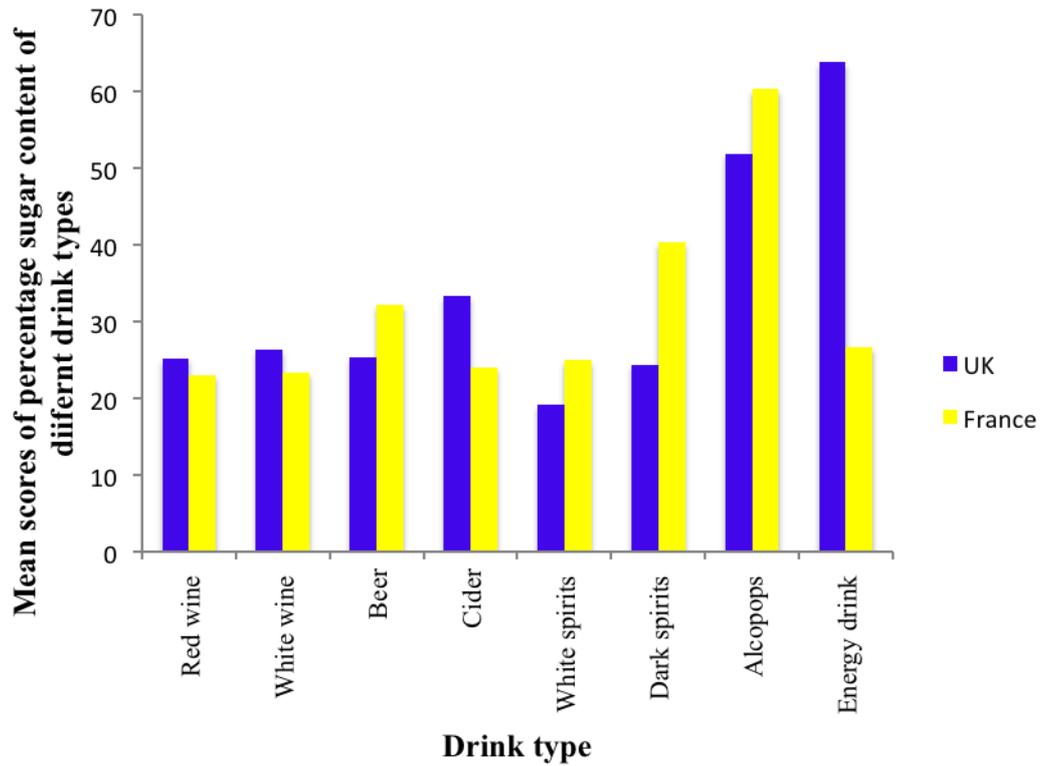


Figure 4.9. Participants estimates of sugar content percentage of different drink types: Split by country

4.4 Discussion

Drinking frequencies across the two countries were similar; the majority of females reported consuming alcohol one day per week and the males on average 2 to 6 days per week. Pre-loading reports were high across both countries, which is consistent with the results for pre-loading by UK participants in study one (Section 2.4.1), where a high proportion of participants reported pre-loading, but it conflicts a little with the French results in study one, where only a low proportion of French participants reported pre-loading.

There was a high frequency of beer consumption among the UK males and wine consumption among UK females, which was consistent with the Lifestyle Statistics report (2015) and the ONS (2009). However, in contrast to the UK females there was a high frequency of beer consumption among French females, which is perhaps more surprising as previous reports have indicated a high consumption of wine drinking among females and low consumption of beer (Mäkelä et al., 2006). However, as also previously mentioned (Section 1.7.1) France is witnessing a marked decrease in wine consumption and an increase in beer consumption (Ritchie, 2009). This increase in beer consumption could be considered concerning as young people, and particularly women who consume beer, have been reported to be at a higher risk of heavy and excessive drinking (Grønbaek et al., 2004; Naimi et al., 2007) and more likely to be involved in law breaking (Stockwell et al., 1998; Siegel et al., 2011).

Both the male and female participants in the UK gave higher estimates of what constitutes “moderate” alcohol consumption, compared to the French participants. Although there was no significant difference between the two countries in terms of estimates of the maximum number of daily alcoholic drinks that can be consumed without compromising health; participants’ estimates were high and closer to the definition of binge-drinking (WHO, 2014) (i.e. 5 or more drinks on a drinking occasion). This indicates that participants in this study believe that binge-drinking is not necessarily harmful to health. This is very concerning as evidence shows a strong relationship between binge-drinking and alcohol related harm (e.g. Naimi, Brewer, Miller, Okoro, & Mehrotra, 2007; Stickley, Jukkala, & Norström, 2011). It also reflects, as previously discussed (Section 1.7), the low public understanding of

‘sensible drinking’ guidelines in the UK (deVisser & Birch, 2012; Gill & O’May, 2006).

Participants’ estimates of the amounts of alcohol in different drink types were similar between countries except for whisky and rum: French participants estimated a lower alcohol percentage content than UK participants, a value that was further from the actual value. And although both countries overestimated the alcohol content of alcopops, the French participants were much further away from the actual value. These inaccurate estimates are potentially harmful as they could put people at risk when consuming these particular beverage types.

In terms of the drinks most involved in specific cognitive effects, there were some similarities and differences across the two countries and the two genders. The participants in both countries believed wine to produce the most relaxation effects. Although red wine was associated more heavily with relaxation in the UK by the male and the females, compared to the French females, who rated white wine and the French males who rated both red and white wine to relaxation. This is consistent with a previous study in which wine was rated as having more positive effects, such as tension-reducing effects, including relaxation, compared to other drink types (Pederson, Neighbors, and Larimer, 2010).

Participants’ ratings of the involvement of the different drink types in exhilaration and euphoria-producing effects differed: the UK participants (male and female) rated clear spirits the most effective, whereas the French participants (both male and females) rated cider as the most likely to produce feelings of exhilaration and euphoria. The fact that the UK participants linked white spirits to these potentially positive moods is worrying, because these perceptions could influence beverage choice towards high alcohol percentage drinks. However, for positive mood effects, the French participants rated cider as the highest, whereas the UK males rated both alcopops and beer highest, and the females rated clear spirits highest. Again, the UK females’ association of white spirits with positive mood effects is concerning due to the high alcohol content of most clear spirits. Both genders in the UK rated clear spirits as the most likely to produce negative mood effects, in contrast with the French participants (male and female), who rated energy drinks most likely to produce these effects.

Lastly, the UK males tended not to link a specific drink to depression but the UK females tended to link dark spirits with depression. In France, the males linked clear spirits with depression whereas the females linked depression to energy drinks. The UK female participants rated clear spirits as most likely to produce both a positive mood and a negative mood (as well as dark spirits and depression), which could suggest that they do not hold strong sets of beliefs in regards to the mood producing effects of different drinks; they may believe that different clear spirits hold different effects on mood or they might hold contradictory views that clear spirits can produce both positive and negative mood effects.

The fact that French participants rated energy drinks as the most likely to produce negative moods and depression among the French females is in line with broader concerns (Section 4.1) over the consumption of these types of drinks. However, the main concern lies with the potentially life threatening effects when combined with alcohol (Marcinski & Fillmore, 2006; Reissig, Strain, & Griffiths, 2009). Therefore the results in the current study suggest that the French participants might be underestimating the dangers of such drinks. However, it is unclear whether the participants in this study were thinking about energy drinks as drinks consumed alone or when consumed in combination with alcohol. It would be important to make these distinctions in future research as it would have an effect on interpreting outcomes and perceptions toward these drinks.

For the six main drink types there was a significant difference between drinks in terms of the extent to which they were considered potentially beneficial to health: red wine rated highest in both countries, followed by white wine; spirits were rated across both countries as the least beneficial to health. This is in contrast to the UK focus groups (Section 3.3) where spirits (after wine) were typically rated as healthier than beer and cider. However, the results are consistent with Wright et al. (2008a and 2008b), where beer and wine drinkers rated red wine as the healthiest alcoholic drink, compared to light and dark beers. However, spirits were not included in that study so it cannot be determined where the participants would rank spirits against the other main drinks types, in terms of healthiness. In the current study there was also a significant drink-by-nationality interaction: red and white wine were rated as much more beneficial by the French compared to the UK participants; for the UK

participants, all drink types were rated similarly apart from the wines. A similar (inverse) profile was obtained when asking about generic “detrimental effects”, which supports the reliability of the beliefs. The consistent trend of the UK participants attributing risk of diseases equally across all drink types, and the French participants holding strong beliefs of beverage-specific effects could be reflective of alcohol education difference in the two countries and therefore has implications for health education and policy. This will be discussed in more detail in Section 6.1.3

In terms of how the six drink types adversely affect physical appearance, there was a significant main effect of drink: clear spirits were rated worst in both countries, closely followed by dark spirits. However, a significant drink-by-nationality interaction arose because UK participants rated beer, cider and spirits similarly and worse than wine, whereas in France, cider was rated alongside wine.

In both the UK and France, cirrhosis of the liver was rated as a significantly higher risk than cardiovascular disease, stroke, liver cancer, lung cancer or breast cancer, but there was no interaction between disease and country. These perceptions are consistent with results from the focus groups (Section 3.3.6) that liver damage is the major long-term health effect of alcohol consumption. Hall et al. (1992) also found that participants rated liver damage as the major long-term health concern. As previously discussed (Section 1.3.2.1) evidence on alcohol consumption and risk of liver cirrhosis is well established (e.g. Sørensen et al., 1984; Sørensen, 1990; Becker, Grønbæk, Johansen, & Sørensen, 2002).

Additionally, there was a significant association between country and beliefs about the different drink types’ involvement in disease. The French participants tended to link liver cirrhosis with consumption of dark spirits and the UK participants tended to attribute risk equally across all drink types. Although the data is less convincing there is evidence to suggest a strong link between spirits and liver cirrhosis (Kerr, Fillmore, & Marvy, 2000; Roizen, Kerr, & Fillmore, 1999). However, these studies did not compare white and dark spirits with rates of liver cirrhosis.

A similar profile emerged in relation to cardiovascular effects and stroke: The French participants highlighted clear spirits as risky, whereas UK participants did not discriminate between drink types. For the cancers (liver, lung, breast), the French also

tended to link risk with the consumption of clear spirits, whereas the UK participants tended to attribute risk equally across all drink types. Although participants in the focus groups (Section 3.3) did not tend to discuss diseases in relation to specific drink types, overall they perceived red wine to be the healthiest drink type due to its supposed effects on the heart, and one participant in Toulouse mentioned it containing anticancer agents. In terms of the most damaging to health, participants in the UK and France (focus groups) associated clear spirits, particularly vodka, with liver damage and gin to detrimental effects on the brain. The French survey results and focus group results are consistent with the evidence previously discussed (Section 1.3.2.1), that wine, compared to spirits, has beneficial effects on health, including beneficial CV effects (e.g. Kokavec & Crowe, 2001; Estruch et al., 2011; Chiva-Blanch et al., 2012), reducing mortality risk (Baglietto, English, Hopper, Powles, & Giles, 2006), and reducing the risk of breast cancer in women (Damianaki et al., 2000; Bessaound & Daures). Spirits, compared to beer and wine have been shown to increase the risk of dementia, (Handing, Ande, Kadlecova, Gatz, & Pedersen, 2015) but the data is less consistent as studies have not always shown an association (e.g. Ritchie, Ledesert, & Touchon, 1999) and some have found protective effects (e.g. Huang, Qui, Winblad, & Fratiglioni, 2002). Alcohol has also been shown to reduce the risk of stroke (Patra et al., 2010) but there are no studies that have tested beverage specific effects. The finding that the UK participants attributed all drink types equally to the risk of disease (despite the evidence), has implications for different approaches to health education in the two countries.

In terms of beliefs about how different drinks contribute to weight gain, there was a significant association of drink by nationality: participants in both countries tended to identify beer as the most likely to promote weight gain, but the association was much stronger in France. The French participants also linked spirits to weight gain much more than did the UK participants, who after beer tended to blame any kind of alcoholic beverage for weight gain. In contrast to the focus groups the French participants did not tend to discuss any drink type in relation to weight gain (Section 3.3.6.1), with the exception of Paris where red wine was perceived as the least calorific. The UK participants perceived beer and the mixers (e.g. Coca Cola) in spirit mixer drinks to be the most calorific and clear spirits on their own as the least calorific, in contrast to the French participants in the survey. The survey results in

particular are consistent with the evidence, that the consumption of beer and spirits, (in comparison with wine) is positively associated with increased BMI and WHR (Lukasiewicz et al., 2004; Duncan et al., 1995; Slattery et al., 1992).

Beliefs about the “naturalness” of different beverages closely mirrored beliefs about the drinks’ relative degrees of “healthiness”: there was a significant drink effect whereby red wine was rated as containing the most natural ingredients, and “alcopops” the least. A significant interaction with nationality reflected a much stronger tendency to associate “naturalness” with red wine and cider among the French male sample and red wine and beer for the French female sample. These results are similar to the participants’ perceptions in the focus groups, where the French participants tended to rate cider and wine as the most natural drink types, whereas in the UK spirits (as well as wine) among most of the participants were seen as the most natural. As previously discussed (Chapter 3.4) concerns over naturalness are also considered to be important in the food market and have been shown to influence consumers’ perceptions of health. Natural foods are generally considered more desirable, than corresponding “non-natural”, “artificial” or “processed” alternatives (Rozin et al., 2004). This will be discussed in more detail in Chapter 6.

Looking at cues that inform judgments of “naturalness” in a drink, the only factors that discriminated the UK and France samples was a stronger tendency for the French sample to use taste and (much more so) labeling and packaging in the UK as indicators. This difference could reflect different views of what “label” and “packaging” represent in the two countries and could perhaps reflect the same thing. In the focus groups (Section 3.2.6.2.1) price informed perceptions of naturalness for participants in London and Cardiff and overall the participants believed that the sugar, additive and chemical contents of a drink determined its level of “naturalness”. Research suggests that the visual properties of food and beverage products are the most important for consumer product evaluation (Schifferstein, 2006), including (although the literature is limited) naturalness evaluations (e.g. Ares & Deliza, 2010). In other words, consumers make judgments, including health judgments on the visual aspects of the packaging (i.e. colour, size, images), before reading the written information on packaging (i.e. nutritional information). The impact of packaging

design on consumer perceptions of healthiness of food and beverage products will be discussed in more detail in Chapter 6.

Participants' estimates of the sugar percentage contents for different drink were different in the two countries; in the UK participants estimated a higher percentage sugar content for cider, than the French participants; and the French participants estimated a higher percentage sugar content for dark spirits compared to the UK participants. There were also significant differences in the ratings of sugar content in energy drinks: the French participants estimated a lower percentage of sugar than the UK participants. Although there were regional differences in comments relating to the sugar contents of different drink types, the UK participants in the focus groups (Section 3.3) also rated cider (as well as beer) as having the highest sugar contents and the French participants tended to perceive spirits (they did not always specify between white and dark spirits) as the having the most sugar content.

It can be concluded from these findings that there has been some convergence of young people's drinking practices and beverage choices between the UK and France. In terms of participants' beliefs about the health effects of different drinks, the notion that wine is healthier than other beverages is widely held in both countries, but this belief was stronger in France than in the UK. Both countries perceived red wine to contain the most natural ingredients and they generally shared similar estimates of the sugar contents of different drink types (with the exception of a higher estimate in the UK for cider and for dark spirits in France). In France, spirits (white and dark) were identified as particularly problematic for health, much more so than in the UK. In the UK, apart from wine, all beverages were considered to have a similar potential for causing health problems. Liver damage was identified as a key problem when compared to other health conditions; in France, it was most strongly associated with drinking dark spirits, whereas in the UK it was not linked to any particular beverage type(s). Additionally, the French participants expressed a stronger association of spirits (white and dark) with the other diseases (cardiovascular diseases, stroke, and liver, lung and breast cancers), whereas respondents in the UK again rated risk equally across all drink types. For both countries, beer was considered the drink most likely to cause weight gain, although the association was stronger in France.

In light of this evidence it is clear that perceptions of healthiness by young people in the UK and France are confused with issues of “naturalness” rather than related to alcohol content. There is also evidence of inaccuracies in estimating the percentage alcohol contents of different drink types and the number of drinks that can be consumed without risking health. Lastly, there were major differences between the two countries in terms of the drinks types most associated with disease, which have implications for different approaches to health education in the two countries.

The following study will therefore aim to explore deeper the shared lack of understanding of alcohol effects on long-term health and to explore areas that might be relevant to alcohol health interventions. As well exploring their knowledge of the positive and negative health effects of different alcoholic drinks, the study will aim to examine where health information about alcohol is obtained (e.g. newspapers, magazines, TV adverts, social media), the sources of information they trust and do not trust, what sources are most influential, and suggestions of ways to improve access to health information about alcohol.

5 Chapter 5: Structured interview study

5.1 Introduction

This study was conducted to explore some key issues that arose from the focus group results (Section 3.3) and the survey results (Section 4.3), especially the finding that young people in both countries shared a lack of understanding of the health consequences associated with different kinds of alcoholic drink. They related “healthiness” more readily to issues of beverage “naturalness,” “authenticity” and branding rather than to issues of alcohol content and alcohol-related illness. Additionally, results from the focus groups (Section 3.3.4.1) revealed that participants believed that they had received very little information about the health effects of alcohol from the media (e.g. on television, newspapers, social media) or throughout their educational lives (i.e. school, college, university). They also believed that the information and messages surrounding the effects of alcohol on health were often confusing, due to the presentation of contradictory information, particularly in the media.

Therefore the researcher wanted to explore beliefs about the current health messages relating to alcohol and why and how these messages were confusing for young people who are heavy episodic drinkers (HED). This style of drinker was chosen because binge-drinking is a concern across the UK and France, and as previously discussed is most common among 18 to 24 year olds (ONS, 2015a) (see Section 1.1.2 for a full discussion about drinking in this life stage of young adulthood).

The evidence suggests that the internet is a popular source of health information and studies have reported that 66% of adults in Europe seek online health advice (Taylor & Leitman, 2002). Evidence also suggests that social media websites, such as YouTube, Facebook, Myspace and Twitter are rapidly emerging as popular sources of health information among teenagers and young adults (Vance, Howe, & Dellavalle, 2009; Escoffrey et al., 2005). Trust has been shown to be a big factor in online health seeking behaviour, and the evidence suggests that several factors are involved in determining the extent to which an internet user will trust the health information provided, such as; design factors of the website, in terms of attractiveness and usability (Peterson, Aslani, & William, 2003); content factors such as source credibility (McNight & Chervany, 2001); and personalisation (Briggs, Simpson, &

DeAngeli, 2004). A study in Australia found that adult internet user perceptions were mixed. Some adults preferred independent sources such as educational institutions and government departments, whereas others viewed the pharmaceutical industry as authoritative (Peterson, Aslani & Williams, 2009). The literature also suggests that older adults are less likely than younger adults to trust the internet as a source for health information and would rather use more traditional methods such as consulting a pharmacist or physician (e.g. Dutter-Bergman, 2003). Therefore trust is likely to be a key factor in determining whether the internet is a preferred source of health information.

The aim of the current study was also to inform ideas for improving access to alcohol health information i.e. types of language used, the use of imagery and where the information should be placed in order to reach this age group. It is hoped that any improvements in alcohol health information could improve the future impact of alcohol literature for young adults. An interview schedule was designed to cover each of these areas, including the issues outlined above (see Appendix N). Exposure to alcohol marketing and advertising is considered a factor that might encourage young people to consume alcoholic beverages (Anderson, Brujin, Angus, Gordno & Hastings, 2009; Smith & Foxcroft, 2009b), which highlights the importance of thoughtful and strategic placement of health information. The evidence regarding the effectiveness of responsible drinking warnings (including the placement of messages on packaging and labels) within alcohol advertising is less conclusive. A study by Thomsen and Fulton (2007) that used eye tracking to determine the amount of time adolescent readers attended to responsibility or moderation messages ('drink responsibly') embedded in magazine alcohol advertisement found that only 7% of total viewing time was spent looking at the responsibility messages. However, the amount of time spent fixating on responsibility messages doubled when the message was a prominent part of the advertisement's design or content. Secondly, beverage bottles, headlines, product logos (including cartoon images), and images of people were the most viewed elements of the alcohol advertisements. The participants spent substantially greater amounts of time fixating on poured drinks, beverage containers, and cartoon logos than responsibility messages (Thomsen & Fulton, 2007).

There is also evidence to suggest that pictorial health warnings on tobacco products are an effective tool for educating smokers and non-smokers about the health risks of tobacco use and increasing smokers thoughts about the health risks of smoking (Li & Grigg, 2009; Thrasher, Hammond, Fong, & Arillo-Santilla, 2007). For example, a study compared the introduction of pictorial warnings in Australia in 2005 to that of the introduction of larger text-only warnings in the UK in 2003 and found that cognitive and behavioural indicators of label impacts that are predictors of quit intentions increased to a greater extent among smokers in Australia than UK (Borland, Yong, Wilson, Fong, Hammond, Cummings et al., 2009). However, it is unclear whether the use of pictorial health warnings on alcohol products would have the same effect.

Therefore in light of these findings, the current study was conducted to address the key issues that arose from the previous two studies (focus groups and survey) and to explore areas that might be relevant to alcohol health interventions. The aim was to explore, among self-declared “binge drinkers”, their knowledge of the positive and negative health effects of different alcoholic drinks, where they obtained health information about alcohol from (e.g. newspapers, magazines, TV adverts, social media), the sources of information they trust and do not trust, what sources are most influential, and suggestions of ways to improve access to health information about alcohol.

5.2 Method

5.2.1 Participants

Critical case sampling was used to recruit young adults (18 to 24 year olds) who were identified as binge drinkers and who found the current health messages of alcohol confusing and contradictory. Binge drinkers were identified by asking participants to complete a drinking frequency questionnaire designed by the researcher (see Appendix O) prior to the interview. Only those who met the WHO (2014) definition of binge-drinking were asked to participate (5 or more drinks on at least one single occasion at least monthly). Therefore this was an inclusion criteria for the current study.

An email was sent out to students at Kingston University with a statement specifying the requirements to participate in the study, which were binge-drinkers between the ages of 18 to 24. A Master's student at the University of Toulouse recruited French participants using the same method and criteria. Other participants were recruited by word of mouth, and posting on social media sites such as Facebook. Snowball sampling was also used, where participants were asked to forward the original email to their peers. This technique was as an efficient way of recruiting binge drinkers, as typically peer groups will share similar drinking styles. A total of 14 participants were recruited in the study (7 in the UK and 7 in France) and the mean age in the UK was 21.8 years ($SD= 1.8$) and 22.2 years ($SD=2.1$) in France (see Table 5.1).

Table 5.1.

Interview study: Participant occupation status by country and gender

		UK		France	
		Male	Female	Male	Female
Occupation	Student	2	2	3	1
	Full/part time work	1	2	1	2

5.2.2 Design

Semi-structured interviews were chosen as the aim of the study was to explore a deeper understanding behind the beliefs of a particular group of people (i.e. 'binge-drinkers'). Semi-structured interviews allowed the interviewer to explore the views, experiences, beliefs and motivations of individuals on a specific matter. As well, as provide a 'deeper' understanding of social phenomena and is seen as a more appropriate way of exploring sensitive topics (Gill, Stewart, Treasure, & Chadwick, 2008). The questions were designed by the research team, from the review of the literature and from the findings in previous two studies (focus groups and survey).

Skype was used to conduct all of the interviews as it provided free, easily accessible, video calling and allowed for a consistent interview format between the two countries. Prior to the interviews commencing, the researcher reassured the participants that they could withdraw at any time throughout the interview or afterwards; they could pause the interview at any time and that the interview would be recorded.

Interviewing is the most widely used form of data collection in qualitative research; over the last decade technological advances have led to the development of internet interviewing.

Traditional face-to-face interviewing has its disadvantages in terms of time, financial constraints, geographical dispersion, and the physical mobility boundaries of research populations (Cater, 2011). These disadvantages have somewhat been rectified with the use of video calling interviews, and the use of video calling in social science research has become much more commonplace (Haw & Hadfield, 2011). It has been suggested that when using webcam interviewing, the interaction is comparable to face-to-face interviewing for the presence of nonverbal and social cues (Stewart & Williams, 2005; Sullivan, 2012) and that the quality of responses is much the same as responses produced by more traditional face-to-face interviews (Denscombe, 2003; Deakon & Wakefield, 2013). Additionally, it has been suggested that online interviews allow for more reflective responses and can be a useful way of asking sensitive or embarrassing questions (Madge & O'Connor, 2004).

However, some disadvantages have also been suggested for video interviewing such as the participants feeling embarrassed or uncomfortable during filming and the requirement of participants to obtain the correct software and Internet connection (Hay-Gibson, 2009). However, in the current study participants were made aware that the interviews would be conducted via Skype video call, and that only an audio recording would be made and that they must have a good internet connection. There were no reliability issues with the internet or with the Skype program during this study. An additional challenge of using a "head shot" web cam is that the participant's body language cannot be assessed. However, for the purposes of this study, body language was not analysed.

5.2.3 Procedure

The primary researcher conducted the UK interviews and a French-speaking Masters student at Toulouse University conducted the French interviews. Prior to the interview each participant was sent (via email) an informed consent (see Appendix P) form and a short demographic questionnaire (see Appendix O), including the questionnaire to determine binge-drinking. The participants sent the completed forms back by email. The two interviewing researchers followed an interview schedule (see Appendix N), which consisted of 13 questions. Each interview lasted approximately 30 minutes and was digitally recorded.

5.2.3.1 Interview procedure

The interview started with questions relating directly to their perceptions of binge-drinking, including whether they perceived themselves as binge drinkers. These questions were asked to explore the participant's knowledge and awareness of binge-drinking and to see whether they self-identified with this harmful drinking style. This was seen as particularly important as the survey results (Section 4.4) suggested that participants over estimate the number of drinks that can be consumed without risking health and in fact, were making estimates closer to binge-drinking levels.

The next set of questions was related to the thoughts about the health effects of alcohol and what they consider the main health effects of alcohol to be, including both positive and negative health effects and short- and long-term health effects. Here the participants were also prompted to discuss these perceptions in relation to beverage types discussed in the previous studies (i.e. wine, beer and spirits).

Questions on how these perceptions were formed then followed i.e. what sources they use to get alcohol health information. They were also asked to recall specific information from these different sources. The participants were prompted to discuss information obtained from the media (e.g. social media, newspapers, television), friends and family, school, college and/or university, doctor surgery and drink labeling; this follows from the theme that arose in the focus groups (Paris and London in particular) namely the perceived lack of education and awareness about alcohol during school, college and their university education. The questions then proceeded to the sources that the participants trusted the most or did not trust, including

explanations for their levels of trust. Lack of trust was a theme that arose from the focus groups (Section 3.3) and was therefore considered an important issue to follow up on in this study.

From the information that they had gathered they were asked to explain what they considered the most current positive and negative consequences of alcohol consumption to be, as well as discuss whether health information was influencing their own and peers' attitudes to drinking. This was to assess the extent to which current health messages from various sources were affecting alcohol consumption and beverage preference.

The interview finished with questions that endeavored to establish what young people found confusing and/or contradictory about the alcohol health information that was available, i.e. lack of clear advice/guidelines, personally unrelated and non-directive advice, conflicting information. Also explored were the specific approaches that might improve their understanding of the health effects of alcohol consumption i.e. on what platforms would the information be most effective and have the most impact (e.g. social media, television advertisement) and ultimately what would make them think more about the health effects of alcohol.

5.2.3 Data analyses

Verbatim transcripts were written up for each interview by the primary researcher in the UK and by the Masters student in Toulouse. All transcripts were checked against the original recordings for accuracy and consistency. Thematic analysis was used to analyse the data and the same Braun and Clarke (2006) guidelines were used as in the focus group phase (see Chapter 3 for detailed guidelines on thematic analysis). The coding was reviewed and refined by the researcher, and the reliability of the coding was assessed through a series of review meetings with supervisors.

5.3 Results

The thematic analysis revealed five superordinate themes: (1) The perception that there is insufficient information available about the health effects of alcohol; (2) Wanting to know more about the health effects of alcohol; (3) The trustworthiness of health-related information; (4) Reflections on the health effects of alcohol; (5) 'I don't think about it when I'm having a drink during a party'. Each superordinate theme will be discussed in turn. A full list of superordinate themes, subordinate themes and sub themes is given in Table 5.1 below.

Table 5.2

Table of the five main superordinate themes and subordinate themes emerging from the structured interview study

Superordinate theme	Subordinate theme
The perception that there is insufficient information on the health effects of alcohol	The belief that there is too much of a focus on drink driving “Shock tactics don’t work”
	The perception that there is a predominant focus on staying safe when drinking
	The perception that there is a predominant focus on drugs and smoking rather than alcohol
Wanting to know more about the health effects of alcohol	The use of images to illustrate the health effects of alcohol
	The perception that information about alcohol is best placed online: social media and news applications
	Wanting more statistics on the health effects of alcohol
	The impact of observing or experiencing the bad effects of alcohol
The trustworthiness of health information	“There is so much in the papers that you can’t trust”
	Trust in information from parents
	Trust in information from General Practitioners and Health Service
Reflections on the health effects of alcohol	Putative benefits of red wine
	Positive perceptions of alcohol on behaviour and socialising
	Thoughts about the calorie content of alcohol
	Perceived effects of alcohol on the liver and kidney
‘I don’t think about it when I’m having a drink during a party’	Concerns about the ‘morning after’
	“I don’t drink enough to have to worry about the long-term health effects of alcohol”

5.3.1 The perception that there is insufficient information on the health effects of alcohol

This superordinate theme concerns participant's perceptions that there is a lack of information about the health effects of alcohol in alcohol messages. This theme was prominent amongst all of the participants in the UK and France. The participants asserted that there was little or no information on the risks associated with alcohol consumption.

There just is not much about health is there, I haven't really thought about it but there is not. It's mad. (UK, female student)

The participant above stated that she had not previously thought about the lack of health information regarding alcohol consumption but participating in the interview had made her aware of this issue.

The participants rarely referred to a specific source when describing the lack of information; instead they tended to talk about the information in a generic and global manner. However, one participant referred to the alcohol information that is provided at hospitals as focusing more on the recommended drinking guidelines, rather than the health effects of alcohol.

Yeah the hospital there is information on the walls and stuff like how much you should be drinking. But it is always the same advice. (UK, male student)

He also mentioned that the information provided in hospitals is often repetitive and lacking originality. Another participant referred to the absence of information on the health effects of alcohol, again referring to it globally, but with a specific reference to the lack of alcohol information on billboards.

I just don't see it anywhere. I mean where do they put this information I don't see them on billboards or anything. (UK, female worker)

A French participant mentioned that the advertising of alcohol rarely contains health information concerning the long-term health effects of alcohol. He believed that the media should provide information on the effects of alcohol consumption in later life.

I think we don't advertise much on the long-term effects of alcohol on health. They should tell us something like: 'if you drink alcohol, you will have problems when you're 50 years old'. (French, male student)

The participant below stated that he could not form an opinion on the health effects of alcohol due to the lack of information that is provided through alcohol messages.

I have the feeling that they don't tell us much about alcohol. So, it's difficult for me to give you my point of view. (French, male student)

The thematic analysis revealed four sub-themes concerning participant's perceptions about alcohol messages: *The belief that there is too much of a focus on drink driving; "Shock tactics don't work"; The perception that there is a predominant focus on staying safe when drinking; The perception that there is a predominant focus on drugs and smoking.* Each will be explored in turn below.

5.3.1.1 The belief that there is too much of a focus on drink driving

The participants in both countries believed that information about the risks associated with consuming alcohol is predominantly focused on dangers of being under the influence of alcohol when driving, rather than the effects of alcohol on health.

Hmmm, what comes to my mind are the warning advertisements for example road safety. But I admit that I haven't heard or had a lot of information concerning the health effects of alcohol. (French, male student)

I think the TV adverts that I used to see and I never saw any to do with drinking and specifically the health problems it was more the shock tactic and the drink driving adverts. Those are the adverts that I remember seeing I don't remember seeing any adverts about the health effects it was more about the shock tactics of drink-driving. (UK, male worker)

Overall, the participants tended to refer to alcohol and driving messages in relation to television advertisements, rather than any other sources, but again the participants did not always refer to a specific source and tended to discuss the issue more globally.

5.3.1.2 “Shock tactics don’t work”

The female participants in both countries and one male participant in the UK (as in the previous sub theme) mentioned the use of ‘shock tactics’ and ‘dramatic’ language and imagery in alcohol-related messages. They believed that this was not an effective tool in informing people of the health risks associated with alcohol consumption.

I would pay attention yeah but I don’t like all the scare mongering stuff like if you hear an alcohol story well not newspaper but a horrific internet scroll there’s those ‘alcohol fuelled teenager does this’ kind of thing. All you think about when you hear all that is, oh that will never be me. (UK, female student)

The participant above stated that this type of information was hard to relate to, and one French female participant mentioned that the use of dramatic messaging was unrealistic.

But maybe they should be less dramatic. Even the adults drink a glass wine every day. So they should find messages that are less sanctimonious. These messages should be more realistic. (French, female worker)

The participant above also mentioned that information that could be seen as sanctimonious is not an effective way of informing young people about the health risks associated with alcohol consumption. Perhaps she put it in the context that the information targets young people in a patronising manner and that the information was inconsistent with adults’ levels of alcohol consumption.

5.3.1.3. The perception that there is a predominant focus on staying safe when drinking

This subordinate theme includes participants’ perceptions that alcohol messages provided by their parents and by universities are focused more on staying safe when consuming alcohol rather than on the effects of alcohol on health. This theme only arose among the female participants in the UK and one male participant in the UK.

I guess my mum has warned me about what alcohol can do and about getting into a state when you are out and about and not able to look after myself... so if I’m unable to walk, talk, think get home. (UK, female student)

Yeah you get quite a lot of leaflets especially during fresher’s week it was about health and safety and stuff with alcohol though, not health. (UK, female student)

The participant below mentioned that concerns over a friend's alcohol consumption was also more about safety rather than any long-term health effects of alcohol.

I have definitely had talks with my friends and that they need to drink less but that is more the immediate effects, like when we are out it's not about damaging your health it's more you need to drink less as I had to carry you home and you need to be safer. It's the here and now, the fact that you are doing something that is affecting you right now, rather than damaging your body for the next however long. (UK, female student)

This participant seemed more concerned over the immediate effects of alcohol in terms of her friends' behaviour and ability to get her home safely after a drinking session, rather than the future effects of alcohol. Her concerns were also focused on the impact that her friends' behaviour has on her i.e. she had the responsibility of getting them both home.

I guess on a night out it is not the long-term effects that you think about its more that they are going to pass out in a gutter on the side of a street are you going to be alright getting home etc. (UK, male worker)

One of the participants in the UK was unique in saying that he received alcohol health information from his family.

They do talk about the health effects as well because it is very much a concern and hundreds of people die from alcohol every year, so it is a big risk. And well alcoholism runs in my family, my gran and my ...on my dad's side died, I am not sure exactly but it is alcohol related. So they are very conscious of what goes on. (UK, male student)

This participant's sensitivity to alcohol and discussions about alcohol in his family gave him a different perspective than the other participants.

5.3.1.4 The perception that there is a predominant focus on drugs and smoking rather than alcohol

This theme was only evident amongst the UK participants and concerned the participants' perceptions that the messages about risky behaviour tended to be more

focused on the risks associated with the use of recreational drugs and smoking cigarettes rather than alcohol specifically.

Yeah the same was at college and university there was more of a focus on drugs and other substances compared to alcohol. (UK, male worker)

The participants considered that the messages that they received at school, college and university focused more on the health effects of drugs than health effects of alcohol. They stated that they were educated about the dangers of drinking, in terms of staying safe, but drug information was more apparent throughout their educational lives.

Never anything direct, apart from someone when I was in year 6 or 7 coming in and talking to us about alcohol and drugs so focused on drugs. It was quite vague and we didn't really ask many questions, as we didn't really understand it. (UK, male student)

The participants in the UK also mentioned that there was more information and health awareness about the dangers of smoking cigarettes compared to alcohol and its health effects.

Well there are loads for smoking so maybe that would work. I remember that one about the fishhook and that really stuck in my mind. I have noticed more of a campaign against anti-smoking than I have about drinking. (UK, female worker)

This participant referred to a specific smoking campaign and made a suggestion that a similar campaign for alcohol could help to raise awareness about the health risks associated with alcohol consumption.

5.3.2 Wanting to know more about the health effects of alcohol

This superordinate theme represented the views of participants in both countries, who wanted to be provided with more information on the health effects of alcohol. The participants showed an eagerness to know more about the long-term health effects of alcohol consumption and believed that alcohol health messages should provide specific examples of the physical effects of alcohol.

Hmmm, to show us that alcohol consumption can really have some nasty effects. They shouldn't just tell us that it could be dangerous, they should show us that. I would like to see things that make us think about the long-term effects of alcohol consumption. (French, male student)

The participants gave four main examples of how they think the health messages of alcohol could be improved and were coded using the following subordinate themes: *The use of images to illustrate the health effects of alcohol; The perception that information about alcohol is best placed online: social media and news applications; Wanting more statistics on the health effects of alcohol; The impact of observing or experiencing bad effects of alcohol.*

5.3.2.1 The use of images to illustrate the health effects of alcohol

The participants in both countries suggested that images could be used as an effective way to illustrate the effects of alcohol on health. The participants also made comparisons with the use of images in smoking campaigns.

Hmmm I don't know. Maybe some concrete examples of people who drank too much and had problems afterwards. For example, for the cigarettes we show some horrible pictures, they could do the same for alcohol. (French, male student)

Participants suggested that there was a lack of imagery used in alcohol health messages, specifically on the packaging (e.g. on the labels of beverage containers) and that this could be an effective way of raising awareness of the adverse health effects of alcohol consumption. However, the participants' suggestion of using pictures to illustrate the negative health effects of alcohol contradicts the earlier subordinate theme of rejecting the use of scaremongering and shock tactics (Section 5.3.1.2).

I guess you could compare it to the old smoking health adverts that they had on TV in abundance for quite a while. There were some absolutely horrible ones and that is the kind of thing that I can imagine would work with alcohol, short brief messages on an advert to do with smoking had more of an effect, than saying you are going to decrease your life span by 10 minutes sort of thing. Short simple facts I think people take in a lot better. (UK, male worker)

This participant made a comparison to smoking campaigns on television, and proposed that a similar approach of short, sharp, and factual information could be used as an effective way of educating young people in the health risks of consuming alcohol.

Yeah more images like the immediate effects because Instagram is, well everything is about how you look now anyway. (UK, female student)

One participant suggested the use of pictures to illustrate the immediate dangers of excessive alcohol consumption on photo sharing and social networking sites. She suggested that this might be an effective tool in making people aware of the effects of alcohol consumption due to young people's concerns over appearance. Social media is discussed in more detail in the theme below.

5.3.2.2 The perception that health information about alcohol is best placed online: social media and news applications

Participants in both countries suggested that messages relating to the health effects of alcohol are best placed online. They believed that this is an effective way of reaching young people due to the amount of time young people spend online.

Online as that is where most people spend their time, maybe television but mostly online. (UK, male student)

Maybe on the internet. Yes, the internet might be a good idea to reach young people. For example on YouTube there are some advertisements before the videos. Maybe that's where you can add health messages because you have the attention of the person. Maybe it will have an impact. That remains to be seen. (French, male student)

The majority of the participants mentioned that information about the health effects of alcohol is more likely to reach young people if it is placed on social media websites, for example Facebook and YouTube.

I think social media is something that is hard to ignore nowadays so I think the amount of people that rely on getting their news from social media than getting it from the newspaper or watching the news in the morning. (UK, male worker)

This participant also suggested that young people use social media sites to access news rather than via newspapers or the television, and therefore the use of social media would have more impact and reach more young people compared to traditional media tools. A further suggestion in the UK was that articles published by the BBC or NHS on the effects of alcohol should be placed on social media sites.

BBC, news articles, picture campaigns on Facebook or popular sites that people go on. (UK, male student)

These types of sources seemed to be seen as trustworthy sources of health information.

5.3.2.3 Wanting more statistics on health effects of alcohol

This subordinate theme was only prominent among three UK participants and concerned the participants wanting to have more statistical health information about alcohol.

Personally I do like my stats I do like to know that kind of thing so I would be interested in seeing that kind of information. (UK, male worker)

In the quote below, another participant wanted data from studies to inform her of the health effects of alcohol at her age rather than necessarily the long-term health effects of alcohol.

More facts and figures so after doing studies on the health effects of alcohol at this age how it affects me. So instead of just saying binge-drinking is bad or adverts doing that they need to give facts and figures. (UK, female worker)

5.3.2.4 The impact of observing or experiencing bad effects of consuming alcohol

The participants across both countries reported that they had personally experienced, or observed someone else experiencing, adverse effects associated with alcohol consumption. The participants reflected on these experiences when asked to recall the types of messages that they found most influential regarding their perceptions of the negative health effects of alcohol.

There was something about a guy who drank loads and had to have his thing pumped and liver damage and stuff like that. (UK, female student)

I think it has been like people's experiences, like my ex-partner, we were at a festival last year and they had a whole bottle of vodka themselves and they ended up in a medical tent kind of thing and had to have their stomach pumped. (UK, male student)

These personal experiences influenced their perceptions towards alcohol and the associated risks of consuming alcohol. The participants perceived these types of personal experiences, such as those described above, as having the most impact on their beliefs about the effects of alcohol. The participants seemed more influenced by alcohol's immediate effects rather than any long-term health effects.

...when I was too drunk it helped me realize that I should be more aware of my alcohol consumption. And I think when your friends tell you about something; it feels more real because it can happen to you. (French, female worker)

Being very drunk and hearing about a friend's bad experiences with alcohol also influenced a participant's alcohol consumption. The above participant also emphasised the credibility of information gathered from friends and the sense of the information feeling more real, perhaps when compared with other sources of information.

It does but more in jest as it's that generation where it is not taken that seriously, I guess until something happens. Or we know someone that something bad has happened to. (French, male student)

In the quote above, it is interesting to note that the participant suggested that young people do not think about the effects of alcohol unless something bad happens to them or someone they know as a result of alcohol, prioritising the role of personal experience.

Yeah GPs and stuff coming to talk to us is good or someone who shares their experiences with alcohol. I think we had someone come in and talk to us about how it affected their lives with alcohol and how it ruined their life etc. (UK, male student)

The participant above mentioned the effectiveness of face-to-face contact with someone, in this case a general practitioner, or someone who has experienced the negative effects of alcohol as credible sources of information.

5.3.3 The trustworthiness of health information

This theme concerns the ways in which participants mapped out sources of information that they trusted and those they were less likely to trust when receiving information about the health effects of alcohol. This theme was evident among all participants in both countries. The participants made an interesting distinction between official and non-official sources of health messages. Official sources were typically referred to as the Government, National Health Service (UK only) and public service professions/ i.e. the police, and fire service. However, it was harder to determine what participants meant by “unofficial sources”, but one participant referred to peers as an unofficial source.

I would trust information given on official government websites for example. But if I hear information in a party I won't really care about it. Yes I think that official sources are more trustworthy. (France, female student)

The participants were more likely to trust information about the health effects of alcohol from the official sources.

5.3.3.1 “There is so much in the papers that you can't trust”

Within this subordinate theme the participants discussed the media as a source of information that they would not trust.

For example, the newspapers saying that wine can be one thing and another how can it be. I think the health officials are less likely to say something unless they definitely know it, whereas the news just wants something to talk about. (UK, female worker)

The participant above made a reference to newspapers as a specific media source that she didn't trust. She perceived the messages concerning alcohol to be conflicting, in terms of the health claims made about wine. One participant in France also made a link with the media producing conflicting messages in alcohol advertisements on the television.

Hmmm for example TV media can tell us that drinking is bad and after that they just show us an advertisement for beer. It's conflicting. They tell you that alcohol is bad and then they just promote an alcoholic beverage. (French, female student)

These conflicting messages in the media seemed to reinforce the participant's lack of trust in the media. They found it difficult to make sense of the conflicting messages, which could be seen on any one-day's viewing. The participant therefore chose to ignore all of the messages was a consequence of these conflicts.

The messages showed by advertisements don't have any effect on me. I consider them to be a commercial tool; I don't really care about it. (French, female student)

This participant believed that the alcohol messages through the use of advertisements are for commercial use and therefore did not consider advertisements as a reliable source of health information about alcohol.

5.3.3.2 Trust in information from parents

The participants in both countries mentioned that they trusted information that they received from their parents and other family members regarding the effects of alcohol on health.

But when your parents tell you that it's not good for health you just listen to them. (French, female student)

Hmmm strangely, when it's someone close to you like family who tells you something, you believe it. (French, female worker)

One participant in the UK mentioned that although he would trust information provided by his family, he would not necessarily trust them more than information from the television.

I would in terms of who I would listen too more would be my parents and family but I wouldn't say I would trust them any more than seeing something on TV or in education I am sure I would trust them just as much. With parents it's very much don't do this, there is never really any back up to it. (UK, male worker)

This participant also mentioned that the information he received from his parents was typically in the form of commands and advice rather than health information about alcohol. This is similar to the earlier subordinate theme (Section 5.3.1.3) of information from parents being more about safety whilst drinking rather than detailed health information.

5.3.3.3 Trust in information from General Practitioners and the Health Service

Participants in both countries mentioned that they trusted or would trust information about alcohol and health that came from a General Practitioner (GP) and other doctors.

And family doctors too. When a doctor talks to you it reaches you more than TV advertisements. (French, female worker)

Here the participant compared her trust in her own family doctor to advertisements on television, and felt that the personalised advice from her doctor was more effective in reaching her than the advertisements.

The female participants in the UK mentioned that the National Health Service (NHS) was a valuable source of information that they would trust.

If I look up any health issues it's usually the NHS health websites and they give you ideas of how to drink. That or NHS health website probably for statistics but not the news because I think a lot of it can be a bit trivial, maybe I am a bit cynical but I would rather get it from the horse's mouth than through three ways down. (UK, female worker)

This participant above mentioned that they actively sourced health information about alcohol online and from NHS websites.

5.3.4 Reflections on the health effects of alcohol

This superordinate theme includes participants' thoughts about the health effects of alcohol. Although the participants tended not to be concerned or think much about the long-term health effects of alcohol, when prompted the participants provided examples of some positive and negative effects of consuming alcohol.

5.3.4.1 Putative benefits of red wine

The participants' knowledge about the benefits of moderate alcohol consumption seemed to be limited to the effects of red wine on health. This subordinate theme only occurred amongst the UK participants.

The main one I tend to think of is something I heard a while ago was something to do with red wine being, in small amounts, quite good for the heart. That's probably the only one I can think of to be honest. (UK, male worker)

The participants' knowledge of the potential health benefits of red wine was vague and was often in terms of information they had gained from the news and was not necessarily something they believed themselves.

There was something, I have heard that a glass of wine a month is good for you or but I don't know if that's true I heard it on the news a while back. (UK, male student)

One participant also mentioned that information about the positive effects of consuming red wine was often contradicted by other information, which suggested that there are no positive effects of red wine consumption on health.

They say, again I don't know where I am getting this from but they say that having a glass of wine a day is good for you. But then they are like no it's not. I don't know where I heard that. (UK, female worker)

The participants also struggled to remember the sources of this information and if they did relate it directly to a source, it was linked to the news in general.

5.3.4.2 Positive perceptions of alcohol on behaviour and socialising

The participants in both countries perceived the most beneficial effect of consuming alcohol to be on behaviour and socialising.

God health, no way! I wouldn't say for health, like if you were talking about confidence and stuff but positive regarding health, no. (UK, female student)

This participant did not perceive there to be any positive health effects of alcohol and the only positive effects were seen as relating to confidence and socialising.

With alcohol you dare to do things you wouldn't have done normally. Alcohol eases the atmosphere and you can talk about many things including « taboo » things. (French, female student)

This French participant believed that alcohol encourages certain conversations that you would not necessarily engage in unless you were under the influence of alcohol.

And I suppose for some people it is stress relieving. (UK, female worker)

A further positive benefit of moderate alcohol consumption was its stress-relieving effects for one participant in the UK.

5.3.4.3 Thoughts about the calorie content of alcohol

This subordinate theme concerns the participants' awareness and consideration of the calorie content of alcohol. Although this theme was only prominent among the female participants in the UK, one UK male participant mentioned that he was aware of the calorie content of alcohol. He suggested that providing information on calorie content could be an effective way of reducing people's alcohol consumption.

I think personally it would make people a lot more conscious when drinking as people don't seem to care how drunk they get but might start to care how much calories. I think it would deter people. (UK, male worker)

In terms of specific drink types, one participant considered gin to be least calorific and wine to be the highest, specifically red wine.

I consider gin to be better, I don't know why because it is lower calories or something. I think so at least you have one thing reduced. I know wine is again regarding calories wine is horrific for you, like red wine. I guess hard liquors would be worse for you, but I love a whiskey so it's hard. (UK, female student)

Here, the participant also referred to spirits as being the worst for health, and this could therefore illustrate that for some participants calorie content was not considered

a key factor when determining how healthy a drink is and that it is in fact seen independent of health.

Two female participants (one in UK and one in France) perceived alcohol to be fattening, although they did not refer directly to calories when discussing alcohol.

For the long-term effects, alcohol makes you put on weight. (French, female worker)

I always worry about drinking because I'm a girl, about weight gain, putting on weight and drinking is fattening. I know when I have had a heavy weekend I get bad skin. (UK, female worker)

This UK participant also referred to the effects of alcohol on her hygiene and that after high consumption of alcohol she was aware of the effects on her skin. However, she did not mention whether these concerns had an effect on the amount of alcohol she planned to consume in the future.

5.3.4.4 Perceived effects of alcohol on the liver and kidneys

When the participants considered the negative health effects of alcohol, they all believed that drinking alcohol could have a damaging effect on the liver and or kidney's, and that this could be a major long-term health effect of consuming alcohol.

I guess the one you always tend to hear are liver and maybe kidney is that a thing? Yeah they are the ones that spring to mind. (UK, male worker)

But on the long-term it attacks your liver. That's what they say anyway. (French, male student)

One participant referred to spirits as the most harmful drink for the liver due to its alcohol strength.

It depends how much you are drinking but I think spirits are always a bit scary as they are stronger and affect your liver more I reckon. (UK, female worker)

Additionally, a female participant in the UK thought that poor mental health could be a major long-term health concern of consuming alcohol.

Well I have had a first-hand experience of alcohol abuse as well so I think it can be very detrimental to personality and mentality. It can affect your mental state quite a lot and it for some people it can quite severely. I would say people don't think about that as much people would straight away think liver, all your organs which of course is terrible but I think it should be considered how the psychological and behavioural aspect are effected. (UK, female worker)

This participant's personal experience of alcohol abuse in her family influenced her perceptions on the long-term health effects of alcohol. She believed that there was very little discussion of the links between alcohol consumption and mental health, compared to the detrimental effects of alcohol consumption on the bodily organs.

Additionally, three participants in France mentioned the effects of alcohol consumption on the brain as well as the liver.

Yes. First of all there are physical problems. I think about the liver, the brain. Hmm I don't know more about it. (French, female student)

Hmmm, I'm mainly thinking about the liver. There are also dependence problems and impacts on the brain. I think it alters the cognitive capacities. (French, male student)

Although they did not necessarily mention mental health, participants did mention the detrimental effects of drinking on cognition.

On the physical level, I don't think there are differences. But on the neuronal level I was told that Absinth and Pastis are alcoholic beverages that have a greater impact on the brain. I don't know how to summarize it but I was told that it makes you "mad". (French, female student)

This participant mentioned two specific spirits (Absinth and Pastis) as the most damaging spirits for the brain and therefore for mental health issues.

5.3.5 "I don't think about it when I'm having a drink during a party"

Although the participants were aware of some negative effects of alcohol consumption, they stated that when on a *night out* they did not consider the health effects of alcohol and it was not something they discussed amongst their peers.

It's true that when you're drinking you are not really thinking about it. You are in a party with people, you just want to have fun. We don't really think about the impacts of alcohol. (French, male student)

If the participants were concerned over the effects of alcohol, they seemed to be more concerned over the short-term or immediate effects of alcohol.

5.3.5.1 Concerns about the 'morning after'

This sub-theme concerns the experiences and recollections about the 'morning after' a heavy drinking session. For some of the participants, the physical effects they experienced after a *night out* drinking session was a reason to lower their alcohol intake or stop drinking, rather than any longer term effects of excessive alcohol consumption on their health.

Well short term, the hangover, so the morning after. On the actual night the vomiting if someone drinks to excess I guess. (UK, male worker)

More afterwards so like the next day as you think oh why is it making me feel this way and what is it doing to my insides sort of thing. (UK, male student)

The second participant here referred to the effects alcohol has on his body and how this made him think about the detrimental effects of alcohol. Another participant in France mentioned the effects of alcohol consumption on her muscles and digestive system.

Ah, so concerning the short-term consequences. You feel as if your muscles are numb. You want to vomit. Your digestive system is out. You always want to eat and you're tired. (France, female worker)

This suggests that the perceptions of the health effects of alcohol were focused on immediate short-term effects.

5.3.5.2 "I don't drink enough so I am not worried about the long-term health effects of alcohol"

As previously demonstrated, the participants in both countries explicitly acknowledged a lack of thought about the health effects of alcohol when they were consuming alcohol with their peers. They also mentioned that the reason for this lack of concern was because of a perception that their current level of alcohol consumption

was not a matter of concern, and that it would only become a concern if they were drinking 'too much'.

Well you are aware of it but you don't think about it when you drink. I think my friends know when we are drinking too much and it may become a problem, well I would like to think they would (*laughs*). (UK, female student)

The participants mentioned that they did not have to consider the long-term health effects of alcohol at their age, and some felt that they did not drink at a level that would be of concern to their long-term health, or did not drink regularly enough for their drinking to be problematic.

You never think of the long-term health effects at my age as we are not abusing alcohol and you never think you are going to get liver failure. (UK, female worker)

The French participant below referred to her alcohol consumption as not being regular enough to be of concern to her health, perhaps implying that she perceived the regularity of alcohol consumption to be detrimental to health rather than quantity of alcohol consumed.

But concerning the long-term health effects, I don't think about it. My alcohol consumption is not regular enough for me to consider these effects. (French, female worker)

5.4 Discussion

First, the key results of this study will be summarised and then comparisons will be made to the literature.

Participants from both countries demonstrated a limited understanding concerning of the effects of alcohol consumption on long-term health outcomes. The only long-term effects of alcohol consumption that were identified included the adverse effects on the liver and kidneys, with the addition of one participant in the UK mentioning the effects of alcohol on mental health, and some French participants who mentioned adverse effects on cognition. Spirits were reported as being the most likely to cause these health conditions. This was similar to the results in the focus groups (Section 3.3.6.4) and survey (Section 4.3.9) where participants reported liver damage as a primary long-term health condition of consuming alcohol, and believed spirits to be the most involved. But in the focus groups they also considered alcohol addiction as a long-term health concern.

In addition, participants reported that they were not concerned about the effects of alcohol on their long-term health, particularly whilst consuming alcohol, nor did they consider that it influenced their alcohol consumption levels. Additionally, they believed that their current levels of alcohol consumption were not of any concern, and therefore they did not need to consider, or be concerned about, the effects of alcohol on their health. Any concerns they had about their alcohol consumption were focused on how they felt the 'day after' a period of heavy alcohol consumption (i.e. feeling hung-over, vomiting, muscle aches). These themes were characteristic of both countries.

The participants in both countries did not spontaneously discuss any positive health effects of alcohol unless prompted by the interviewer, and when prompted to do so the discussions were limited to the putative benefits of red wine. This theme was only evident among the UK participants. The participants in the UK stated that the media (i.e. television adverts, newspaper articles) provided them with this type of information, but the information they recalled during the interviews was vague and seemingly had little influence on their perceptions. However, a similar theme was found in focus groups across both countries (Section 3.3.6) and survey results (Section 4.3.9), where red wine was perceived as the healthiest drink type. In

addition, the focus groups revealed that these views were influenced by messages in the media. However, in the current interviews, the participants spoke in more detail about the direct effects of red wine on the heart. In terms of beneficial effects not directly related to health, the participants across both countries perceived that there were positive effects of alcohol consumption on behaviour, in particular socialising i.e. it helped with feelings of relaxation and confidence.

With the exception of red wine, the participants across both countries did not tend to distinguish between beverage types in terms of the beneficial or detrimental effects on health. However, the female participants in the UK believed that spirits, had lower calorie content compared to other drink types. This was similar to results in the focus groups (Section 3.3.6.1) but the UK participants rated vodka and red wine as the least calorific, and participants in Paris rated wine as the least calorific. The survey results found that the French participants linked spirits to weight gain much more than did the UK participants, who except beer tended to blame any kind of alcoholic beverage for weight gain (Section 4.3.9). An additional concern for some of the females in the UK interviews was a perception of the adverse effects of alcohol on the complexion of the skin.

Across the two countries the participants believed that there was an overall lack of information about the health effects of alcohol, and the participants possessed strong ideas about how to improve health information about alcohol. They believed that the current messages about alcohol in the media (i.e. television adverts, newspaper articles) often used shock tactics, as well as dramatic and patronising language. They believed that this style of information and messaging was not effective in teaching young people about the risks associated with alcohol consumption. However, some participants also suggested that 'horrible' images of the effects of alcohol might be effective as a deterrent. Participants also stated that the information provided in the media is dominated by the risks of driving under the influence of alcohol, the health risks associated with smoking and taking recreational drugs, and staying safe when drinking alcohol (i.e. getting home safely after a *night out*). A similar theme arose in the focus groups, where the participants believed that drug and cigarette education, as well as drink driving campaigns in the media outweighed the health information about alcohol that is shown in the media (Section 3.3.4.3).

A further theme that arose from the interviews was that information received from their family members was also dominated by discussions about how to stay safe when drinking, rather than the health effects of consuming alcohol. One participant in France did however receive health information from his family members, due to his family history of alcoholism. Again, similar to the focus groups, participants in the UK reported that information about the risks of smoking cigarettes and drug use was more prominent than health information about alcohol at school, college, and university.

Participants from both countries showed an eagerness for more information on the long-term health effects of alcohol. They suggested that they would like to see health information about alcohol online, specifically on social media, networking and photo sharing sites (e.g. Facebook, Instagram) due to the high usage of these types of platforms by young people. They also suggested the need for an increase in the use of images. Participants suggested that official organisations were the BBC and the NHS in the UK, and public service professionals in France. These findings support the literature that suggests that young adults use the internet and particularly social media websites to seek health information (Beck, Richard et al., 2014; Escoffrey et al., 2005; Hanauer, Dibble, Fortin, & Col, 2004; Simou, 2015; Vance, Howe, & Dellavalle, 2009) and that the credibility of the source influences how much the information is trusted (McNight & Chervany, 2001). While the efficacy and efficiency of traditional media campaigns are well documented, and have shown positive outcomes in terms of awareness and behaviour change (Anand, Gupta, & Kwatra, 2013), the evidence base for the effectiveness of online health interventions is less conclusive. However, the literature suggests that online based health interventions can be an effective way of reaching young people and are effective in promoting health behaviour change (Ritterband & Tate, 2009). This will be discussed in more detail on Chapter 6.

The participants in both countries stated that they trusted alcohol information provided by the Government, health professionals, and in France in particular public service professions such as the police, and fire service. However, they did not specifically state whether they used these services to gain information about the health effects of alcohol, with the exception of one participant in the UK who stated

that she used NHS websites as a health information tool. However, as previously discussed the evidence suggests that online health information seeking is high among young adults (Beck et al., 2014; Escoffrey et al., 2005; Hanauer, Dibble, Fortin, & Col, 2004; Simou, 2015; Vance, Howe, & Dellavalle, 2009;), but it is still unclear whether the same applies to seeking alcohol-related health information. The participants in the interviews also trusted information from their parents and family members but, as stated before, this only concerned information about staying safe, rather than the effects of alcohol on health. Uniquely, one participant in the UK received alcohol health information from his family members, due to a family history of alcoholism. Studies have shown that parents play a key role as a general health information source among adolescents, as well as peers (Gould & Mazzeo, 1982; Sussner, Lindsay, Gortmaker, & Kim, 2006). Within sexual health information young women were more likely to consult their mothers for information and young men favored peers (Thornburg, 1981).

The sources of information that were not considered to be trustworthy included mostly information provided by newspapers, as participants believed that articles are published with the motive of selling stories to sell newspapers, rather than informing the public about accurate information. Specific references to wine in the media were made (i.e. newspapers and television adverts) and how articles are published with contradictory health information about alcohol. Also, participants mentioned that television included advertisements promoting alcoholic beverages, as well as issuing health warnings about the consumption of alcohol, which they found confusing. This dual role of the media resulted in a lack of trust in the information provided. As previously discussed (Section 5.1) trust is important during online health seeking behaviour (e.g. Peterson, Aslani, & William, 2003). This will be discussed in more detail in Chapter 6.

A further important finding was that the participants in both countries reported that personally experiencing, or observing someone else experiencing, the adverse effects of alcohol (e.g. being hurt, or getting the stomach pumped in a hospital) had the most influence on their perceptions of the dangers of alcohol consumption. These experiences did not necessarily influence their perceptions of the health effects of alcohol, but it influenced their awareness of some of the dangers of consuming

alcohol and in some cases participants believed it had contributed towards a reduction in their levels of alcohol intake after their first hand experience of the adverse effects of alcohol consumption. This was also found among the participants in the focus groups (Section 3.3.5), but with the additional concern of embarrassing oneself on a night out or having responsibilities (i.e. work, college) the following day. This impact of personal or observed experiences of alcohol on awareness is supportive of the previously discussed (in the introduction of this Chapter) importance of personalisation in online health information (Briggs, Simpson, & DeAngeli, 2004).

To conclude, this study found that the participants had a limited understanding of the effects of alcohol on long-term health outcomes, nor did they describe feeling much concern over the long-term health effects. This lack of concern was particularly marked during a drinking occasion and any concern was about the short-term effects of the day after drinking had occurred. There was a consensus across the countries that there was a lack of information regarding the long-term health effects of alcohol in the media and during their educational lives. Participants' perceptions of current information regarding alcohol and health were mostly negative and they believed that smoking awareness, drinking alcohol under the influence, and staying safe whilst drinking dominated any information about alcohol and health. They also described a lack of trust in health information provided by the media and advertising due to conflicting information and dual roles. Importantly the participants showed an eagerness for more information about the long-term health risks of consuming alcohol and suggested that information should be placed on-line and specifically on social media sites, due to the high usage of these platforms amongst young adults. In terms of suggested content and style, the use of images and information provided by official organisations and health professionals was suggested as a way of reaching more young people. Lastly, participants' suggested personalising and making the information more relatable to young adults, and that this could have an impact on drinking behavior in young adults, and encourage them to think about the negative effects of alcohol consumption.

6 Chapter 6: General discussion

The thesis aimed to examine how young people in two European countries with different cultures of alcohol consumption (France and the UK) perceive the health risks and benefits associated with particular alcoholic beverages, specifically contrasting beers, wines and spirits. The project evaluated the factors that influence beverage selection, such as the drinking context, peer influence, beliefs about drink-specific effects and how different kinds of drink affect body weight.

There were four phases: pilot data were derived from a drinking diary phase of young people (18 to 24 years old) in each country and then, in the first main study, from 14 structured focus group sessions held within each country. The focus groups served to explore young people's attitudes towards alcohol consumption, their perceptions of the health effects of different types of alcohol and how these perceptions impact on their behaviour. The focus groups informed the development of the questions used in the survey phase. The quantitative survey phase, as well as exploring patterns of use and knowledge of alcohol content, also explored further what determines the "healthiness" and "un-healthiness" of drinks by asking questions about the natural and artificial ingredients in different drinks. Finally, the interview phase explored in greater depth some key issues that arose from the focus groups and the survey, particularly focusing on health information about alcohol that had been retrieved from the media and other sources, as well as the trustworthiness and effectiveness of this information in changing beliefs and drinking behaviour.

6.1 Overview of findings

6.1.1 Study 1: Online diaries

The pilot online diary phase was conducted to gain insight into young peoples drinking styles and habits in the two countries, and to gain a clear picture about the drinks consumed by young people in the two countries. The intention was to gather data on the quantity of alcohol consumed, the types of drinks consumed (including brands), who they consumed alcohol with, the location in which the drinking took place and any beliefs they held about the different drink types.

The main differences that were found between the two countries were that the French participants reported ‘mixing’ drinks on individual drinking occasions more often than those in the UK; the UK participants consumed alcohol in the home more often than the French participants (who reported consuming alcohol mostly in bars); and the UK participants reported pre-loading more often than the French. The higher consumption of alcohol at home in the UK supports the higher reporting of preloading behavior in the UK.

Beverage preference was also different in the two countries, with cider being the most-reported drink type consumed in the UK compared to very little overall consumption of cider in France. Among the males in the UK, beer was the most consumed beverage type (as well as cider) compared to wine for the French males. The most consumed beverage type for the French females was beer compared to cider among the UK females. The high consumption of beer among UK males is consistent with statistics as previously discussed (ONS, 2009) but the same report found that wine was the most consumed beverage type among females (ONS, 2009), in comparison to cider in the current study. The French results also differ from a report by Mäkelä et al. (2006), where wine was the most consumed drink type among French males and females. The females’ preference for beer in France is reflective of the decrease of overall consumption of wine in France (Ritchie, 2009). However, the increase of wine consumption in the UK is not necessarily reflected in the results found in this study.

The perceived healthiness of drinks did not seem to influence beverage choice in either country; however, price and speed of drunkenness influenced beverage choice in the UK; the French participants more often discussed drink types in terms of food pairing. The higher rate of ‘mixing’ among the French participants, compared to the UK could reflect of a stronger alcohol and food pairing culture. The price of alcohol influencing beverage preference in the UK is consistent with the evidence (Section 2.5) that young adults’ alcohol consumption is heavily influenced by cheap alcohol and promotions (Wagenaar, Salois, & Komro, 2009; Saffer, Dhaval, & Grossman, 2016; Kuo, Wechsler, Greenberg, & Lee, 2003). This is discussed in more detail later (Section 6.2.1).

By characterizing young people's drinking habits and brand choices, the data in this study informed areas of discussion in the focus groups, in particular by identifying beverage preferences among young people, common patterns of behaviour during drinking occasions and influences on beverage choice (e.g. price of alcohol). A number of key differences were found between the two countries which also informed areas of discussion in the focus groups, including beverage preferences, the difference in levels of pre-loading and mixing drinks, as well as the relationship between alcohol and food.

6.1.2 Study 2: Focus groups

The structured focus groups were conducted to understand better young people's attitudes towards alcohol consumption, their perceptions of the health effects of different types of alcoholic drink, and how these perceptions impact on their behaviour.

In both countries getting drunk was considered important when consuming alcohol, and beverage choice was influenced by the speed of intoxication, the taste of alcohol being disguised, and the cost and availability of the alcohol. Beer and wine were considered the most cost effective when the intention was to be intoxicated. This supports and further develops the findings in study 1 (Section 2.4), with the addition of taste as an influence on beverage preference and the shared behavior across both countries. This finding is concerning due to the potential impact on the amount of alcohol consumed and has implications for policy. It could also be taken as evidence to support the UK government's ban on selling alcohol at cost price (Woodhouse and Ward, 2014), as the price of alcohol is clearly a factor when considering the amount of alcohol consumed and the type of alcohol consumed. Offers on alcoholic drinks, such as 'buy-one-get-one-free' and 'three for the price of two' are therefore likely to influence purchasing and ultimately the amount of alcohol consumed. Such offers distort the expected relationship between the number of drinks people are paying for and the amount of drinks they are consuming. The reported importance of taste is not surprising, as previous research has found that taste is reported as an influential factor when choosing an alcoholic beverage (Wright et al., 2008a; Glanz, Basil, Maibach, Goldberg, & Synder, 1998). Adding strong flavours and/or sweeteners to

alcoholic drinks may make higher-strength drinks more palatable, by masking the taste of the alcohol and therefore may make people consume more alcohol. This could apply particularly to ready-to-drink beverages (RTDs) or 'alcopops', as they are known to disguise the taste of alcohol more than other drinks types due to their sweet taste making them easy to drink (Commonwealth of Australia, 2008). RTD's include fruit flavoured wines, cider, spirit based RTD's, and fruit flavoured beers. This is supported by previous research that bitterness of taste in alcohol influenced alcohol intake, in that a lower rating of bitterness was a predictor of preference. Scotch intake was highest amongst those participants who rated it as the sweetest and least bitter (Lanier, Hayes and Duffy, 2005). In light of these findings, policy makers and alcohol producers must consider not only the beverage preferences of young adults but the influences on beverage preference, such as price and taste.

Any perceived health effects of different alcoholic drinks did not influence beverage choice in either country, nor were they influenced by a drink type's low alcohol content. Some of the UK participants reported choosing clear spirits and avoiding cider and cocktails when on a diet, but when drinking to get drunk these influences were ignored. The theme of concerns over the calorie contents (Section 3.3.6.1) of different drinks was also stronger in the UK. This is perhaps not surprising as it may reflect an increase in the awareness of calorific content of different drinks as a way of reducing alcohol consumption in the UK (RSPH, 2014). For example, websites and applications on smart phones now allow people to calculate the calorific content of different drinks and find out a drink type's food equivalent (e.g. Drinkaware.co.uk). These efforts to increase awareness of calorie content are partly in response to a national public health concern about obesity (Lobstein & Jackson-Leach, 2011) and eating disorders in Europe (Favaro, Ferrera, & Santonastaso, 2003). Therefore providing nutritional information on alcoholic beverages, particularly calorie content has recently entered the public discourse (LGA, 2016). Calorie-labeling on food products has also been shown to be effective in informing better food choices and in decreasing weight gain in young adults (Nikolaou, Hankey & Lean, 2014), as well as reducing calorie intake in restaurants by providing calorie-labels on menus (Roberto et al., 2010; Dumanovsky, Huang, Nonas, Matte, Bassett, & Silver, 2011; Pang and Hammond, 2013) Current European legislation exempts alcoholic beverages containing more than 1.2% alcohol-by- volume from the obligation to list its

ingredients and provide nutritional information (Royal Society for Public Health: Vision, Voice and Practice ([RSPH], 2014). However, the UK's Local Government Association (LGA) and European Union (EU) organisations believe that providing the public with nutritional information about alcohol will help tackle the obesity crisis and inform better choices (LGA, 2016). A recent survey found that 67% of the UK public supported the addition of calorie labels on packaging of alcoholic drinks (RSPH, 2014). However, some studies have found little or no effect of calorie-labeling on calorie intake (Downs, Loewenstein, & Wisdom, 2013; Elbel, Kersh, Brescoll, & Dixon, 2009; Finkelstein, Strombotne, Chan, & Krieger, 2011) and some have even found calorie-labeling to increase calorie intake in restaurants (Harnack, French, Oakes, Story, Jeffrey, & Rydell, 2008). Bollinger, Leslie, and Sorensen (2011) found that in Starbucks most calorie reductions occurred in terms of food calories, as opposed to beverage calories. The research suggests mixed evidence regarding calorie-labelling effects on weight gain and calorie intake and is even less conclusive for its effects on alcoholic beverages.

Greater consumption of higher-strength alcohol was reported at weekends across both countries. Abstaining during the week was reported by some participants due to the feeling that they were unable or unwilling to consume alcohol without the intention of getting drunk i.e. limiting intake. This reinforces the notion of consuming alcohol with the sole intention of getting drunk. Additionally, in the current study feeling embarrassed due to drunken behaviour and the responsibilities of college, university or work the day following a drinking occasion were considered influential in limiting alcohol consumption, in addition to any short-term physical effects the day after a drinking occasion i.e. hangover, vomiting. This is supportive of previous research that has reported a greater concern over the short-term effects rather than long-term health effects of alcohol among young adults (deVisser, Smith, Abraham, & Wheeler, 2012). The notion of alcohol being synonymous with the pursuit of drunkenness has also been noted in the literature and further, it seems to be a 'default' choice for peer socialising in adulthood. For example, Seaman and Ikegwuonu (2010) found that participants (eighty 18 to 24 year olds in the UK) found it difficult to imagine alternatives to alcohol consumption for getting groups of peers and young adults together, they also reported that consuming alcohol encouraged openness and the breaking down of barriers during group interactions. This is also in line with evidence

of people using alcohol as a means of coping with social fears due to alcohol-related expectancies to relieve social anxiety (e.g. Book, Carrie, & Randall, 2002). Whether alcohol reduces anxiety is not conclusive and in fact, some evidence suggests that based on pharmacological properties alcohol actually increases stress and anxiety (Spencer & Hutchinson, 1999; Polivy, Schueneman, & Carlson, 1976). But in terms of informing a better understanding of young adults' expectations of alcohol consumption and implications for policy alcohol clearly has a strong association with socialising.

Participants tended to justify their drinking styles and behaviours in different ways. In Paris and London a key justification was the lack of education during their school days and in the media about the health effects of alcohol; they perceived that drug and cigarette education dominated any health information they received. They also portrayed the information that was provided as contradictory and confusing, as well as using shock tactics, and dramatic and patronising language. This led to a lack of trust in information from the media. Some participants expressed the need for more awareness and information about the adverse health effects of alcohol. The literature suggests that health information that elicits an emotional response is more effective (Robertson, 2008). For example, a study showed that appeals using fear had an impact on young people's attitudes towards smoking (Farrelly, Niederdeppe, & Yarsevich, 2003). A review of reviews of mass media campaigns aimed at reducing levels of smoking found one study where a group exposed to a provocative mass media campaign changed their smoking behaviour more than a control group that did not see the campaign (Naidoo, Warm, Quigley, & Taylor, 2004). But evidence also suggests that these 'emotional appeals' may have more impact on attitudes than on actual behaviour. This supports behaviour theory that while increasing public knowledge and beliefs with information is important, it does not however elicit behaviour change (Robertson, 2008). For example, Hastings, Stead and Webb (2004) found that fear health campaigns have less of an impact in real world social marketing campaigns than in psychological experiments, and suggest that it could be due to the subjects having forced exposure to the material in the experiments, that often consist of students, and measure only the short-term effects. Some studies have also shown that the use of fear in promoting behaviour change is not effective for all behaviours, for example, a meta-analysis of interventions to prevent HIV showed it was an ineffective

strategy in HIV prevention (Albarracin, Gilette, Earl, Glasman, & Durantini, 2005). It is clear from the evidence that the content and language used needs to be considered and campaigns that elicit an emotional response, particularly fear, can be effective in altering attitudes and knowledge (at least short-term) but perhaps not effective in behaviour change.

Wine, particularly red wine, was reported to be the healthiest drink type in both countries, which is consistent with other studies (e.g. Wright et al., 2008a; Wright et al., 2009b; Pederson et al., 2010). In France, the positive perception of wine reflected a strong cultural relationship with wine, reinforced by parental and family tradition. Contrastingly, in the UK, positive beliefs about wine tended to reflect media reports about the beneficial effects of wine on specific aspects of health, such as promoting a healthy heart. The UK beliefs reflecting media reports are surprising in light of the theme discussed previously of there being a perceived lack of information about alcohol and its health effects in the media, as well as the information being perceived as contradictory and confusing. However, the strong and positive cultural relationship with wine in France is not surprising due to France traditionally being a wine drinking (and producing) country, compared to the UK where beer has dominated consumption for some time (although these distinctions are narrowing; Ritchie, 2009). It could also suggest that health information provided by the media may be less effective in France, compared to the UK.

Alcohol content (% ABV) was not considered relevant to health in either country; instead, the perceived “naturalness” or “artificiality” of the drink and the nature of the production process were considered to be of more concern. In France, beer, cider and wine were perceived to be healthier than spirits due to associations with artisanal production. Spirits were considered unhealthy because their production process was considered less “natural”. Conversely, spirits (as well as wine) in the UK were perceived to be relatively healthy because they were regarded as having fewer additives and were, therefore, less “artificial,” but spirits (white and dark) in the UK were also reported as the most likely to cause liver damage. Therefore it is unclear what they believe to be the most concerning and influential when considering specific beverage types’ effects on health. The association between healthiness and natural production was strongest in London and Paris. Stronger beliefs held in the two

capitals is not surprising as they were considered to be culturally dominant compared to other regions in the countries.

Having an understanding of lay meanings and beliefs regarding health and illness are critical for any preventive or promotional endeavor to succeed (World Health Organization, 2005; Kwok & Sullivan, 2007). The literature around lay people's definitions of health in general is vast and multi-faceted (Hugher & Kleine, 2004). However, research on food choice, as discussed in Section 3.4, shows a strong association between naturalness and healthiness of food products (Evans, Challemaison, & Cox, 2010). Natural products are seen among consumers as inherently healthier (Rozin, 2005) and are therefore preferred. For example, a study conducted on undergraduate students (18 to 24 year olds) in America found that the preference for natural products was substantial and was stronger for food than for medicines (Rozin et al., 2004). It has been proposed that consumers judge the naturalness of foods based on the history of the food item, in terms of how its made rather than its actual content (Rozin, 2006). Rozin (2005) also suggested that consumer naturalness perceptions of food can be reduced when additives with non-natural characteristics are in contact with food (i.e. in the form of packaging or contained in the product). This reflects the finding in the UK that the perceived additive content of different drinks influenced participant health beliefs. Numerous survey studies have also found that consumers are concerned about "chemicals" in food (European Commission, 2006; Miles, Brennan, Kuznes, Ness, Ritson, & Frewer, 2004) and one study found that risk perceptions of chemicals in food were positively correlated with preference for natural food (Dickson-Spillmann, Siegrist, & Keller, 2011). Gender differences have also been reported in preference for naturalness, for example in the context of food, women have been shown to demonstrate more concern than men for risks such as additives, pesticides, bacteria and fat (Dosman, Adamowicz, & Hrudey, 2001; Knight & Warland, 2004). Studies have also shown that women are more likely to consume organic food products (Lockie, Lyon, Lawrence, & Grice, 2004) and be more interested in the health and natural aspects of food (Roininen, Lahteenmaki, & Tuorila, 1999), compared to men. In the current study, both male and female participants reported a concern over the "naturalness" of alcohol, however there were gender differences in terms of the drinks they perceived to be most natural. Both genders also shared a lack of concern for the long-term

health effects of alcohol, but the females in the UK did report avoiding certain drink types when on a diet more often than males in the UK. It is also clear from the literature that social and cultural settings influence perceptions of health, and both preventative and remedial behaviours (e.g. Furnham, 1994). Therefore it would be expected that different health beliefs related to alcohol would exist between the UK and France, and would also support the finding of a stronger set of beliefs held in the two capitals. It is clear from the literature that people interpret health in different ways, but issues of ‘naturalness’ dominate the discourse in terms of food products and alcohol in the current study. This has implications for policy that will be discussed further in Section 6.2.1.

Participants in both countries highlighted liver damage and addiction to alcohol as the primary long-term health concerns. Hall et al. (1992) also found that participants perceived liver damage to be a major long-term health concern of alcohol abuse. However, the participants in the current studies, when on a “night out”, gave little thought to the chronic health effects of alcohol. Health concerns were related to alcohol’s acute impacts on the individual: vomiting, the consequences of loss of control and, most commonly, feeling hung-over. ‘Binge-drinking’ was seen as a temporary style of drinking that young people go through. There was also a consistent view in both countries that they would eventually develop a healthier relationship with alcohol as they aged. This concept of ‘maturing out’ of heavy alcohol consumption is supported in the literature and suggests that substance use rates decline during the mid-twenties due to significant life changes and events (e.g. Bachman, Wadsworth, O’Malley, & Schulenberg, 1997). Studies have shown that individuals moderate their alcohol intake prior to and during the transition to marriage, and this continues into the first year of marriage (Miller-Tutzauer, Leonrad, & Windle, 1991). Power, Rodgers and Hope (1999) also found that heavy levels of drinking reduced between the ages of 23 and 33 (21.4% to 13% in men, 6.4% to 3.4% in women), but increased with those who divorced, and heavy drinking rates persisted among un-married men (19.1%) and women (5.1%). However evidence also suggest as previously discussed (Chapter 1) that those who binge drink in their 20’s are more likely to binge drink in their 40’s (Institute of Alcohol Studies, 2009; Jefferis, Power, & Manor, 2005). The finding in the current study implies an understanding of a concept of “mature = healthy” drinking that can be attained. This is concerning due to

the potentially harmful amount of alcohol that could be consumed during the period when this concept is believed to be true and it is clear from the evidence discussed here that many variables can influence whether alcohol consumption becomes more moderate or not.

To conclude, this study highlighted a number of key issues. Firstly, the UK and France shared a lack of thought about the genuine health effects of different drink types and any concerns about alcohol consumption were related to its acute and short-term effects. Secondly, the two countries differed in terms of the perceived healthiness of the different beverage types, with the exception of wine. Lastly, both countries shared a lack of emphasis on the alcohol content when determining the healthiness of different beverage types. Instead any thoughts of health were related to the perceived “naturalness” and “artificiality” of different drink types, as well as the production process.

6.1.3 Study 3: Survey

The survey was conducted to explore participants’ health beliefs concerning different beverage types, including how they relate different beverage types to specific diseases and knowledge of the amounts of alcohol in each beverage type. The survey also examined further the issue of what might contribute to perceptions of “healthiness” or “un-healthiness” in a drink, by asking questions about the extent to which the different drink types contained natural and artificial ingredients, as well as asking them for estimates of sugar content.

The UK participants gave higher estimates of what constitutes “moderate” alcohol consumption, compared to the French participants. No significant difference was found for estimates of the maximum number of drinks that can be consumed without risking health but the participants’ estimates were high and closer to the definition of binge-drinking (WHO, 2014) (i.e. 5 or more drinks on a drinking occasion). This is concerning due to the potential amount of alcohol that could be consumed and its effects on health; the literature clearly suggests that binge-drinking is harmful to health (Naimi, Brewer, Miller, Okoro and Mehrotra, 2007; Stickley, Jukkala and Norström, 2011). It also highlights that recommended ‘safe drinking’ levels are not

impacting on the amounts of alcohol consumed among the participants in the current study. The evidence suggests that there is a lack of knowledge of ‘safe drinking’ levels among young people (deVisser & Birch, 2012; Gill & O’May, 2006).

Estimates of the alcohol contents of different drinks were similar apart from the French participants estimating lower percentage alcohol contents for whisky and rum (in comparison with the UK participants), which were further from the actual values. The French participants also overestimated the alcohol content of alcopops more so than the UK. As previously discussed (Section 4.1) research has also shown poor accuracy in estimating the alcohol percentages of different drink types among young adults (Hasking, Shortell, & Machalek, 2005; Dowling, Clark, & Corney, 2006). These inaccurate estimates are potentially very harmful as they could put people at risk when consuming these particular beverage types.

Red wine was considered the most beneficial to health in both countries, followed by white wine; spirits were rated across both countries as the least beneficial to health. This is consistent with Wright et al. (2008a; 2008b) who found that red wine was rated the healthiest alcoholic drink. But it is worth noting that these studies did not include spirits (or cider) when comparing health beliefs. There was also a significant drink-by-nationality interaction: red and white wines were rated as much more beneficial to health by the French compared to the UK participants. For the UK participants, all drink types were rated similarly apart from the wines. A similar (inverse) profile was obtained when asking about generic “detrimental effects”. In both countries, clear spirits were rated as the most likely to affect physical appearance, but UK participants rated beer, cider and spirits similarly and worse than wine, whereas in France, cider was rated alongside wine.

Consistent with the literature (e.g. Hall et al., 1999) and results from the previous study (focus groups), participants rated liver damage as the major long-term health concern. The participants in this study also rated liver damage as significantly more likely than other diseases. In terms of the drinks most involved in diseases, the French participants tended to link liver cirrhosis with consumption of dark spirits and the UK participants tended to attribute risk equally across all drink types. As previously discussed (Section 4.4) there is evidence to suggest a strong link between spirits and

liver cirrhosis (Kerr, Fillmore, & Marvy, 2000; Roizen, Kerr, & Fillmore, 1999). In the survey results a similar profile emerged in relation to cardiovascular effects and stroke; clear spirits were associated with breast cancer. Beer was significantly associated with weight gain in both countries, but the association was stronger in France. The French participants' also linked spirits to weight gain much more than UK participants, who after beer tended to blame any kind of alcoholic beverage for weight gain. The consistent trend of the UK participants attributing risk of diseases equally across all drink types, and the French participants holding strong beliefs of beverage-specific effects has implications for health education and policy. In France there needs to be a greater emphasis that all beverage types confer risk and that the key factor determining risk is the alcohol content of the drink, not the beverage type. Contrastingly, the UK participants presented more realistic views on beverage-specific effects of alcohol and this could be reflective of alcohol education in the UK.

Across both countries, red wine was rated as containing the most natural ingredients and alcopops the least. The French participants had a stronger tendency to associate naturalness with beer and a stronger tendency to report using labeling (and taste less so) as an indicator of naturalness. Ratings of sugar content were similar between the two countries for all of the main drink types, except for the UK participants estimating a higher percentage of sugar in cider and the French estimating higher sugar contents in dark spirits. The French using labeling and UK participants using packaging as indicators of naturalness is not surprising as previously discussed (Section 4.5), evidence suggests that consumers use visual packaging cues to form health judgments of products (Schifferstein, 2006). There is a large evidence base for removing colour and brand design on cigarettes as it is thought to significantly reduce misleading perceptions of risk based on package design (Scheffels & Lund, 2013). For example, a survey-based study conducted across four countries (UK, USA, Canada, Australia) found that one-fifth of smokers incorrectly believed that some cigarette brands were less harmful than others, and the colour of the labeling influenced perceptions of relative risk (gold, silver, blue and purple were seen as less harmful than red or black), as well as label verbiage ("light/mild" and slim were considered less harmful than "regular") (Muttie et al., 2011). Hammond, Dockrell, Arnott, Lee and McNeil (2009) also found that cigarette brands labeled 'smooth' were significantly less harmful compared with a 'regular' variety. The colour of the

packaging was also associated with perceptions of risk: packs with a gold logo were rated as lower health risk (53%) and easier to quit (31%), compared to a red logo.

It is worth noting that in the current study it was uncertain what the participants defined as the 'label' on a drink, i.e. it was unclear whether they were referring to the front or back labeling. Typically, front labeling tends to consist of more imagery and less information, compared to the back, where more written information is placed, including alcohol strength, mandatory health warnings, address of manufacturer or producer (Wansink, 2003). This would be an important distinction to make in future research as evidence suggests that consumers use front label information on food and beverage products to access a product's benefits or hazards (e.g. Roe, Levy, & Derby, 1999). It is clear that product labeling influences health perceptions, which has implications for policy and alcohol producers, in terms of how alcohol products are marketed. Particular attention needs to be paid to colour, placement of verbiage and the types of words or slogans used on product labeling, as it can potentially mislead consumers in terms of health beliefs.

Considering that the UK is typically considered a "beer drinking" country and France a "wine drinking" country, a difference in the views surrounding these two categories of drink might be expected; however the participants' beliefs did not differ much for these two categories of drink (wine and beer), with the exception of "naturalness" being more strongly held in France. However, there were differences in the views held for spirits in the two countries, suggesting that a country's culture in terms of drinking preference does not necessarily influence young adults' perceptions of healthiness.

Overall it is clear that in the UK and France young people's perceptions of health effects are confused with issues of "naturalness" rather than alcohol content. There was also evidence of inaccuracies in estimating the percentage alcohol contents of different drink types and the number of drinks that can be consumed without risking health. Lastly, there were major differences between the two countries in terms of the drinks types most associated with disease, which have implications for different approaches to health education in the two countries.

6.1.4 Study 4: Structured interview study

Fourteen interviews (seven in each country) were conducted to address key issues that arose from the previous two studies (focus groups and survey) and to explore areas that might be relevant to alcohol health interventions. The aim was to explore, among self-declared “binge drinkers”, their knowledge of the positive and negative health effects of different alcoholic drinks, where they obtained health information about alcohol from (e.g. newspapers, magazines, TV adverts, social media), the sources of information they trust and do not trust, what sources are most influential, and suggestions of ways to improve access to health information about alcohol.

Participants’ knowledge about the long-term health effects of alcohol was limited to the effects on the liver and kidneys, and spirits were most strongly associated with these conditions. Despite some knowledge of the long-term health effects, the participants reported little concern, particularly during alcohol consumption, so this knowledge did not influence patterns of consumption. Similarly to the previous two studies, concerns over consumption levels were focused on short-term effects i.e. feeling hung-over, vomiting, muscle aches. Participants’ knowledge of possible positive health effects of alcohol was even more limited, and only the UK participants discussed red wine’s potential benefits on health. However, this knowledge was vague and was expressed more in terms of information they had heard in the news and not necessarily something they believed in. This was in contrast to the findings from the focus groups, where both the French and UK participants reported red wine benefits to health (Section 3.3.6.3). The lack of reporting in the current study of alcohol’s positive effects could have been due to the nature of the interviews, in that they did not allow much time for the discussion of such issues, as it was not the primary purpose of the interviews (compared to the focus groups). The focus was more on the sources of health information and trustworthiness of these sources. However, the participants across both countries recognised alcohol’s relaxant effects and its ability to increase confidence in social situations as the most positive effects of alcohol consumption. As previously discussed (Section 6.1.2) alcohol consumption is believed to enhance socializing through decreasing anxiety (e.g. Seaman & Ikegwonu, 2010). This is concerning as the literature has also suggested that alcohol

may in fact increase anxiety (e.g. Spencer & Hutchinson, 1999), therefore young adults holding these expectancy effects of alcohol may increase alcohol consumption. Participants across both countries did not carry strong beliefs about beneficial and detrimental health effects of different drink types. However, the UK females perceived gin as the least calorific and alcohol, in general, was related to weight gain and adverse effects on skin complexion.

The lack of knowledge about alcohol's effects on health was attributed to an overall lack of information provided by the media, schools (or any other form of education), friends and family. They particularly believed that the strategies and information used by the media (i.e. television advertising, newspaper articles) were not effective in informing young people about the long-term health effects of alcohol. Awareness was dominated by the dangers of drink-driving and staying safe when drinking alcohol (e.g. getting home safely after a night out), as well as the health risks associated with smoking and taking recreational drugs. Alcohol health-awareness communications by parents, although trusted, were also reported as being dominated by messages about staying safe when drinking. Participants also reported that they would trust alcohol health information from health care professionals and government sources, although they did often use this as a way of retrieving health information. But this was due to an overall lack of reported health seeking behaviours. However, it has been reported that official sources or those endorsed by a government do not necessarily secure public trust, and by connecting messages to a government source may in some cases have a negative effect (Robertson, 2008). The *Choosing Health* White Paper concedes that messages coming from government can seem 'preachy, boring and too much like hard work' (Department of Health, 2004). In response to this some organisations try to distance their messages from their true official sources. For example, NHS North West has chosen to deliver their public health programme through an independent community based organisation, as they believe public confidence in government messages to be low (Mooney, 2007). Information provided by newspapers was the least trusted source due to the perceived motive of writing stories to sell newspapers rather than informing the public of accurate information. The contradictory nature of media reporting also influenced participants' trust in the media, with specific references to wine being reported as both healthy and unhealthy. As previously discussed, trust is an important factor in health seeking behaviour (Peterson, Aslani,

William, 2003). For example, Huh (2005) reported that the greater the trust in drug-related health information, the more likely the participants would communicate with doctors, talk to peers, and seek more health-related information. Other studies have found similar findings in general health related information (e.g. Hou, 2010; Hong, 2008). Therefore it is paramount to understand and provide young people with health information that they trust if it is to effect change in alcohol-related behaviour.

There was also a shared view that more could be done to raise awareness of the long-term health effects of alcohol, and that this information should be delivered online, and specifically on social media, networking and photo sharing sites (e.g. Facebook, Instagram) due to the high usage of these types of platforms by young people. Additionally, the use of images was favored, and there was a desire for information to be provided by official organisations, such as the government and health care professionals, for example the NHS in the UK and the police in France, due to them being perceived as trusted sources. The theme of providing health information about alcohol online is consistent with research, as a high proportion of young people are reported to use the internet as a source of health information (Simou, 2015; Beck et al., 2014; Hanauer, Dibble, Fortin, & Col, 2004). For example, a survey-based study in France found that 45% of young adults (18-30 year olds) used the internet for health purposes and considered the internet as a valid source of health advice (Beck et al., 2014). Positive effects of online-based interventions and advice have been found, albeit small effects, on behaviours such as tobacco use (e.g. Shahbab & McEwen, 2009) and physical activity (e.g. Vandelanotte, Spathonis, Eakin, & Owen, 2007). Studies have also demonstrated a high impact of social media applications in terms of reaching people, due to the high number of users and the high potential for engaging specific target groups (Mangold & Faulds, 2009). Social media based information also offers an alternative space where sensitive health issues can be discussed, as evidence suggests that adolescents and young adults have difficulty accessing health services, and building therapeutic relationships with professional health care providers (Chambers, Ried, McGrath, & Finley, 1997; Ackard & Neumark-Sztainer, 2001). Colineau and Paris (2007) found that adults used social networking sites, in the form of chat rooms to discuss sensitive issues and complex information with health professionals. The use of images has also been shown to be very effective in increasing awareness of the health effects of smoking (Li & Grigg, 2009; Thrasher,

Hammond, Fong, & Arillo-Santilla, 2007; Borland et al., 2009). Imagery use in alcohol advertisement has also been shown to dominate over responsible drink warnings in text form (e.g. Thomsen & Fulton, 2007). In light of this evidence, social media and the combined use of images could be an effective way of reaching young adults and informing them of the dangers associated with alcohol.

In both countries, personal experience or observing someone experiencing adverse effects of alcohol (e.g. being hurt, getting their stomach pumped in a hospital) had a strong influence on patterns of consumption. This was also a theme shared across both countries in the focus groups (Chapter 3), with the additional concern of embarrassing oneself on a night out or having responsibilities (i.e. work, college) the following day. These findings, and the evidence as previously discussed that personalisation of online health information is an important factor in health seeking behaviour (Briggs, Simpson, & DeAngeli, 2004) has implications for policy, in terms of where health information is best placed to have the most impact on drinking behaviour.

Overall the analysis revealed that there is a need for more accessible and relatable information regarding the long-term health effects of alcohol. In light of the current findings and evidence in the literature health information about alcohol could be very effective if placed online, and to gain the most reach it should be on sites that are highly used by young adults (i.e. social media sites). The use of images and personalised information that is relatable are also highly recommended to create the most impact on alcohol health awareness. For the information to be trusted and to have the most impact on behaviour the information should be from official government sources or health care professionals, as well as public officials such as the emergency services and police in France.

6.2 Implications

6.2.1 Policy implications

The findings have implications for the alcohol industry and for alcohol education. In recent years, one strategy for reducing alcohol intake has been the introduction of unit labeling on alcohol and providing “official” safe drinking limits in terms of alcohol unit measures. However, evidence (Buykx et al., 2015; de Visser & Birch, 2011) and the results from this thesis (study 2 and study 3) would suggest that people do not monitor their alcohol intake using units. Knowledge of units or standard drinks was particularly low in France, but this is not surprising as there is currently no requirement for alcohol content in units to be displayed on alcohol labeling, compared to the UK where a government agreement with the alcohol industry to encourage manufacturers to label alcoholic beverages with information about alcohol in terms of “units” exists and is widely used (Farke, 2011). In addition, participants had poor accuracy when estimating the alcohol strength of different drink types, particularly in France. A further finding across all of the studies was the notion of alcohol being synonymous with the pursuit of drunkenness, which is also supported in the literature (e.g. Seaman & Ikegwonu, 2010). This again suggests that alcohol education focusing on unit intake per session and the promotion of ‘sensible drinking’ contrasts with how alcohol is used among young people. Therefore, it seems unlikely that it will influence behavioural change in young people. The poor accuracy in making alcohol strength estimates could also support the need for alcohol producers and manufacturers to produce a wider-range of low-alcohol products (Knai et al., 2015). By increasing the availability of low-alcohol products it could impact on young adults overall alcohol intake in the short-term and accompanied with increasing knowledge could effect alcohol consumption long-term.

The participants in both countries showed a lack of emphasis on alcohol content (% ABV) of different beverage types as a key health-related indicator; instead thoughts about the hazards of drinking were shifted towards concerns over specific drinks’ “naturalness” or “artificiality,” as well as the production process. Such a view needs to be challenged: the emphasis needs to be placed back on the alcohol content as the primary contributor to harm. This challenge may be greater in France, where stronger beverage-specific views appear to be held.

Although participants (in both countries) highlighted liver damage as a primary long-term health concern of alcohol consumption, when consuming alcohol on a “night out” little thought was given to the health effects of alcohol. Health concerns were related to acute impacts on the individual: vomiting, the consequences of loss of control and most commonly feeling hung-over. Other concerns not related directly to health were doing something embarrassing whilst drunk and responsibilities such as work or study. This suggests that a focus in alcohol education needs to be placed on the long-term health effects of alcohol and that young people need to be made aware of other alcohol related health problems, for example cancer.

The focus group results (Section 3.3.1) and survey results (Section 4.3) showed that a number of factors influenced beverage preference, including the perceived speed of intoxication, the taste of the alcohol being disguised, location, occasion and the cost and the availability of alcohol. The importance of cost and availability to facilitate intoxication perhaps has the most impact on implications for policy. It also supports the UK government's ban on selling alcohol below cost price (Woodhouse & Ward, 2014) and the proposed introduction of a minimum unit price (Her Majesty's Government, 2012). The finding that the taste of alcohol being disguised influences beverage preference and consumption also has implications for policy and alcohol manufacturers. Taste as the most influential factor when choosing an alcoholic beverage is supported in the literature (e.g. Glanz, Basil, Maibach, Goldberg, Synder, 1998). Perhaps a reduction in drinks that are produced to target people (typically young people) with a low tolerance for the taste of alcohol, by masking the alcohol with sugar and sweeteners, could reduce the amount of alcohol consumed.

Study 3 (Section 4.3.9) revealed that the French tended to link risk of disease with consumption of either white or dark spirits, whereas in the UK risk was attributed equally to all drink types. However, beer in both countries was identified as the most likely to promote weight gain, although the association was stronger in France; after beer, participants in the UK tended to associate all drink types with weight gain. This consistent result that UK participants attribute risk equally to all drink types could be as a result of alcohol health campaigns, and perhaps French campaigns and education about alcohol focuses more on beverage-specific effects. These findings would also point to alcohol policy and information provided on labels to state the sugar contents

of different alcoholic drinks. The results also suggest that more information should be provided in the form of calorie content due to young people in both countries being concerned about weight gain and choosing drink types due to often-mistaken perceptions about low-calorie content. Although the female participants showed more concern over weight gain issues, the male participants may not have felt comfortable discussing issues of weight as readily as the females. There is mixed evidence concerning calorie-labelling effects on calorie intake and weight gain, and the evidence is even less conclusive for its effects on alcoholic beverages.

In both countries, the chronic effects of alcohol on health are not a serious concern for young people. However, the acute effects on health and well-being are immediately recognised, but the possible long-term effects are largely overlooked because young people do not expect to become long-term consumers of alcohol in excess. This finding demonstrates a need to make young people aware that binge-drinking (increasingly common in France as well as the UK) is not without longer-term health risks and that these risks are not reduced by drinking beverages perceived to be healthier, e.g. red wine.

The focus groups (Section 3.3.4.3) and interviews (Section 5.3.1) revealed that participants believed there to be a lack of information about the long-term health effects of alcohol not only in the media but also from family and during school education. The interview study provided more insight into this issue and revealed that young people in both countries believed that information about the health risks associated with alcohol was dominated by information about smoking health risks, drink driving and staying safe whilst drunk. As previously discussed (Section 1.5) governments in the UK and other parts of Europe, including France have made numerous attempts to promote sensible drinking and reduce alcohol related harm (e.g. Change for Life, a television campaign set up by the DH in the UK and 2340 France website set up by an independent charity, whose objective is to promote WHO drinking guidelines). Yet the findings in this thesis would suggest that these attempts to inform people of the dangers of alcohol consumption are not effective at generating accurate perceptions of the health effects of alcohol among young adults in the UK and France. It could imply that current campaigns and strategies are not reaching this specific age group. They also believed that alcohol information would be more

accessible if it was placed on social media and photo sharing platforms, due to the high use of these sources by young adults. The evidence shows that health promotion programmes based on providing information are most effective when they target specific groups and use a source or message that suits the target audience (Boyce, Robertson, & Dixon, 2008). Additionally, there was a shared belief that the information should be accompanied by images and that this would have the most impact on increasing awareness. There is evidence to suggest that imagery in health campaigns is effective, particularly in increasing the awareness of the health effects of smoking (Li & Grigg, 2009; Thrasher, Hammond, Fong, & Arillo-Santilla, 2007; Borland et al., 2009). The results in the this thesis and other evidence would suggest that by increasing health education related to the long-term effects of alcohol and by tailoring it to target young adults would increase awareness and encourage behaviour change.

6.3 Research strengths

A strength of this research is the use of both qualitative and quantitative methodologies to gain insight into drinking beliefs. The preliminary findings (study 1: Online diaries) informed the drink types and scenarios discussed and the topics of the focus groups, which then went on to inform the quantitative survey phase. The interviews (study 4) allowed the researcher to explore deeper the concerning finding that emerged from the previous studies that young people in both countries share a lack of knowledge or concern about the long-term health effects of alcohol.

6.4 Limitations and possible future research

A problem with the survey (Chapter 4) was that the large number of questions asked might have impacted on the number of participants who were willing to complete the survey. Many participants either did not complete the survey or answered the questions inappropriately. Therefore, a shorter version would be recommended if followed up in order to reduce the high dropout rate. However, the length of the survey was determined in large part due to the collaboration with a French institution (Toulouse University) who had some additional requirements as part of our wider collaboration. The ongoing collaboration was essential for the final study in the thesis.

In the focus groups and survey studies, only participants who consumed alcohol regularly were recruited. A prospective study could recruit low alcohol consumers and abstainers, so that beliefs and attitudes towards different drink types could be compared. Previous research has shown that, although the highest rates of binge-drinking are reported among 18-24 year olds in the UK (ONS, 2015a), there has also been a marked decrease in alcohol consumption in terms of units per week; there is also a growing proportion of abstainers among this age group (Lifestyle Statistics, 2012). Looking at abstainers and low frequency drinkers would provide novel insights into what influences beliefs among young adults with different drinking styles i.e. those who choose not to consume alcohol or those that drink within 'safe limits'. It is clear from the evidence discussed in this thesis that it is paramount to understand the influences behind alcohol consumption among a broad range of young adults, if alcohol education and interventions are to be effective.

The use of recruitment companies in the focus group study (Chapter 3) and for the survey phase (Chapter 4) limited the samples to self-selecting groups who expressed an interest in participating in the studies and therefore may not comprise genuinely "representative" samples of the target population of young drinkers in the two countries. However, the companies employed have many years of experience recruiting to particular characteristics from panels of many thousands of potential participants in the UK and France. The researcher liaised with the recruitment agencies throughout the sampling phase to ensure that age, gender and work/study status were appropriate. The recruitment was the most practical and time efficient for exploratory work of this kind. If replicated, alternative sampling methods might be used, for example, opportunistic sampling. By recruiting participants from locations/premises where alcohol is typically consumed by young people, i.e. pubs, bars and clubs, it will be possible to increase representation of harder-to-recruit individuals such as persistent binge drinkers.

The fact that the focus group locations were restricted to four locations in each country also necessarily limited the representativeness of the sample in the focus group study. However, it would be impossible to conduct a qualitative study of this kind that could truly represent the two countries in their entirety (also, population representativeness is not a typical goal of qualitative studies). The researcher assumed

that it would be most informative to collect most data from London and Paris; these are the largest, most culturally-dominant cities in each country; the additional locations were chosen to give additional provincial representation for purposes of contrast, drawn from different geographic regions.

A further limitation of the survey and focus group studies is that it was difficult to judge people's abilities to estimate the sugar and alcohol contents of different drink types, as well as unit values, due to the very wide range in the amounts present in different beverage types. For example, the alcohol contents of cider and beer can vary enormously, a range that has become more extended with the increasing availability of alcohol-free and low-alcohol drinks in the UK and France (Knai et al., 2015). Although participants were asked to estimate the 'average' alcohol contents of these drinks, the variations within the beverage types make the answers less informative than might be the case. Therefore, if replicated, it would be useful to incorporate an experimental part of the study to explore knowledge of different drink types through pouring exercises. The accuracy of sugar content estimates is perhaps less important as this line of questioning was included primarily to explore further the participants' attitudes and beliefs around 'naturalness' and 'artificiality'.

6.5 Conclusions

There has been some convergence of young people's drinking practices and beverage choices between the UK and France. In France, young people acknowledge a generational change in drinking patterns (moving closer to a UK profile in non-family settings). In both countries, beliefs about the health consequences of drinking alcohol are confused with issues of drink "quality". Young people related "healthiness" more readily to issues of beverage "naturalness," "authenticity" and branding rather than to issues of alcohol content and alcohol-associated illness. Drink additives are cited as a health issue more so than alcohol content.

In both countries, the acute effects on health (via binge-drinking) were more salient than the chronic effects, and the primary concern relating to long-term consumption was addiction rather than damage to physical health. Young people expressed that their lack of knowledge about the long-term health effects of alcohol was due to

inadequate and inaccessible information in the media and during their formal education. They believed that alcohol information should be directed towards social media and photo sharing platforms and that the information should involve salient imagery.

The notion that wine is healthier than other beverages is widely held in both countries, but this belief is stronger in France than in the UK and it has different determinants in the two countries. Also, in France, spirits are identified as particularly problematic for health, much more so than in the UK. In the UK, apart from wine, all beverages are considered to have a similar potential for causing health problems. Liver damage was identified as a key problem linked to chronic alcohol consumption; in France, it was most strongly associated with drinking dark spirits, whereas in the UK it was not linked to any particular beverage type(s). Beer in both countries was identified as the most likely to promote weight gain, although the association was stronger in France and after beer participants in the UK tended to associate all drink types to weight gain. This has implications for health education and policy. In France there needs to be a greater emphasis on understanding that all beverage types confer risk and that the key factor determining risk is the alcohol content of the drink, not the beverage type.

References

- Ackard, D. M., & Neumark-Sztainer, D. (2001). Health care information sources for adolescents: Age and gender differences on use, concerns and needs. *Journal of Adolescent Health, 29*, 170–176. doi: [http://dx.doi.org/10.1016/S1054-139X\(01\)00253-1](http://dx.doi.org/10.1016/S1054-139X(01)00253-1)
- Albarracin D, Gilette J, Earl A, Glasman LR, Durantini M (2005). ‘A test of the major assumptions about behaviour change: a comprehensive look at the effects of passive and active HIV prevention interventions since the beginning of the epidemic’. *Psychological Bulletin, 6*, 856–97. doi: 10.1037/0033-2909.131.6.856
- Alcohol Concern and Balance. (2012). Drinking to get drunk: Influences on young adult drinking behaviours. Retrieved from http://www.alcoholconcern.org.uk/wp-content/uploads/woocommerce_uploads/2014/10/Drinking_to_get_drunk.compressed.pdf
- Alcohol policy UK. (2016). News and analysis of the alcohol harm reduction field. Retrieved from <http://www.alcoholpolicy.net/2016/04/nudging-pubs-and-zero-alcohol-awards.html>
- Alulis, S., & Linn, D. (2013). Do focus groups give insight into understanding the alcohol use behavior of college athletes or not? *National Conference of Undergraduate Research*. Retrieved from <http://www.ncurproceedings.org/ojs/index.php/NCUR2013/article/view/663>
- Anand, S., Gupta, M., & Kwatra, S. (2013). Social media and effective health communication. *International journal of social science and interdisciplinary research, 8*, 39-46. Retrieved from <http://indianresearchjournals.com/pdf/IJSSIR/2013/August/5.pdf>
- Anderson, P., Bruijn, A., Angus, K., Gordon, R., Hastings, G. (2009). Impact of alcohol advertising and media exposure on adolescent alcohol use: a systematic review of longitudinal studies. *Alcohol and Alcoholism, 44*, 229–243. doi:

<http://dx.doi.org/10.1093/alcalc/agn115>

Ares, G., & Deliza, R. (2010). Studying the influence of package shape and colour on consumer expectations of milk desserts using word association and conjoint analysis. *Food Quality and Preference*, 8, 930-937.

doi:10.1016/j.foodqual.2010.03.006

Bachman, J.G., Wadsworth, K.N., O'Malley, P.M., Johnston, L.D., & Schulenberg, J.E. (1997). Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities. Mahwah, New Jersey: Lawrence Erlbaum Associates. Retrieved from

<https://www.ncjrs.gov/App/publications/abstract.aspx?ID=176728>

Baglietto, L., English, D.R., Hopper, J.L., Powles, J., & Giles, G.G. (2006). Average volume of alcohol consumed, type of beverage, drinking pattern and the risk of death from all causes. *Alcohol and Alcoholism*, 41, 664-671. doi:

10.1093/alcalc/agl087

Bagnardi, V., Blangiardo, M., La Vecchia, C., & Carrao, G. (2001). A meta-analysis of alcohol drinking and cancer risk. *British Journal of Cancer*, 85, 1700-05.

doi:10.1054/bjoc.2001.2140

Baik, M., suk, h., suh, t. & kim, y. 2011. Organic food package design management in SMEs. Proceedings of IASDR2011, 4th world conference on design research, delft, netherlands. Retrieved from <http://ced.kaist.ac.kr/pdf/paper.pdf>

Baum-Baicker, C. (1985). The health benefits of moderate alcohol consumption: A review of the literature. *Drug and Alcohol Dependency*, 15, 207-27. doi: 0376-8716/85/\$03.3

Beck, F., Richard, J.-B., Nguyen-Thanh, V., Montagni, I., Parizot, I., & Renahy, E. (2014). Use of the Internet as a Health Information Resource Among French Young Adults: Results From a Nationally Representative Survey. *Journal of Medical Internet Research*, 16, 128-161. doi: [10.2196/jmir.2934](https://doi.org/10.2196/jmir.2934)

- Becker, U., Grønbaek, M., Johansen, D., Thorkild, I.A., & Sørensen, T.I. (2002). Lower risk for alcohol-induced cirrhosis in wine drinkers. *Hepatology*, 4, 868-875. doi: 10.1053/jhep.2002.3210
- Bertolote, J.M., & Fleischmann, A. (2005). Suicidal behavior prevention: WHO perspectives on research. *American Journal of Medical Genetics Part C: Seminars in Medical Genetics*, 133, 8-12. doi: 10.1002/ajmg.c.30041
- Bessaoud, F., & Daurès J.P. (2008). Patterns of alcohol (especially wine) consumption and breast cancer risk: A case-control study among a population in Southern France. *Annals of Epidemiology*, 6, 467-75. doi:10.1016/j.annepidem.2008.02.001
- Bhattacharjee, A. (2002). Individual trust in online firms: scale development and initial test. *Journal of management information systems*, 9, 211-241. Retrieved from <http://www.jstor.org/stable/40398572>
- Bobak, M., Hertzma, C., Skodova, Z., & Marmot, M. (1999). Socioeconomic status and cardiovascular risk factors in the Czech Republic. *International Journal of Epidemiology*, 28, 46–52. doi:10.1038/sj.ejcn.1601678
- Boffetta, P., & Hashibe, M. (2006). Alcohol and Cancer. *Lancet Oncology*, 7, 149- 156. doi: [http://dx.doi.org/10.1016/s1470-2045\(06\)70577-0](http://dx.doi.org/10.1016/s1470-2045(06)70577-0)
- Bollinger, B., Leslie, P., & Sorensen, A. (2011). Calorie posting in chain restaurants. *American Economic Journal: Economic Policy*, 3, 91–128. doi: 10.3386/w15648
- Boluarte, T., Mossialos, E., & Rudisill, C. (2011). The impact of alcohol policies across Europe on young adults' perceptions of alcohol risks. *CESifo Economic Studies*, 57, 763-788. doi:10.1093/cesifo/ifr025

- Book, S. W., & Randall, C. L. (2002). Social anxiety disorder and alcohol use. *Alcohol Research and Health*, 26, 130-135. Retrieved from http://pubs.niaaa.nih.gov/publications/arh26-2/130-135.htm?icid%5Bmaster%5D=vid~7f554128-f879-4837-8cf8-85cc8237848e&icid%5Bil726%5D=rlt~1423014231~land~2_4757_direct
- Bone, P. F., & France, K. R. (2001). Package graphics and consumer product beliefs. *Journal of business and psychology*, 15, 467-489. doi: 10.1023/A:1007826818206
- Bongaerts, B.W.C., Goeij, A.F.P.M., Van den Brandt, P.A., & Weijenberg., M.P. (2006). Alcohol and the risk of colon and rectal cancer with mutations in the K- ras gene. *Alcohol*, 38, 147-154. doi: <http://dx.doi.org/10.1016/j.alcohol.2006.06.003>
- Borland, R., Wilson, N., Fong, G.T., Hammond, D., Cummings, K.M., Yong, H.H.,...McNeil. (2008). Impact of graphic and text warnings on cigarette packs: findings from four countries over five years. *Tobacco Control*, 18, 358-364. doi:10.1136/tc.2008.028043.
- Bosetti, C., Gallus, S., Franceschi S., Levi, F., Bertuzzi, M., Negri, E., ... La Vecchia, C. (2002). Cancer of the larynx in nonsmoking alcohol drinkers and in non-drinking tobacco smokers. *British Journal of Cancer*, 87, 516–18. doi: 10.1038/sj.bjc.6600469
- Brache, K., & Stockwell, T. (2011). Drinking patterns and risk behaviors associated with combined alcohol and energy drink consumption in college drinkers. *Addictive Behaviours*, 36, 1133-1140. doi:10.1016/j.addbeh.2011.07.003
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101. doi:org/10.1191/1478088706qp063oa
- Briggs, P., Simpson, B., & deAngeli, A. (2004). Personalisation and trust: A reciprocal relationship? Springer: Netherlands.

- British Medical Association Board of Science. (2008). *Alcohol misuse: tackling the UK epidemic*. British Medical Association: London.
- Brown, L.M. (2005). Epidemiology of alcohol-associated cancers. *Alcohol*, 35, 161-168. doi: <http://dx.doi.org/10.1016/j.alcohol.2005.03.008>
- Brugger-Anderson, T., Ponitz, V., Snapinn, S., & Dickstein, K. (2009). Moderate alcohol consumption is associated with reduced long-term cardiovascular risk in patients following a complicated acute myocardial infarction. *International Journal of Cardiology*, 133, 229-232. doi:10.1016/j.ijcard.2007.12.046
- Bryson, C.L., Mukamal, K.J., Mittleman, M.A., Fried, L.P., Kitzman, D.W., & Siscovick, D.S. (2006). The association of alcohol consumption and incident heart failure: The Cardiovascular Health Study. *Journal of the American College of Cardiology*, 48, 305-11. doi:10.1016/j.jacc.2006.02.066
- Buykx, P., Gavens, L., Lovatt, M., Gomes de Matos, E., Holmes, J., Hooper., & Meier, P. (2015). An investigation of public knowledge of the link between alcohol and cancer. University Sheffield and Cancer Research UK. Retrieved from http://www.cancerresearchuk.org/sites/default/files/an_investigation_of_public_knowledge_of_the_link_between_alcohol_and_cancer_buykx_et_al.pdf
- Cabinet Office. Prime Minister's Strategy Unit. (2004). *Alcohol Harm Reduction Strategy for England*. London: Cabinet Office.
- Castellsague,X., Munoz,N., De Stefani, E., Victora, C.G., Castelletto, R., Rolon, P.A., Quintana, M.J. (1999). Independent and joint effects of tobacco smoking and alcohol drinking on the risk of oesophageal cancer in men and women. *International Journal of Cancer*, 82, 657–64. doi: 10.1002/(SICI)1097-0215(19990827)82:5<657::AID-IJC7>3.0.CO;2-C
- Cater, J. K. (2011). Skype a cost-effective method for qualitative research. *Rehabilitation Counselors & Educators Journal*, 4, 10-17. doi: 10.3402/qhw.v9.24152

- Celhay, F., Boysselle, J. & Cohen, J. (2015). Food packages and communication through typeface design: the exoticism of exotypes. *Food quality and preference*, 39, 167-175. [doi:10.1016/j.foodqual.2014.07.009](https://doi.org/10.1016/j.foodqual.2014.07.009)
- Chambers, C. T., Reid, G. J., McGrath, P. J., & Finley, G. A. (1997). Self administration of over-the-counter medication for pain among adolescents. *Archives of Pediatric and Adolescent Medicine*, 151, 449–455.
doi:10.1001/archpedi.1997.02170420019003
- Chan, A.M., Muhlen, D., Kritz-Silverstein, D., & Barrett-Connor, E. (2009). Regular alcohol consumption is associated with increasing quality of life and mood in older men and women: The Rancho Bernardo Study. *Maturitas*, 62, 294-300.
doi:10.1016/j.maturitas.2009.01.005
- Chao, C. (2007). Associations between beer, wine, and liquor consumption and lung cancer risk: a meta-analysis. *Cancer Epidemiology, Biomarkers and Prevention*, 11, 2436-1447. doi: 10.1158/1055-9965.EPI-07-0386
- Chao, C., Haque, R., Van Den Eeden, S. K., Caan, B. J., Poon, K.-Y. T., & Quinn, V. P. (2010). Red wine consumption and risk of prostate cancer: The California Men's Health Study. *International Journal of Cancer*, 126, 171–179.
doi: 10.1002/ijc.24637
- Charters, S. (2006). *Wine and Society: The Social and Cultural Context of a Drink*. Elsevier Butterworth-Heinemann: Oxford.
- Chen, W.Y., Rosner, B., Hankinson, S.E., Colditz, G.A., & Willett, W.C. (2011). Moderate alcohol consumption during adult life, drinking patterns, and breast cancer risk. *The Journal of the American Medical Association*. 17, 1884-90. doi: 10.1001/jama.2011.1590
- Chiva-Blanch, G., Urpi-Sarda, M., Llorach, R., Rotches-Ribalta, M., Guillen, M., Casas, R...Estruch, R. (2012). Differential effects of polyphenols and alcohol of red wine on the expression of adhesion molecules and inflammatory cytokines

- related to atherosclerosis: a randomized clinical trial. *American Journal of Clinical Nutrition*, 95, 326-334. doi: 10.3945/ajcn.111.022889
- Choi, H. K., & Curhan, G. (2004). Beer, liquor, and wine consumption and serum uric acid level: The third national health and nutrition examination survey. *Arthritis and Rheumatism*, 51, 1023-1029. doi: 10.1002/art.20821
- Clement, J., Kristensen, T., & Grønhaug, K. (2013). Understanding consumers' in store visual perception: the influence of package design features on visual attention. *Journal of retailing and consumer services*, 20, 234-239. doi:10.1016/j.jretconser.2013.01.003
- Colineau, N., & Paris, C. (2010). Talking about your health to strangers: understanding the use of online social networks by patients. *New Review of Hypermedia and Multimedia*, 16, 141-160. Doi: 10.1080/13614568.2010.496131
- Commonwealth of Australia. (2008). Standing committee on Community Affairs: ready-to-drink alcohol beverages. Retrieved from http://www.aph.gov.au/binaries/senate/committee/clac_ctte/alcohol_beverages/report/report.pdf
- Corrao G., Bagnardi, V., Zambon, A., La Vecchia, C. (2003). A meta-analysis of alcohol consumption and the risk of 15 diseases. *Preventive Medicine*, 38, 613–9. doi:10.1016/j.ypmed.2003.11.027
- Dallongeville, J., Marecaux, N., Ducimetie`re, P., Ferrieres, J., Arveiler, D., Bingham, A...Amouyel, P. (1998). Influence of alcohol consumption and various beverages on waist girth and waist-to-hip ratio in a sample of French men and women. *International Journal of Obesity and Related Metabolic Disorders*, 22, 1178–83. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/9877253>
- Damianaki, A., Bakogeorgou, E., Kampa, M., Notas, G., Hatzoglou, A., Panagiotou, S., Gemetzi, C., Kouroumalis, E., Martin, P.-M. and Castanas, E. (2000). Potent inhibitory action of red wine polyphenols on human breast cancer cells. *Journal of*

Cellular Biochemistry, 78, 429–441. doi:10.1002/1097-4644(20000901)78:3<429::AID-JCB8>3.0.CO;2-

Deakin, H., & Wakefield, K. (2013). Skype interviewing: Reflections of two PhD researchers. *Qualitative Research*, 0, 1-14. doi: 10.1177/1468794113488126

Denscombe, M. (2003) .*The Good Research Guide*. Maidenhead: Open University Press.

Department of Health (2004). Choosing Health: Making healthy choices easier. London: The Stationery Office. Retrieved from http://www.healthlinklibraries.co.uk/pdf/Delivering_Choosing_Health_DH_4105713.pdf

Department of Health and the Home Office. (2007). *Safe. Sensible. Social: The next steps in the National Alcohol Strategy*. London Department of Health and the Home Office. London: HMSO.

Department of Health (DH) Home Of Health, Home Office, Department for Education and Skills And Department of Culture, Media and Sport. (2007). *Safe. Sensible. Social. The next steps in the National Alcohol Strategy*. London: HMSO. Retrieved from http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_075219.pdf

Department for Transport. (2015). Estimates for reported road traffic accidents involving illegal alcohol levels: 2013 (Second provisional), self-reported drink and drug driving for 2013/14. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/402698/rrcgb-drink-drive-2013-prov.pdf

- Department of Health (DH) and the Home Office (2015). Policy paper: 2010 to 2015 government policy: harmful drinking. London: HMSO. Retrieved from <https://www.gov.uk/government/publications/2010-to-2015-government-policy-harmful-drinking/2010-to-2015-government-policy-harmful-drinking>
- De Oliveira, S., Foster, D., Harper, M., Seidman, C.E., Smith, J.D., Breslow, J.L., & Brinton, E.A. (2000). Alcohol Consumption Raises HDL Cholesterol Levels by Increasing the Transport Rate of Apolipoproteins A-I and A-II. *Circulation*, *102*, 2347-2352. doi: 10.1161/01.CIR.102.19.2347
- deVisser, R.O., & Birch, J. (2012). My cup runneth over: Young people's lack of knowledge of low-risk drinking guidelines. *Drug and Alcohol Review*, *31*, 206-212. doi: 10.1111/j.1465-3362.2011.00371.x
- deVisser, R., Smith, J., Abraham, C., & Wheeler, Z. (2012). Gender, alcohol, and interventions. Alcohol Research UK. Retrieved from http://www.thedrinkingpitch.com/nsw/wp-content/downloads/Gender_alcohol_and_interventions_study.pdf
- Devoulyte, K., Stewart, S.H., & Theakston, J.A. (2006). Is beer the drink of choice for women with alcohol use problems? Positive alcohol outcome expectancies as a function of beverage type. *Addictive Behaviors*, *31*, 1133-1143. doi:10.1016/j.addbeh.2005.08.006
- Di Castelnuovo, A., Rotondo, S., Iacoviello, L., Donato, M.B., & De Gaetano, G. (2002). Meta-analysis of wine and beer consumption in relation to vascular risk. *Circulation*, *105*, 2836-2844. doi: 10.1161/01.CIR.0000018653.19696.01
- Dickson-Spillmann, M., Siegrist, M., & Keller, C. (2011). Attitudes towards chemicals are associated with preference for natural food. *Food quality and preference*, *22*, 149-156. doi:10.1016/j.foodqual.2010.09.001
- Dosman, D. M., Adamowicz, W. L., & Hrudey, S. E. (2001). Socioeconomic determinants of health- and food safety-related risk perceptions. *Risk Analysis*, *21*, 307-317. doi: 10.1111/0272-4332.212113

- Dowling, N., Clark, D., & Corney, T. (2006). Responsible drinking knowledge: A comparison of Australian apprentices and college students. *Youth studies Australia*, 25, 42 – 48. Retrieved from <http://search.informit.com.au/fullText;res=AEIPT;dn=155018>
- Downs, J.S., Wisdom, J., Wansink., B., & Loewenstein, G. (2013). Supplementing menu labeling with calorie recommendations to test forFacilitation effects.’*American Journal of Public Health* 103, 1604–609. doi: 10.2105/AJPH.2013.301218
- Drinkawarecouk. (2016). New government alcohol unit guidelines. Retrieved from <https://www.drinkaware.co.uk/check-the-facts/what-is-alcohol/new-government-alcohol-unit-guidelines?gclid=Cj0KEQiA2b20BRDj4buduIGy9EBEiQAhgMGFe2kK5ZmDtzMIIDlx1cfprJYjRDhsKK1MO13lJeAL78aArdD8P8HAQ>
- Dumanovsky, T., Huang, C.Y., Nonas, C.A., Matte, T.D., Bassett, M.T., & Silver, L.D. (2011). Changes in energy content of lunchtime purchases from fast food restaurants after introduction of calorie labelling: cross sectional customer surveys. *British Medical Journal*, 343, 4464-4475. doi: <http://dx.doi.org/10.1136/bmj.d4464>
- Duncan, B.B, Chambless L.E, Schmidt M.I, Folsom A.R, Szklo M, Crouse III. Jr, Carpenter, M.A. (1995). Association of the waist-to-hip ratio is different with wine than with beer or hard liquor consumption. *American Journal of Epidemiology*, 142, 1034–1038. Retrieved from <http://aje.oxfordjournals.org/content/142/10/1034.long>
- Dutta-Bergman, M. (2003). Trusted online sources of health information: differences in demographics, health beliefs, and health-information orientation. *Journal of Medical Internet Research*, 3, 21-26. doi: 10.2196/jmir.5.3.e21
- Elbel, B., Kersh, R., Brescoll, V.L., & Dixon, L.B. (2009). Calorie Labeling and Food Choices: A first look at the effects on low-income people in New York City.’’ *Health Affairs*, 28, 1110–21. doi: 10.1377/hlthaff.28.6.w1110

- El-Guebaly, N. (2007). Investigating the association between moderate drinking and mental health. *Annals of Epidemiology*, *17*, 55-62.
doi:10.1016/j.annepidem.2007.01.013
- Ellison, C., Zhang, Y., McLenna, E., & Rothman, J. (2001). Exploring the relation of alcohol consumption to risk of breast cancer. *American Journal of Epidemiology*, *154*, 740–47. doi: 10.1093/aje/154.8.740
- Escoffery, C., Miner, K. R., Adame, D. D., Butler, S., McCormick, L., & Mendell, E. (2005). Internet use for health information among college students. *Journal of American College Health*, *53*, 183-188. doi:10.3200/JACH.53.4.183-188
- Estruch, R., Sacanella, E., Mota, F., Chiva-Blanch, G., Antu´nez, E., Casals, E... Urbano-Marquez, A. (2011). Moderate consumption of red wine, but not gin, decreases erythrocyte superoxide dismutase activity: A randomised cross-over trial. *Nutrition, Metabolism and Cardiovascular Disease*, *21*, 46-53.
doi:10.1016/j.numecd.2009.07.006
- European Alcohol Policy Alliance. (2016, November 25). France adopts new law on alcohol. Retrieved from http://www.eurocare.org/media_centre/eurocare_newsletter/2009/august_september_2009/news_from_the_member_states/france_adopts_new_law_on_alcohol
- European Commission. (2006). Special Eurobarometer: Health and food. Retrieved from http://ec.europa.eu/health/ph_publication/eb_food_en.pdf
- Evans, G., Challemaison, B., & Cox. (2016). Consumers' choice-blindness to ingredient information *Appetite*, *54*, 557–563.
doi:http://dx.doi.org/10.1016/j.appet.2010.02.014
- Farke, W. (2011). Health warnings and responsibility messages on alcoholic beverages- a review of practices in Europe. Retrieved from file:///Users/victoriabarber/Desktop/WP5%20-%20Alcohol%20labelling%20practices%20in%20Europe%20-%202014-02-11.pdf

- Farrelly, M.C., Niederdeppe, J., & Yarsevich, J. (2003). Youth tobacco prevention mass media campaigns: past, present, and future directions. *Tobacco Control, 12*, 35–47. doi:10.1136/tc.12.suppl_1.i35
- Finkelstein, E.A., Strombotne, K.L. Chan, N.L., & Krieger, J. (2011). Mandatory menu labeling in one fast-food chain in king county, Washington. *American Journal of Preventive Medicine, 40*, 122–27. doi:
<http://dx.doi.org/10.1016/j.amepre.2010.10.019>
- Foster, J.H., & Ferguson, C. (2013). Alcohol ‘Pre-loading’: A Review of the Literature. *Alcohol and Alcoholism, 49*, 213-226.
doi: <http://dx.doi.org/10.1093/alcalc/agt135>
- Fox, M. (2011, October 11). Centre for Disease Control and Prevention: Alcohol abuse costs U.S. \$224 billion a year. Retrieved from
<http://www.cdc.gov/features/alcoholconsumption/>
- Furnham, A. (1994). Explaining health and illness: lay perspectives on current and future health, the causes of illness, and the nature of recovery. *Social Science Medicine, 39*, 715-725. Retrieved from
<http://www.ncbi.nlm.nih.gov/pubmed/797386>
- Garber, L.L., Hyatt, E.M., & Boya, Ü.Ö. (2009). The effect of package shape on Apparent volume: an exploratory study with implications for package design. *Journal of marketing theory and practice, 17*, 215-234. doi: 10.2753/MTP1069-6679170302
- Gill, J.S., & O’May, F. (2006). People seem confused about sensible drinking messages. *British Medical Journal, 332*, 302–3. doi: 10.1136/bmj.332.7536.302-a
- Gill, P., Stewart, K., Treasure, E., & Chadwicl, B. (2008). Methods of data collection in qualitative research: interviews and focus groups. *British Dental Journal, 204*, 291-295. doi:10.1038/bdj.2008.192

- Glanz, K., Basil, M., Maibach, E., Goldberg, J., & Synder, D. (1998). Why Americans eat what they do: taste, nutrition, cost, convenience, and weight control concerns as influences on food consumption. *Journal of the academy of nutrition and dietetics*, *10*, 118-1126. doi: [http://dx.doi.org/10.1016/S0002-8223\(98\)00260-0](http://dx.doi.org/10.1016/S0002-8223(98)00260-0)
- Goddard, E. (2006). Smoking and drinking among adults, 2006. *General Household Survey*. Retrieved from <http://iasnew.onepiecejigsaw.com/uploads/pdf/UK%20alcohol%20reports/ghs2006-smoking-and-drinking-report.pdf>
- Gordon, R., Heim, D., & MacAskill, S. (2012). Rethinking drinking cultures: A review of drinking cultures and a reconstructed dimensional approach. *Public Health*, *126*, 3-11. doi:10.1016/j.puhe.2011.09.014
- Gould, A. W., & Mazzeo, J. (1982). Age and sex differences in early adolescent's information sources. *The Journal of Early Adolescence*, *2*, 283-292. doi: 10.1177/027243168200200311
- Graves, A.B., Duijn, V.M., Chandra, V., Fratiglioni, L., Heyman, A., Jorm, A.F...Hofman, A. (1991). Alcohol and tobacco consumption as risk factors for Alzheimer's disease: A collaborative re-analysis of case-control studies. *International Journal of Epidemiology*, *20*, 48-57. doi: 10.1093/ije/20.Supplement_2.S48
- Graziano, F., Bina, M., Giannotta, F., & Ciairano, S. (2012). Drinking motives and alcoholic beverage preferences among Italian adolescents. *Journal of adolescence*, *35*, 823-831. doi:10.1016/j.adolescence.2011.11.010
- Green, C.A., Polen, M.R., Janoff, S. L., Castleton, D.K., & Perrin, N.A. (2007). "Not getting tanked": Definitions of moderate drinking and their health implications. *Drug and Alcohol Dependence*, *86*, 265-273. doi: 10.1016/j.drugalcdep.2006.07.002
- Grønbaek, M., Jensen, M.K., Johansen, D., Sorensen, T.I.A., & Becker, U. (2004).

- Intake of beer, wine and spirits and risk of heavy drinking and alcoholic cirrhosis. *Biomedical Research*, 37, 195-200. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/15455647>
- Grønbaek, M., Deis, A., Sørensen, T.I.A., Becker, U., Schnohr, P., & Jensen, G. (1995). Mortality associated with moderate intake of wine, beer, or spirits. *British Medical Journal*, 310, 1165–1169. doi: <http://dx.doi.org/10.1136/bmj.310.6988.1165>
- Gruenewald, P. J., & Ponicki, W.R. (1995). The relationship of alcohol sales to cirrhosis mortality. *Journal of Studies on Alcohol*, 6, 635- 641. doi: <http://dx.doi.org/10.15288/jsa.1995.56.635>
- Gunzerath, L., Faden, V., Zakhari, S., & Warren, K. (2004). National Institute on Alcohol Abuse and Alcoholism report on moderate drinking. *Alcoholism, Clinical and Experimental Research*, 28, 829-47. doi: 10.1097/01.ALC.0000128382.79375.B6
- Hall, W. (1995). Changes in the public perceptions of the health benefits of alcohol use, 1989 to 1994. *Australian and New Zealand Journal of Public Health*, 20, 93-95. doi: 10.1111/j.1467-842X.1996.tb01344.x
- Hall, W., Flaherty, B., & Homel, P. (1992). The public perception of the risks and benefits of alcohol consumption. *Australian Journal of Public Health*, 16, 38-42. doi: 10.1111/j.1753-6405.1992.tb00023.x
- Hammond, D., Dockrell, M., Arnott, D., Lee, A., & McNeill, A. (2009). Cigarette pack design and perceptions of risk among UK adults and youth. *The European Journal of Public Health*, 6, 631-637. doi: <http://dx.doi.org/10.1093/eurpub/ckp122>
- Hanauer, D., Dibble, E., Fortin, J., & Col, N. F. (2004). Internet use among community college students: Implications in designing healthcare interventions. *Journal of American College Health*, 52, 197-202. doi: 10.3200/JACH.52.5.197-202

- Handing, E. P., An del , R., Kadlecova, P., Gatz, M., & Pedersen, L.N. (2015). Midlife alcohol consumption and risk of dementia over 43 years of follow-up: A population-based study from the Swedish twin registry. *Journals of Gerontology: Medical Sciences*, 0, 1-7. doi:10.1093/gerona/glv038
- Harnack, L.J., French, S.A., Oakes, J.M., Story, M.T., Jeffrey, R.W., & Rydell, S.A. (2008). Effects of Calorie Labeling and Value Size Pricing on Fast Food Meal Choices: Results from an Experimental Trial. *The International Journal of Behavioral Nutrition and Physical Activity*, 5, 1–13. doi: 10.1186/1479-5868-5-63
- Hasking, P., Shortell, C., Machalek, M. (2005). University students' knowledge of alcoholic drinks and their perception of alcohol-related harm. *Journal of Drug Education*, 35, 95–109. doi: 10.2190/9Y34-F5XR-AQV5-KEL8
- Hastings, G., Stead, M., & Webb, J. (2004). Fear appeals in social marketing: strategic and ethical reasons for concern. *Psychology and Marketing*, 1 21, 961–86. doi: 10.1002/mar.20043
- Haw, K., & Hadfield, M. (2011). Video in Social Science Research. London: Routledge.
- Hay-Gibson, N.V. (2009) Interviews via VoIP: Benefits and disadvantages within a PhD study of Small to Medium Enterprise's. *Library and Information Research*, 33, 39–50. Retrieved from <http://www.lirjournal.org.uk/lir/ojs/index.php/lir/article/view/111#sthash.CSNU6cdy.dpuf>
- Hebert, L.E., Scherr, P.A., Beckett, L.A, Funkenstein, H.H., Albert, M.S., Chown, M.J., & Evans, D.A. (1992). Relation of smoking and alcohol consumption to incident Alzheimer's disease, *American Journal of Epidemiology*, 135, 347–355. Retrieved from <http://aje.oxfordjournals.org/content/135/4/347>

- Her Majesty's Government. (2012). The Government's Alcohol Strategy. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224075/alcohol-strategy.pdf
- Hibell, B., Guttormsson, U., Ahlström, S., Balakireva, O., Bjarnason, T., Kokkevi, A., Kraus, L. (2011). The 2011 ESPAD Report: Substance Use Among Students in 36 European Countries. Retrieved from http://www.espad.org/uploads/espad_reports/2011/the_2011_espad_report_full_2012_10_29.pdf
- Hines, M., & Rimm, B. (2001). Moderate alcohol consumption and coronary heart disease: A review. *Postgraduate Medical Journal*, 77, 747–752. doi:10.1136/pmj.77.914.747
- Holmes, J., Meng, Y., Meier, P.S., Brennan, A., Angus, C., Campbell-Burton, A., ... Purshouse, R.C. (2014). Effects of minimum unit pricing for alcohol on different income and socioeconomic groups: a modelling study. *Lancet*, 383, 1655-1664. doi:10.1016/S0140-6736(13)62417-4
- Huang, W., Qui, C., Winblad, B., Fratiglioni, L. (2002). Alcohol consumption and incidence of dementia in a community sample aged 75 years and older. *Journal of Clinical Epidemiology*, 10, 959 – 964. doi: [http://dx.doi.org/10.1016/S0895-4356\(02\)00462-6](http://dx.doi.org/10.1016/S0895-4356(02)00462-6)
- Huckle, T., Sweetsur, P., Moyes, S., & Casswell, S. (2008). Ready to drinks are associated with heavier drinking patterns among young females. *Drug and Alcohol Review*, 27, 398-403. doi: 10.1080/09595230802093802
- Hughes, K., Anderson, Z., Morleo, M., & Bellis, M.A. (2008). Alcohol, nightlife and violence: the relative contributions of drinking before and during nights out to negative health and criminal justice outcomes. *Addiction*, 103, 60-5. doi: 10.1111/j.1360-0443.2007.02030.x

- Hughner, R. E., & Kleine, S. S. (2004). View of health in the lay sector: A compilation and review of how individuals think about health. *Health, 8*, 395–422. doi: 10.1177/1363459304045696
- Huh, J., DeLorme, D. E., & Reid, L. N. (2005). Factors affecting trust in on-line prescription drug information and impact of trust on behavior following exposure to DTC advertising. *Journal of Health Communication, 10*, 711-731. doi: 10.1080/10810730500326716
- Hong, T. (2008). Internet Health Information in the Patient-Provider Dialogue. [Article]. *Cyberpsychology & Behavior, 11*(5), 587-589. doi: 10.1089/cpb.2007.0172
- Hou, J. R., & Shim, M. (2010). The Role of Provider-Patient Communication and Trust in Online Sources in Internet Use for Health-Related Activities. *Journal of Health Communication, 15*, 186-199. doi: 10.1080/10810730.2010.522691
- Institute of Alcohol Studies. (2009). Binge-drinking- Nature prevalence and causes. IAS Factsheet. Retrieved from Http://www.emcdda.europa.eu/attachements.cfm/att_93745_EN_binge
- International Centre for Alcohol Policies (2003). International Centre for Alcohol Policies Reports 14: International drinking guidelines. Washington, DC: ICAP. Retrieved from <http://www.icap.org/LinkClick.aspx?fileticket=KtXj8PGibT8%3D&tabid=75>
- International Agency for Research on Cancer [IARC]. (1988) IARC monographs on the evaluation of the carcinogenic risk to humans: Alcohol drinking, 44. Lyon: IARC. Retrieved from <http://monographs.iarc.fr/ENG/Monographs/vol44/mono44.pdf>
- Jackson, K.M., Colby, S.M., & Sher, K.J. (2010). Daily patterns of conjoint smoking and drinking in college student smokers. *Psychological of Addictive Behaviours, 24*, 424–435. doi: 10.1037/a0019793

- Jefferis, B., Power, C., & Manor, O. (2005). Adolescent drinking level and adult binge drinking in a national birth cohort. *Addiction, 100*, 543–9. doi: 10.1111/j.1360-0443.2005.01034.x
- Kaplan, Bush, & Berry, (1979). The Quality of Wellbeing Scale. Retrieved from <https://hoap.ucsd.edu/qwb-info/QWB-Manual.pdf>
- Kauppinen-Räsänen, H., & Luomala, H. T. (2010). Exploring consumers' product-specific colour meanings. *Qualitative market research: an international journal, 13*, 287-308. doi: <http://dx.doi.org/10.1108/13522751011053644>
- Kerr, W.C., Fillmore, K.M., & Marvy, P. (2000). Beverage-specific alcohol consumption and cirrhosis mortality in a group of English-speaking beer-drinking countries. *Addiction, 95*, 339-346. doi: 10.1046/j.1360-0443.2000.9533394.
- Kerr, W. C., Subbaraman, M., & Ye, Y. (2011). Per capita alcohol consumption and suicide mortality in a panel of US states from 1950 to 2002. *Drug and alcohol Review, 30*, 473-480. doi: 10.1111/j.1465-3362.2011.00306.x
- Key, J., Hodgson, S., Omar, R. Z., Jensen, T. K., Thompson, S. G., Boobis, A. R...Elliot, P. (2006). Meta-analysis of studies of alcohol and breast cancer with consideration of the methodological issues. *Cancer Causes Control, 17*, 759 – 70. doi:10.1007/s10552-006-0011-0
- Kitzinger, J. (1995). Qualitative research: Introducing focus groups. *British Medical Journal, 331*, 299- 302. 41. doi: <http://dx.doi.org/10.1136/bmj.311.7000.299>
- Klatsky, A.L. (2004). Alcohol and cardiovascular health. *Integrative and Comparative Biology, 44*, 324-328. doi: 10.1093/icb/44.4.324
- Klatsky, A.L., & Armstrong, M.A. (1993). Alcoholic beverage choice and risk of coronary artery disease mortality: do red wine drinkers fare best? *American Journal of Cardiology, 71*, 467–469. doi:10.1016/0002-9149(93)90460-T

- Knai, C., Petticrew, M., Durand, M. A., Scott, C., James, L., Mehrotra, A., Eastmure, E., and Mays, N. (2015). The Public Health Responsibility deal: has a public–private partnership brought about action on alcohol reduction? *Addiction*, *110*, 1217–1225. doi: 10.1111/add.12892.
- Knight, A., & Warland, R. (2004). The relationship between sociodemographics and concern about food safety issues. *Journal of Consumer Affairs*, *38*, 107–120. doi: 10.1111/j.1745-6606.2004.tb00467.x
- Kokavec, A., & Crowe, S.F. (2001). The effect of a moderate level of white wine consumption on the hypothalamic–pituitary–adrenal axis before and after a meal. *Pharmacology, Biochemistry and Behavior*, *70*, 243-250. doi: 0.1016/S0091-3057(01)00606-2
- Koloveroua, E., Panagiotakosa, D. B., Pitsavos, C., Chrysohoou, C., Georgousopoulou, E. N., Metaxa, V., & Stefanadis, C. (2014). Effects of alcohol consumption and the metabolic syndrome on 10-year incidence of diabetes: The ATTICA study. *Diabetes and Metabolism*, *41*, 152-159. doi: 10.1016/j.diabet.2014.06.003
- Kono, S., Ikeda, N., Yanait, F., Shinchit, K., & Imanishi, K. (1990). Alcoholic Beverages and adenomatous polyps of the sigmoid colon: A Study of male self-defence officials in Japan. *International Journal of Epidemiology*, *19*, 848- 852. doi: 10.1093/ije/19.4.848
- Koppes, L.J., Dekker, J.M., Hendricks, H. F. J., Bouter, L. M., & Heine, R. J. (2005). Moderate alcohol consumption lowers the risk of Type 2 diabetes. A meta-analysis of prospective observational studies, *Diabetes Care*, *28*, 719-725. doi:10.2337/diacare.26.10.2785
- Kuntsche, E., Knibbe, R., Gmel, G., & Engels, R. (2006). 'I drink spirits to get drunk and block out my problems...' beverage preference, drinking motives and alcohol use in adolescence. *Alcohol & Alcoholism*, *5*, 566- 573. doi:10.1093/alcalc/agl046

- Kwok, C., & Sullivan, G. (2007). Health seeking behaviours among Chinese-Australian women: implications for health promotion programs. *Health, 11*, 401–415. doi: 10.1177/1363459307077552
- Labrecque, L. L., & Milne, G. R. (2012). Exciting red and competent blue: the importance of color in marketing. *Journal of the academy of marketing science, 40*, 711-727. doi: 10.1007/s11747-010-0245-y
- Lang, I., Wallace, R. B., Huppert, F.A., & Melzer, D. (2007). Moderate alcohol consumption in older adults is associated with better cognition and well-being than abstinence. *Age and Ageing, 36*, 256-261. doi:10.1093/ageing/afm001
- Lanier, S.A., Hayes, J.E., & Duffy, V.B. (2005). Sweet and bitter tastes of alcoholic beverages mediate alcohol intake in of-age undergraduates. *Physiology and Behavior, 83*, 821-831. doi:10.1016/j.physbeh.2004.10.004
- Leibovici, D., Ritchie, K., Ledésert, B., & Touchon, J. (1999). The effects of wine and tobacco consumption on cognitive performance in the elderly: a longitudinal study of relative risk. *International Journal of Epidemiology, 28*, 77–81. doi: 10.1093/ije/28.1.77
- Lelbach, W. (1975). Quantitative aspects of drinking in alcohol liver cirrhosis. In: Khanna, J.M., Israel, Y., & Kalant, H (Eds). *Alcoholic Liver Pathology*. Toronto: Addiction Research Foundation of Ontario.
- Letenneur, L. (2004). Risk of dementia and alcohol and wine consumption: A review of recent results. *Biological Research, 37*, 189-193. doi: org/10.4067/S0716-97602004000200003
- Li, J., & Grigg, M. (2009). New Zealand: new graphic warnings encourage registrations with the quitline. *Tobacco Control, 18*, 72. doi:10.1136/tc.2008.027649
- Lifestyle Statistics, Health and Social Care Information Centre. (2012). *Statistic on*

- Alcohol: England 2012*. London: Office for National Statistics and Economic Trends. Retrieved from <http://www.hscic.gov.uk/catalogue/PUB06166/alco-eng-2012-rep.pdf>
- Lifestyle Statistics, Health and Social Care Information Centre (2014). *Statistic on Alcohol: England 2014*. London: Office for National Statistics and Economic Trends. Retrieved from <http://www.hscic.gov.uk/catalogue/PUB15483/alc-eng-2014-rep.pdf>
- Lifestyle Statistics, Health and Social Care Information Centre (2015). *Statistic on Alcohol: England 2015*. London: Office for National Statistics and Economic Trends. Retrieved from <http://www.hscic.gov.uk/catalogue/PUB17712/alc-eng-2015-rep.pdf>
- Lintonen, T.P., & Konu, A.I. (2003). Adolescent alcohol beverage type choices reflect substance use patterns and attitudes. *Journal of Youth and Adolescence*, 32, 279-298. doi: 0047-2891/03/0800-0279/0
- Local Government Association. (2016). Bottle and cans of alcoholic drinks should include calorie count signs. Retrieved from http://www.local.gov.uk/media-releases/-/journal_content/56/10180/7626335/NEWS
- Lockie, S., Lyons, K., Lawrence, G., & Grice, J. (2004). Choosing organics: A path analysis of factors underlying the selection of organic food among Australian consumers. *Appetite*, 43, 135–146. doi: 10.1016/j.appet.2004.02.004
- Lukasiewicz, E., Mennen, I.L., Bertrais, S., Arnault, N., Prezios, P., Galan, P., Hercberg, S. (2004). Alcohol intake in relation to body mass index and waist-to-hip ratio: the importance of type of alcoholic beverage. *Public Health Nutrition*, 8, 315- 320. doi:10.1079/PHN2004680
- Madge, C., & O'Connor, H. (2004). Online methods in geography educational research. *Journal of Geography in Higher Education* 28, 143–152. doi:10.1080/0309826042000198710

- Mäkelä, P., Grittner, U., Gmel, G., Grittner, U., Kuendig, H., Kuntsche, S... Room, R. (2006). Drinking patterns and their gender differences in Europe. *Alcohol and Alcoholism*, 41, 8-18. doi: 10.1093/alcalc/agl071
- Mäkita S., Onoda T., Ohsawa, M., Tanaka,F., Segawa, T., Takahashi, T., & Kuribayashi, T. (2012). Influence of mild-to-moderate alcohol consumption on cardiovascular diseases in men from the general population, *Atherosclerosis*, 224, 222–227. doi.org/10.1016/j.atherosclerosis.2012.07.004
- Mangold, W.G., & Faulds, D.J. (2009). Social media: The new hybrid element of the promotion mix. *Business Horizons*, 4, 357-365. doi:10.1016/j.bushor.2009.03.002
- Marczinski, C. A., & Fillmore, M. T. (2003). Dissociative antagonistic effects of caffeine on alcohol-induced impairment of behavioral control. *Experimental and Clinical Psychopharmacology*, 3, 228–236. doi: org/10.1037/1064-1297.11.3.228
- McGregor, D., Murray, R.P. and Barnes, G.E. (2003). ‘Personality Differences between Users of Wine, Beer and Spirits in a Community Sample: The Winnipeg Health and Drinking Survey. *Journal of Studies on Alcohol*, 64, 634–41. doi: <http://dx.doi.org/10.15288/jsa.2003.64.634>
- Miles, S., Brennan, M., Kuznesof, S., Ness, M., Ritson, C., & Frewer, L. J. (2004). Public worry about specific food safety issues. *British Food Journal*, 106, 9–22. doi: <http://dx.doi.org/10.1108/00070700410515172>
- Miller, P., & Plant, M. (2003). Teenage alcoholic beverage preference: risks and responses. *Health, Risk & Society*, 5, 3-9. doi: 10.1080/1369857031000065970
- Miller-Tutzauer, C., Leonard, K.E., & Windle, M. (1991). Marriage and alcohol use: a longitudinal study of “maturing out”. *Journal of studies on alcohol and drugs*, 52, 434- 440. doi: <http://dx.doi.org/10.15288/jsa.1991.52.434>
- Mooney, H. (2007). £1m company to tackle inequalities in North west. *Health Service*

- Journal*, 117, 6. Retrieved from <http://www.hsj.co.uk/topics/leadership/the-nhs-cannot-close-health-inequalities-on-its-own/5065494.fullarticle>
- Mukamal, J., Ding, L., & Djousse, L. (2006). Alcohol consumption, physical activity, and chronic disease risk factors: a population-based cross-sectional survey. *BioMed Central Public Health*, 3, 6-118. doi:10.1186/1471-2458-6-118
- Mukamal, K.J., Kuller, L.H., Fitzpatrick, A.L., Longstreth, W.T., Mittleman, M.A., & Siscovick, D.S. (2003). Prospective study of alcohol consumption and risk of dementia in older adults. *Journal of American Medical Association*, 289, 1405–13. doi:10.1001/jama.289.11.1405
- Mutti, S., Hammond, D., Borland, R., Cummings, M.K., O'Connor, R.J. Fong, G.T. (2001). Beyond light and mild: cigarette brand descriptions and perceptions of risk in the International Tobacco Control (ITC) four country survey. *Addiction*, 6, 1166-1175. doi: 10.1111/j.1360-0443.2011.03402.x
- Naidoo, B., Warm, D., Quigley, R., & Taylor, L. (2004). Smoking and Public Health: A review of reviews of interventions to increase smoking cessation, reduce smoking initiation and prevent further uptake of smoking. Evidence Briefing, 1st ed. London: Health Development Agency. Retrieved from <https://www.bipsolutions.com/docstore/pdf/7237.pdf>
- Naimi, T. S., Brewer, R. D., Miller, J. W., Okoro, C., & Mehrotra, C. (2007). What do binge drinkers drink? Implications for alcohol control policy. *American Journal of Preventative Medicine*, 33, 188-193. doi: <http://dx.doi.org/10.1016/j.amepre.2007.04.026>
- National Institute for Health and Clinical Excellence, 2010. Alcohol-use disorders – preventing harmful drinking: costing report. Retrieved from <https://www.nice.org.uk/guidance/ph24/resources/costing-report-67288285>
- Nemtsov, A.V. (2000). Estimates of total alcohol consumption in Russia, 1980–1994. *Drug and Alcohol Dependence*, 58, 133–142. doi:

[http://dx.doi.org/10.1016/S0376-8716\(99\)00069-1](http://dx.doi.org/10.1016/S0376-8716(99)00069-1)

Newcomb, P.A., Nichols, H. B., Beasley, J. M., Egan, K., Titus-Ernstoff, L., Hampton, J. M., & Trentham-Dietz, A. (2009). No difference between red wine or white wine consumption and breast cancer risk. *Cancer Epidemiology BioMarkers and Prevention*, 3, 1007-1667. doi: 10.1158/1055-9965.EPI-08-0801

Ng, S.K., Kabat, G.C., & Wynder, E.L.(1993). Oral cavity cancer in non-users of tobacco. *Journal of the National Cancer Institute*, 85, 743–45.
doi: 10.1093/jnci/85.9.743

Nikolaou, C. K., Hankey, C. R., & Lean, M. E. J., (2014). Preventing weight gain with calorie-labeling. *Obesity*, 22, 2277–2283. doi: 10.1002/oby.20885

Norström, T., Stickley, A., & Shibuya, K. (2012). The importance of alcoholic beverage type for suicide in Japan: A time-series analysis, 1963-2007. *Drug and Alcohol Review*, 31, 251-256. doi: 10.1111/j.1465-3362.2011.00300.x

O'Donnell, K., Wardle, J., Dantzer, C., & Steptoe, A. (2006) . Alcohol consumption and symptoms of depression in young adults from 20 countries. *Journal of Studies on Alcohol*, 6, 837-40. doi: <http://dx.doi.org/10.15288/jsa.2006.67.837>

Office for National Statistics. (2009). *Opinions Survey Report No. 42 Drinking: adults' behaviour and knowledge in 2009*. Retrieved from
file:///Users/victoriabarber/Downloads/drink2009_tcm77-144451.pdf

Office for National Statistics. (2015a). *Adult Drinking Habits in Great Britain, 2013*. Retrieved from http://www.ons.gov.uk/ons/dcp171778_395191.pdf

Office for National Statistics. (2015b). *Statistics on Alcohol: England 2015*. Retrieved from <http://www.hscic.gov.uk/catalogue/PUB17712/alc-eng-2015-rep.pdf>

- Office for National Statistics. (2015b). *Focus on: Violent Crime and Sexual Offenses 2013/2014*. Retrieved from <http://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/compendium/focusonviolentcrimeandsexualoffences/2015-02-12>
- Office for National Statistics. (2015c). Suicide rates in the United Kingdom, 2013 registrations. Retrieved from http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/dcp171778_395145.pdf
- Ogborne, C., & Smart, G. (2001). Public opinion on the health benefits of moderate drinking: results from a Canadian National Population Health Survey. *Addiction*, *96*, 641-649. doi: 10.1080/09652140020031692
- Olsen, J., Thach, L. and Nowak, L. (2007) "Wine for my generation: Exploring how US wine consumers are socialised to wine". *Journal of Wine Research*, *18*, 1-18. doi: 10.1080/09571260701526816
- Orgogozo, J.M., Dartigues, J.F., Lafont, S., Letenneur, L., Commenges, D., Salamon, R...Breteler, M.B. (1997). Wine consumption and dementia in the elderly: A prospective community study in the Bordeaux area. *Review Neurology*, *153*, 185–192. doi : RN-05-1997-153-3-0035-3787-101019-ART58
- Patra, J., Taylor, B., Irving, H., Roerecke, M., Baliunas, D., Mohapatra, S...Rehm, J. (2010). Alcohol consumption and the risk of morbidity and mortality for different stroke types: a systematic review and meta-analysis. *BMC Public Health*, *10*, 258. doi: 10.1186/1471-2458-10-258
- Pederson, E., Neighbors, C., & Larimer, M. (2010). Differential alcohol expectancies based on types of alcohol beverage consumed. *Journal of Studies on Alcohol and Drugs*, *71*, 925-929. doi: PMC2965491
- Pederson, A., Johansen, C., & Grønbaek, M. (2003). Relations between amount and type of alcohol and colon and rectal cancer in a Danish population based cohort

- study. *Gut*, 6, 861- 867. doi:10.1136/gut.52.6.861
- Perret, B., Ruidavets, J-B., Vieu, C., Jaspard, B., Cambou, J-P., Terce, F., & Collet, X. (2002). Alcohol consumption is associated with enrichment of high density lipoprotein particles in polyunsaturated lipids and increased cholesterol esterification rate. *Alcoholism, Clinical and Experiment Research*, 26, 1134–1140. doi: 10.1111/j.1530-0277.2002.tb02649.x
- Peterson, G., Aslani, O., & Williams, K.A. (2003). How do consumers search for and appraise information on medicines on the internet? A qualitative study using focus groups. *Journal of medical internet research*, 5, 33-36. doi: 10.2196/jmir.5.4.e33
- Plant, M. (2009). *Factsheet: Alcohol Concern's information and statistical digest*. Retrieved from http://www.sqa.org.uk/files_ccc/Drinking%20Patterns%20Factsheet.pdf
- Platz, A., Leitzmann, F., Rimm, B., Willett, C., & Giovannucci, E. (2004). Alcohol intake, drinking patterns, and risk of prostate cancer in a large prospective cohort study. *American Journal of Epidemiology*, 159, 444–53. doi: 10.1093/aje/kwh062
- Power, C., Rodgers, B. and Hope, S. (1999). Heavy alcohol consumption and marital status: disentangling the relationship in a national study of young adults. *Addiction*, 94, 1477–1487. doi: 10.1046/j.1360-0443.1999.941014774.x
- Prescott, E., Grønbaek, M., Becker, U., & Sørensen, T.I. (1990). Alcohol intake and the risk of lung cancer: Influence of type of alcoholic beverage. *American Journal of Epidemiology*, 49, 463-70. Retrieved from <http://aje.oxfordjournals.org/content/149/5/463.full.pdf>
- Pridemore, W.A. (2006). Heavy drinking and suicide in Russia. *National Institute of Health Public Access*, 1, 413-430. doi: 10.1353/sof.2006.0138
- Public and International Health Directorate; DH International, EU Business and Public Health Delivery; Health Improvement Analytical Team. Responsibility

- Deal: Monitoring the number of units of alcohol sold- second interim report, 2013. Retrieved from, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/389574/second_interim_report.pdf
- Razvodovsky, Y.E. (2003). Association between distilled spirits consumption and violent mortality rate. *Drugs: Education, Prevention, and Policy*, 10, 235–50. doi: 10.1080/0968763031000082124
- Razvodovsky, E. (2009). Suicide and fatal alcohol poisoning in Russia, 1956-2005. *Drugs: Education, Prevention and Policy*, 16, 127-139. doi:10.1080/09687630801931804
- Razvodovsky, E. (2011). The effects of beverage type on suicide rate in Russia. *Psychiatria Danubina*, 23, 378-383. Retrieved from http://www.hdbp.org/psychiatria_danubina/pdf/dnb_vol23_no4/dnb_vol23_no4_378.pdf
- Rehm, J., Mather, C., Popova, S., Thavorncharoensap, M., Teerawattananon, Y., & Patra, J. (2009). Alcohol and global health 1: Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. *Lancet*, 373, 2223– 2233. doi: org/10.1016/S0140-6736(09)60746-7
- Rehm, J., Taylor, B., & Patra, J. (2006). Volume of alcohol consumption, patterns of drinking and burden of disease in the European region 2002. *Addiction* 101, 1086– 1095. doi: 10.1111/j.1360-0443.2006.01491.x
- Reissig, C. J., Strain, E. C., & Griffiths, R. R. (2009). Caffeinated energy drinks—A growing problem. *Drug and Alcohol Dependence*, 99, 1 -10 doi:10.1016/j.drugaldep.2008.08.001
- Renaud, S., & De Lorgeril, M. (1992). Wine, alcohol, platelets and the French paradox for coronary heart disease. *Lancet*, 339, 1523-1526. doi: [http://dx.doi.org/10.1016/0140-6736\(92\)91277-F](http://dx.doi.org/10.1016/0140-6736(92)91277-F)

Rimm, E. B., Giovannucci, E. L., Willett, W. C., Colditz, G.A., Ascherio, A., Rosner, B., & Stampfer, M.J. (1991) Prospective study of alcohol consumption and risk of coronary disease in men. *Lancet*, 338, 464–468. doi: [http://dx.doi.org/10.1016/0140-6736\(91\)90542-W](http://dx.doi.org/10.1016/0140-6736(91)90542-W)

Rimm, B., Williams, P., Fosher, K., Criqui, M., & Stampfer, J. (1999). Moderate alcohol intake and lower risk of coronary heart disease: meta-analysis of effects on lipids and haemostatic factors. *British Medical Journal*, 8, 319-1523. doi: 10.1136/bmj.319.7224.1523

Ritchie, C. (2009). The culture of wine buying in the UK off-trade. *International Journal of Wine Business Research*, 21, 194-21. doi: 10.1108/17511060910985944

Ritchie, C., Ritchie, F. & Ward, R. (2009a), “A good night out: alcohol-related behaviours in young adults”. *World Hospitality and Tourism Themes (WHATT)*, 1, 169-93. doi: <http://dx.doi.org/10.1108/17554210910962549>

Ritchie, C., Ritchie, F. & Ward, R. (2009b). “How can I drink safely? Perception versus the reality of alcohol consumption”. *Service Industries Journal*, 29, 115. doi: <http://dx.doi.org/10.1080/02642060903026288>

Ritchie, C., & Valentin, D. (2011). A Comparison of Wine Drinking Behaviours in Young Adults in the UK and France. 6th AWBR International Conference, Retrieved from http://academyofwinebusiness.com/wp-content/uploads/2011/09/55-AWBR2011_Ritchie_Valentin.pdf

Ritterband, L.M., & Tate, D.F. (2009). The science of internet interventions. *Annals of Behavioral Medicine*, 38, 1-3. Doi : 10.1007/s12160-009-9132-5

Robertson, R. (2008). Kicking bad habits: using information to promote healthy behaviours. London: King's Fund. Retrieved from http://www.kingsfund.org.uk/sites/files/kf/field/field_document/information-promote-healthy-behaviours-kicking-bad-habits-supporting-paper-ruth-robertson.pdf

- Robinson, S., & Harris, H. (2010). *General Lifestyle Survey Overview, A report on the 2010 General Lifestyle Survey*. London: Office for National Statistics.
- Roe, B., Levy, A.S., & Derby, B.M. (1999). The impact of health claims on consumer search and product evaluation outcomes: Results from FDA experiment study. *Journal of public policy and marketing*, 18, 89-105. Retrieved from <https://archive.ama.org/archive/ResourceLibrary/JournalofPublicPolicyandMarketing/Pages/1999/18/1/1932040.aspx>
- Roininen, K., Lahteenmaki, L., & Tuorila, H. (1999). Quantification of consumer attitudes to health and hedonic characteristics of foods. *Appetite*, 33, 71–88. doi:10.1006/appe.1999.0232
- Roizen, R., Kerr, W.C., & Fillmore, K.M. (2000). Cirrhosis mortality and per capita consumption of distilled spirits, United States, 1949-94: trend analysis. *British Medical Journal*, 7, 319-666. doi: 10.1136/bmj.319.7211.666
- Romeo, J., González-Gross, M., Wärnberg, J., Dý'az, L.E., & Ascensio'n Marcos. (2007). Effects of moderate beer consumption on blood lipid profile in healthy Spanish adults. *Nutrition, Metabolism and Cardiovascular Diseases*, 18, 365-372. doi:10.1016/j.numecd.2007.03.007
- Room, R., Babor, T., & Rehm, J. (2005). Alcohol and public health. *Lancet*, 365, 519-530. Retrieved from https://www.researchgate.net/profile/Robin_Room2/publication/8028417_Alcohol_and_Public_Health/links/09e41508e3279e211d000000.pdf
- Rosmond, R., & Bjorntorp, P. (1999). Psychosocial and socio-economic factors in women and their relationship to obesity and regional body fat distribution. *International Journal of Obesity*, 23, 138–145. Retrieved from http://www.nature.com/ijo/journal/v23/n2/pdf/0800782a.pdf?origin=publication_detail

- Royal society for public health vision, voice, and practice. (2014). Increasing awareness of ‘invisible’ calories from alcohol. Retrieved from http://www.rsph.org.uk/filemanager/root/site_assets/our_work/position_statements/alcohol_and_obesity_final.pdf
- Rozin, P. (2005). The Meaning of “Natural”: Process More Important Than Content. *Psychological Science*, 8, 652-658. doi: 10.1111/j.1467-9280.2005.01589.x
- Rozin, P., Spranca, M., Krieger, Z., Neuhaus, R., Surillo, D., Swerdlin, A., & Wood, K. (2004). Preference for natural: instrumental and ideational/moral motivations, and the contrast between foods and medicines. *Appetite*, 43, 147-154. doi:10.1016/j.appet.2004.03.005
- Ruitenbergh, A., Van Swieten, J. C., Witteman, J. C., Mehta, K. M., van Duijn, C. M., Hofman, A., & Breteler, M.M. (2002). Alcohol consumption and risk of dementia: The Rotterdam Study. *Lancet*, 359, 281–286. doi: [http://dx.doi.org/10.1016/S0140-6736\(02\)07493-7](http://dx.doi.org/10.1016/S0140-6736(02)07493-7)
- Saffer, H., Dave, D., & Grossman, M. (2016) A behavioral economic model of alcohol advertising and price. *Health Economics*, 25, 816–828. doi: [10.1002/hec.3186](https://doi.org/10.1002/hec.3186)
- Saliba, A., & Moran, C. (2010). The influence of perceived healthiness on wine consumption patterns. *Food Quality and Preference*, 21, 692-696. doi:10.1016/j.foodqual.2010.05.006
- Schifferstein, H. N. J. (2006). The perceived importance of sensory modalities in product usage: A study of self-reports. *Acta Psychologica*, 121, 41–64. doi: 10.1016/j.actpsy.2005.06.004
- Science and Technology Committee (2012). *Alcohol guidelines. Eleventh Report of Session 2012-12*. London: House of Commons. Retrieved from <http://www.publications.parliament.uk/pa/cm201012/cmselect/cmsctech/1536/1536.pdf>

- Seaman, P., & Ikegwuonu, T. (2010). Drinking to belong. Understanding young adults' alcohol use within social networks. Retrieved on 20th March 2014 from <https://www.jrf.org.uk/sites/default/files/jrf/migrated/files/alcohol-young-adults-full.pdf>
- Sesso, H.D., Paffenbarger, R.S.Jr., & Lee, I.M. (2001). Alcohol consumption and risk of prostate cancer: The Harvard Alumni Health Study. *International Journal of Epidemiology*, 4, 749-55. doi: 10.1093/ije/30.4.749
- Shahab, L., & McEwen, A. (2009). Online support for smoking cessation: a systematic review of the literature. *Addiction*, 11, 1792-1804. doi: 10.1111/j.1360-0443.2009.02710.x.
- Siegel, M., Naimi, S., Cremeens, L., & Nelson, E. (2011). Alcoholic beverage preferences and associated drinking patterns and risk behaviors among high school youth. *American Journal of Preventive Medicine*, 40, 419-426. doi:10.1016/j.amepre.2010.12.011
- Sim, J. (1998), Collecting and analysing qualitative data: issues raised by the focus group. *Journal of Advanced Nursing*, 28, 345–352. doi: 10.1046/j.1365-2648.1998.00692.x
- Simou, E. (2015). Health information sources: trust and satisfaction. *International journal of health care*, 2, 38-43. doi: 10.5430/ijh.v2n1p38
- Sinn, D.H., Gwak, G-Y, Cho, J., Son, H.J., Paik, Y-H, Choi, M.S... Yoo, B.C. (2014). Modest alcohol consumption and carotid plaques or carotid artery stenosis in men with non-alcoholic fatty liver disease. *Atherosclerosis*, 234, 270- 275. doi:10.1016/j.atherosclerosis.2014.03.001
- Slattery, M.L., McDonald, A., Bild, D.E., Caan, B.J., Hilner, J.E., Jacobs Jr, D.R., & Liu, K. (1992). Associations of body fat and its distribution with dietary intake, physical activity, alcohol, and smoking in blacks and whites. *American Journal of*

- Clinical Nutrition*, 55, 943–949. Retrieved from <http://ajcn.nutrition.org/content/55/5/943.long>
- Smith, L., & Foxcroft, D. (2009a). Drinking in the UK: An exploration of trends. The Joseph Rowntree Foundation. Retrieved from www.jrf.org.uk
- Smith, L., & Foxcroft, D. (2009b). The effect of alcohol advertising, marketing and portrayal on drinking behavior in young people: systematic review of prospective cohort studies. *BMC Public Health*, 9, 51-55. doi: 10.1186/1471-2382-9-808
- Smith-Warner, A., Spiegelman, D., Yaun, S. S., Brandt, P. A., Folsom, A. R., Goldbohm, R. A...Hunter, D.J. (1998). Alcohol and breast cancer in women: A pooled analysis of cohort studies. *Journal of American Medical Association*, 279, 535–40. doi:10.1001/jama.279.7.535
- Sørensen, A. (1990). The relationship between alcohol consumption and risk of development of cirrhosis of the liver. *Alcologia*, 2, 121-126. doi:10.1136/gut.41.6.857
- Sørensen, A., Orholm, M., Bentsen, D., Høybye, G., Eghøj, K., & Christoffersen, P. (1984). Prospective evaluation of alcohol abuse and alcoholic liver injury in men as predictors of development of cirrhosis, *Lancet*, 2, 241-244. doi:10.1016/S0140-6736(84)90295-2
- Spencer, R.L., & Hutchison, K.E. (1999). Alcohol, aging, and the stress response. *Alcohol Research & Health*, 23, 272–283. Retrieved from <http://pubs.niaaa.nih.gov/publications/arh23-4/272-283.pdf>
- Stampfer, M., Kang, J.H., Chen, J., Cherry, R., & Grodstein, F. (2005). Effects of moderate alcohol consumption on cognitive function in women. *The New England Journal of Medicine*, 352, 245-253. doi: 10.1056/NEJMoa041152

- Stewart, K., & Williams, M. (2005). Researching online populations: the use of online focus groups for social research. *Qualitative Research, 5*, 395-416. doi: 10.1177/1468794105056916
- Stickley, A., Jukkala, T., & Norstrom, T. (2011). Alcohol and suicide in Russia, 1870-1894 and 1956-2005: Evidence for the continuation of a harmful drinking culture across time? *Journal of Studies on Alcohol and Drugs, 72*, 341-347. doi: 10.1371/journal.pone.0061809
- Stockwell, T., Maters, L., Philips, M., Gahegan, M., Midford, R., & Philip, A. (1998). Consumption of different alcoholic beverage as predictors of local rates of night-time assault and acute alcohol-related morbidity. *Australian and New Zealand Journal of Public Health, 22*, 237-242. doi: 10.1111/j.1467-842X.1998.tb01180.x
- Stockwell, T., Zhao, J., Martin, G., Macdonald, S., Vallance, K., Treno, A., & Buxton, J. (2013). Minimum Alcohol Prices and Outlet Densities in British Columbia, Canada: Estimated Impacts on Alcohol-Attributable Hospital Admissions. *American Journal of Public Health, 103*, 2014-2020. doi: 10.2105/AJPH.2013.301289
- Suba, Z. (2007). Gender-related hormonal risk factors for oral cancer. *Pathology Oncology Research, 13*, 195-202. doi: 10.1007/BF02893499
- Sullivan, J. R. (2013). Skype: An appropriate method of data collection for qualitative interviews? *The Hilltop Review, 6*, 53-60. Retrieved from <http://scholarworks.wmich.edu/hilltopreview/vol6/iss1/10>
- Sussner, K. M., Lindsay, A. C., Gortmaker, S. L., & Kim, J. (2006). The role of parents in preventing childhood obesity. *The Future of children, 16*, 169-186. doi: 10.1353/foc.2006.0006
- Sutherland, I., & Wilner, P. (1998). Patterns of alcohol, cigarette and illicit drug use in English adolescents. *Addiction, 93*, 1199-1208. doi: 09650-2140/98/081199-10

- Takács, D., Koppány, F., Mihályi, S., Suba, Z. (2011). Decreased oral cancer risk by moderate alcohol consumption in non-smoker postmenopausal women. *Oral Oncology*, *47*, 537-540. doi:10.1016/j.oraloncology.2011.04.003
- Taylor, H., & Leitman, R. (2002). The future use of the Internet in four countries in relation to prescriptions, physician communication and health information. Retrieved from www.harrisinteractive.com/news/newsletters_healthcare.asp
- Theobald, H., Bygren, L.O., Carstensen, J., & Engfeldt, P. (2000). A moderate intake of wine is associated with reduced total mortality and reduced mortality from cardiovascular disease. *Journal of Studies on Alcohol*, *61*, 652–656. doi: <http://dx.doi.org/10.15288/jsa.2000.61.652>
- Thomsen, S. R., & Fulton, K. (2007). Adolescents' attention to responsibility messages in magazine alcohol advertisements: An eye-tracking approach. *Journal of Adolescent Health*, *41*, 27-34. doi:10.1016/j.jadohealth.2007.02.014
- Thornburg, H. D. (1981). Adolescent Sources of Information on Sex. *Journal of School Health*, *51*, 274–277. doi: 10.1111/j.1746-1561.1981.tb02188.x
- Thrasher, J.F., Hammond, D., Fong, G.T., Arillo-Santillan, E. (2007). Smokers' reactions to cigarette package warnings with graphic imagery and with only text: a comparison between Mexico and Canada. *Salud Publica Mexico*, *49*, 233-240. doi: 10.1590/S0036-36342007000800013
- Tuyns, J., & Pequignot, G. (1984) Greater risk of ascitic cirrhosis in females in relation to alcohol consumption, *International Journal of Epidemiology*, *13*, 53-57. doi: 10.1093/ije/13.1.53
- Underwood, R. L., Klein, N. M., & Burke, R. R. (2001). Packaging communication: attentional effects of product imagery. *Journal of product and brand management*, *10*, 403-422. doi: <http://dx.doi.org/10.1108/10610420110410531>

- US Department of Health and Human Services. (2004). NIAAA News letter: Featuring information from the National Institute on Alcohol Abuse and Alcoholism. Retrieved from http://pubs.niaaa.nih.gov/publications/Newsletter/winter2004/Newsletter_Number3.pdf
- Vance, K., Howe, W., & Dellavalle, R. P. (2009). Social internet sites as a source of public health information. *Dermatologic clinics*, 27, 133-136. doi:10.1016/j.det.2008.11.010
- Vandelanotte, C., Spathonis, K.M., Eakin, E.G., & Owen, N. (2007). Website-delivered physical activity interventions a review of the literature. *American Journal of Preventative Medicine*, 1, 54-64. doi:10.1016/j.amepre.2007.02.041
- Vegt, F., Dekker, J.M., Groeneveld, W-J, Nijpels, G., Stehouwer, C.D.A., Bouter, L.M., & Heine, R. J. (2002). Moderate alcohol consumption is associated with lower risk for incident diabetes and mortality: the Hoorn Study. *Diabetes Research and Clinical Practice*, 57, 53-60. doi: 10.1016/S0168-8227(02)00013
- Velicer, C.M., Kristal, A., & White, E. (2006). Alcohol use and the risk of prostate cancer: results from the VITAL cohort study. *Nutritional Cancer*, 56, 50–6. doi:10.1207/s15327914nc5601_7
- Viel, J., Perarnau, J., Challier, B., & Faivre- Napppez, I. (1997). Alcoholic calories, red wine consumption and breast cancer among premenopausal women. *European Journal of Epidemiology*, 13, 639–643. Retrieved from <http://www.jstor.org/stable/3582255>
- Wagenaar, A. C., Salois, M. J. & Komro, K. A. (2009). Effects of beverage alcohol price and tax levels on drinking: a meta-analysis of 1003 estimates from 112 studies. *Addiction*, 104, 179–190. doi: 10.1111/j.1360-0443.2008.02438.x
- Wansink, B. (2003). How do front and back package labels influence beliefs about health claims? *Journal of consumer affairs*, 37, 305-316. Retrieved from

<http://poseidon01.ssrn.com/delivery.php?ID=676067083085098092124028071115069078034050019023060074029023107088102019030124093099032060018032059046053102107082017019124013126023030041068069026114099029071024090043085092030074085110127076025067001066111027102024077023075073026098026027074121065&EXT=pdf>

Westerman, S. J., Gardner, P. H., Sutherland, E. J., White, T., Jordan, K., Watts, D. & Wells, S. (2012). Product design: preference for rounded versus angular design elements. *Psychology and marketing*, 29, 595-605. doi: 10.1002/mar.20546

White, A.M., Kraus, C.L., Flom, J.D., Kestenbaum, L.A., Mitchell, J.R., Shah, K., Swartzwelder, H.S. (2005). College students lack knowledge of standard drink volumes: implications for definitions of risky drinking based on survey data. *Alcoholism: Clinical and Experimental Research*, 29, 631–8. doi:10.1097/01.ALC.0000158836.77407.E6

Woodhouse, J., & Ward, P. (2014). Alcohol: minimum pricing. (Briefing paper. Number 5021). Retrieved from <http://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN05021#fullreport>

World Health Organization. (2005). Mental health and policy, plans and programs (updated version 2). Geneva: World Health Organization. Retrieved from http://www.who.int/mental_health/policy/services/2_policy%20plans%20prog_WEB_07.pdf

World Health Organization. (2011). Global status report on alcohol and health. Geneva: World Health Organization. Retrieved from http://www.who.int/substance_abuse/publications/global_report/msbgsruprofiles.pdf

World Health Organization. (2014). Global status report on alcohol and health. Geneva: World Health Organization. Retrieved from http://www.who.int/substance_abuse/publications/global_alcohol_report/en/

- Wright, C.A, Bruhn, C.M., Heymann, H., & Bamforth, C.W. (2008a). Beer and wine consumers' perceptions of the nutritional value of alcoholic and non alcoholic beverages. *Journal of food science*, 73, 8-11. doi: 10.1111/j.1750-3841.2007.00606.x.
- Wright, C.A, Bruhn, C.M., Heymann, H., & Bamforth, C.W. (2008b). Beer consumers' perceptions of the health aspects of alcoholic beverages. *Journal of Food Science*, 73, 12-17. doi: 10.1111/j.1750-3841.2007.00574.x.
- Yeung, S. L., Jiang, C., Zhang, W., Lam, T.H., Cheng, K.K., Leung, G.M., & Schooling, M.C. (2010). Moderate alcohol use and cognitive function in the Guangzhou Biobank cohort study. *Annals of Epidemiology*, 20, 873-882. doi:10.1016/j.annepidem.2010.06.005
- Young French women turn to 'le binge-drinking. (2015, April 01). Retrieved from <http://www.thelocal.fr/20150401/binge-drinking-alcohol-french-young-people>
- Yousaf, H., Rodeheffer, R.J., Paterick, T.E., Ashary, Z., Ahmad, M.N., & Ammar, K.A. (2014). Association between alcohol consumption and systolic ventricular function: A population-based study. *American Heart Journal*, 6, 861-866. doi:10.1016/j.ahj.2014.02.014
- Zhao, J., Stockwell, T., Martin, G., Macdonald, S., Vallance, K., Treno, A., Ponicki, W. R., Tu, A. and Buxton, J. (2013), The relationship between minimum alcohol prices, outlet densities and alcohol-attributable deaths in British Columbia, 2002–09. *Addiction*, 108: 1059–1069. doi: 10.1111/add.12139
-
- Zheng, W., McLaughlin, J.K., Gridley, G., Bjelke, E., Schuman, L.M., Silverman, D.T., ...Fraumeni, J.F. (1993). A cohort study of smoking, alcohol consumption, and dietary factors for pancreatic cancer (United States). *Cancer Causes Control*, 4, 477–82. doi: 10.1007/BF00050867

Appendices

Appendix A

Ethics approval



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24 March 2011

Professor Philip Terry

Kingston University

Faculty of Arts and Social Sciences

Penrhyn Road Campus Kingston upon Thames Surrey, KT1 2EE

Dear Professor Terry,

Re: 'Young people's belief's about the health effects of different alcoholic beverages'.

Thank you for submitting your application for research ethics review concerning your project entitled 'Young people's beliefs about the health effects of different alcoholic beverage'.

The application and the accompanying material have been fully reviewed, and we can confirm that the project satisfies all requirements on ethical grounds. The application is therefore fully approved.

We would like to wish you success with your research.

Yours sincerely,

Kimberley Plumpton

Faculty Research Administrator

Faculty of Arts and Social Sciences

Appendix B

Informed consent form study 1



Informed Consent Form

PLEASE READ THIS DOCUMENT CAREFULLY. YOUR SIGNATURE IS REQUIRED FOR PARTICIPATION. YOU MUST BE AT LEAST 18 YEARS OF AGE TO GIVE YOUR CONSENT TO PARTICIPATE IN RESEARCH. IF YOU DESIRE A COPY OF THIS CONSENT FORM, YOU MAY REQUEST ONE AND WE WILL PROVIDE IT.

Thank you for taking part in this study. The purpose of the study is to understand the drinking trends of young people and influences of drink choice. We would like you to keep a daily diary over the next two weeks in March and then again in May. We will contact you prior to the second part of the study. If you have any photos to illustrate your diary comments that would be very helpful. **Please be aware that you must use a computer to access the site. The site is not compatible with phones or tablets.**

There are no risks or side-effects involved in this study, and we hope that you will find the process interesting and enjoyable. We will not be analysing data individually, but will be looking at trends and themes, and in the reporting of the project no information will be released which will enable the reader to identify you. All of the information we gain from you will be maintained in a strictly confidential manner. You have the right to withdraw your results at any time. If you have any questions regarding the study, please contact Victoria Barber at Kingston University, London (k0723536@kingston.ac.uk)

- ***I confirm that I have read and understood the information about this study.***
- ***I understand that my participation is entirely voluntary, and that I can withdraw at any time without prejudice.***
- ***I understand that all information obtained will be confidential.***
- ***I agree that research data gathered for the study may be published provided that I cannot be identified as a subject.***
- ***Contact information has been provided should I wish to seek further information from the investigator at any time for purposes of clarification.***

I give my informed consent to participate (please tick)

Please sign (or enter name), date and send back to researcher via email (k0723536@kingston.ac.uk):

If you would like to find out about the final results of this study, please leave your email address below:

Appendix C

Recruitment questionnaire study 1

UK Recruitment Questionnaire

Please use this so that we have consistency across the two countries

SECTION 1: CLASSIFICATION:

Hello my name is _____ and I working for Emerald Fieldwork, and independent market research company.

We are conducting a study on ALCOHOL.

We have a few questions we would like to ask you with a view to inviting you to a paid group discussion. We need to ask you these questions to ensure you qualify for the study. This will only take a few minutes. We are only interested in your opinions and all your answers are completely confidential.

First can you tell me:

- 1a. Do you or any members of your household currently work, or have ever worked in any of the following industries/occupations? (READ LIST)

Advertising agency or advertising department within a company	1	CLOSE
Media/Journalism/Publishing	2	CLOSE
Market Research	3	CLOSE
Marketing	4	CLOSE
Management Consulting	5	CLOSE
Public Relations	6	CLOSE
Supermarket	7	CLOSE
Off licence	8	CLOSE
Sales, Distribution, Manufacture of Beers, Lagers, Alcohol	9	CLOSE
Pub/Bar/Club/Restaurant	10	CLOSE

None of the above	11	CONTINUE

- 1b. How many market research projects (i.e. focus group discussions or one-on-one interviews) have you ever taken part in? _____

CLOSE IF MORE THAN THREE PROJECTS EVER

A ___ 1-CLOSE
 B ___ 2
 C1 ___ 3
 C2 ___ 4
 D ___ 5-CLOSE
 E ___ 6-CLOSE

ALL GROUPS TO BE BC1C2

Q7 And are you in:

Full Time education	1
In other Training	2
Working Full Time	3
Working part Time	4

PLEASE GET A GOOD SPREAD OF EDUCATION, TRAINING AND FULL TIME/PART TIME WORKING STATUS IN EACH GROUP.

SECTION 2: MAIN QUESTIONNAIRE

Q1: How often do you drink Alcohol?

Once a month	1 CLOSE
Once a fortnight	2 CLOSE
Once a week	3 RECRUIT
More Often	4 RECRUIT

ALL RESPONDENTS MUST DRINK ACOHOL AT LEAST ONCE A WEEK – OTHERWISE CLOSE

Q2 And where do you drink Alcohol each week?

In a bar/the pub	1+
In Home	2+
In a Restaurant	3
Other	4

ALL RESPONDENTS MUST DRINK ALCOHOL IN A BAR/PUB AND IN HOME EACH WEEK (CODES 1 AND 2). OTHERWISE CLOSE. THEY CAN ALSO DRINK ALCOHOL IN OTHER LOCATIONS AS WELL.

Q3a. Which of the following types of drink do you drink regularly nowadays?

Q3b. Which do you drink occasionally nowadays (ie. once a month)

Occasionally	Q1a Regularly	Q1b
Draught Lager	1	1
Bottled Lager	2	2
Cider	3	3
Ale	4	4
Stout	5	5

Clear spirits	6	6
Dark Spirits	7	7
White Wine	8	8
Red Wine	9	9
Sparkling Wine/Champagne	10	10

Alcopops	11	11
Shots	12	12
Aperitifs	13	13
Cocktails	14	14

ALL RESPONDENTS

ALL RESPONDENTS MUST MENTION AT LEAST ONE ALCOHOL TYPE IN COLUMN A (DRINK REGULARLY NOWADAYS) AND MUST MENTION AT LEAST ONE OTHER ALCOHOL TYPE IN COLUMN B. PLEASE GET A GOOD SPREAD IN EACH GROUP

NB: BOTTLED LAGER AND DRAUGHT LAGER ONLY COUNT AS ONE ALCOHOL TYPE

NB: RED AND WHITE WINE ONLY COUNT AS ONE ALCOHOL TYPE

PLEASE CHECK ALL RECRUITMENT CRITERIA AND RECRUIT IF POSSIBLE. OTHERWISE CLOSE

SECTION 3:

A. Are you a permanent resident in the UK and been living in the UK for the last 5 years?

Yes, I am a permanent UK resident and have lived in the UK for the last 5 years

CONTINUE

No, I am not a permanent UK resident

CLOSE

ALL RESPONDENTS MUST BE A PERMANENT UK RESIDENT AND HAVE BEEN LIVING IN THE UK FOR AT LEAST 5 YEARS.

ALL MUST HAVE A GOOD UNDERSTANDING OF THE ENGLISH LANGUAGE

Name: _____

Address: _____

Postcode: _____

Home phone: _____ Work phone: _____

Mobile: _____

Email address: _____

RESPONDENTS MUST GIVE BOTH HOME & WORK OR MOBILE PHONE

Thank you again for your responses and your time. We look forward to meeting with you.

INTERVIEWER DECLARATION

This interview was conducted in accordance with the market research code of conduct. The respondent is not a relative or friend of mine.

FACE TO FACE		TELEPHONE	
DOOR TO DOOR		STREET	

INTERVIEWERS SIGNATURE:.....

Date:.....2013

Appendix D

Screen shot study 1

Screen shot: an example of a diary entry

Welcome

Thank you for logging on to and taking part in this project. If you have problems using any part of this site, you can contact us here

Help

Quick links

[Diary](#)

Participant Input [View All](#)

Participant: All Input Type: All **Filter**

Content	Title	Username	Date	Actions
	Cider 3	biotyran436774	29/05/2012 21:34	
29/05/2012 1. Cider 2. Magners 3. 1 bottle 4. Home 5. Family 6. Tasted fresh				
Add comment				
	BBQ	lucyh17	29/05/2012 21:19	
25/05/2012 Me and a few friends had a BBQ due to the hot weather. I drank one bottle of Brothers Strawberry and lime cider (500ml) but didn't drink much else. I paid around £4 for it. It's a long drink that I like the taste of. I can trust that the brothers make is reliable and I like the taste of it. I would rather spend more money on a brand that I know and can trust I like, rather than wasting money on something cheaper which I wouldn't end up drinking.				
Add comment				

Appendix E

Table study 1

Within each drink type, the 1st and the 2nd most reported brand of alcohol consumed :
Split by country

Country				
		France	UK	
Alcohol type	Brand	Number of times mentioned (%)	Brand	Number of times mentioned (%)
Beer				
<i>1st popular</i>	Heineken	13/85 (15.2%)	Stella Artois	12/60 (20%)
<i>2nd popular</i>	Desperados	10/85 (17.2%)	Becks/ Carling/ Fosters/ Peroni	5/60 (8.3%)
Bitter				
<i>1st popular</i>	-	-	Hobgoblin/IPA	½ (50%)
<i>2nd popular</i>	-	-		
Cider				
<i>1st popular</i>	-	-	Strongbow	17/67 (25.3%)
<i>2nd popular</i>	-	-	Bulmers/ Kopperberg	11/67 (16.4%)
Wine				
<i>1st popular</i>	Cote de Rhone	4/76 (5.2%)	Echo Falls/ Blossom Hill	4/33 (12.1%)
<i>2nd popular</i>	Montbazillac Tariquet	2/76 (2.6%) 2/76 (2.6%)	-	4/33 (12.1%)
Champagne				
<i>1st popular</i>	Mummy Ruinard	2/17 (11.7%) 2/17 (11.7%)	Moet	1/3 (33.3%)

	France		UK	
Alcohol type	Brand	Number of times mentioned (%)	Brand	Number of times mentioned (%)
Spirits			Jagermeister	8/21 (38%)
Vodka				
<i>1st popular</i>	Smirnoff	8/32 (25%)	Smirnoff	5/36 (13.8%)
<i>2nd popular</i>	Absolut	5/32 (15.6%)	VK	3/36 (8.3%)
Whiskey				
<i>1st popular</i>	Jack Daniels	12/20 (60%)	Jim Bean	2/4 (50%)
Rum				
<i>1st popular</i>	Old Nick	3/8 (37.5%)	Malibu	4/10 (40%)
<i>2nd popular</i>	-	-	Morgan Spice	2/10 (20%)
Gin				
<i>1st popular</i>	-	-	Gordans	2/5 (40%)

***The gaps (-) and no entries for some drink types it is due to no brand description (unspecified) in the diary entries.*

Appendix F

Informed consent form study 2



Informed Consent Form

PLEASE READ THIS DOCUMENT CAREFULLY. YOUR SIGNATURE IS REQUIRED FOR PARTICIPATION. YOU MUST BE AT LEAST 18 YEARS OF AGE TO GIVE YOUR CONSENT TO PARTICIPATE IN RESEARCH. IF YOU DESIRE A COPY OF THIS CONSENT FORM, YOU MAY REQUEST ONE AND WE WILL PROVIDE IT.

Thank you for taking part in this study. The purpose of the study is to understand drinking trends among young people and the perceptions of the health effects of different alcohol types.

The study involves a focus group discussion containing six participants and you will be asked questions regarding your knowledge of and beliefs about the risks and benefits associated with different alcoholic drinks. The study will take approximately 60 minutes.

There are no risks or side-effects involved in this study, and we hope that you will find the process interesting and enjoyable. We will not be analysing data individually, but will be looking at trends and themes, and in the reporting of the project no information will be released which will enable the reader to identify you. Please answer all of the questions honestly and accurately. All of the information we gain from you will be maintained in a strictly confidential manner. You have the right to withdraw your results at any time.

If you have any questions regarding the study, please contact Victoria Barber at Kingston University, London (k0723536@kingston.ac.uk)

- ***I confirm that I have read and understood the information about this study.***
- ***I understand that my participation is entirely voluntary, and that I can withdraw at any time without prejudice.***
- ***I understand that all information obtained will be confidential.***
- ***I agree that research data gathered for the study may be published provided that I cannot be identified as a subject.***
- ***Contact information has been provided should I wish to seek further information from the investigator at any time for purposes of clarification.***

I give my informed consent to participate (please tick)

Please sign (or enter name), date and send back to researcher via email (k0723536@kingston.ac.uk):

If you would like to find out about the final results of this study, please leave your email address below:

Appendix G

Discussion guide study 2

Focus group discussion guide

Introduction (5 minutes)

Alcohol types consumed and types of occasion when they have been consumed. What is the balance of on and off trade drinking and which days of the week does each take place? How has their drinking behaviour changed in the drinking careers? What are they drinking more of or less of compared with 2-3 years ago (including any underage drinking)? What was their behaviour in the early years of drinking alcohol and how has this changed?

Mapping of Alcohol Market (15 minutes)

Using names of alcohol types on cards (c20), we will ask consumers to map the market – which alcohol types are similar to each other and which groups do they create? What associations do they have with each drink type – brand imagery, user imagery, mood, occasionality? What is the typical drinker of each drink type like? If they were personified, what sort of person would they be, what sort of holiday would they be and what sort of party would they be? Any spontaneous mentions of health and alcohol content in these discussions? Which sectors are used for pre-loading and for getting drunk? Why?

Product Characteristics of Sectors (10 Minutes)

How do they think about each sector in product terms – are they all about taste, alcohol content, healthiness, imagery etc? What do they know about the strengths of each sector – which do they know more about and which do they know less about? Do they know the strengths of particular brands in each sector and why? What do they associated with product strength – is it a positive or a negative? How does this work by sector and by occasion and how does it relate to the volume consumed of different drinks?

Healthiness in the Alcohol Sector (15 Minutes)

Only at this point in the group will we focus on healthiness in detail – we will get them to map the market along a long the dimension of healthiness. Which sectors are more and less healthy, and why?

Is healthiness an issue in the market? Are there some sectors where it is not even an issue – either because the sector is assumed to be healthy or not at all healthy?

What do they mean by ‘healthy’ in each sector? Are they talking about alcohol strength, ingredients, calorie levels, artificiality, process of manufacture or naturalness etc? Is freshness even an issue in some sectors? Are some sectors seen as unhealthy because of the imagery associated with them – users and usage occasions rather than anything in the products themselves? How do they define unhealthy – is it actually the opposite of healthy? What is the role of peer group pressure and knowledge in terms of defining ‘healthiness’? Are memories of bad occasions key in defining what is unhealthy?

What is the role of the media in informing their views on healthiness of alcohol? What is the role of advertising, public health information, doctors, school, parents etc?

Role of Messaging on Pack/Labelling (10 Minutes)

Look at about eight packs from different alcohol markets (two vodka, two white wine, two cider and two beer). We can look at the role of the design of the packs by considering which packs look ‘healthy’ or ‘unhealthy’? What is the role of pack type, colours, logos, look and feel etc? What makes a pack look unhealthy and what makes a pack look healthy? How does this vary by sector? Does this equate to being desirable and undesirable? Do any packs look both healthier and more appealing and how do they achieve this?

Summary (5 Minutes)

Overall, what drives perceptions of healthiness and is this factor related to perceived alcohol content? Is healthiness an issue in this market and what drives perceptions of it? Is there a trade off between perceived healthiness and desirability? How can healthiness become more of a positive in the alcohol market?

Appendix H**List of 22 drink types used in study 2**

Beer

Lager

Ale

Bitter

Cider

Alcopops

Red wine

White wine

Ròse

Champagne

Brandy

Port

Sherry

Vodka

Whiskey

Rum

Gin

Tequila

Vermouth

Cocktails

Pastis

Appendix I

Statements study 2

Focus group statements

1. Naturalness is really important to me in a drink - I want to drink more natural beers, wines and ciders
2. Youngsters today drink in different ways to the way we used to - they drink more and mix their drinks up across the evening
3. Expensive vodka is actually quite healthy – it has few calories, it is pure, and it has no additives in it.
4. Any kind of alcoholic drink is good for you if consumed in moderation
5. Cheap alcoholic drinks are always the ones that do you most damage
6. You can't drink beers and ciders all evening because you get bloated. You have to switch to wines and spirits, or only drink them all evening
7. Cider and wine are quite healthy for you as they are made out of fruit.
8. Drinking beer and cider out of a can looks cheap and un-healthy.

Appendix J

Survey study 3

Alcohol Survey

Hello and welcome, First of all thank you for taking the time to help us collect data concerning young adults and alcohol. For this research project, you will be asked to fill a questionnaire. This may take 25 minutes of your time. Please try to answer every question. The study is strictly anonymous and all responses you provide will remain anonymous. Thanks again for your participation!

Q1. How old are you :

- < 18 years old (1)
- 18 years old (2)
- 19 years old (3)
- 20 years old (4)
- 21 years old (5)
- 22 years old (6)
- 23 years old (7)
- 24 years old (8)
- 25 years old (9)
- > 25 years old (10)

Q2. How often do you drink alcohol?

- Every day (1)
- 2-6 days per week (2)
- One day per week (3)
- 2-4 times per month (4)
- Once per month or less (5)

Q3. Name three alcoholic beverages commonly associated with England?

1st (1) _____
2nd (2) _____
3rd (3) _____

Q4. Name three alcoholic beverages commonly associated with France?

1st (1) _____
2nd (2) _____
3rd (3) _____

Q5. According to you, where would the consumption of these following alcoholic beverages be the highest? (France or England) (Move the cursor from "FRANCE+" to "ENGLAND+"). To leave the cursor on the middle, just click on it.

- _____ Red wine (1)
- _____ White wine (2)
- _____ Beer (3)
- _____ Cider (4)
- _____ Clear spirits (Gin, vodka) (5)
- _____ Dark spirits (Rum, whisky) (6)
- _____ Alcopops (Smirnoff Ice) (7)
- _____ Energy drinks (Redbull) (8)
- _____ Liquor (Pastis) (9)

Q6. In comparison to French people alcohol consumption, do you think English people drink:

- Less (1)
- As much (2)
- More (3)

Q7. Do you ever drink alcohol before going out to a bar, pub or club?

- Never (1)
- Rarely (2)
- Sometimes (3)
- Often (4)
- All of the Time (5)

Q8. If this the case, how many drinks (typical measures) do you consume, approximately?

Q9. For each of the following type of drinks, rate on the scale below the extent to which they contain:

	Natural ingredients						Artificial ingredients					
	1- Not at all (1)	2 (2)	3 (3)	4 (4)	5 (5)	6- Totally (6)	1- Not at all (1)	2 (2)	3 (3)	4 (4)	5 (5)	6- Totally (6)
Red wine (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
White wine (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Beer (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cider (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clear spirits (gin, vodka) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dark spirits (whisky, rum) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alcopops (Smirnoff ice) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy drinks (Red bull) (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10. How do you judge the extent to which an alcoholic beverage is natural or artificial? (select as many as apply)

- By the taste (1)
- By the colour of the liquid (2)
- By the price (3)
- By the label (4)
- Where you purchased it (5)
- By the packaging (e.g. Bottle, can) (6)
- By the brand (7)
- Other (8)

Q11. Other, please state:

Q12. According to you, which of the following effects is related to alcohol :(use the scale below to answer)

	1- Not at all (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	10- Extremely (10)
Relaxing (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Euphoric (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exhilarating (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduce your thirst (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Refreshing (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calming (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exciting (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Likely to make you feel sleepy (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Likely to make you overcome social restraints (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Depressing (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Negatives effects on the mood (anger, sadness) (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Positives effects on the mood (joy, gladness) (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Painkiller (13)	<input type="radio"/>									
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Q13. How many drinks per day do you think would correspond to :

Moderate alcohol consumption (1)

The maximum amount of alcohol that can be consumed without risking one's health (2)

Q14, Among these alcoholic beverages, identify the one which is the most :

	Red wine (1)	White wine (2)	Beer (3)	Cider (4)	Clear spirits(gin, vodka) (5)	Dark spirits(whisky, rum) (6)	Alcopops (smirnoff ice) (7)	Energy drink (red bull) (8)	None (9)
Relaxing (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Euphoria-producing (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Exhilarating (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Likely to reduce your thirst (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Refreshing (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Calming (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Exciting (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Likely to make you feel sleepy (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Depressing (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Negative for the mood (anger, sadness) (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Positive for the mood (happiness, pleasure) (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Painkiller (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				

Q15. In your opinion, what is the average alcohol content (in percentage) for the alcoholic beverages listed below ?

- _____ In a bottle of beer (1)
- _____ In a bottle of red wine (2)
- _____ In a bottle of white wine (3)
- _____ In a bottle of cider (4)
- _____ In a bottle of gin (5)
- _____ In a bottle of vodka (6)
- _____ In a bottle of whisky (7)
- _____ In a bottle of rum (8)
- _____ In a bottle of Smirnoff Ice (9)
- _____ In a bottle of red bull (10)

Q16. In your opinion, how much sugar do the following alcoholic beverages contain:

- _____ Red wine (1)
- _____ White wine (2)
- _____ Beer (3)
- _____ Cider (4)
- _____ Clear spirits (gin, vodka) (5)
- _____ Dark spirits (whisky, bourbon, rum) (6)
- _____ Alcopops (Smirnoff Ice) (7)
- _____ An energy drink (Red Bull) (8)

Q17. According to you what is the legal blood alcohol level allowed for car drivers in ENGLAND:

- 0.2 g/L (1)
- 0.3 g/L (2)
- 0.4 g/L (3)
- 0.5 g/L (4)
- 0.6 g/L (5)
- 0.7 g/L (6)
- 0.8 g/L (7)
- 0.9 g/L (8)

Q18. According to you what is the legal blood alcohol level allowed for car drivers in FRANCE :

- 0.2 g/L (1)
- 0.3 g/L (2)
- 0.4 g/L (3)
- 0.5 g/L (4)
- 0.6 g/L (5)
- 0.7 g/L (6)
- 0.8 g/L (7)
- 0.9 g/L (8)

Q19. When you've been under the influence of alcohol, have you ever experienced a situation where you have been the initiator or the victim in one of the following situations:

	How often?				As:	
	Never (1)	Once (2)	A few times (3)	Several times (4)	Initiator (1)	Victim (2)
Road accidents (1)	<input type="radio"/>					
Wounds (2)	<input type="radio"/>					
Brawls (3)	<input type="radio"/>					
Fights with friends (4)	<input type="radio"/>					
Unprotected sex (5)	<input type="radio"/>					
Forced sexual intercourse (6)	<input type="radio"/>					
Sins or crimes (7)	<input type="radio"/>					
Driving whilst intoxicated (8)	<input type="radio"/>					

Q20. According to you, to what extent can alcohol consumption contribute to the following physical problems. Also, for the drinks listed below, which one do you think has the biggest impact ?

	Alcohol involvement						Alcoholic beverages which are the most involved								
	1- Not at all (1)	2 (2)	3 (3)	4 (4)	5 (5)	6- Ve ry high (6)	Re d wi ne (1)	Wh ite win e (2)	Be er (3)	Cid er (4)	Clea r spir its (gin, vod ka) (5)	Dark spir its (whis ky, rum) (6)	Alcop ops (smir noff ice) (7)	Ene rgy drin ks (red bull) (8)	All of the m (9)
Liver cirrhosis (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hair loss (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weight gain (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Skin problems (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cardiova scular problems (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Skin turning grey (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Liver cancer (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weight loss (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dental problems (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sleep disorders (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Headach es (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Neurolog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ical problems (12)															
Circulato ry system troubles (13)	<input type="radio"/>														
Lung cancer (14)	<input type="radio"/>														
Ulcers (15)	<input type="radio"/>														
Breast cancer (16)	<input type="radio"/>														
Common cold (17)	<input type="radio"/>														
Exhaustio n (18)	<input type="radio"/>														
Coma (19)	<input type="radio"/>														
Vision problems (20)	<input type="radio"/>														
Fainting (21)	<input type="radio"/>														
Impotenc e (22)	<input type="radio"/>														
Stroke (23)	<input type="radio"/>														
Vomiting (24)	<input type="radio"/>														

Q21. On the scale below, assess the extent to which the different alcoholic beverages have:

	Beneficial effects on your health ?						Detrimental effects on your health?						Bad effects on your physical appearance ?					
	N o t at all (1)	2	3	4	5	Extre mely (6)	N o t at all (1)	2	3	4	5	Extre mely (6)	N o t at all (1)	2	3	4	5	Extre mely (6)
White wine (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Red wine (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Beer (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cider (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clear spirits (vodka, gin) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dark spirits(whisky, rum) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q22. Indicate how much you agree with the following statements (tick the box that best matches your opinion)

	1 - Totally Agree (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 - Totally Disagree (6)
Alcohol is a disinfectant (1)	<input type="radio"/>					
Alcohol develops creativity (2)	<input type="radio"/>					
Alcohol is a natural remedy against common cold (3)	<input type="radio"/>					
Alcohol is an anti-inflammatory (4)	<input type="radio"/>					
Alcohol helps us to exceed our limits (5)	<input type="radio"/>					
Alcohol helps to overcome headaches (6)	<input type="radio"/>					
Alcohol is a laxative (helps the intestinal transit) (7)	<input type="radio"/>					
Alcohol is great for headaches (8)	<input type="radio"/>					
Alcohol helps you work (9)	<input type="radio"/>					
Alcohol increases the amount of red cells in the blood	<input type="radio"/>					

(10) Alcohol suppresses appetite (11)	<input type="radio"/>					
Alcohol increases self-esteem (12)	<input type="radio"/>					

Q23. Rate on the following scales how likely it is that you would develop a health condition (heart disease, dementia, cancer) when consuming moderate amounts of the following alcoholic beverages:

	1 - Much less likely (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 - Much more likely (6)
Red wine (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
White wine (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cider (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clear spirits (gin, vodka) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dark spirits (whisky, rum) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alcopops (Smirnoff Ice) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy drinks (Red Bull) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q24. According to you, to what extent can alcohol contribute to the following psychological problems:

	1 - Not at all (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 - Very much (6)
Depression (1)	<input type="radio"/>					
Isolation (2)	<input type="radio"/>					
Decreased concentration (3)	<input type="radio"/>					
Decreased self-esteem (4)	<input type="radio"/>					
Decrease of attention (5)	<input type="radio"/>					
Decreased intelligence (6)	<input type="radio"/>					
Difficulties talking (7)	<input type="radio"/>					
Difficulties thinking (8)	<input type="radio"/>					
Difficulties understanding (9)	<input type="radio"/>					
Memory loss (10)	<input type="radio"/>					
Sadness (11)	<input type="radio"/>					
Paranoia (12)	<input type="radio"/>					
Delusional thoughts (13)	<input type="radio"/>					
Decline of the libido (14)	<input type="radio"/>					

Q25. On the social level, alcohol consumption can lead to :

	1 - Not at all (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 - Very much (6)
Marital problems (1)	<input type="radio"/>					
Reduced productivity (work, school) (2)	<input type="radio"/>					
Violence (3)	<input type="radio"/>					
Aggression (4)	<input type="radio"/>					

Q26. Which colour is associated to red wine?

- Orange (1)
- Red (2)
- Yellow (3)

Q27. When you drink alcohol, you are:

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)
Alone (1)	<input type="radio"/>				
With partner (2)	<input type="radio"/>				
With friends (3)	<input type="radio"/>				
With family (4)	<input type="radio"/>				
With colleagues (5)	<input type="radio"/>				
With strangers (6)	<input type="radio"/>				

Q28. When you drink alcohol, you are :

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)
At home (1)	<input type="radio"/>				
In a bar (2)	<input type="radio"/>				
In a pub (3)	<input type="radio"/>				
In a restaurant (4)	<input type="radio"/>				
At a friend's place (5)	<input type="radio"/>				
In a nightclub (6)	<input type="radio"/>				
At a stranger's place (7)	<input type="radio"/>				
At your workplace (8)	<input type="radio"/>				
While travelling (train, bus, tram, car etc.) (9)	<input type="radio"/>				
In public areas (parks, streets etc.) (10)	<input type="radio"/>				
Others (11)	<input type="radio"/>				

Q29. Other, please state

Q30. When you drink alcohol, it's :

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)
When you just woke up (1)	<input type="radio"/>				
The morning (2)	<input type="radio"/>				
At noon, before meal (3)	<input type="radio"/>				
At noon, during meal (4)	<input type="radio"/>				
The afternoon (5)	<input type="radio"/>				
During the evening, before dinner (6)	<input type="radio"/>				
During the evening, during dinner (7)	<input type="radio"/>				
The night, after dinner (8)	<input type="radio"/>				
The night (9)	<input type="radio"/>				

Q31. On what opportunity do you drink alcohol ?

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)
Happy event (1)	<input type="radio"/>				
Parties with friends (2)	<input type="radio"/>				
Family get-togethers (3)	<input type="radio"/>				
Sad or painful event (4)	<input type="radio"/>				
Failure (5)	<input type="radio"/>				
Success (6)	<input type="radio"/>				
No particular occasion (7)	<input type="radio"/>				

Q32. On a weekly basis, how much money do you spend on alcohol ? (at the supermarkets, at the restaurant etc... *Enter as Pounds or Euroes.*

Q33. Indicate how much you agree with the following statements:

	1 - Not at all (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 - Absolutely (6)
My parents are aware of my alcohol consumption (1)	<input type="radio"/>					
My parents think that I drink too much (2)	<input type="radio"/>					
My friends have an impact on my alcohol consumption (3)	<input type="radio"/>					
My parents consider my alcohol consumption reasonable. (4)	<input type="radio"/>					
My friends think that I drink too much (5)	<input type="radio"/>					
It is not well seen to refuse a drink (6)	<input type="radio"/>					
My friends consider my alcohol consumption reasonable (7)	<input type="radio"/>					
I have concerns over the short-term effects of alcohol on	<input type="radio"/>					

my health (8)						
It is normal to drink alcoholic beverages on special events (parties, marriages, anniversaries, newborn baby, graduation etc...) (9)	<input type="radio"/>					
It is not well seen when you don't drink on a special event (10)	<input type="radio"/>					
My friends are aware of my alcohol consumption (11)	<input type="radio"/>					
I have concerns over the long-term effects of alcohol on my health (12)	<input type="radio"/>					
I drink because others do (13)	<input type="radio"/>					
I like to drink alcohol (14)	<input type="radio"/>					

Q34. What is the alcoholic beverage that you drink the most?

Q35. How often do you drink it?

- Every day (1)
- 2-6 times per week (2)
- 2-4 times per month (3)
- Once per month or less (4)
- One day per week (5)

Q36. You are :

- A man (1)
- A women (2)

Q37. What is your nationality:

Q38. Are you:

- Single (1)
- In a relationship (2)

Q39. You live:

	Residential area		Housing type		Are you:		
	Urban (1)	Rural (2)	House (1)	Apartment (2)	Sharing a flat or a house (1)	At your parent's place (2)	Living alone (3)
During the week (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
The weekend (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
During the holidays (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				

Q40. What is the current occupation of your father ?

- Farmer (1)
- Craftsmen, merchant, manager (2)
- Superior professional activities (doctors, engineer..) (3)
- Intermediate professional activities (teachers, social workers.) (4)
- Employee (5)
- Industry worker (6)
- Personal services (waiter, janitors..) (7)
- Retired (8)
- People without occupation (student, unemployment) (9)
- N/A (10)

Q41. What is the current occupation of your mother ?

- Farmer (1)
- Craftsmen, merchant, manager (2)
- Superior professional activities (doctors, engineer..) (3)
- Intermediate professional activities (teachers, social workers.) (4)
- Employee (5)
- Industry worker (6)
- Personal services (waiters, janitors) (7)
- Retired (8)
- People without occupation (student, unemployed) (9)
- N/A (10)

Q42. What is your principal occupation:

- Student (1)
- Professional (2)

Q43. If you work, what is your current occupation?

Answer If What is your principal occupation: Professional Is Selected

Q44. If you work, specify for how long?

- less than a month (1)
- Less than a year (2)
- one year (3)
- Two years (4)
- Over 2 years (5)

Answer If What is your principal occupation: Student Is Selected

Q45. What are you currently studying (university, high school) ?

- Social Sciences (Psychology, Sociology, Linguistics) (1)
- Sciences (Biology, Physics) (2)
- Art (3)
- Medicine, Dentistry (4)
- Other (5)

Answer If What is your principal occupation: Student Is Selected

Q46. What is your level of study ?

- GCSEs or A-levels (1)
- BTEC or other diploma (2)
- Bachelors degree (3)
- Masters degree (4)
- Doctorate (5)
- Other postgraduate qualification (6)

Answer If What is your level of study ? Other postgraduate qualification Is Selected

Q47. Other, please state

Q48. What is your monthly income?

- Less than 500 pounds (1)
- Between 500 and 1000 pounds (2)
- More than 1000 pounds (3)

Q49. How long have you had your driving license?

- I don't have it (1)
- Less than a year ago (2)
- Less than 5 years ago (3)
- More than 5 years (4)

Q50. Did you read the questions thoroughly and answered them in the sincerest possible way?

- Yes (1)
- No (2)

Thank you for your participation

Appendix K

Survey screen shot study 3

Qualtrics survey screen shot



INTRODUCTION

Hello and welcome,
First of all thank you for taking the time to help us collect data concerning young adults and alcohol.
For this research project, you will be asked to fill a questionnaire. This may take 25 minutes of your time. Please try to answer every question. The study is strictly anonymous and all responses you provide will remain anonymous.
Thanks again for your participation!

Block 8

How old are you :

< 18 years old
18 years old
19 years old
20 years old
21 years old
22 years old
23 years old
24 years old
25 years old
> 25 years old

How often do you drink alcohol ?

Every day

2-6 days per week

one day per week

2-4 times per month

Once per month or less

CULTURAL REPRESENTATION

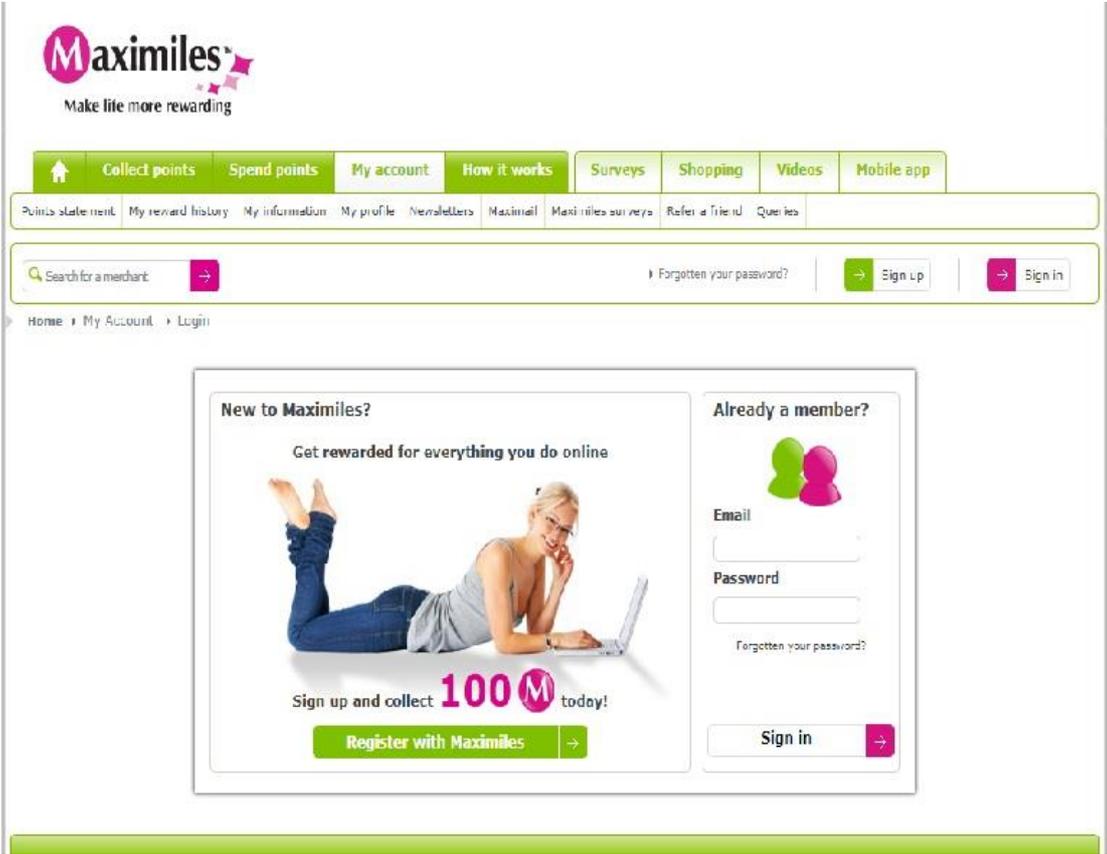
Name three alcoholic beverages commonly associated with England?

1st	<input type="text"/>
2nd	<input type="text"/>
3rd	<input type="text"/>

Appendix L

Screen shot study 3

Maximiles screen shot



Appendix M

Consent form for study 3



Informed Consent Form

PLEASE READ THIS DOCUMENT CAREFULLY. YOUR SIGNATURE IS REQUIRED FOR PARTICIPATION. YOU MUST BE AT LEAST 18 YEARS OF AGE TO GIVE YOUR CONSENT TO PARTICIPATE IN RESEARCH. IF YOU DESIRE A COPY OF THIS CONSENT FORM, YOU MAY REQUEST ONE AND WE WILL PROVIDE IT.

Thank you for taking part in this study. The purpose of the study is to understand drinking trends among young people and the perceptions of the health effects of different alcohol types.

The study involves an online survey consisting of questions regarding your knowledge of and beliefs about the risks and benefits associated with different alcoholic drinks. The survey will take you approximately 20 minutes to complete.

There are no risks or side-effects involved in this study, and we hope that you will find the process interesting and enjoyable. Please answer all of the questions honestly and accurately. All of the information we gain from you will be maintained in a strictly confidential manner. You have the right to withdraw your results at any time.

If you have any questions regarding the study, please contact Victoria Barber at Kingston University, London (k0723536@kingston.ac.uk)

- *I confirm that I have read and understood the information about this study.*
- *I understand that my participation is entirely voluntary, and that I can withdraw at any time without prejudice.*
- *I understand that all information obtained will be confidential.*
- *I agree that research data gathered for the study may be published provided that I cannot be identified as a subject.*
- *Contact information has been provided should I wish to seek further information from the investigator at any time for purposes of clarification.*

I give my informed consent to participate (please tick)

Please sign (or enter name), date and send back to researcher via email (k0723536@kingston.ac.uk):

If you would like to find out about the final results of this study, please leave your email address: _____

Appendix N

Interview schedule study 4

Interview schedule

Understanding the beliefs about health messages of alcohol and why/ how the messages are confusing for young people who see themselves as heavy episodic drinkers.

- Consent form (sent via email)
- Demographic information (sent via email)

Q1. What does the term binge-drinking mean to you?

Q2. Do you see yourself as a binge drinker? Why/why not?

Q3. Do you ever think about the health effects of alcohol?

Q4. What do you consider the main health effects of drinking alcohol to be?

- Any positive health effects?
- What about Short term effects
- How about the long-term effects
- For any drinks in particular? Wine, spirits, beer?

Q5. Have you been given information about the health effects of alcohol from any of the following sources?

- Media- social media, newspapers
- Friends and family
- College, university
- Doctor surgery
- Beverage container warnings

If so what information can you recall?

Q6. What sources of information would you trust? What information would you not trust? Why?

Q7. What has been the most influential?

- Media- social media, newspapers
- Friends and family
- College, university
- Doctor surgery
- Beverage container warnings

Q8. What types of health messages are most influential/effective?

- Alcohol beverage container labels
- Point of sale signs (posters etc.)
- Advertisements
- Televised campaigns
- Personal conversations- peer /family influence

Q9. From the information that you have gathered what are the current health messages about alcohol?

- Positive health effects

- Negative health effects

Q10. Are they influencing your attitude towards drinking alcohol? If so in what way are they influencing you?

- Amount you consume?
- Drink choice

Q11. Do you think the health messages are influencing you and your friends?

Q12. What specifically do you find confusing about health messages?

- Lack of clear advice/guidelines
- Personally unrelated and non-directive advice
- Conflicting messages
- Not accessible
- Are certain drink types more confusing?

Q13. What would help you to understand the health messages about alcohol?

- What platforms would reach you most effectively?
- What would have the most impact?
- Possible improvements
- What would make you think more about your drinking?

Close

Appendix O

Questionnaire study 4

Demographic questionnaire for interviews

Age: _____

Gender: _____

Occupation: _____

How often do you drink alcohol?

Once a month

Once a fortnight

Once a week

More often

In a single drinking occasion how many drinks (or units) do you typically consume?
(1 pint of 5% beer = 1 unit/ small glass of 12% wine= 2.1 units)

Appendix P

Consent form for study 4



Informed Consent Form

PLEASE READ THIS DOCUMENT CAREFULLY. YOUR SIGNATURE IS REQUIRED FOR PARTICIPATION. YOU MUST BE AT LEAST 18 YEARS OF AGE TO GIVE YOUR CONSENT TO PARTICIPATE IN RESEARCH. IF YOU DESIRE A COPY OF THIS CONSENT FORM, YOU MAY REQUEST ONE AND WE WILL PROVIDE IT.

Thank you for taking part in this study. The purpose of the study is to understand beliefs about health messages relating to alcohol and why/how the messages are confusing for young people.

The study involves a skype interview and you will be asked questions regarding your knowledge of and beliefs about current alcohol health messages of different alcoholic drinks. The interview will take approximately 30 minutes.

There are no risks or side-effects involved in this study, and we hope that you will find the interview process interesting and enjoyable. We will not be analysing data individually, but will be looking at trends and themes, and in the reporting of the project no information will be released which will enable the reader to identify you. Please answer all of the questions honestly and accurately. All of the information we gain from you will be maintained in a strictly confidential manner. You have the right to withdraw your results at any time.

If you have any questions regarding the study, please contact Victoria Barber at Kingston University, London (k0723536@kingston.ac.uk)

- ***I confirm that I have read and understood the information about this study.***
- ***I understand that my participation is entirely voluntary, and that I can withdraw at any time without prejudice.***
- ***I understand that all information obtained will be confidential.***
- ***I agree that research data gathered for the study may be published provided that I cannot be identified as a subject.***
- ***Contact information has been provided should I wish to seek further information from the investigator at any time for purposes of clarification.***

I give my informed consent to participate (please tick)

Please sign (or enter name), date and send back to researcher via email (k0723536@kingston.ac.uk):

If you would like to find out about the final results of this study, please leave your email address: _____