

**Exploring Industry Driven Marketing Influences on  
Young People who Drink Alcohol**

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## Abstract

*Background:* While the overall proportion of young people who report drinking alcohol in the UK appears to have decreased over the past fifteen years, those who do drink are consuming in larger quantities, and drinking more frequently. An association between industry-driven alcohol marketing and young people's drinking behaviour has been demonstrated in a number of cross-sectional, longitudinal and qualitative studies, but less is known about how young people are affected by alcohol marketing and how marketing processes knit with other widely studied influences on young people's drinking behaviour. This study aimed to investigate the influence of industry-driven alcohol marketing processes (price, promotion, product branding and placing) on young people's drinking choices and behaviour.

*Methods:* A mixed-methods approach underpinned by a critical realist perspective was adopted. A systematic review examined empirical studies concerning the impact of industry-driven price and other marketing techniques on young people's drinking behaviour. Qualitative interviews were conducted with young people aged 14-17 from NE England (n=31) to explore accounts of when, why, where and how they drink alcohol. Q methodology was used to derive 'factors' underlying alcohol choices, based on the results of a card sorting procedure undertaken with young people aged 14-17 from NE England (n=28).

*Findings:* The systematic review identified 32 papers which were predominantly cross-sectional in design, and focused on the impact of alcohol promotion on young people's alcohol use. Although industry-driven alcohol marketing appeared to influence young people's drinking behaviour, studies reported on a variety of populations, study designs, exposure measures and outcome measures, making synthesis and extrapolation difficult, as well as underlining a shortage of longitudinal work establishing the effect of alcohol marketing over time. The review highlighted a paucity of studies conducted in the UK as well as a lack of research examining the influence of price for those under the legal drinking age *only* and exploring the impact of digital or social media marketing on young people's drinking behaviour. Young people interviewed in the qualitative study appeared to make micro-level choices about alcohol (between products and brands), positioning themselves as autonomous agents and unaffected by overt forms of alcohol marketing. However, the majority of



participants were able to recount brands and slogans, did not recognise less visible aspects of promotion (e.g. sponsorship, viral and digital marketing) and did not associate the pricing of alcohol as a form of marketing. Therefore, advertising and other promotional activity seemed to play a role in building recognisable imagery linked to alcohol products, as well as associations and expectancies related to drinking. The advisability of drinking *per se* did not appear to have been questioned by participants and was considered an acceptable and normal practice. Participants reported that they were not exclusively price-led and choices were made in conjunction with other criteria (e.g. taste, availability, strength and image). Q factor analysis revealed three accounts: Factor one illustrates a sense of individuality, autonomy, and maturity in alcohol choices; factor two is price-led, choosing to drink whatever is most accessible, cheapest or on special offer; and factor three is an account of bounded adventure, pleasure and hedonism.

*Conclusions:* Bourdieu's concept of 'habitus' is drawn on to illustrate that young people's alcohol choices are influenced by structural predispositions (including industry processes and alcohol marketing) but that 'taste', social norms and inter-personal relationships (recognised as agency) can also play a role in reinforcing, normalising and driving behaviour. Deeply embedded social norms and industry processes culminate in 'political economies of health' where health behaviours are governed by historical traditions and the logic of advanced capitalism (the need to make a profit), and choices constrained into seemingly free, naturalised directions. Thus, a description of young people as individual, rational agents, who can make the 'correct' choices about alcohol use, minimises structural and cultural factors that are, in part, shaped by the alcohol industry in conjunction with other influences such as inter-personal relationships and social norms, and which constrain health choices and behaviours of young people. Public Responsibility Deals and voluntary self-regulation of alcohol marketing may be inadequate to counter this. Instead, it needs to be identified that young people are being subtly bombarded and further work is required to 'unravel' this impact. Nevertheless, tighter restrictions on the marketing of alcohol, such as a policy resembling France's Loi Evin should be given consideration. The current alcohol strategy for England and Wales includes a commitment to implementing an alcohol minimum unit price. However, findings from this doctoral work demonstrate that it is difficult to disentangle the four elements of the marketing

mix. Price encompasses just one facet of alcohol marketing and makes up only a small part of the external world in which young people are becoming acculturated. The effect that price changes alone could have on young people's alcohol use should not be overemphasised. Thus, as well as examining the impact of price on young people's drinking behaviour pre and post legislative change, further work should also explore the changing nature of industry-driven alcohol marketing processes. In particular, the influence of digital and social media marketing on young people's drinking behaviour needs to be examined further, as well as the combined contribution that alcohol marketing, long-standing social norms and inter-personal relationships ('the alcohol habitus') all can make towards a ubiquitous culture of alcohol consumption.

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## Abbreviations

ABCs	Acceptable Behaviour Contracts
ABM	Alcohol Branded Merchandise
ABV	Alcohol By Volume
AHR	Adjusted Hazard Ratio
AOR	Adjusted Odds Ratio
APCI	Alcohol Promotional Clothing Item
API	Alcohol Promotional Item
ASA	Advertising Standards Agency
ASBOs	Anti-Social Behaviour Orders
AUD	Alcohol Use Disorder
CASP	Critical Appraisal Skills Programme
CHD	Coronary Heart Disease
CI	Confidence Interval
CMO	Chief Medical Officer
CRB	Criminal Records Bureau
DfCSF	Department for Children, Schools and Families
DMA	Designated Marketing Area
DoH	Department of Health
EHAF	European Commission's European Alcohol and Health Forum
ESPAD	European School Survey Project on Alcohol and Other Drugs
ESRC	Economic and Social Research Council
EU	European Union
FAB	Flavoured Alcoholic Beverage
FAS	Foetal Alcohol Spectrum
FOI	Freedom Of Information
GUTs	Growing Up Today Survey
HED	Heavy Episodic Drinking
HR	Hazard Ratio
MAE	Movie Alcohol Exposure
MIP	Message Interpretation Process
MTF	Monitoring The Future
MUP	Minimum Unit Price
NE	North East
NHS	National Health Service
NICE	National Institute of Clinical and Health Excellence
NLSY	National Longitudinal Survey of Youth

NW	North West
OHT	Oregon Healthy Teens Survey
OR	Odds Ratio
PCA	Principle Components Analysis
POS	Point of Sale
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
PSA	Pro-Social Advertisement
PSHE	Personal, Social, Health Education
QALY	Quality Adjusted Life Year
QF	Drinking Volume
QUID	Qualitative Understandings in Youth Drinking
RCT	Randomised Control Trial
RSOD	Risky Single Occasion Drinking
RTD	Ready To Drink
SD	Standard Deviation
SE	Standard Error
SES	Socio-Economic Status
SNP	Scottish National Party
TAPA	Tobacco Advertising and Promotion Act 2002
TV	Television
UK	United Kingdom
UN	United Nations
US	United States
USA	United States of America
VAT	Value Added Tax
WFA	World Federation of Advertisers
WHO	World Health Organisation

## **Chapter 1: Introduction**

This doctoral thesis presents a mixed-methods study conducted to explore the influence of industry-driven alcohol marketing on the drinking choices and behaviour of young people aged 14-17. In this thesis, the term 'young people' is used to describe those under the UK legal drinking age (18 years old) unless otherwise stated. Where primary research conducted as part of this study is discussed, the term 'young people' refers to those aged 14-17 only. In this chapter, the prevalence of young people's alcohol consumption on a global, national and regional scale will be outlined. This is followed by an exploration of what is known about the influences on young people's drinking behaviour and an examination of current and recent alcohol policy, focusing specifically upon the implications for those under the UK legal drinking age, and strategies designed to restrict the pricing and wider marketing of alcohol. Finally, the rationale for this study will be presented and the research aims, objectives and questions introduced. The chapter ends with an overview of the thesis.

### **1.1. Background and area of study**

#### ***1.1.1. Young people and alcohol consumption***

While the overall proportion of young people who report drinking alcohol in the UK appears to have decreased over the past fifteen years, those who do drink appear to be drinking in larger quantities, and more frequently (Bellis et al., 2008a). The percentage of young people aged 11-15 who report having drunk alcohol has decreased steadily from 62% in 1988 to 45% in 2010 and, correspondingly, the proportion of young people who report that they have never drunk alcohol has risen from 39% in 2003 to 55% in 2010 (Fuller, 2011). However, the mean amount of alcohol consumed by young people who do drink increased from 6.4 units per week in 1994 to 12.9 units per week in 2010 (Fuller, 2011). This is equivalent to approximately six pints of normal strength beer (4% ABV) or one and a quarter bottles of wine (at 12% ABV).

Further, patterns of heavy episodic drinking (defined here as consuming more than 5 drinks in a single occasion) amongst young people aged 15-16 have not changed since 2003 (Atkinson et al., 2012).

The likelihood of having drunk alcohol (as well as the frequency / volume of consumption) increases with age and the figures above can mask important variations across different age groups. For example, 10% of 11 year olds in the UK report having drunk alcohol compared to 77% of 15 year olds, and 1% of 11 year olds have drunk alcohol in the last seven days compared to 30% of 15 year olds (Fuller, 2011). Further, 47% of Year 9 students (aged 13-14) report that they drink monthly, a figure which increases to 72% amongst Year 11 students, who are aged 15-16 (Bremner et al., 2011). Similarly, Atkinson et al (2012) found that, by age 15-16, 90% of young people in the UK report having drunk alcohol at least once in their lifetime; 85% report drinking alcohol in the last 12 months and 65% in the last 30 days.

Nevertheless, a difficulty in reporting drinking trends amongst young people is that some age-groups tend to be collapsed into a wider age range of young people. For example, locating alcohol research findings solely for, say, 16-17 year olds is more troublesome. Drinking behaviour during these years is largely bracketed '16-24', with young people re-labelled as young adults. For such a transitional age, where, for example, a high proportion of young people will move from compulsory education into further education, training or full time work, this is surprising. Arguably, the normalisation of involvement with alcohol and other drugs appears to occur more rapidly between 15 and 17 years, despite the fact that individuals remain under the legal drinking age. Indeed, a fairly adult pattern of behaviour appears to become established by 17 years, with easier access to alcohol (and tobacco) in public situations and acceptance (or reduction of conflict) among many parents of an adolescent's drinking behaviour (Boys et al., 2003).

Returning to the scale of young people's drinking, compared to the rest of Europe (using data collected from 36 countries), young people in the UK (aged 15 and 16) have the sixth highest average level of alcohol consumption on their last drinking day at 6.7 centilitres and the UK is the third highest ranking country in Europe for the proportion

of young people reported to be drunk in the last 30 days (26%) (Hibell et al., 2012). Compared to the rest of the world (using data collected from 39 countries), England rank tenth highest (22% of girls and 31% of boys) for the proportion of 15-year-olds who drink alcohol at least once per week. England also ranks ninth (18% of girls and 20% of boys) for the proportion of 15-year-olds who report first drunkenness at age 13 or younger and 11<sup>th</sup> (15% of girls and boys respectively) for the proportion of 15-year-olds who have been drunk at least twice (Currie et al., 2012).

Examining the alcohol consumption of young people in the UK on a micro level highlights pronounced regional differences. NE England continues to have the highest proportion of young people (aged 11-15) who have ever drunk alcohol (51%) and who have drunk alcohol in the last week (17%), as well as the highest mean consumption in the last week (15.2 units) (NHS Information Centre, 2012). NE England also has the highest rate of young people under 18 in specialist alcohol treatment in England, with more than 600 young people in treatment in 2010-2011, 7% of the total number of all people in treatment in the region (NHS Information Centre, 2012). A high population prevalence of alcohol consumption in young people is reflective of the NE England adult population as a whole, 87% of whom report drinking alcohol (Balance, 2009). This level can be compared to the rest of the UK, where 68% of men and 54% of women (aged 16 and over) report drinking an alcoholic drink on at least one day per week (NHS Information Centre, 2012). Roche (2001) describes geographical differences in the relationship that young people (and adults) have with alcohol as 'cultural recipes', which are evident in regional (and national) differences in drinking prevalence rates.

Early onset of drinking, and consuming larger quantities than ever before, has led to alcohol-related liver problems becoming manifest far earlier than in previous decades (Bonner and Gilmore, 2012). This is particularly evident in NE England, with current figures suggesting that there has been a 400% increase in the number of 30-34 year olds being admitted to hospital with alcohol-related liver disease in NE England since 2002 (Balance, 2011a). Further, young people are actually vulnerable to multiple, interacting strands of risk as a result of alcohol consumption, with physiology and (lack of) experience coming together. Alcohol has a bigger effect on smaller bodies



(physiological) that have not learnt (experientially and metabolically) to process it (Murgraff et al., 1999). In addition, there are both environmental and resource issues, with young people tending to drink away from adult gaze, with fewer financial resources to help buffer the social and environmental risks that result from drinking alcohol (Brown et al., 2009). Young people also drink infrequently compared to an adult population, but at a higher intensity, with the psychoactive nature of alcohol specifically affecting judgement, leading to intoxication and risk-taking behaviour.

The onset of multiple risk behaviours, including alcohol consumption, cluster in adolescence and young people who engage in any one risk behaviour are likely to engage in others (Kipping et al., 2012; Connell et al., 2009; van Nieuwenhuijzen et al., 2009; DuRant et al., 1999; Escobedo et al., 1997; Shrier et al., 1997). Thus, although alcohol consumption during childhood and adolescence can impact on liver, bone and brain development, it is the short term negative social factors and behavioural outcomes that are associated with drinking which pose much more of a risk to health and wellbeing. These include an increase in the likelihood of accidents, trauma and early death from intoxication; violence, self-harm and / or suicidal behaviour; early, forced and unprotected sex; development of and exacerbation of mental health issues and poor school attendance and attainment (Witt, 2010; Barnes et al., 2009; Bellis et al., 2009; Windle et al., 2009; Bellis et al., 2008b; Newbury-Birch et al., 2008; Youth Justice Board, 2008; Rodham et al., 2005a; Zeigler et al., 2005; Carpenter, 2004). As a result, the prevention of excessive drinking in young people is now a global public health priority (Rolles and Measham, 2011; Nutt et al., 2010). With this in mind, the following chapter section examines existing literature surrounding the influences on, reasons or causal factors that attempt to explain or predicate young people's drinking behaviour.

### ***1.1.2. Psycho-Social, Structural and Environmental Influences on Young People's Alcohol Consumption***

This chapter section begins with a detailed account of research examining the role that parental behaviour and attitudes can have on young people's drinking beliefs and

behaviour. Following this, literature exploring wider family relationships (siblings), peer or social networks, gender, religion, ethnicity, and socio-economic status (SES) will also be discussed. Literature exploring the influence of alcohol price and wider marketing (industry driven or otherwise) on the drinking behaviour of young people will be introduced here. However, the specific impact of industry driven alcohol price and wider marketing is reviewed systematically in Chapter 5 of this thesis, and policies designed to control the commercial marketing of alcohol are discussed in section 1.1.3 of this chapter. Thus, the purpose of this particular chapter section is to provide an overview of the range of explanations put forward for young people's drinking behaviour, before the potential influence of industry driven pricing and wider marketing of alcohol is introduced and later appraised in detail.

### *Parents*

It is consistently demonstrated that young people whose parents drink alcohol are more likely to drink themselves (Elliott et al., 2011; Moore et al., 2010; Kestila et al., 2008; Newbury-Birch et al., 2008; Spijkerman et al., 2008; Fisher et al., 2007; Duncan et al., 2006; Kuendig and Kuntsche, 2006; Hellandsjo Bu et al., 2002; Windle, 2000). Parental use of alcohol may influence young people's behaviour directly through social modelling and learning processes (Bremner et al., 2011; Ward and Snow, 2011; Eadie et al., 2010; Valentine et al., 2010; Velleman, 2009; Dalton et al., 2005; Yu, 2003) or indirectly through the development of positive alcohol expectancies (Bremner et al., 2011; Eadie et al., 2010; Valentine et al., 2010; Velleman, 2009).

In particular, Yu (2003) suggests that the observed, actual frequency of parental drinking is more important than attitudes and norms towards alcohol, reinforcing the argument that it is the modelling of behaviour, rather than the transmission of norms, which is key. Thus, Elliott et al (2011) highlight that 51% of drinking children (aged 11-17) in NW England report that their mother drank weekly or more (compared to 33% of non-drinking children) and that 64% of drinking children report that their father drank at least weekly (compared to 46% of non-drinking children). Further, Hellandsjo Bu et al (2002) suggest that parental drinking frequency (as reported by their children)

is positively associated with early adolescent alcohol debut. However, the effects of parental drinking are rarely so straightforward and Brody et al (2000) acknowledge that social modelling and the development of positive alcohol expectancies and attitudes can interact. They suggest that it is feasible for young people to observe parental drinking and, from doing so, learn (or be socialised into) their own norms about expected drinking behaviour.

Many parents see it as their responsibility to teach their children when, how and where to drink alcohol (Gilligan et al., 2012; Hayes and et al., 2004; Taylor and Carroll, 2001). Arguably, there are two widely reported reasons for this point of view. First, it reflects the implicit attitude that introducing young people to alcohol in the home represents a 'safe' environment in comparison to public spaces associated with violence and disorder (Jayne et al., 2011; Valentine et al., 2010). Further, this also assumes that, by allowing young people to drink at home on 'special occasions' or with friends under adult supervision, a certain level of 'informal surveillance' can exist, minimising the probability of alcohol-related harm (Jayne et al., 2011; Forsyth and Barnard, 2000).

Second, it is frequently assumed that introducing young people to alcohol at an earlier age (particularly with meals) normalises alcohol use and reflects a continental drinking style which can result in young people having a 'sensible' and 'moderate' relationship with alcohol. However, there is little evidence to support this effect and the evidence that a distinct 'continental' drinking style exists or is beneficial is equivocal (Gilligan et al., 2012; Gallimberti et al., 2011). Further, it is possible that, by introducing children to alcohol at an early age, parents are speeding up progression to higher drinking levels, with early drinking initiation associated with increased frequency / volume alcohol consumption and the development of alcohol use disorders (AUDs) and alcohol-related problems later in life (Englund et al., 2008; Newbury-Birch et al., 2008; Kypri et al., 2007; DeWit et al., 2000).

Thus, on one hand, Livingston et al (2010) found that young people permitted to drink at home during high school (either with a meal or with friends) reported more frequent heavy episodic drinking (HED) during the first semester of college than those

not permitted to drink at home at all. Adolescents permitted to drink at home are also more likely to drink outside of the home and report a higher level of alcohol-related problems over a two year period (van der Vorst et al., 2010). On the other hand, Yu (2003) found that parents who prohibit adolescents from drinking alcohol at home may lower adolescents' alcohol involvement and Bellis et al (2010) have demonstrated that young people who drink without supervision are significantly more likely to drink frequently, heavily and experience alcohol-related harms.

Introducing young people to alcohol in the home may inadvertently communicate that drinking is condoned and acceptable in less restrictive situations, and oversimplify domestic and public drinking cultures (Jayne et al., 2011; Boyle et al., 2006). Further, Jayne et al (2011) highlight contradictions in the public opinions and private behaviour of parents in relation to their children's alcohol use. They found that the dominant parental attitude was that young people should not be introduced to alcohol at home until their mid-teens and should not be allowed to drink in public until they are over the legal drinking age. In practice, parents interviewed were introducing their own children to alcohol at home at an earlier age than this. However, parental attitudes to (and use of) alcohol are rarely straightforward and are embedded in a much broader culture which accepts and normalises intoxication (Jayne et al., 2011; Ward and Snow, 2011). Thus, because alcohol is an "unremarkable part of many families' lives", and most young people's use of alcohol is perceived to be 'ordinary' rather than 'spectacular', official guidance on young people's alcohol use (such as that issued by the Chief Medical Officer (CMO), outlined in the following chapter section) is unrealistic and "runs counter to sensible parental approaches to alcohol" (Jayne et al., 2011:3)

Parenting 'style' and 'good' family relationships have been demonstrated to have a positive effect on young people's drinking behaviour regardless of family structure or whether parents consume alcohol (Ryan et al., 2010; Newbury-Birch et al., 2008; Urberg et al., 2005). Excessively authoritarian and permissive parenting are both associated with earlier onset of alcohol use or higher levels of drinking behaviour (Moore et al., 2010; Baumrind, 1985); and Foxcroft and Lowe (1991) identify a possible curvilinear relationship between control and adolescent drinking, where significantly

stricter or lax parenting styles appear to increase the frequency of alcohol misuse. Further, Baumrind's model of parenting highlights three distinct parenting styles – 'Authoritarian', 'Authoritative' and 'Permissive', as well as a variation of the permissive prototype described as 'Non-Conforming'. In particular, this model highlights the subtle difference between 'authoritarian' and 'authoritative' parenting styles. 'Authoritative' control (which is responsive and negotiated) is likely to be viewed by adolescents as legitimate and well accepted, whereas 'authoritarian' control (which is status-oriented and non-negotiated) is likely to be rejected.

In this way, Baumrind's model shares much in common with a 'neo-liberal' model of parenting in which the role of the parent is to equip the young person with the right personal skills and qualities to make sensible, informed choices in relation to alcohol (Jayne et al., 2011). More specifically, open, positive communication (about both alcohol and general issues) has been demonstrated to have a protective effect on inappropriate or excessive adolescent drinking (Cable and Sacker, 2007; Turrisi et al., 2007). Family bonding (Kuendig and Kuntsche, 2006), cohesion (Velleman, 2009), regularly eating an evening meal together (CASA, 2007) and support (Hellandsjo Bu et al., 2002; Kloep et al., 2001) have all been described as protective factors against early, risky or excessive adolescent drinking. Further, a substantial number of papers indicate that parental control or monitoring, adult supervision after school, involvement in activities with parents, and rules or boundaries (which are not necessarily only alcohol-related) are associated with lower levels of adolescent drinking, primarily by postponing initiation into drinking (Bremner et al., 2011; Habib and et al., 2010; Moore et al., 2010; Kenny and Schreiner, 2009; Choquet et al., 2008; Spijkerman et al., 2008; Fisher et al., 2007; van der Vorst et al., 2006; van der Vorst et al., 2005; Aizer, 2004; DiClemente et al., 2001; Kloep et al., 2001).

Finally, parents can also be a primary source of the supply of alcohol to young people (Elliott et al., 2011; Kearns et al., 2011; Ward and Snow, 2011). This may be through the provision of money or by purchasing alcohol for young people directly. Easy availability of alcohol is associated with increased adolescent alcohol consumption (Bremner et al., 2011) and Elliott et al (2011) found that 65% of drinkers (aged 11-17) accessed alcohol via their parents. Further, as suggested earlier in this section, it is

implicitly assumed that, if parents purchase alcohol for their children directly, the amount of alcohol consumed can be strictly monitored. In other words, that providing young people with alcohol will stop them from accessing it elsewhere, thus reducing the risk of alcohol-related harm.

Again, the evidence for this is equivocal. On one hand, Bellis et al (2009) found that (in contrast to other ways of obtaining alcohol) young people (aged 15-16) whose parents bought alcohol for them were less likely to drink in a public setting, 'binge' drink, drink heavily or drink frequently. On the other hand, receiving alcohol from a parent or taking it from home has been demonstrated to be the strongest indicator of increased alcohol use over time (Komro et al., 2007). However, Gilligan et al (2012) found that negative outcomes from parental provision of alcohol are dependent on the context of supply. In other words, if parents supplied young people with alcohol per se, this did not increase the odds of risky drinking (though it also did not have the protective effect which motivated the behaviour). However, if alcohol was supplied for consumption without parental supervision, then the odds of risky drinking were four times higher.

### *Siblings*

The influence of sibling alcohol use is explored in only a small number of studies. Nevertheless, a large proportion of those that do report that having siblings who misuse alcohol predicts young people's own misuse of alcohol (Moore et al., 2010; Newbury-Birch et al., 2008; Bellis et al., 2007; Bahr et al., 2005; Trim et al., 2005; Brook et al., 2003; Boyle et al., 2001; Windle, 2000). In particular, Moore et al (2010) demonstrate that having a sibling who drank regularly before the age of 18 is significantly associated with the increased likelihood of all markers of alcohol consumption studied amongst 11-16 year olds in the UK.

Further, Windle (2000) and Scholte et al (2008) suggest that it is feasible for sibling effects to be similar to peer effects and stronger than parental effects. They found that an association between sibling alcohol use and young people's own alcohol use (amongst respondents with a mean age of 17.8 years) remained strong regardless of

the sex of the sibling but declined with age. Finally, obtaining alcohol from older siblings, like parents, is a predictor of early drinking in 11-12 year olds and risky drinking in young people aged 15-16 who already drink (Bellis et al., 2007; McBride et al., 2000).

### *Peers and Social Networks*

Peer drinking, and the amount of time spent with friends, is also positively associated with the initiation of alcohol consumption and a strong indicator for current drinking / high drinking levels amongst young people (Bremner et al., 2011; Fisher et al., 2007; Hellandsjo Bu et al., 2002; Kloep et al., 2001). In particular, Windle (2000) suggests that parents begin to exert less direct influence, and peers exert greater direct influence, on young people's drinking behaviour from mid-adolescence onwards. More specifically, Year 9 students in the UK (aged 13-14) are more likely to have been with parents or siblings when last drinking whereas Year 11 students (aged 15-16) are most likely to have been with friends. Further, those who were with friends the last time they consumed alcohol are more likely to have been drunk more than once (Bremner et al., 2011), and obtaining alcohol from friends is a predictor of risky drinking amongst drinkers aged 15-16 (Bellis et al., 2007). Peer approval of drinking is also linked to greater alcohol use amongst first year college students (Chawla et al., 2009; Kristjansson et al., 2009; Duncan et al., 2006).

Many young people report drinking alcohol to facilitate socialisation and to develop relationships with peers (Johnson, 2011; Coleman and Cater, 2005). Alcohol experience and positive attitudes towards drinking have been demonstrated to be related to popularity and influence in the peer group (Demant and Jarvinen, 2006). Thus, alcohol has been described as the 'glue that binds friendships together' and central to the practice of 'having fun', with the social friendship group identified as a 'locus' of young people's identities (Percy et al., 2011; Seaman and Ikegwuonu, 2010; Griffin and et al, 2008). Further, Demant and Ostergaard (2007) suggest that partying (and socialising) is an integrated part of adolescents' everyday life and represents a way to reaffirm or extend friendship networks. They describe the 'social logic' of a party as being to

consume alcohol collectively, symbolising commitment to both the party and to the specific group of friends.

Findings demonstrate that a best friend's drinking behaviour is related to adolescent drinking both cross-sectionally and longitudinally (Bot et al., 2005), and that being part of a larger social network of heavy drinkers is related to greater levels of binge drinking in those aged 18-25 (Delucchi et al., 2008). However, it remains equivocal whether it is peer influence or peer selection which impacts on risky behaviour, such as alcohol use (Cotterell, 2007; Reifman et al., 2006). Thus, Kirke (2006) outlines a 'chain reaction' model of social network theory to explain substance use within peer groups. In this model, it is neither selection or influence which exclusively explains similarities or homophily in substance use patterns amongst peer groups. Rather, it is a combination of the two. For example, a well-established friendship group may comprise non-drinkers but the addition of a new young person who drinks could mean that their influence diffuses to the rest of the group. On the other hand, this principle works in reverse and so a friendship group of drinkers could influence a new individual's drinking behaviour. Further, individuals or friendship groups may select each other based on similar beliefs or behaviour, with this pattern continuing in a cycle as a peer group continuously changes.

### *Socio-Economic Status (SES)*

Little research focuses specifically on the impact of SES on young people's alcohol use, especially in the UK. Further, although adult drinking is patterned by SES (Huerta and Borgonovi, 2010), the small amount of work which does examine the influence of SES on adolescent drinking is largely equivocal. Data relating to SES is notoriously difficult to collect for young people with indicators of parental SES often used as a proxy measure despite many deemed inappropriate for use in research with adolescents (Currie et al., 1997). Deprivation can also often be assigned using school location and calculated on an ecological rather than individual basis (Bellis et al., 2010; Bellis et al., 2007). Further, it is suggested here that young people may not readily associate their



health behaviours with markers of SES such as parental income, occupation or school location.

Nevertheless, Droomers et al (2003) suggest that SES affects adolescent consumption substantially. They found that a significant association between fathers' occupation and adolescent alcohol consumption emerged at age 15, and adolescents from the lowest occupational group had almost twice the odds of being a heavier drinker than the highest occupational group. This association between father's occupation and high alcohol consumption during adolescence was explained by the higher prevalence of familial alcohol problems and friends approving of alcohol consumption, lower intelligence scores, and lower parental attachment among adolescents from lower occupational groups. Alternatively, Bellis et al (2010) found higher levels of drinking amongst UK adolescents (aged 15-16) from more affluent areas and those with a higher personal income. Similarly, Melotti et al (2011) report that drinking was more common in UK young people aged 13 from higher-income households but less common in households with higher levels of maternal education.

However, two recent systematic reviews have demonstrated that there is little consistent evidence to support an association between adolescent alcohol use and SES (Hanson and Chen, 2007; Wiles et al., 2007a). Additionally, Sutherland (2012) reports that, amongst UK young people aged 11-12 at recruitment and followed up longitudinally, familial and demographic factors emerged as important predictors of adolescent substance use but SES did not appear to be relevant. Further, Richter et al (2006) found that family SES had only a limited effect on repeated drunkenness amongst 11-15 year olds across Europe and North America. Where there was any effect, this was predicted by parental occupation rather than family affluence. Despite this, negative alcohol-related outcomes have been demonstrated to disproportionately affect those from a lower SES, and it is feasible that young people from more affluent backgrounds have greater financial resources to help buffer the social and environmental risks that result from drinking alcohol (Brown et al., 2009).

An association has been demonstrated between lower education / school attainment levels (sometimes used as a proxy for SES and family affluence) and greater levels of

binge drinking in those aged 18-25 (Delucchi et al., 2008). Further, adolescents who do well in school are less likely to drink, smoke or take drugs, and educational patterns of success or failure are usually well established by age 13-14. However, this pattern appears to change in college and university where, by age 20, young people attending college and university surpass their less-educated peers in their use of alcohol, especially in bouts of heavy drinking (Bachman et al., 2008). Here, many young people are away from home and have their own income for the first time, and socialising becomes increasingly orientated around peers rather than family.

### *Religion, Ethnicity and Race*

There also remains very little UK-based research focusing specifically on the impact of religion, ethnicity or race on how young people learn and behave towards alcohol. Familial and peer influences closely correlate with both religion and ethnicity (Goodman et al., 2011; Velleman, 2009). Religious attendance has been demonstrated to predict lower levels of quantity and frequency of alcohol use, even in the presence of peer, family and school variables (Bartkowski and Xu, 2007; Mason and Windle, 2002); and 'religiosity' (salience / sense of personal importance of religious beliefs) was associated negatively with later alcohol use, although this association became non significant when controlling for peer, family and school influences (Mason and Windle, 2002).

In a recent review of the literature, Velleman (2009) highlights a drinking 'continuum of acceptance' with alcohol playing a central role in some religions or cultures, such as certain aspects of Judaism and Christianity. Further, in a review of studies conducted in the UK, Hurcombe et al (2010) identify tensions, particularly in 'second generation' ethnic minority groups, between strong ethnic identity (and drinking abstinence) and growing UK acculturation. Thus, young people who describe themselves as non-drinkers (particularly those belonging to Muslim, Sikh (especially girls) or Hindu religions and those from South Asian ethnic groups) may hide their alcohol use (Hurcombe et al., 2010). In particular, Denscombe (1995) and Denscombe and Drucquer (2000) report differences in attitudes towards drinking between Hindus,

Sikhs and Muslims aged 15-16, with Muslims exhibiting particular sensitivity to their religion's proscription of drinking alcohol. Nevertheless, reported levels of drinking by Hindus, Sikhs and Muslims were similar yet significantly lower than that of White young people of the same age (Denscombe and Drucquer, 2000; Denscombe, 1995).

Finally, Bellis et al (2007) found that White and mixed race youths in the UK (aged 15-16) were more likely to binge than any other group, and mixed race youths were also more likely to drink in public settings. Further, some evidence suggests that Black Caribbean young people and those of mixed race seem at highest risk of 'regular' drinking (Velleman, 2009; Rodham et al., 2005b; Stansfeld et al., 2003; Stillwell et al., 2003; Best et al., 2001; Purser et al., 2001; Denscombe and Drucquer, 2000; Harrington, 2000; Karlsen et al., 1998; Measham, 1996; Denscombe, 1995).

### *Gender*

Although a vast amount of work has explored the role of gender in drinking and the night-time economy among young people over the age of 18, less work has focused on gendered alcohol use in adolescence (Chatterton and Hollands, 2003; 2001). However, arguably, the assumptions outlined below are just as valid in adolescence and, despite not being a primary aim or objective, will be explored across the findings of this thesis. There has been a marked increase in alcohol consumption among women and girls over the last ten years, with volume / frequency of alcohol use now very similar for adolescent boys and girls in the UK (Hibell et al., 2009). However, gender continues to be a substantial influence on young people's relationship with alcohol (de Visser et al., 2012; Percy et al., 2011). Although there is evidence that young women's drinking is becoming similar to men's in terms of drinking to achieve drunkenness as the norm (Sweeting and West, 2003), there are indications that hazardous drinking remains higher for males (Emslie et al., 2009). Further, experience of alcohol-related harms and related risk behaviours may differ according to gender (MacArthur et al., 2012).

Drinking continues to be bound in gender stereotypes or constructs, with alcohol consumption associated with traditional notions of masculinity. Thus, the use of

alcohol is particularly complex for young women. Although drinking to excess is constructed as inherently unfeminine, a refusal to do so for many young women is seen as out of the ordinary and requires justification, resulting in mixed messages and a 'no win' situation for young women (Griffin and et al, 2008). Thus, work conducted by The Glasgow Centre for Population Health (2012) found, amongst young people aged 16-18 and 25-30 in Scotland, that "although there was superficial evidence of gender convergence in drinking intentions...how these intentions related to ideas of femininity and masculinity remained distinct...drinking practices were therefore enactments of femininity and masculinity as much as maintaining risky or safe drinking styles."

Finally, the marketing and promotion of alcohol (industry-led or otherwise) helps to reinforce gender roles with, in places, highly sexualised and stereotypical content (Sumnall et al., 2011; Brooks, 2010; Hastings, 2010; Seaman and Ikegwuonu, 2010; Daykin et al., 2009). In particular, Sumnall et al (2011) found that images of alcohol differed by gender. More specifically, female-orientated media (especially magazines) focused on celebrities and the glamorous aspects of drinking, while also suggesting that drinking is less acceptable in women. However, media targeting men presented drinking as a way to shape masculine identity and form friendships. Similarly, the diversification or re-commodification of alcohol products and drinking spaces (see section 1.1.3) contribute to gendered notions of drinking behaviour. Such diversification in marketing techniques include the deliberate targeting of specific segments of the population, particularly women and young people, and also comprise the re-modelling of space to introduce 'virtual drinking establishments' and a 'female friendly' café and cocktail bar culture.

#### *Price and Wider Marketing (industry-driven or otherwise)*

The commercial marketing of alcohol is a complex process which consists of four key domains: price, product, promotion and placement issues (of product sale or use), traditionally described by business or industry as the '4 Ps' or the 'marketing mix' (Adams and Beenstock, 2012; Constantinides, 2006; Brassington and Pettitt, 2003;

Kotler, 2003; Cannon, 1992; Cowell, 1984; McCarthy, 1964). Literature exploring the influence of industry-driven alcohol marketing on the drinking behaviour of young people aged 14-17 is not explored in any depth here and is instead reviewed systematically in chapter 4.

However, several alternative studies observe or model differences in young people's drinking behaviour following a change in alcohol tax or explore factors such as available spending money, whereas others identify that price may be associated with adolescent alcohol use only on the basis of extrapolating from their own findings or similar findings from other studies. These studies are explored here rather than in the systematic review conducted as part of this doctoral work as they do not specifically focus on the influence of *industry driven* pricing techniques on drinking behaviour and / or do not focus only on underage drinkers, particularly those aged 14-17.

Keng and Huffman (2007) found that binge drinking by young people in the USA appears to be highly responsive to state taxes on alcohol and van den Berg et al (2008) concluded that an alcohol tax increase would be a cost-effective policy instrument. However, several papers acknowledge that increases may also lead to a quality / volume trade off, especially in young drinkers. In other words, consumption may decrease slightly but drinkers also switch to low cost brands to maintain their alcohol use (Doran and Digiusto, 2011; Muller et al., 2010; Dhaval and Saffer, 2008; Institute of Alcohol Studies, 2008; Gruenewald et al., 2006). Further, a substitution effect becomes more likely if it is only certain products, such as alcopops or spirits, which are taxed more highly than others (Doran and Digiusto, 2011; Muller et al., 2010).

Findings from three large cross-sectional surveys demonstrated that risky drinking among young people (aged 15-16) in NW England (binge, frequent and public) appears to be strongly related to the amount of available spending money and the accessibility of cheap, affordable alcohol (Bellis et al., 2010; Bellis et al., 2008a; Bellis et al., 2007). In 2007, young people (aged 15-16) who purchased their own alcohol were nearly six times more likely to drink in public settings, three times more likely to drink frequently and twice as likely to usually binge. Almost 40% of those that drank had bought alcohol for themselves, with the next most common option being to obtain alcohol from older

friends, siblings or strangers outside of shops (Bellis et al., 2007). In 2008, the percentage of young drinkers (aged 15-16) that engaged in binge drinking increased from 27.5% among those with less than £10 per week to just over 48% among those with £30 a week or more. Stealing alcohol from parents, obtaining alcohol from family and friends and asking adults outside of shops to buy alcohol were also significantly associated with risky drinking behaviours (Bellis et al., 2008a). In 2010, almost 40% of young drinkers (aged 15-16) who bought their own alcohol drank frequently; and 80% drank heavily (Bellis et al., 2010). Further, 'value for money' may encompass more than sheer economic cost. For example, Galloway et al (2007) and Brain et al (2000) found that the preferred drinks of young adolescents (in Scotland and NW England) were those which had a pleasant taste; had a desired cost-strength ratio; were convenient for drinking outside (easy to carry and conceal products with screwcaps which could be opened and resealed) and 'acceptable' to the cultural image cultivated by their group.

An association between wider alcohol marketing and young people's drinking behaviour (industry driven or otherwise) has been demonstrated in a growing body of studies (Jones and Magee, 2011; Morgenstern et al., 2011; Sumnall et al., 2011; Gordon et al., 2010a; Gordon et al., 2010b; Gordon et al., 2010d; Griffiths and Casswell, 2010; Seaman and Ikegwuonu, 2010; Gunter et al., 2009; Griffin and et al, 2008). Several primary studies have also looked beyond mainstream industry-driven marketing and explored exposure to alcohol use in media outlets such as contemporary film and radio (Hunt et al., 2011; Lyons et al., 2011; Primack et al., 2011; Koordeman et al., 2010; Daykin et al., 2009; Dal Cin et al., 2008).

In particular, Dal Cin et al (2008) found that 83% of the films in their US sample contained alcohol use; 52% contained at least one alcohol brand appearance; and films rated PG13 (marketed specifically to children and adolescents) contained as much alcohol use and brand appearances as R-rated films (those classified as 'restricted' and which contain explicit content such as blood, cursing or sexual content). Daykin et al (2009) explored 'alcohol talk' in six radio stations in England and found that the majority of comments made by presenters supported drinking, whilst 13% of comments appeared to support excessive drinking. This material, whilst relevant, is not

explored in the systematic review conducted in this piece of work as it comprises general media rather than studies which examine the impact of specifically driven marketing by the alcohol industry on drinking behaviour (see Chapter 4 for a more detailed appraisal of this point).

Despite the material presented above, the evidence base examining the link between alcohol marketing (industry driven or otherwise) and alcohol consumption in young people demonstrates associations rather than causality. Much data stems from cohort, albeit longitudinal, studies originating in the USA, whilst Smith and Foxcroft (2009) in particular acknowledge the threat of confounding. Very few studies are able to answer 'why' such significant relationships occur. Those that do rely on theoretical models in which exposure to advertising per se is thought to create behaviour change, rather than exploring young peoples' affective responses to such messages and how they internalise and decode cultural norms surrounding alcohol use (Casswell and Casswell, 2004). Thus, it remains unclear whether it is heavy and routine advertising exposure or the fostering of positive expectancies (or favourable attitudes) toward alcohol which impact upon drinking behaviour. Further, the duration of 'exposure effects' is largely unknown and it is difficult to obtain an accurate picture of youth exposure (Anderson et al., 2009b).

Qualitative research conducted with Irish teenagers indicated that alcohol advertising and promotion appeared to fuel positive alcohol expectancies (Dring and Hope, 2001). More specifically, for this group of young people, the 'selling' aspects of alcohol advertisements appeared much to do with linking alcohol to positive images of desirable lifestyles, and actually very little to do with selling the alcohol product advertised (Dring and Hope, 2001). Participants felt the characters were 'normal average people' and that advertisements portrayed drinking as 'fun', 'for everyone', 'makes the drinker happy, energetic, confident, and popular' and 'helps you to dance better'. A greater impact was found among younger age groups and 15-17 year old girls. Not only were teenagers aware of alcohol advertisements, they also considered some to be amongst their favourites. Yet, some young people did make a distinction between liking the advertisement and not liking the brand of drink. In such cases they identified a 'third person effect' (Davison, 1983), meaning that participants felt they

would not be influenced by the advertisements but 'others' in their age group, or younger adolescents, might be.

However, Meier (2010) argues against the implicit assumption that alcohol marketing poses disproportionate risk to children and young people. Doing so, introduces a 'two-tier' society of adults and young people, where it is impossible to separate (without an outright ban) alcohol-related 'content' (whether this is advertising or other people's drinking) that young people are exposed to from the cultural milieu of drinking that the rest of society is a participant in. In other words, it may not only be young people who lack the ability to evaluate the marketing to which they are exposed, or the cognitive capacity to distinguish the reality portrayed in adverts from real-life existence. Further, Casswell (2004) argues that subtle, fluid forms of marketing (such as viral marketing, point of sale, attractive packaging and trade promotions) may be relatively invisible to other segments of the population, even those in positions to influence policy.

Despite a reported association between the number of venues selling alcohol in one area and subsequent levels of harm (Popova et al., 2009), most work exploring the impact of alcohol marketing focuses on price or traditional advertising techniques, and the influence of where alcohol is bought or consumed can be neglected. Further, a large proportion of existing studies which examine outlet density, particularly in relation to young people's drinking, have been conducted outside of the UK (mostly in the USA), making cultural comparisons difficult. Although this literature will be examined more critically in chapter 4, it is important here to define the differences between alcohol outlets. Outlets licensed to sell alcohol can be described as 'on' trade (such as pubs and clubs) or 'off' trade (ranging from the largest supermarket chains, who can be particularly powerful, down to independent convenience stores).

### **1.1.3. Alcohol Policy and Young People**

The following chapter section examines current and recent alcohol policy, focusing specifically upon the implications for those under the UK legal drinking age. Broader



youth-specific UK alcohol policy is outlined followed by a deeper examination of policy designed to restrict industry-driven alcohol marketing (including price). Exploring attempts to restrict the marketing of alcohol (including price) is of great importance to the study of young people's drinking choices and behaviour as it reflects the external world in which they are developing and becoming acculturated.

It is argued here that UK alcohol policy (youth-specific or otherwise) assumes, at least until very recently, that the public (including young people) have a personal responsibility for, and can be 'empowered' to make, the 'correct' choices in relation to alcohol use, diminishing the need for population-wide preventative measures and minimising the important influence of structural and cultural factors that constrain health choices and behaviours, of which marketing (including price) is part of. This argument will be expanded on in Chapter 2. Finally, the tobacco industry is reflected on as a comparator to the drinks industry, in order to examine conceivable strategies to restrict or reduce the potential adverse impacts of alcohol marketing on young people, but also to explore barriers to tighter alcohol regulation, in particular, why tobacco control strategies may be more widely accepted than that of alcohol.

### *Youth-specific UK Alcohol Policy*

In England and Wales, youth drinking falls under the remit of a number of different governmental departments such as the Department of Health (DoH), the Home Office, the Department for Children, Schools and Families (DfCSF), Media, Culture and Sport and the Justice System. Regulation banning the sale of alcohol to minors is already substantial and largely well enforced. At a basic level, legislation prevents the sale of alcohol to those under the age of 18. Outlets and industry also operate a 'Challenge 21' or 'Challenge 25' policy meaning that you must show adequate identification to be sold an alcohol product. More ambiguously, young people between the ages of 5 and 18 are allowed to drink alcohol but not to buy it. In other words, alcohol can be administered to children over the age of five by an appropriate parent or guardian. In addition, 16 and 17 year olds, when accompanied by an adult, can drink (but not buy) beer, wine and cider with a table meal.

It was updates to the National Alcohol Harm Reduction Strategy (2004) unveiled in 2007 entitled *Safe, Sensible, Social* (Department of Health et al., 2007) which identified drinkers under the age of 18 as a priority group in reducing harmful and risky drinking. However, strategies specifically designed to reduce young people's drinking, such as the Youth Alcohol Action Plan (2008), have tended to lean more towards the criminological side of alcohol consumption, by emphasising social disorder and deviance, rather than wider public health benefits and the vulnerability of children (Fionda, 2005).

However, recommendations from the last CMO for England and Wales (as well as from similar public health figures in Australia and Canada) represent a slight shift by advocating an alcohol-free childhood as the 'healthiest' option for those under the age of 15. This guidance also recommended that, if young people aged 15-17 do drink, this should be under the supervision of parents (or an appropriate adult) on special occasions only and must not exceed adult drinking guidelines more than once per week (Bellis et al., 2009; Department of Health, 2009; Newbury-Birch et al., 2008; Bellis et al., 2007).

### *UK Policy on the Pricing and Wider Marketing of Alcohol*

As indicated in the previous chapter section, a growing body of empirical evidence has now established links between the increased availability of alcohol, per capita levels of consumption and alcohol-related harm (National Institute for Clinical and Health Excellence, 2010; Anderson et al., 2009a; Sheron et al., 2008), leading academics and public health practitioners to call for tighter controls over many aspects of supply, including restrictions on alcohol pricing (such as by setting a minimum unit price) and limits put upon the extensive marketing of alcohol (Sheron et al., 2012; Cook et al., 2011; Sheron et al., 2011; Gordon et al., 2010b; Seaman and Ikegwuonu, 2010; Bellis et al., 2009; Gilmore, 2009; Hastings and Angus, 2009; Bellis et al., 2008a; Sheron et al., 2008; Chisholm et al., 2004).

Until very recently, such regulatory approaches have largely been opposed by policy makers in the UK in favour of industry-supported policies based on market forces, individual responsibility, self-regulation via voluntary codes, education and maximum customer satisfaction or choice (Gilmore et al., 2011; Babor, 2009; McCreanor et al., 2008; Anderson, 2007b; Jackson et al., 2000). Further, self-regulation of the alcohol industry is part of a long-running discourse, comprising a number of key players, and which cannot be ascribed to a particular body, agency, department or political party. For example, the previous (to the current coalition government) Labour administration's approach to UK alcohol strategy relied heavily upon a 'Social Responsibility Charter' with industry, an agenda demonstrated in the current Coalition government's recent white paper 'Healthy Lives Healthy People' (HM Government, 2010), which introduced 'Public Health Responsibility Deals' (Bonner and Gilmore, 2012).

Launched in March 2011, the deals consist of 'pledges' in the key areas of alcohol, food, behaviour change, physical activity, and health at work. In particular, industry representatives signed up to the alcohol deal have pledged to "foster a culture of responsible drinking which will help people drink within the guidelines" (Department of Health, 2011:5). However, responsibility deals are controversial and have been described by some as a fundamental conflict of interest. In particular, Gilmore et al suggest that responsibility deals are inconsistent with evidence of public health effectiveness, aligned with industry preferences and that broader lessons from the tobacco field have been implicitly rejected. They argue that "the fiduciary responsibilities of all corporations require them to maximise profits regardless of consequences to health, society, or the environment and thus to oppose policies that could reduce their profits" and therefore there are "significant limits to the compatibility of industry interests in public health" (2011:1). Put mildly, responsibility deals have been described as no more than 'lip service' towards reducing alcohol harm by, in particular, focusing on activities (such as education or product labelling) that, if implemented without tighter legislation, are likely to have only a limited effect (Bonner and Gilmore, 2012). Put more strongly, they have been described as just as much about marketing as price, promotion and packaging (Mart and Tan, 2012).

By emphasising individual 'choice' and voluntary action, such policies also resemble a 'nudge' approach to behaviour change. The nudge approach originates in America, where the market always has much more control, where 'nanny state' policies (those which are considered to be overly controlling or which interfere with personal choice) are associated with restrictions on free trading, and protection of the vulnerable sits low on the political agenda. Nudging can be defined as any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding options or significantly changing their economic incentives (Thaler and Sunstein, 2008) and can "include a wide variety of approaches to altering social or physical environments to make certain behaviours more likely" (Marteau et al., 2011:263). Thus, nudging may include strategies such as serving alcohol in smaller glasses or using social norm campaigns to highlight that the majority of the population do not drink.

On the other hand, the social and physical environment of urban city centres may encourage a 'nudge in the opposite direction' by constructing a leisure space which reinforces alcohol consumption. For example, in NE England, this environment is complex with, on one hand, traditional depictions of the 'industrial' city characterised by large social divisions and inequalities (where binge or 'circuit' drinking and 'hyper masculinity' or the exaggeration of stereotypical and sexualised behaviour remains the norm) and, on the other hand, moves towards a 'cosmopolitan vibe' or the construction of a 'party city' and the remodelling of drinking space to reflect a café / cocktail bar culture (Hayward and Hobbs, 2007; Hayward and Yar, 2006; Measham and Brain, 2005; Chatterton and Hollands, 2003; Chatterton and Hollands, 2002; Hollands and Chatterton, 2002; Chatterton and Hollands, 2001; Hobbs et al., 2000; Gofton, 1990).

Moving back to behaviour change, Marteau et al (2011) suggest that effective nudging might also require legislation. A recent report also identifies that the Health Select Committee for England and Wales remain unconvinced as to the effectiveness of a nudge approach, and especially unconvinced by public health responsibility deals, arguing that those with a financial interest must not be able to set the agenda for health improvement. Further, they suggest that innovative techniques, such as nudging, should first be robustly evaluated, and that they would expect the DoH to set

out clear progress monitoring and sanctions for how tougher regulation would be applied if necessary (Health Committee, 2011).

What is clear is that there appears to be a complex and conflicted relationship between treasury, health and the drinks industry, one which operates in a liberal environment that 'trusts' the industry to manage itself and its activities. This relationship is on-going and under constant negotiation, with the drinks industry appearing to push boundaries all of the time knowing that if they go 'too far' that this may provoke heavier legislation. A number of commentators have reflected on the perceived influence of the industry on government policy yet there have been very few studies focusing on the role of industry actors in the alcohol policy process (Holden et al., 2012; Miller and Harkins, 2010; Anderson et al., 2009c; Casswell, 2009; Baggott, 2006; Hellman et al., 2006; Moskalewicz, 2004; Munro, 2004). There is also little consideration of what exactly constitutes the 'industry', which is far from monolithic or linear (Holden et al., 2012). Importantly, UK alcohol policy reflects more than the simple libertarian approach outlined in Public Health Responsibility Deals and has historically been shaped by the generation of profit via taxation. Further, although the government seem not to want alcohol consumption to cause disorder problems or create future costs for the NHS, they appear disinclined to limit the power and sovereignty of corporate drinks manufacturers. As Nicholls suggests, "in the face of such well-financed, globalised and highly sophisticated campaigns, efforts to de-normalise routine consumption face significant challenges" (2012:490).

This 'complex' relationship is highlighted most clearly in guidelines designed to protect young people from 'harmful' exposure to alcohol promotion. Much marketing regulation focuses on adults *and* youth and it is hard to focus exclusively on the latter. For simplicity and cultural relevance, only European regulations will be explored in this chapter section, and particular emphasis will be given to UK (and specifically English) guidelines. The regulation of alcohol marketing is complex and focuses almost exclusively on advertising through traditional media such as television, radio and print. A variety of content and volume restrictions can be applied, which can be embedded by law (legislation or statutory regulation), by voluntary codes of conduct (industry self-regulation or non-statutory regulation) or by a combination of state and non-state

regulation (co-regulation) (de Bruijn et al., 2012). Further, volume restrictions tend to be embedded in statutory regulations whereas content restrictions are traditionally found in non-statutory regulations or self-regulatory codes put in place by alcohol industry (STAP., 2007).

Some European countries have content and / or volume restrictions in place relating to the type of alcohol product advertised or the time of day (such as Bulgaria, Denmark, Italy and the Netherlands). For example, Bulgaria has a statutory ban on 'direct' spirits advertising with 'indirect' spirits advertising only permitted after 10pm; and both Bulgaria and Denmark have a self-regulated '30% threshold' policy, meaning that alcohol advertising is not permitted if the audience is estimated to consist of more than 30% of minors. In the Netherlands, this threshold is 25%, and alcohol advertising is not permitted between 6am and 9pm. In Italy, only the advertising of spirits is regulated and this is not permitted between 4pm and 7pm (de Bruijn et al., 2012). Other countries (such as Norway, Poland and Switzerland) have a complete ban on alcohol advertising on television (Dring and Hope, 2001).

However, the UK is particularly reliant on self-regulation and voluntary action (Anderson, 2007a). By working alongside of the drinks industry, the Advertising Standards Agency (ASA) is in place to monitor and constrain the advertising of alcohol to young people. A substantial number of voluntary measures in the UK are also managed by the Portman Group, set up in 1990 by the eight major UK drinks manufacturers. Advertisements are banned from appearing in and around programmes commissioned for (or principally targeted at) audiences below the age of 18, as well as programmes likely to appeal to audiences below the age of 18. Voluntary codes of conduct also state that alcohol advertisements cannot appear in publications or on a poster site aimed at those under 18, or where more than 25% of the readership is under 18 (Jackson et al., 2000).

UK voluntary codes of conduct comprise commitments not to couple alcohol with humour, social, sporting and sexual success, and not to show intoxication or link alcohol with younger people or with driving. However, voluntary codes are widely critiqued and are perceived (especially by public health academics and practitioners) as

no more than an exercise in good public relations and social responsibility for the alcohol industry (Babor, 2009; Munro and De Wever, 2008). More specifically, codes do not appear to be adhered to by industry, with numerous reports of infringements, especially in the use of humour and connotations of sexual, sporting and social success to target younger people, content which is subjective in nature and difficult to police in practice (Griffin and et al, 2008; Dring and Hope, 2001).

The alcohol industry maintain that the purpose of advertising is to promote brand loyalty and affiliation among existing consumers rather than to increase consumption levels or to recruit / encourage new drinkers (Meier, 2010). However, using a Freedom Of Information (FOI) request, Hastings et al (2010) highlighted what appeared to be deliberate infringements of UK voluntary codes of conduct, by identifying market research conducted with 15 and 16 year olds to aid product design and development; alcohol products described by industry as 'kids drinks'; clear intentions to 'recruit' 18-year old drinkers and the aspiration of many leading companies to be a 'respected youth brand'.

These issues are exacerbated when applied to 'indirect' advertising such as the sponsorship of products or events by the alcohol industry, the increasing use of 'new' or 'social' digital media channels (demonstrated in Diageo's recent multi-million pound advertising partnership with Facebook), and 'below the line' advertising (targeted and direct communication) where even voluntary sanctions are lacking (Alcohol Concern, 2011a; Brooks, 2010) and marketing can go beyond national boundaries (Casswell, 2012). It is estimated that approximately £800m is spent on alcohol promotion each year in the UK (Cabinet Office, 2003). However, it is reported that only a quarter of this figure is spent on direct advertising, for which there are at least voluntary sanctions in place (Casswell, 2012; Hastings and Angus, 2009).

Nevertheless, academic analysis which strives to understand the influence of both brand authored and user-generated digital alcohol marketing is lacking (Nicholls, 2012; Chester et al., 2010). Further, the bulk of published research which does explore digital marketing focuses on conventional websites whereas, despite increasing developments within this field, research examining alcohol marketing using social

media communication (such as Twitter) remains ‘in its infancy’ (Nicholls, 2012; Alcohol Concern, 2011a; Thoring, 2011; Griffiths and Casswell, 2010). For example, in January 2011, Bacardi announced intentions to “shift up to 90% of its digital spend to Facebook as it no longer deemed dotcom sites relevant” (Nicholls, 2012; Shearman, 2011). By September 2011, alcohol brands had the third highest ‘consumer engagement rate’ on Facebook after automobiles and retail (Socialbakers., 2011b). Further, between March and September 2011, ‘likes’ for the Smirnoff Great Britain (GB) page increased by just over 39% whereas ‘likes’ for the global Bacardi page increased by 289% (Socialbakers., 2011a).

Thus, in March 2011, the UK Committee on Advertising Practice (Committee on Advertising Practice., 2011) extended existing regulations to cover digital communications and, in September 2011, the Portman Group, released a consultation on its marketing Code of Practice, which included proposals to tighten current guidelines on social media communications (Portman Group., 2011; Portman Group., 2009), by focusing on preventing brands from targeting underage drinkers and better moderation of user-generated material that potentially breaches existing regulations (Portman Group., 2009). Nevertheless, such guidelines continue to apply existing marketing regulations to the online environment rather than addressing the unique features of social media that present new challenges for alcohol policy (Nicholls, 2012). More specifically, social media communications are dynamic and rapid, while existing regulatory frameworks remain reactive and struggle to keep up with even conventional advertising (Nicholls, 2012; Baggott, 2006). This issue is exacerbated in an environment where messages are “ephemeral” and their impact period is a matter of hours and days, rather than weeks, months or years (Nicholls, 2012).

### *Importance of UK Policy on the Pricing and Wider Marketing of Alcohol to Young People*

Policies restricting the marketing of alcohol are particularly pertinent to young people. The marketing of alcohol (industry-driven or otherwise) is increasingly pushed into the media outlets used (and even aimed at) young people, such as the sponsorship of



products or events, product tie-ins, the use of digital or social media and 'viral' marketing ('word of mouth' advertising which snowballs positive messages about products transmitted in a peer-to-peer fashion among members of a social network) (Alcohol Concern, 2011a; Alcohol Concern, 2011c; Brooks, 2010). Some current examples include Heineken's sponsorship of televised UEFA Champions League football coverage, Fosters sponsorship of televised comedy on Channel Four, and Smirnoff's sponsorship of Madonna's 2012 world music tour.

Industry-driven alcohol product websites are colourful and interactive, incorporating game-like content and user-friendly characters (Alcohol Concern, 2011a; Brooks, 2010). In comparison, tobacco industry websites are now information driven and extremely plain. Further, alcohol product websites increasingly blur the boundaries between brand promotion and user-generated content (Nicholls, 2012). In particular, marketing via social media "hinges on the promotion of interaction and conversation among potential consumers..." (Nicholls, 2012:486). Interactive social media adds several new dimensions to brand marketing by allowing marketers access to profile data (consumer analytics) of users who 'like' or 'follow' brand pages and by providing the opportunity to observe, analyse and direct conversations in 'real time', leading to 'social influence marketing' where "conversations about brands are increasingly woven into the interactions among the users of social networks" (Chester et al., 2010:6).

At time of writing, the website for WKD allows users to '*make it WKD your way*' and personalise or modify the page to their own preferences. The website for Fosters includes the tag line '*Good Call Centre, Brad & Dan Will Help Your Mates Out*' and uses the same 'agony-aunt' male characters and storyline as seen in the television advertisements, showing video clips of a variety of girls in bikinis manning telephone calls to the main characters. Such content and the use of 'knowing humour' does not break the letter of voluntary sanctions but breaks the spirit of it. By acknowledging the importance of 'emotions' in marketing, like the tobacco industry before it, the drinks industry recognises the value in building early and enduring brand relationships with customers rather than marketing one-off transactions (Anderson et al., 2002). Further, although alcohol product websites ask users to verify their date of birth before entering the site, this process has been demonstrated to be largely ineffective, with

users able to reload the site and simply enter a fictitious date of birth upon a second attempt (Alcohol Concern, 2011a).

Work by Hastings et al (2010) and Brooks et al (2010) provides evidence to support the purposive (active) advertising of alcohol to youth as opposed to accidental (leaking). The enterprise of marketing and promoting alcohol products, especially to young people, is reliant on what McCreanor et al (2008) have dubbed the creating and maintaining of 'intoxigenic environments', a concept which Griffiths and Casswell (2010) have extended further and describe as 'intoxigenic digital spaces'. The term 'intoxigenic' is heavily informed by work examining 'obesogenic' environments (Egger and Swinburn, 1997), and used by McCreanor et al to describe social environments in which (a) young people trust and value industry-given knowledge and the messages presented in important domains of youth culture; and (b) alcohol marketing is so all pervasive, and the world is built in such a way, that it is hard for young people to consciously or unconsciously avoid alcohol marketing. Further, the messages that young people receive in this environment suggest that alcohol is not for low or moderate consumption but that drinking to intoxication is the norm and the expectation.

Although the practice of alcohol marketing is by no means a recent phenomenon, intensive industry-driven marketing was, partially and at least initially, felt to be a direct response to the growing popularity of the rave scene and illicit drug and clubbing cultures in the UK during the late 1980s and 1990s (Measham and Brain, 2005; Measham, 2004; Brain, 2000; Brain et al., 2000). The development of new, psychoactive consumption styles demonstrated "a new willingness to experiment with and experience altered states of intoxication as a leisure time-out" (Measham and Brain, 2005:266-267). Thus, in an attempt to compete with the drugs economies, the alcohol industry not only modified traditional methods of advertising but diversified what they offered consumers by way of product types and drinking establishments. Since the early 1990s, a range of new affordable alcohol products (packaged and brewed to appeal widely) have steadily flooded the market including high strength beer, cider and fortified wine; ready-to-drink mixers (RTDs) and flavoured alcoholic beverages (FABs); 'buzz' or legal stimulant (such as caffeine) based products; and shots

or shooters (Galloway et al., 2007; Brain et al., 2000). The strength of traditional alcohol products, such as wines and beers, has also increased by up to 50% over the last ten years (Measham and Brain, 2005).

Further, not only are alcohol products actively marketed and branded, but so are nightlife environments, resembling what Clarke (2010) has described as an 'experience economy'. As explored earlier in this introduction, evolving urban city-centres and changes in the night-time economy can act as a backdrop to changing patterns of youth consumption, particularly with regards to alcohol (Hayward and Hobbs, 2007; Hayward and Yar, 2006; Measham and Brain, 2005; Chatterton and Hollands, 2003; Chatterton and Hollands, 2002; Hollands and Chatterton, 2002; Chatterton and Hollands, 2001; Hobbs et al., 2000; Gofton, 1990). Such changes comprise (but are not limited to) the remodelling of drinking space to 'virtual drinking establishments' and 'female friendly' café or cocktail bars. Such diversification in marketing techniques involves the deliberate targeting of specific segments of the population, particularly women and young people. Although this thesis focuses on those under the legal drinking age, it is argued here that changes in the night-time economy contribute towards how younger young people view alcohol use and to when, why, where and how they drink alcohol.

Thus, intoxicogenic environments are not accidental by-products of brand marketing. Rather, they are a strongly resourced component of commercial social engineering that blends seamlessly with hegemonic discourses of pleasure, identity and culture in order to maximise profit and enterprise capitalism (Daykin et al., 2009; Jackson et al., 2000). Thus, young people may not always recognise the subtle difference between entertainment and industry-driven advertising, with boundaries increasingly blurred between the two. Examples of this include the portrayal of alcohol use (or deliberate product placement) in music, films and television shows or user-generated digital media such as Facebook fan pages or YouTube videos, the latter of which allows young people to become inadvertent 'ambassadors' for the brand (Alcohol Concern, 2011a).

Finally, the price or affordability of alcohol is of particular relevance to young people. Meier et al (2008) and Purshouse et al (2010) modelled data specifically based on

youth drinking patterns, concluding that underage drinkers may be particularly sensitive to price because they often have little money of their own and are more likely to choose cheaper drinks (the influence of pricing on young people's drinking behaviour is appraised systematically in chapter 4). Further, findings from three large cross-sectional surveys also demonstrate that risky drinking among young people (aged 15-16) in North West England (binge, frequent and public) is strongly related to the amount of available spending money and the accessibility of cheap, affordable alcohol (Bellis et al., 2010; Bellis et al., 2008a; Bellis et al., 2007).

Recent surveys in North West (NW) and NE England indicate the average minimum price per unit of alcohol to be currently as little as 14p and 12p respectively, amounts dubbed 'pocket money prices' (Balance, 2011b; Bellis et al., 2009). A key attraction of an alcohol minimum unit price (MUP) is that it selectively targets those who are underage (as well as the heaviest drinkers) by simultaneously targeting the cheapest products (Sheron et al., 2012). However, young people are not a homogenous population group and the effect of alcohol price on youth drinking may be mitigated by how available money is (this varies) and what the cost of the product is (this also varies). Thus, affluent young people or those who can access more money or products (for example, non-affluent youth engaged in criminal behaviour) may be less affected than other young people.

### *Current Recommendations and The New UK Alcohol Strategy – Signs of Change*

Recently, there have been signs that the Government is getting tougher in its pressure on the alcohol industry (Bonner and Gilmore, 2012). However, this pressure is focused almost exclusively on the price-related promotion of alcohol, with proposed legislation in Scotland leading the way. First, The Alcohol etc. (Scotland) Act (2010) employs, amongst other measures, a ban on quantity discounts in off-sales premises. Second, despite initial opposition, an Alcohol Minimum Pricing Bill (introduced on 1 November 2011) was passed by the Scottish Government in May 2012, but still requires Royal Assent. If the Bill is successful, a 50p MUP for alcohol will be implemented, calculated based on the strength and volume of the alcohol product. Scottish MUP legislation will

also incorporate a 'sunset clause' allowing MUP to be scrapped if it fails to make an impact after six years.

In the rest of the UK, such pressure on the price-related promotion of alcohol began with a mandatory code for alcohol retailers (through the Policing and Crime Act 2009) implemented in 2010. Amongst other measures, this code bans 'irresponsible promotions' such as 'all you can drink for £10' offers, 'women drink free' deals and speed drinking competitions (Home Office, 2010). However, the latest UK Alcohol Strategy, announced on 23 March 2012, outlined plans for the introduction of a MUP for alcohol and a ban on off-trade multi-buy promotions, meaning that multiple bottles or cans could not be sold cheaper than the multiple of one bottle or can (HM Government, 2012). The actual price will be subject to consultation (40p is anticipated) and, in its Business Plan 2012-2015, the Home Office has set a target of implementing an alcohol MUP by October 2014 following an impact assessment and consultation on this and other measures later this year. Prior to the new UK Alcohol Strategy (2012), the Coalition government had proposed only a 'below cost' ban on alcohol beverages, meaning that outlets would not have been able to sell alcohol below the rate of duty plus VAT. The introduction of an alcohol MUP supersedes plans for a below cost ban, which, although representing a step in the right direction, was described as 'inconsequential' or 'trivial' due to the small amount of beverages which fall into this category and would thus have been affected (Adams and Beenstock, 2012; Cook et al., 2011; Sheron et al., 2011).

However, the alcohol industry has claimed that an alcohol MUP may contravene EU free trade rules and it is currently unclear whether a legal challenge would be mounted, in either Scotland or the rest of the UK. Further, whilst supportive of some aspects of the strategy (including plans to introduce an alcohol MUP), a recent Health Select Committee Report (2012) criticised an excessive focus on binge drinking and social disorder rather than public health issues and a lack of delivery framework for the strategy. The report also argues that responsibility deals must be evaluated and should be a standard part of corporate social responsibility (or a "civic duty") rather than a replacement for legislation or something for the industry to be praised for.

As well as UK responsibility deals, a self-regulatory 'Responsible Marketing Pact' was launched in April 2012, which covers all European Union (EU) countries. The pact has been produced by eight drinks manufacturers (Carlsberg, Heineken and Diageo; AB InBev, Bacardi, Brown-Forman, Pernod Ricard and SABMiller) with the World Federation of Advertisers (WFA) and the European Commission's European Alcohol and Health Forum (EHAF) and contains the key commitment not to 'target' children, particularly via social media. More specifically, 70% of the marketing 'audience' should be above the legal drinking age and advertisements must not be deemed 'attractive' to young people. In the UK, the ASA is expected to help enforce the pact, with public 'naming and shaming' for repeat offences.

Nevertheless, attempts to tighten the statutory (rather than voluntary or self-governed) regulation on the advertising and promotion of alcohol in the UK have largely been resisted, with the exception of the announcement in May 2012 of a ban on alcohol sports sponsorship in Ireland, which will be phased out over 'a reasonable amount of time'. In 2011, a Private Members Bill (The Alcohol Marketing Bill) called for a modified version of France's '*Loi Evin*' legislation to be implemented in the UK, which aims to remove alcohol marketing from all media that children enjoy and engage with (Hastings and Sheron, 2011). This call was reinforced in a recent Health Select Committee Report (2012), which urged government to explore the possibility of introducing a version of this legislation, which states that alcohol marketing can only be aimed at adults using factual and verifiable messages. As part of this legislation, marketing could only be used to describe alcohol products using characteristics such as brand name, ingredients, provenance, and how the product should be prepared and served (Rigaud and Craplet, 2004). It would also place limits on advertising volume and frequency to prevent overexposure; forbid marketing in 'new' or 'social' digital media, ban the sponsorship of youth-orientated cultural or sporting events by alcohol companies, with sponsorship only permitted where respondents are wholly over the age of 18; implement a 9pm watershed for TV advertising, with advertising removed from youth-orientated films; and ban billboards and posters within 200m of schools (Gordon, 2011; Hastings and Sheron, 2011).

Such proposals are supported by leading figures in public health and alcohol research (Hastings and Sheron, 2011). In particular, Gordon (2011) describes this move as a 'workable starting point', suggesting that it may provide clarity as to where alcohol marketing is permitted to be placed. Of course, it is questionable whether it is possible to completely remove all marketing that young people will regularly see; society is not so easily divisible. Further, restrictions would only be placed on promotion deemed 'industry-driven' rather than on all mediated portrayals of alcohol use. Despite support, an order to read the bill in parliament a second time (due 21 October 2011) lapsed and the bill has failed to complete its passage through Parliament, meaning it will make no further progress.

Finally, UK legislation of alcohol on- and off-trade (through The Police Reform and Social Responsibility Act 2011) places no current restrictions on the number of outlets based on public health need. Instead, sanctions have traditionally been crime and disorder focused. However, the new UK Alcohol Strategy (2012) acknowledged the influence of outlet density on subsequent damage to health (especially highlighting young people) and emphasised community input in licensing sanctions. The strategy also announced a consultation on a new health-related objective for alcohol licensing related specifically to the 'cumulative impact' of alcohol outlets.

### *Comparing UK alcohol regulations to tobacco control*

The issue of whether smoking is the right model or parallel to apply to alcohol with respect to recommended use guidelines or policy has existed for some time. The control of industry-driven tobacco marketing is now without a doubt far more stringent than that of alcohol, and it is interesting that there can be such vast differences in the control of quite similar industries. However, both industries continue to share distinct similarities in relation to the 'spirit' of their marketing practices, and there is merit in examining these in a thesis focusing on the impact of alcohol marketing. It is beyond the remit of this PhD to explore tobacco control and industry-driven tobacco marketing in great depth. Thus, the tobacco industry is reflected on here only as a comparator to the drinks industry, in order to examine conceivable

strategies to restrict or reduce the potential adverse impacts of alcohol marketing on young people, but also to explore barriers to tighter alcohol regulation, in particular, why tobacco control strategies may be more widely accepted than that of alcohol.

Virtually all tobacco advertising is now illegal in the UK and many other countries. The Tobacco Advertising and Promotion Act 2002 (TAPA) banned almost all types of tobacco marketing by 2005, with the main exception of point of sale (POS) displays. However, the presence of tobacco displays goes directly against Article 13 of the Framework Convention on Tobacco Control (WHO, 2005) which recommends that member parties prohibit all forms of tobacco marketing, including displays (MacKintosh et al., 2011). Thus, as part of the Health Act 2009, POS tobacco displays were prohibited in large shops (such as supermarkets) from 6 April 2012 and will be banned in small shops from 6 April 2015. The Coalition government has also launched a consultation on putting tobacco products in plain packaging. This consultation is open until 10 July 2012, and would mean that tobacco packaging would have no branding, a uniform colour and a standard font and text for any writing on the pack. Comparing the proposed plain packaging of tobacco to the largely colourful and attractive packaging of alcohol products highlights how differently the two industries are viewed and treated.

The relative success of tobacco control is, in part, due to the recognition that a multifaceted, coordinated and strategic response to smoking is needed, meaning that no single approach is enough (Brown and Moodie, 2012). Thus, in addition to marketing restrictions, UK tobacco control includes increased domestic and international regulation, increased taxation, pictorial health warnings, smoke-free legislation and raising of the age limit for tobacco purchase to 18 (Brown and Moodie, 2012; Anderson et al., 2002). Essentially, the aim of tobacco control is to make smoking culturally and socially unacceptable. However, this success is also due to the clear identification (by public health academics and policy makers) of the tobacco industry as the 'competition' and the acknowledgement that working with the tobacco industry represents a conflict of interest (MacKintosh et al., 2011; Anderson et al., 2002; Hastings and MacFadyen, 2000). This acknowledgement is where tobacco control fundamentally differs from alcohol regulation, perhaps as smoking is now



almost universally recognised as harmful, whereas, in comparison, alcohol is consumed by a greater proportion of the population and does have some protective health impacts for some population groups, when consumed at very low levels, particularly later in life in relation to coronary heart disease (CHD) (Anderson, 1993). Culturally, alcohol consumption is still regarded as an unmitigated good thing, in part, due to a complex evidence base and confusion as to what constitutes safe and moderate use. Thus, alcohol regulation is not an attempt to ‘stop’ people from drinking, but to make excessive and anti-social drinking culturally unacceptable (HM Government, 2012; Department of Health et al., 2007). Further, it took several decades for tobacco control to achieve the universal recognition that cigarette smoking is harmful after the risks were made clear and evidenced scientifically.

## **1.2. Rationale for the Current Study**

In the context of youth drinking, three factors (policy, marketing, and psycho-social influences) appear to inter-relate. For example, policy can shape the attitudes of young people and parents; policy can also affect how commercial operators behave; and marketing may affect behaviour by creating a social milieu in which the positive aspects of drinking dominate and the use of alcohol is normalised, as well as by potentially influencing how much alcohol parents buy and keep around their house.

Quite a lot is already known about the psycho-social influences on young people’s drinking choices and behaviour (see section 1.1.2). Although there are a lot of interactions, making it difficult to draw firm and straightforward conclusions, psycho-social factors and circumstances appear to play a role in shaping early drinking attitudes and behaviour (Velleman, 2009). Nevertheless, as a young person develops and becomes more independent, external factors seem to become increasingly important (Velleman, 2009). We know something about some of these (such as peers, religion, sexual stereotypes) but one clear area we know very little about is the aspect of the social world that is shaped by the industry that produces and markets alcohol. Further, we know even less about how young people ‘engage’ with industry-driven marketing (including price) and how marketing processes knit with other widely

studied influences on young people's drinking behaviour. These considerations helped to frame the research aims, objectives and study design, introduced below in section 1.3.

### **1.3. Aims and Objectives of the Research**

The doctoral work presented here aims to investigate the influence of marketing processes (price, promotion, product branding and placing) on young people's drinking choices and behaviour, and to answer the following research question:

*'Is there empirical evidence to show that price and other industry-driven marketing processes influence young people's choices and behaviour regarding alcohol consumption?'*

Building on the aim and research question listed above, this study has four substantive objectives related to studying the use of alcohol by young people, one of which is predominantly methodological:

1. To systematically review empirical studies concerning the impact of price and other industry-driven marketing on the drinking behaviour of young people.
2. To examine young people's own accounts (using in-depth qualitative interviews and Q methodology) of when, why, where and how they drink alcohol.
3. To use a mixed methods approach (systematic review, qualitative interviews and Q methodology) underpinned by critical realism to study young people's choices about alcohol.
4. To develop a theoretical model of the range of external factors that shape the choices made by young people about alcohol.

### **1.4. Overview of the thesis**

The purpose of this chapter has been to introduce the area of study (young people's alcohol consumption) and to set out the rationale, aims, objectives and questions of

this research study. The rest of the thesis is divided into three key sections. The first section expands extensively on the background to the research, the area of study and the philosophical orientations of the researcher. The second section presents the methodology, method and findings from three phases of data collection. The third and final section provides a synthesis of the primary findings from this research, and draws conclusions and recommendations for policy, practice and future research.

More specifically, **Chapter 2** presents the theoretical framing of the research by exploring the role of structure and agency in young people's health behaviours. In particular, the notion of 'individual choice' in relation to alcohol consumption is critically examined and the impact of neo-liberalism and capitalist pursuit of profit on drinking behaviour is discussed, the result of which are the construction of what are described here and elsewhere as 'political economies of health'. In this chapter, Bourdieu's notion of the 'habitus' is presented as a potential theoretical framework in which to explore young people's alcohol consumption, one which acknowledges the powerful influence of both structure and agency.

**Chapter 3** introduces the philosophy and design of the research. A critical realist approach is used to support the design of a complex mixed methods thesis comprising a systematic literature review, qualitative in-depth interviews and Q methodology.

**Chapter 4** presents the methodology, method and findings from a systematic literature review exploring the impact of industry-driven price and wider marketing techniques on the drinking behaviour of young people. **Chapter 5** details the methodology and method of conducting qualitative in-depth interviews and **chapters 6 and 7** illustrate the findings from interviews conducted with young people aged 14-17 in this research. **Chapter 8** introduces Q Methodology and describes the techniques associated with a Q study. **Chapter 9** presents the methods and findings of the Q study conducted in this thesis.

Finally, **Chapter 10** provides a synthesis of the findings from this research, and the strengths and limitations of the approach taken are acknowledged. The thesis concludes by identifying recommendations for policy, practice and future research.

These ten chapters form the main body of the thesis, which is then followed by a series of appendices and a full bibliography.

## **Chapter 2: Structure and Agency in Young People's Health Behaviours (Theoretical Framework)**

### **2.1. Overview of the Chapter**

This chapter sets out the theoretical perspectives that will be used to guide the interpretivist aspects of the work. First, the notion of 'individual choice' in relation to young people's alcohol consumption is critically examined and the impact of neo-liberalism and capitalist pursuit of profit on drinking behaviour is then discussed, the result of which are the construction of what are described here and elsewhere as 'political economies of health'. In particular, it is argued here that the assumption that young people are responsible rational agents, and can be empowered to make the 'correct' choices in relation to alcohol use minimises the important role of structural and cultural factors that constrain health choices and behaviours, of which capitalist industry (and the ubiquity of alcohol) is an influential part of. In doing so, literature exploring health behaviour *and* consumer culture will be drawn upon, recognising that lifestyle patterns, such as alcohol use, can be classified as a consumption practice as well as a health behaviour. Finally, Bourdieu's notion of the 'habitus' is presented as a potential theoretical concept with which to explore young people's alcohol consumption, one which acknowledges the powerful influence of both structure and agency.

### **2.2. What is 'Choice'?**

In traditional economics and rational-choice sociology, humans are understood to make choices and decisions by maximising utility and operating in an instrumentally rational way. Differences between these two disciplines mean that rational-choice sociologists often use 'broader' notions of rational choice than economists typically do (Hedstrom and Stern, 2008:10); and it is largely a sociological approach towards rational choice which will be taken throughout much of this chapter. To maximise

utility means to maximise the reward or the satisfaction from a desired commodity for the minimal amount of effort or cost. This may or may not denote obtaining the largest quantity of a commodity. Therefore, an instrumental model of rational choice assumes that human beings carefully weigh up the consequences and outcomes of their choices and decisions, by engaging in a process of cost-benefit analysis.

Thus, “actors are not assumed to be governed by causal factors operating behind their backs, but are seen as conscious decision makers whose actions are significantly influenced by the costs and benefits of different action alternatives” (Hedstrom and Stern, 2008:2). For example, in the context of this doctoral work, a person may decide on a particular type of alcohol because it has the lowest price, it is a drink that they can comfortably access or because it is marketed through a special offer. Although there are variations on such a purist and utilitarian model (Renwick Monroe, 2001; Zafirovski, 2000; March, 1986), it largely remains a consequentialist model of rational choice (underpinned by individual responsibility) which features prominently in current approaches to health promotion and education (Bunton and Coveney, 2011; Room, 2011; LeBesco, 2010; Baker, 2006), and which can also be defined as an ‘upwards conflation’ model of behaviour (Cockerham, 2005; Lomas, 1998; Archer, 1995)

However, such pure individual (and conscious) rationality can be described as ‘divorced from real life’ as human experience is not characterised solely by free will (Hedstrom and Stern, 2008; Krugman, 1998). Clarke (2010) argues that the act of choosing is not an abstracted rational process of knowledge accumulation and processing. Instead, the social context in which individuals make choices is complex and can involve the investment of a considerable amount of time, emotional and moral energy (Lupton, 1994). Rather differently, it is also suggested that the vast majority of choices can be routinised to such an extent that they become habits (in other words, so ingrained that they are automatic or unthinking and no longer conscious). In this way, we engage in a behaviour as if on auto-drive, short circuiting the more demanding aspects of choice (Clarke, 2010; Meier, 2010; Lindbladh and Lyttkens, 2002), or opt for something which is ‘easily available’ to us, described as ‘satisficing behaviour’ or ‘bounded’ rationality (Lindbladh and Lyttkens, 2002; Simon, 1987a; Simon, 1987b).

In other words, traditional concepts of pure rationality can serve only as a useful economic model or yardstick for our behaviour (Krugman, 1998). Instead, an abundance of different factors are thought to impinge on the choices we make on a daily basis (Hedstrom and Stern, 2008). Drawing on the work of Hargreaves Heap (1989), Baker extends traditional notions of rationality by highlighting that “choices are not only about receiving the best possible outcome but are often influenced by a range of other factors such as social norms and institutions, short cuts and rules of thumb, values and internal conflict” (2006:2342). It is suggested here (and elsewhere) that young people’s choices in relation to health behaviours (of which alcohol use is one) need to be examined at a much deeper level (Williams, 2003). More specifically, choices about health behaviour are widely assumed to relate to aspects of structure impinging on young people or on their sense of agency, though opinion is divided as to which poses the most influence (Cockerham, 2005). The following chapter section examines the role of both structure and agency in decisions about health behaviour, by using young people as the frame of reference, rather than the general population.

### **2.3. Structure and Agency in Young People’s Choices about Health Behaviour**

There are differences between psychological (and economical) approaches which stress individual choice and rationality and sociological approaches which accept agency, but in the context of structural factors and predispositions which can severely restrict the true 'menu' of choices for many young people, and influence the thoughts, decisions and actions of individuals (Sibeon, 2004). Sewell defines structure as “sets of mutually sustaining schemas and resources that empower or constrain social action and tend to be reproduced by social action” (1992:19). Here, structure is assumed to constitute aspects of society which a young person has no active control over or would find very difficult to change, and may extend to factors such as government policy, industry, organisations, SES, education, poverty, locality and inequalities, or even social norms and traditions.

Alternatively, Emirbayer and Mische define agency as “a process where individuals critically evaluate and choose their course of action” (1998:963). This definition of individual agency is implicit in much of the material examining rational choice in the section above, and is a central point of postmodern work on consumer culture, which tends to inflate subjectivity, identity and personal autonomy (Migone, 2007; Chatterton and Hollands, 2002; Presdee, 2000; Lupton, 1994; Shields, 1992). Here, consumption practices or decisions about health behaviour are assumed to illustrate a sense of performance, individuality, identity or belonging (Hayward and Yar, 2006); and to be free, democratic and positive (Miles, 2003). Further, in this theoretical tradition, the material environment is argued to provide its own sense of structure, order and purpose in what can be an uncertain world (Miles, 2003; Bauman, 2001). However, Demers et al (2002) highlight that individuals do not make health decisions in a social vacuum, and Williams (2003) argues that assuming that people have the freedom to make healthy choices is out of line with what many people experience in their everyday lives. Further, Bauman (1999) suggests that individual choices in all circumstances are confined by two sets of constraints (1) choosing from what is available and (2) social rules or codes telling the individual the rank order and appropriateness of preferences.

Exaggerating an individual’s sense of structure can also be overtly deterministic. Crawford argues that “when the macro-conditions that affect health appear to be out of control, self-control over the considerable range of personal behaviours that also affect health is the only remaining option” (1984:74). Therefore, Inesi et al suggest that choice and power can act as substitutes for one another in providing a sense of personal control. In other words, “when a person is deprived of one source of personal control (such as power) they can seek out and satisfy their need for control through an alternative source, such as by exercising a notion of choice” (2011:1042-1043). Thus, consumption practices and choices about health behaviour can be understood as an entirely pragmatic and rational way of coping with structural conditions. As such, Bauman recognises that “members of consumer society try hard to respond sensibly to conditions of life which may be, but may not be, rational and suitable for rational conduct and render rational strategies effective; that, in other words, under certain conditions irrational behaviour may carry many a trapping of rational strategy and



even offer the most immediately obvious rational option among those available” (2001:18).

Therefore, an ‘either / or dichotomy’ tends to over-inflate a person’s sense of agency or structure. Where a structural approach illustrates young people to be vulnerable victims subject to the whims of market forces, the cultural approach portrays them as active social agents and powerful consumers. Instead, a model which recognises the co-constructed or ‘mutually reinforcing’ nature of structure and agency is needed (Edwards, 2000). Cockerham (2005) highlights that, whilst agency is important, structural conditions can act back on individuals and configure their lifestyle patterns, such as alcohol use, in particular ways. Agency allows them to reject or modify these patterns, but structure limits the options that are available. In other words, young people cannot consume entirely freely. Instead, the ways in which they consume are, to an extent, decided for them by a variety of factors, including the degree of access they have to resources (Miles, 2003).

Similarly, Carlisle et al (2008) suggest that, although there are important social and economic determinants of health and wellbeing, we also need to acknowledge the influence of individual choice or ‘taste’ (the process through which people adopt, as seemingly voluntary preferences, particular lifestyles) on the social patterning of health and wellbeing. They argue that ‘taste’ conveys powerful messages about status and lifestyle choices, that can create cultural or symbolic forms of hierarchy which, because socially divisive, may add to pre-existing structural / material forms of inequality. The idea that choices about health behaviour (and consumption) can add to pre-existing social divisions is returned to later in this chapter (see section 2.5 and 2.6).

Thus, Mirowsky and Ross (2003) argue that neither individual choice nor structural limitations can be ignored in studies of health behaviour and lifestyles. Instead, they use the term ‘structural amplification’ to refer to situations where well-educated individuals accumulate advantages and poorly educated persons amass disadvantages that cumulate over time into ‘cascading sequences’ impacting either positively or negatively on health. Further, the concept of ‘cascading sequences’ may exemplify why public health and health education are often ineffective when they try to treat one

behaviour at a time without addressing the root causes and without understanding why 'unhealthy' behaviours are so embedded in young people's lives. The following chapter section presents Bourdieu's notion of the 'habitus' as a possible theoretical framework in which to explore young people's alcohol consumption, one which moves beyond the determinism of structure and the subjectivity of agency (Bourdieu, 1990; 1984).

#### **2.4. Combining Structure and Agency: Bourdieu's 'Habitus'**

Bourdieu's notion of the 'habitus' represents an attempt to straddle the divide between freedom and constraint, by providing a 'corrective' to dominant models which over-emphasise the capacity for human agency and see health and lifestyle as a matter of socially neutral, individual choice (Carlisle et al., 2008). Thus, in many ways it can be seen as an alternative to postmodern or post-structural ways of thinking about health behaviours or consumer culture which dissolve structure and division in favour of mobilities and pluralities (Williams, 2003). 'Habitus' can be defined as "a "socially constituted system of cognitive and motivating structures which provide individuals with...predisposed ways of relating to and categorising both novel and familiar situations" (Schilling, 1997:129) or "a 'structuring structure' (or 'socialised subjectivity') which determines practices in the contexts of daily lives..." (Crawshaw and Bunton, 2009:275). In other words, Carlisle et al (2008) describe the habitus as a set of durable dispositions, acquired through socialisation, that serve to reinforce existing social structures by providing seemingly naturalised ways of classifying the social world and one's position in it, inculcating individuals into a worldview based on, and reconciled by, social position.

In other words, the habitus works to align subjective expectations with objective probabilities, and limits the options that people have by providing cultural norms and historic precedents which determine action and practice (Crawshaw and Bunton, 2009; Carlisle et al., 2008). Therefore, individuals develop tastes only for lifestyle options that are available to them and fit their own social position. Importantly, this encapsulates more than just class or SES (Eckersley, 2006). Thus, Bourdieu argues that "economic

theory which acknowledges only the rational 'responses'...conceals the fact that the 'rational' habitus which is the precondition for appropriate economic behaviour is the product of a particular economic condition, the one defined by possession of the economic and cultural capital required in order to seize the 'potential opportunities' theoretically available to all" (1990:63). In the context of this thesis, this could be interpreted to mean that young people can freely make choices in relation to alcohol use, but only from a restricted number of available options.

Crawshaw and Bunton (2009) suggest that the habitus is produced and reinforced by imitation, is routinised, and continuously reproduced through practice (what people do), and works to generate behaviours which are sanctioned as 'logical' or consistent with expectations. Bourdieu's model rests on the idea that this process is largely unconscious, unlike Giddens' notion of 'practical consciousness' (Williams, 2003). More specifically, the habitus sets limits to behaviour, resulting in the normalisation or ubiquity of certain behaviours. Crawshaw and Bunton (2009) suggest that even 'risky' consumption practices or health behaviours can have a 'cultural logic' within a specific habitus or cultural milieu. Thus, it is argued here that a habitus exists in relation to young people's health behaviours, and is particularly evident for alcohol use. Further, using this framework, young people's 'harder' illicit drug use may be negatively sanctioned as it is incompatible with the 'logic' of the habitus. The idea that young people's alcohol use may be condoned and considered to be a 'lesser evil' (by parents in particular) is important and will be returned to in the qualitative findings chapters of this thesis (see chapter 6 and 7).

Drawing on Urry's (2010) work on the nature of consumption practices and social control, the habitus of young people's alcohol use can potentially be mapped over time, and by age. In other words, young people's trajectories of drinking may gradually shift from behaviour which is contained and tightly regulated by informal and local sanctions of social control (described as 'societies of discipline') to behaviour which is seemingly less restrained and policed by more formal and intensified measures of social control in the night-time economy, described as 'societies of control' and culminating in 'sites of excess'. The changing nature of young people's drinking

practices over time will also be returned to in the qualitative findings chapters of this thesis (see chapter 6 and 7).

Bourdieu's model is appropriate for framing the often controlled and ritualistic nature of young people's alcohol consumption. Bauman illustrates this by providing a comparator with the consumption of package holidays, suggesting that "tourists of the consumer society want their holidays to be escapes from daily routine - but also to be escapes from the hazards, confusions and uncertainties endemic to their daily life: the holidays they would gladly pay for should be predictable, calculable, efficient and controlled" (2001:26). Moving back to alcohol, Measham and Brain (2005) describe this level of control as 'bounded' or 'calculated' hedonism, a practice which holds much in common to interpretations of edgework in postmodernism, cultural criminology and, more recently, illicit drug cultures (McGovern and McGovern, 2011). More specifically, young people walk an 'intoxication tightrope' (Percy et al., 2011) which involves a high degree of planning in order to achieve the 'correct' level of intoxication, what Measham and Brain (2005) have referred to as 'determined drunkenness' and others describe as 'controlled loss of control' (Bunton and Coveney, 2011; Hayward, 2002; Brain, 2000) or 'calculated hedonism' (Szmigin et al., 2008). The controlled and ritualistic ways in which young people drink alcohol was a key theme to emerge from this piece of doctoral work, and will be explored in the findings from qualitative interviews and Q sorts conducted with young people later in this thesis.

Bourdieu's model has been criticised as remaining 'trapped' within an objectivist point of view, one which suggests that the social world operates 'behind the backs' of subjects, strips agency of its messy, critical reflexive character and, thus, underplays the power of choice (Williams, 1995). However, it is argued here that the reduction of agency represents a necessary corrective to theories which suggest that lifestyles are simply a matter of personal choice. Thus, Williams suggests that "people make their own history, through their social practices, but the conditions under which these practices are formed are neither known nor chosen by them" (2003:143). As such, the habitus may not pose a uniform effect on everyone, but 'whisper suggestions'. However, it is argued here that the structural conditions that govern alcohol use are part of something much bigger, and that the largest 'structuring structure' of all is

capitalism, which will be explored across the rest of this chapter. Capitalism is considered to be important to the understanding of young people's alcohol use as it reflects the structural, external world in which they are developing and becoming acculturated. In particular, it is suggested that it is necessary to situate young people's alcohol consumption in a framework of political, economic and cultural forces, and acknowledge how the distribution of power, resources and opportunities can impact on health behaviours, culminating in 'political economies of health' or 'political economies of alcohol consumption' (Saggers and Gray, 1997; Singer, 1986).

## **2.5. Capitalism and Consumerism**

Capitalism can be defined as "the inexorable requirement of profitability" (McKinley, 1984:3) and is a powerful force in shaping the thoughts and behaviours of individuals. Within a capitalist structure, the market economy is central, with society increasingly fragmented and individualistic (Migone, 2007; Bauman, 2005; 2001). Post-Fordism, this structure shifted towards a framework of 'neo-liberal' consumerism, in which consumption is hedonistic, ruthless, immediately gratifying and discriminatory, opening society up to what appears to be an almost inexhaustible 'matrix of choices' with numerous opportunities to consume (Ivanova, 2011; Room, 2011; Migone, 2007; Hayward and Yar, 2006; Sassatelli, 2000).

It is this capitalist model which continues to dominate, where responsibility for choice is almost entirely individual (Clarke, 2010; Migone, 2007). This model is implicitly accepted as a 'natural state of affairs' or the 'status quo' (Miles, 2003) for those living in developed Western countries outside the former Soviet bloc. Further, some of the premises of capitalism are so commonly accepted that "the discourse they underpin not only is seldom challenged, but it often offers the only organisational and legitimising basis for social structures" (Migone, 2007:184). Thus, Navarro suggests that "capital uses all forms of ideological codes and messages...to avoid the creation of a political consciousness capable of going beyond the capitalist system" (1984:114).

However, it is suggested here that ever increasing consumption (especially of alcohol) is not natural or inevitable but, in part, culturally manufactured by marketing and industry processes, which co-exist alongside of other important psycho-social, structural and environmental influences on drinking behaviour. Thus, McKinlay argues that “decisions are always dictated by criteria of profitability...activities whose product or result is either unprofitable or unable to be measured according to profitability criteria...cannot, under capitalism, be given priority...” (1984:7). Rather more critically, Eckersley (2006) describes such practices as ‘cultural fraud’ involving the promotion of ‘unhealthy’ images and ideals of the ‘good life’ that serve the economy but do not meet, need or reflect social realities, culminating in ‘political economies of health’ or ‘political economies of alcohol use’. The final section of this chapter examines a political economy view of health, which acknowledges that differences in health behaviours are reinforced by the logic of capitalism and should be understood as part of the capitalist endeavour (Bradby, 2012).

## **2.6. Constructing ‘Political Economies of Health’**

A political economy view of health is based on a Marxist critique of the capitalist endeavour. However, it is not the researcher’s intention to offer an unadulterated Marxist framework in order to explore responses to young people’s choices about health behaviour. Instead, political economies of health are examined in order to demonstrate how “that which parades as choice is often a narrowing of choice” (White, 1995:36). In other words, how the combined effect of industry processes, psycho-social influences, deeply embedded ideologies and the structural ubiquity of alcohol effectively funnel or constrain young people’s choices about alcohol into specific, ‘naturalised’ directions (Carlisle et al., 2008; Giddens, 2007) in order to be able to ‘function without deficiency’ (Urry, 2010), which Clarke (2010) describes as the illusion or ideology of greater choice. Using this framework, to not drink becomes the harder choice for young people to make.

McKinlay (1984) argues it is important to recognise that some forms of market competition force expansion of productive output and sales, regardless of questions

concerning the nature of commodities produced, and that the pressure to find new buyers leads to increased market penetration, sometimes through 'misleading' advertising, the scale of which escalates with every cycle. Further, Crawford highlights that for "an economy that normally requires ever greater levels of consumption, a symbolic order based on self-control is ruinous..." (1984:90), an argument which is reflected in the critique presented of public responsibility deals in the previous chapter.

In order to maintain what is essentially a capitalist system of social control, an individualist worldview must be reinforced. Rich and Miah argue that "the provision of information around healthy lifestyles draws on strong political imperatives that prescribe the morally correct choices people should make around lifestyle" (2009:167). Further, Bourdieu (1984) suggests that how people treat their bodies reveals the deepest dispositions of the habitus, with 'wrong' choices in relation to alcohol inscribed on bodies through visible intoxication, bloating and long-term alcohol-related damage. Increasingly, the ability to exert self-control (and participate correctly in a drinking economy) is indicative of individual responsibility and different from 'problematic' drinking (Room, 2011). Bunton and Coveney suggest that this leads to 'irresolvable contradictions' whereby "on one hand we have a consumerist promotion of drug use and excess; on the other, there is increased stress of self-restraint and discipline" (2011:11). Thus, Measham and Brain argue that "tougher policing and punishment are visited on those who...cannot keep the consequences of their consumption bounded in socially prescribed ways...such consumers offend the rules of self-policing consumer behaviour..." (2005:277).

Paradoxically, the very consumption practices that provoke stigma are those which are strongly coveted by low-income consumers (Hamilton, 2012). Some young people are perceived to drink in ways which are deemed 'vulgar' or lacking in 'distinction' (Hayward and Yar, 2006). In other words, they are described as 'flawed' consumers (Bauman, 2005; Measham and Brain, 2005; Bauman, 2001). Further, some young people may 'subvert' industry intentions, an example of which can be found in the case of Burberry clothing, where the commercial intention was to be a luxury, expensive brand and appeal to people from a high social status. Instead, this brand

was coveted by those from a low social status and became 'common' and cheapened, meaning that its status and market value was considerably reduced. However, the success of capitalist endeavour lies in its ability to be anything at any time to any person. Essentially, it fits all. Young people can be "economically excluded but commercially and culturally included" in alcohol consumption (Hayward and Yar, 2006:21). Thus, despite the divisions outlined above, there remains a dominant industry-led model of drinking, which exerts a certain level of social control over young people.

## **2.7. Chapter Summary**

In this chapter, the notion of 'individual choice' in relation to young people's alcohol consumption was examined and the impact of neo-liberalism and capitalist pursuit of profit on drinking behaviour discussed, the result of which is the construction of 'political economies of health'. In particular, it is argued in this work that the assumption that young people are responsible rational agents, and can be empowered to make, the 'correct' choices in relation to alcohol use minimises the important role of structural and cultural factors that constrain health choices and behaviours, of which capitalist industry (albeit in combination with other structural, inter-personal or psycho-social factors) is an influential part of. In doing so, the mutually reinforcing or co-constructed nature of structure and agency was acknowledged and Bourdieu's notion of the 'habitus' was presented as a potential theoretical framework in which to explore young people's alcohol consumption, one which acknowledges the powerful influence of both structure and agency, and the impact of both commercial industry processes and deeply embedded norms and psycho-social influences on drinking behaviour. These key ideas underpin the findings and discussion presented later in this thesis. Where this chapter has set out a theoretical framework for this doctoral work, the next chapter outlines the study design and philosophical framework of the research.



## **Chapter 3: Study Design and Research Philosophy**

### **3.1. Overview of the Chapter**

Although this study is recognised as a public health doctorate, public health is an eclectic discipline which draws upon a number of parent disciplines. A range of disciplines are reflected in this doctoral work, the most notable of which is sociology. It is the view of this researcher that there is immense value in bringing a number of disciplines (or perspectives) together and that a consequence of this is the mixing of methods. In this chapter the overarching epistemological and ontological assumptions of the research are outlined and a Critical Realist approach to knowledge is explored. In particular, how this approach can be used to underpin a complex mixed methods thesis comprising a systematic literature review, qualitative in-depth interviews and Q methodology is examined.

### **3.2. Research Philosophy**

All research develops from the desire to understand and make sense of the world (McEvoy and Richards, 2006; Dzurec and Abraham, 1993). However, it is important to be reflexive about what we choose to study and how we choose to do so, by recognising that a researcher's own experiences affect every aspect of the research that they do. Inevitably, this means that researchers "make choices about what is important and what is appropriate, and those choices involve aspects of personal history, social background, and cultural assumptions" (Morgan, 2007:70).

Whether aware of it or not, researchers each bring with them their own assumptions about the world. Further, these assumptions should reflect a theoretical perspective and be demonstrated in the methodological approach taken. The elements which a researcher chooses to see as relevant "will be based, implicitly or explicitly, on a way of seeing the social world and on a particular form of explanatory logic" (Mason, 2002b:8). In practice, this means critically and transparently acknowledging that there

can be multiple interpretations of reality and that the analysis presented here reflects this researcher's interpretation of the data only. This mind set has both positive and negative implications for the research, which are addressed within the thesis.

### ***3.2.1. Ontology and Epistemology***

Ontology refers to the constituents of the world and how it is made up while epistemology is concerned with the methods we can adopt to make sense of the world (Nairn, 2011). In this way, ontology refers to how we 'see' the world and epistemology to the nature of evidence and knowledge, or to how we can begin to access data about the world. As such, Mason suggests that epistemology "helps to generate knowledge and explanations about the ontological components of the social world, be they social processes, social actions, discourses, meanings and so on identified as central" (2002b:16).

### ***3.2.2. Realism versus Relativism***

Such different approaches to knowledge and knowledge production conventionally span a continuum from realism to relativism and the opposing ends of this continuum are traditionally distinguished as positivist and interpretivist paradigms. McEvoy and Richards outline that "the positivist paradigm is based on the philosophy that preconceptions need to be set aside in order to identify objective facts based on empirical observations whereas the interpretivist paradigm places much greater emphasis upon the way in which the world is socially constructed and understood" (2006:67).

However, this distinction is simplistic and serves mainly to dichotomise quantitative and qualitative research methods. Instead, the pluralism in research methods is increasingly recognised and it is suggested that such boundaries can (and should) be blurred with multiple (or mixed) methods adopted (Chamberlain et al., 2011; Lazard et al., 2011). As such, Morgan criticises the term 'paradigm' by suggesting that "most

represent 'epistemological stances' which, despite drawing attention to the deeper assumptions that researchers make, tell us little about more substantive decisions such as what to study and how to do so" (2007:52).

This piece of research aimed to explore young people's own interpretations of the influences upon their alcohol consumption. Articulated in this way, the approach taken is inescapably embedded within the interpretivist paradigm. However, Bryman (2007a) questions how 'real' public health issues (for which there is 'objective evidence') can be linked with constructed accounts. With this in mind, the research also aimed to examine what we already 'know' from the evidence base about the 'reality' of the impact of industry-driven marketing techniques on young people's drinking behaviour. To do so, multiple methods were chosen and, drawing on the work of Bryman (2008; 2007b) and Moffatt et al (2006), a 'particularistic' rather than 'universalistic' approach was followed, where methods are selected based upon the research question, and where it is explicitly recognised that different methods can be used to ask different, but related, questions or to research different aspects of the phenomena in question. In other words, methods were specifically chosen in order to examine the current evidence base (a systematic literature review) as well as to explore young people's subjective opinions about alcohol (qualitative interviews and Q methodology).

Further, the decision to combine in-depth interviews (an interpretivist method) with a systematic literature review (traditionally considered to be a positivist approach) and Q methodology (a statistical and interpretivist method) suggests a more nuanced approach to research philosophy and knowledge production. In-depth interviews in this study explored individual accounts which were then grouped thematically. Providing a 'bridge' between qualitative and quantitative data collection techniques, Q methodology was used to explore shared accounts using correlation and factor analysis, and represented a way of 'getting underneath' the verbal accounts provided by young people in interviews. In this way, both methods provided a different way of exploring young people's subjective accounts of their drinking behaviour, which was combined with an examination of the evidence base, using a systematic literature review, to help address the impact of price and wider industry-driven marketing techniques on young people's alcohol consumption.

A number of mixed methods studies involve an element of sequencing, in which one method informs the next, before being brought together, or 'triangulated' as an end product. To an extent, this was true of this study, with, for example, emergent findings from the systematic literature review used to direct subsequent qualitative interview work, and verbal interview accounts used to inform the Q methodological study. However, in this study, each method was continually revisited at different time points, and data analysis was concurrent, representing a much more fluid and iterative approach to knowledge production.

Thus, by employing mixed methods, this study asks important questions about whether differences between positivist and interpretivist paradigms should be an all-encompassing dichotomy. More specifically, it is suggested that the mixed method approach taken in this PhD is underpinned by Bhaskar's (1978) critical realism and it is to this philosophical perspective that this chapter now turns. The following discussion is predominantly methodological, focusing on why the researcher feels that mixed method research is supported best by a critical realist approach to knowledge. However, where appropriate, reference will be made to the wider principles of critical realism (particularly the distinction between structure and agency).

### **3.3. Critical Realism**

A critical realist approach to knowledge is increasingly adopted in public health, nursing and healthcare research (Angus, 2011). This approach argues that it is an 'epistemological fallacy' to believe that there is only one way in which to research the world. To do so "confuses our descriptions of the world with the world itself" (Nairn, 2011:2). Instead, critical realism suggests that there is one objective reality and that individuals construct different interpretations of this reality. In other words, "knowledge is a practical and mediated product of how human beings interact with accessible aspects of the world rather than an abstract product of human thought" (Nairn, 2011:10; McEvoy and Richards, 2006:69).

As such, wholly positivist or interpretivist (hermeneutic) approaches to knowledge are criticised while ontological commitments and a focus on explanation rather than description are prioritised. Critical realism contends that attention should primarily be on the explanation of ontological components of the social world, be they social processes, social actions, discourses, or meanings. Thus, the prioritisation of ontology over epistemology offers researchers a 'middle ground' by neither reducing the world to unknowable chaos or a positivistic universal order; and by neither placing objective truth value on the perspectives of human beings or completely removing the influence and importance of human perspectives (DeForge and Shaw, 2011; Clark et al., 2008).

As such, methodological tools should be selected which fit and answer the research problem most accurately; and it is this point in particular which can be presented as a rationale for the use of mixed methods research (Angus, 2011; Lipscomb, 2008). Mixed methods may be used to ask distinctive but intersecting questions (Mason, 2006). Further, when mixing methods, we are simply "observing the same reality from different levels of analysis" (Harrits, 2011:6). Thus, researchers often justify their choice of mixed methods on the basis that it allows them to "reveal different versions of reality or to understand the phenomenon they are studying more completely than would be possible with a single method" (Mertens, 2011:195).

However, unlike the pragmatic approach (which suggests the ability to dip freely in and out of objective and subjective knowledge) and that of methodological 'purists' (who suggest that objective and subjective data equate to 'incommensurable' kinds of knowledge) critical realism recognises the existence of one reality which can be interpreted in different ways by using the most appropriate methods of data collection, be they quantitative or qualitative techniques, circumventing many of the problems associated with paradigm switching. As such, Mason (2006) recognises that different dimensions of a social world might exist in an uneasy or messy 'creative tension'.

The distinction between objective and subjective knowledge is maintained in critical realism and presented as the *intransitive* and the *transitive*. Nairn explains that the intransitive is equated with ontology and a 'real world' of objects with their own causal

powers and structures. Importantly, this is a single world and not part of multiple worlds as advocated by post-structuralists and social constructionists. Therefore, the transitive is “multiple, relativist, associated with epistemology and situated within certain socio-historical contexts” (2011:2).

More specifically, critical realism is represented by a three-layered (stratified) ontological model consisting of the empirical domain (experiences), the actual domain (events) and the real domain (structural processes or causal mechanisms) (Harwood and Clark, 2012; McEvoy and Richards, 2006). The empirical is “what a person sees, feels or experiences; the actual is what actually happens or occurs and the real is the identification of an underlying mechanism that may or may not occur” (Nairn, 2011:2). Applied to this research, the empirical consists of the subjective and rich accounts young people give about their experiences of what impacts on their use of alcohol; the actual is tangible drinking behaviour and the real is comprised of structural processes or causal mechanisms associated with alcohol such as biology, socio-economic status, industry processes, policy and legislation, material circumstances (including price), relationships with parents and peers and so on.

Thus, the philosophical approach underpinning this study recognises the need for a dialogue between structure and agency (Harwood and Clark, 2012). Irwin suggests that “the ‘cultural turn’ in social research with an emphasis on agency, subjectivities and moral components of social life has led to difficulties in understanding how these meld with structural processes; and that the alleged gap between subjective orientations and social circumstance may be overstated and unhelpful” (2006:6). Instead, critical realism illustrates that “effects arise due to the interaction between social structures, mechanism and human agency” (McEvoy and Richards, 2006:70). Further, studying structure without agency results in a ‘flat ontology’ which restricts explanatory power (Reed, 1997).

As such, Angus suggests that “the impingements of structure on individual health and well-being are of as much interest as the tactics devised by individuals to deal with these very impingements” (2011:2). In this way, critical realism is considered to be a ‘post-positivist’ approach to knowledge, “by recognising that the realm of observable

events are subject to change, can be affected by human agency, and that certain structures are unobservable yet still at work” (Cruickshank, 2011:10).

Thus, what much of the argument presented in this chapter suggests is that the end product in a mixed method project needs to be more than the sum of individual parts and should not represent an attempt to simply bring together lots of data in an additive way (O’Cathain et al., 2010; Bryman, 2007a; Irwin, 2006; Moffatt et al., 2006). Instead, Irwin recognises that “we need conceive data as particular rather than all-revealing slices through our research problem” (2006:3). In other words, data from different methods should “talk to each other, much like a conversation or debate” (Bryman, 2007a:14) and the aim should be to “construct a negotiated account of what they mean together” (Bryman, 2007a:14). With this in mind, a ‘dialectic’ approach will be taken in this doctoral work (a ‘challenging conversation’ between the three methodologies employed) and the methodological strategy for this research is summarized in Table 3.1 below.

<i>Philosophical Framework</i>	Critical Realism
<i>Research Methods</i>	Systematic Literature Review In-depth Interviews Q Methodology
<i>Analysis Techniques</i>	Narrative synthesis Thematic analysis Q Factor analysis

*Table 3.1: Methodological strategy of the research*

### **3.4. Chapter Summary**

In this chapter, a critical realist approach to knowledge was outlined. This approach suggests that there is one social reality which can be interpreted in multiple ways. More specifically, the stratified ontology advocated by a critical realist worldview is used in this research to support a complex mixed methods thesis comprising a systematic literature review, qualitative in-depth interviews and Q methodology. The

rest of the thesis will present the methodology, method and findings for each phase of this research before all three are drawn together in the discussion and conclusion provided in chapter 10.



## **Chapter 4: The impact of industry-driven price and other marketing activities on the drinking behaviour of young people: A systematic review of the primary literature**

### **4.1. Overview of the Chapter**

This chapter details the methodology, method and findings of a systematic review exploring the impact of industry-driven price and other marketing activities on the drinking behaviour of young people. Why a systematic approach to literature reviewing may be used and the limitations of doing so are examined before the context for the current systematic review is explored and each stage in conducting it is outlined. The findings of this review are then presented, broken down into each element of the alcohol 'marketing mix', consisting of product, promotion, price and place, followed by a summary of the key implications for policy and practice, limitations of papers found and a short chapter summary.

### **4.2. Why conduct a systematic literature review?**

A systematic review is a review of a clearly formulated question on a specific topic or field of work which uses transparent and explicit methods to identify, select and critically appraise relevant literature (Harden, 2010). By using a pre-specified protocol, a systematic review is an efficient means of distilling or bringing together a large amount of (quantitative or qualitative) material in a way that tries to minimise bias and which helps in the formulation of robust conclusions about a topic or issue (Akobeng, 2005; Chalmers, 2003).

Systematic reviews have become increasingly important in healthcare and policy contexts (Rodgers et al., 2009; Chalmers, 2003). Evans suggests that findings from systematic reviews can be considered as 'best evidence' (alongside multi-centre studies and above randomised control trials) for evaluating health care interventions. This level of evidence provides "the strongest scientific base for clinical practice and, as this evidence is at the least risk of error, it is optimal for the development of practice

guidelines and clinical recommendations” (2003:82). Thus, reviewing the literature in this way can be contrasted with traditional expert reviews, where some material is included and some not, with no explicit indication as to why this may be the case and as to what the implications of such exclusions may be. Instead, conclusions need to be based on all available studies and not just those which the reviewer may be aware of or favour (Badger et al., 2000).

### **4.3. Limitations of systematic reviews**

Like any approach to data collection, systematic reviews have several limitations. There is a tendency in some systematic reviews to regard the compilation of studies as completion of the review. Instead, it is the interpretation of studies and conclusions drawn which are most important (Pawson, 2002). Further, the identification of studies can be constrained by pre-determined exclusion criteria and, although the potential for bias can be minimised, relevant papers remain manually selected and quality appraised by members of a research team (Jorgensen et al., 2006).

Combining evidence which cuts across different methodological and epistemological frameworks can prove difficult (Rodgers et al., 2009; Dixon-Woods et al., 2005; Mays et al., 2005; Barbour, 1998). This is especially pronounced with regard to qualitative research, where it is suggested that attempts at aggregation destroy the integrity of individual studies (Mays et al., 2005; Sandelowski et al., 1997). Thus, some academics have questioned the very notion of a systematic review by suggesting that the concept is rooted in a positivist model and committed to procedural objectivity (Chalmers, 2003).

A postmodern critique argues that such an ‘evidence-based’ approach to health sciences is exclusionary, reductionist and dangerously normative with regards to scientific knowledge, drawing parallels with Foucault’s ‘regime of truth’, arguing that, in the name of efficiency, effectiveness and convenience, it simplistically supplants all heterogeneous thinking with a singular and totalising ideology (Holmes et al.,

2006:185). Further, systematic reviewing has been described as “an algorithm for not reading as much of the literature as possible” (MacLure, 2005:399).

In particular, systematic reviews are described as mechanistic, pre-fabricated formulas or buzz-words which ignore research pluralism, relying overtly on evidence from randomised control trials, and which reinforce dominant scientific paradigms or hierarchies of knowledge (Holmes et al., 2006; Hammersley, 2005). However, this perspective misinterprets the rationale behind conducting a systematic review. Rather than reinforcing dominant paradigms, the objective of a systematic review is to transparently access and analyse a large amount of research findings in order to formulate robust conclusions and recommendations.

In reducing information into component parts, systematic reviews cannot explain complex phenomena. Rich and contextual detail (often from papers that are theoretical rather than empirical in nature) which may contribute toward informing debate or policy architecture is lost, ignored or missing. Thus, Pawson (2002) suggests conducting ‘realist synthesis’ of literature which acknowledges the contextual and theory-laden nature of the world. However, this approach appears better suited to reviews designed to assess the success of programmes and interventions rather than those which aim to identify and bring together evidence in order to ‘answer’ a particular research question.

#### **4.4. Context for the current systematic review**

Two recent systematic reviews have explored the impact of alcohol advertising, marketing and portrayal (of alcohol use) on the drinking behaviour of young people. First, Anderson et al (2009b) identified, using results from thirteen empirical papers, that longitudinal studies consistently demonstrate that alcohol advertising and promotion increase the likelihood that adolescents (aged 18 or younger) will start to use alcohol, and to drink more if they are already using alcohol. Second, Smith and Foxcroft (2009) report on data from seven prospective cohort studies which show an

association between exposure to alcohol advertising or promotional activity and subsequent alcohol consumption in young people (aged 10-26).

However, although both of the reviews outlined above have important implications for this doctoral work, they considered only part of the alcohol marketing mix ('promotion'). In particular, the impact of price and outlet density ('placement' of product sale or use) on young people's drinking behaviour was not considered. Instead, both reviews focused on traditional forms of advertising using media such as television, film, print advertising and billboards. Digital 'new' media and wider marketing practices, such as sponsorship and product placement, were not examined. The extent to which included studies explored industry-driven marketing techniques or more general exposure to alcohol types, brands or use is also unclear. Further, both reviews included a much wider range of ages than the focus of this research (14-17), with most studies identified conducted in the USA, raising doubts about the cultural transmissibility of findings.

An additional systematic review conducted by Meier et al (2008) used two pre-existing meta-analyses combined with a further 15 relevant studies to explore the wider impact of price (including taxation), promotion (which includes advertising) and alcohol availability (such as through the density of outlets in a particular area that sell alcohol) on alcohol consumption. This review covered adults and young people (aged 10 and upwards), and was accompanied by statistical modelling of the effects of various alcohol pricing and promotion policy options (Purshouse et al., 2010). The authors concluded that young drinkers may be particularly sensitive to price because they often have little money of their own. However, Meier et al (2008) and Purshouse et al (2010) examined impact on a population level and found that most research about alcohol price focuses on adults. Further, the authors took a 'review of reviews' approach which may have hampered their ability to find youth-specific material. As such, young people were absorbed into a wider age range and subtle differences such as age, gender, ethnicity and geographical and cultural context were minimised.

Thus, no existing review examines the impact of alcohol marketing on the drinking behaviour of adolescents only and no existing review explores the effect of price and

other marketing principles simultaneously. Instead, it is argued here that price is a particularly important 'ingredient' in the marketing of alcohol products and should be considered in conjunction with advertising and other marketing techniques, rather than as a separate principle. This finding forms the rationale for the current systematic review, which is the focus of the rest of this chapter, beginning with a breakdown of the research question, aims and objectives of the review.

#### **4.5. Research question, aims and objectives of the review**

The research question for this systematic review is '*what is the impact of industry-driven price and other marketing activities on the drinking behaviour of young people*'. Utilising a business marketing framework, the review focuses on all four elements of the 'marketing mix'.

The review seeks to fulfil two broad objectives. Firstly, to identify, evaluate and summarise the findings of all relevant individual studies examining the impact of industry-led alcohol price *and* other marketing practices on adolescents only, particularly those aged 14-17. In doing so, it is anticipated that the review will help to demonstrate key knowledge gaps in the subject field. More specifically, the review aims to investigate the extent of the UK evidence base or the applicability of current research to a UK context and examine the literature for advances (particularly from the systematic reviews outlined above) such as studies which focus on the impact of 'new' digital marketing channels or techniques (such as electronic websites, viral marketing and sponsorship) on young people's drinking behaviour.

#### **4.6. Research Process**

The following section details each stage in carrying out a systematic literature review, broken down into roughly the order in which tasks are undertaken, with a specific focus on the process followed in the review conducted for this piece of research.

#### **4.6.1. Assessing the Eligibility of Studies for Inclusion in the Review**

A pre-determined protocol is used to assess the eligibility of studies for inclusion in a systematic review. The process of selecting studies “should be explicit and conducted in such a way as to minimise the risk of errors or bias” (Centre for Reviews and Dissemination, 2009:23). More specifically, studies are screened (by title, abstract and finally by full paper) for eligibility using set inclusion and exclusion criteria. In this review, an initial scoping exercise suggested that a range of studies were potentially relevant for inclusion, and both quantitative and qualitative studies were screened. Further, in keeping with the review question, and the overall aims and objectives of the thesis, only studies focusing on industry-driven alcohol price and other marketing practices were considered for inclusion in this review. This excludes papers which, for example, focus on the appearance of alcohol in television and film, policy-based interventions such as taxation, and user-led ‘alcohol talk’ in media such as Facebook and Twitter, the influence of which is explored in the introductory chapters of this thesis.

Studies published after January 1999 were screened for inclusion in this review for several reasons. First, it was felt by the researcher that relevant earlier literature had already been identified and robustly examined in earlier systematic reviews, outlined in section 4.4. Thus, it made sense to extend and update rather than repeat. Second, this period encompasses a series of key developments in UK alcohol and youth policy. Specifically, updates to the National Alcohol Harm Reduction Strategy (2004) unveiled in 2007 entitled *Safe, Sensible, Social* identified drinkers under the age of 18 as a priority group in reducing harmful and risky drinking (Department of Health et al., 2007). Further, recommendations from the CMO in 2009 advocated an alcohol-free childhood whilst underage, and certainly whilst under 15 years old. Additional inclusion and exclusion criteria are presented in Table 4.1.

1.	Related to the impact of industry-driven alcohol availability, marketing and promotion on young people's drinking behaviour.	<u>YES</u> : Retain; progress with other inclusion / exclusion criteria if relevant <u>NO</u> : Reject
2.	Related to the impact of alcohol price on young people's drinking behaviour.	<u>YES</u> : Retain; progress with other inclusion / exclusion criteria if relevant <u>NO</u> : Reject
3.	Focuses on young people aged 14-17 years old: <ul style="list-style-type: none"> <li>• Not babies / FAS</li> <li>• Include wider age range if study is relevant, young people are younger only at baseline, or if the mean age of participants falls between 14-17.</li> <li>• Exclusion of young people over 18 years old or over the legal drinking age; and US college students.</li> </ul>	<u>YES</u> : Retain; progress with other inclusion / exclusion criteria if relevant <u>NO</u> : Reject / use discretion and discuss with additional reviewers
4.	Published after 1999	<u>YES</u> : Retain; progress with other inclusion / exclusion criteria if relevant <u>NO</u> : Reject
5.	Primary papers only	<u>YES</u> : Retain; progress with other inclusion / exclusion criteria if relevant <u>NO</u> : Reject
6.	Developed countries only (NB preference must be given to UK studies but other developed countries will not be excluded based on country of origin).	<u>YES</u> : Retain; progress with other inclusion / exclusion criteria if relevant <u>NO</u> : Reject
7.	Uncertainty (i.e. abstract does not make the subject clear).	Obtain full paper and progress with other inclusion / exclusion criteria

*Table 4.1: Systematic Review Inclusion and Exclusion Criteria*

#### **4.6.2. Searching and Identifying Literature**

A comprehensive literature search (using several sources) is important to ensure that as many studies as possible are identified as well as to minimise selection and publication bias for those that are found, which can occur when “studies with statistically significant results are more likely to be published and cited” (Akobeng, 2005:847). Single electronic database searches lack sensitivity and relevant articles may be missed if only one database is searched (Dickersin et al., 1994). Further, exclusively relying on just one database may also retrieve a set of studies that are unrepresentative of all studies that would have been identified through a systematic search of multiple sources.

In this review, a search strategy was developed with the help of an information specialist to locate relevant studies of interest. In order to minimise publication bias and ensure that the findings were fully reflective of the existing evidence base, this review examined peer-reviewed journal papers and book chapters in addition to a range of grey literature (material disseminated quickly before or without formal publication process) including theses, conference abstracts, unpublished / on-going studies and reports.

### *Electronic searches*

The following general and subject-specific electronic databases were searched:

- MEDLINE (January 1999 – )
- ETOH (1972-2003)
- Scopus (January 1999 – )
- Web of Knowledge (January 1999 – )
- EMBASE (January 1999 – )
- CINAHL (January 1999 – )
- PsycINFO (January 1999 – )
- CSA Illumina, including IBSS, Sociological Abstracts and ASSIA (January 1999 – )

Key words were also used to search the following websites:

- Barnardos (<http://barnardos.org.uk>)
- Balance (<http://www.balancenortheast.co.uk>)
- Joseph Rowntree Foundation (<http://www.jrf.org.uk>)
- Intute (<http://www.intute.ac.uk>)
- Portman Group (<http://www.portman-group.org.uk>)
- International Center for Alcohol Policies (ICAP) (<http://www.icap.org>)
- Centre for Youth Drug Studies (<http://www.cyds.adf.org.au>)
- Institute of Alcohol Studies (<http://www.ias.org.uk>)
- Department of Children, Schools and Families (<http://www.dcsf.gov.uk>)



- Department of Health  
(<http://www.dh.gov.uk/en/Publicationsandstatistics/index.htm>)
- Home Office (<http://www.homeoffice.gov.uk/rds/alcohol1.html>)
- UK Statistics Authority (<http://www.statistics.gov.uk>)
- Eurostat (<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>)
- European Gateway on Alcohol, Drugs and Addictions  
(<http://www.addictionsinfo.eu>)
- NHS Information Centre (<http://www.ic.nhs.uk>)
- UK Data Archive (<http://www.data-archive.ac.uk>)
- NICE (<http://www.nice.org.uk>)
- WHO ([http://who.int/topics/alcohol\\_drinking/en/](http://who.int/topics/alcohol_drinking/en/))
- Alcohol Concern (<http://www.alcoholconcern.org.uk>)
- Alcohol Education and Research Council (<http://www.aerc.org.uk>)
- National Center on Addiction and Substance Abuse  
(<http://www.casacolumbia.org/>)
- Diversity Health Institute Clearinghouse (<http://203.32.142.106/clearinghouse/>)
- SoRAD (<http://www.sorad.su.se/>)
- European Alcohol Policy Alliance (<http://www.eurocare.org/>)
- DrinkandDrugs.net (<http://www.drinkanddrugs.net>)
- Daily Dose (<http://www.dailydose.net>)
- Drugscope (<http://www.drugscope.org.uk>)
- National Institute on Alcohol Abuse and Alcoholism (NIAAA)  
(<http://www.niaaa.nih.gov/>)

In addition, the reference lists of located papers were scanned for supplementary papers using a 360 degree citation process; and reference lists already held by the reviewer were searched.

### *Search Terms*

Search terms were agreed following a scoping search carried out in collaboration with a senior information specialist at Newcastle University. The search was split into three

core concepts: alcohol, participants (young people) and marketing techniques. Specific search terms used in accordance with the requirements of individual electronic databases are presented in Appendix A of this thesis. A combination of search strategies was used in this review. For MEDLINE, EMBASE, PsycINFO and CSA Illumina a string search was conducted using appropriate subject headings in conjunction with a range of associated free terms (combined using the Boolean operators 'OR' and 'AND'). For Scopus, other databases and website searches, a free text search strategy was employed, using a series of free terms.

### *Screening of studies*

The titles and abstracts of all records identified by electronic searches were retrieved and exported to a reference management software programme (Endnote X4). Duplicates were removed and the remaining articles went through three stages of screening. The first of these was a brief analysis of the article title to eliminate studies that were obviously not relevant. The next stage of screening consisted of analysing the abstract of the remaining articles for relevance. The final stage of screening consisted of reading the full article to check eligibility. Full text copies of all potentially relevant studies were retrieved. Papers deemed relevant from websites, grey literature or reference lists were added iteratively throughout the screening process. An 'In/Out form' was created that consisted of checkboxes for each of the inclusion criteria in an attempt to speed up the search process and to create a detailed log of why particular articles did not qualify for the review. A copy of this form is included in Appendix B of this thesis. All abstracts and full papers were screened independently by a second reviewer to ensure rigour and minimise bias. Any disagreements regarding papers to be included / excluded were resolved in a discussion between the two reviewers.

### ***4.6.3. Quality appraisal and data extraction of included material***

Next, studies deemed eligible for inclusion are assessed for quality. Again, a pre-determined protocol is used at this stage. Quality refers to the internal validity of the

studies (i.e. lack of bias) and the criteria used to determine this will depend on the study design (Pai et al., 2004). Thus, quality appraisal is undertaken to ensure that results are not over-interpreted and involves a more critical reading of each paper focusing specifically on the aims; methodology and study design; sampling, participants and recruitment; data analysis; findings; and implications of the study. The final stage in a systematic review before synthesising relevant findings is data extraction, the main purpose of which is to identify relevant and comparable data across studies. The extraction of data is traditionally linked to quality assessment in that both processes can (but do not have to be) undertaken at the same time (Centre for Reviews and Dissemination, 2009). To facilitate this process, a 'data extraction form' is traditionally used (which should be tailored to the review question) to provide consistency, and thus improve reliability and validity. Finally, data extracted from primary studies is reworked into tabular form (described as summary tables). This represents the last step in data extraction, and the first step in data synthesis.

In this review, all full papers retrieved were quality assessed and data extracted using tools developed by the researcher. Both tools were first piloted on several papers in the review to ensure that relevant data was being appraised and extracted. The GRADE system of rating evidence quality (Canfield SE and Dahm P., 2011; Guyatt GH et al., 2008) and the CASP (Critical Appraisal Skills Programme) tool, methodological checklists providing key criteria relevant to specific study designs, from the International Centre For Allied Health Evidence (MKPC Trust, 2002) were used to provide guidance on content. A copy of the quality appraisal and data extraction tool used are included in Appendix C and D of this thesis.

A second reviewer independently assessed the quality of included papers to minimise the risk of selection bias. Again, any disagreements regarding papers to be included / excluded were resolved in a discussion between the two reviewers. Further, although each paper was given an overall quality 'rating' this was used by the researcher to guide subsequent data analysis and the synthesis of findings only. For example, if a study deemed to be poor quality contributed towards answering the review question and met the inclusion criteria it was retained for data extraction. A flow chart of the study selection process (detailing the number of papers retained at each phase of the

review) based on the PRISMA Statement (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) derived by Moher et al (2009) is shown below in Figure 4.1. A total of 32 papers were identified for inclusion in this systematic review. A list of all included full papers is presented in Appendix E of this thesis.

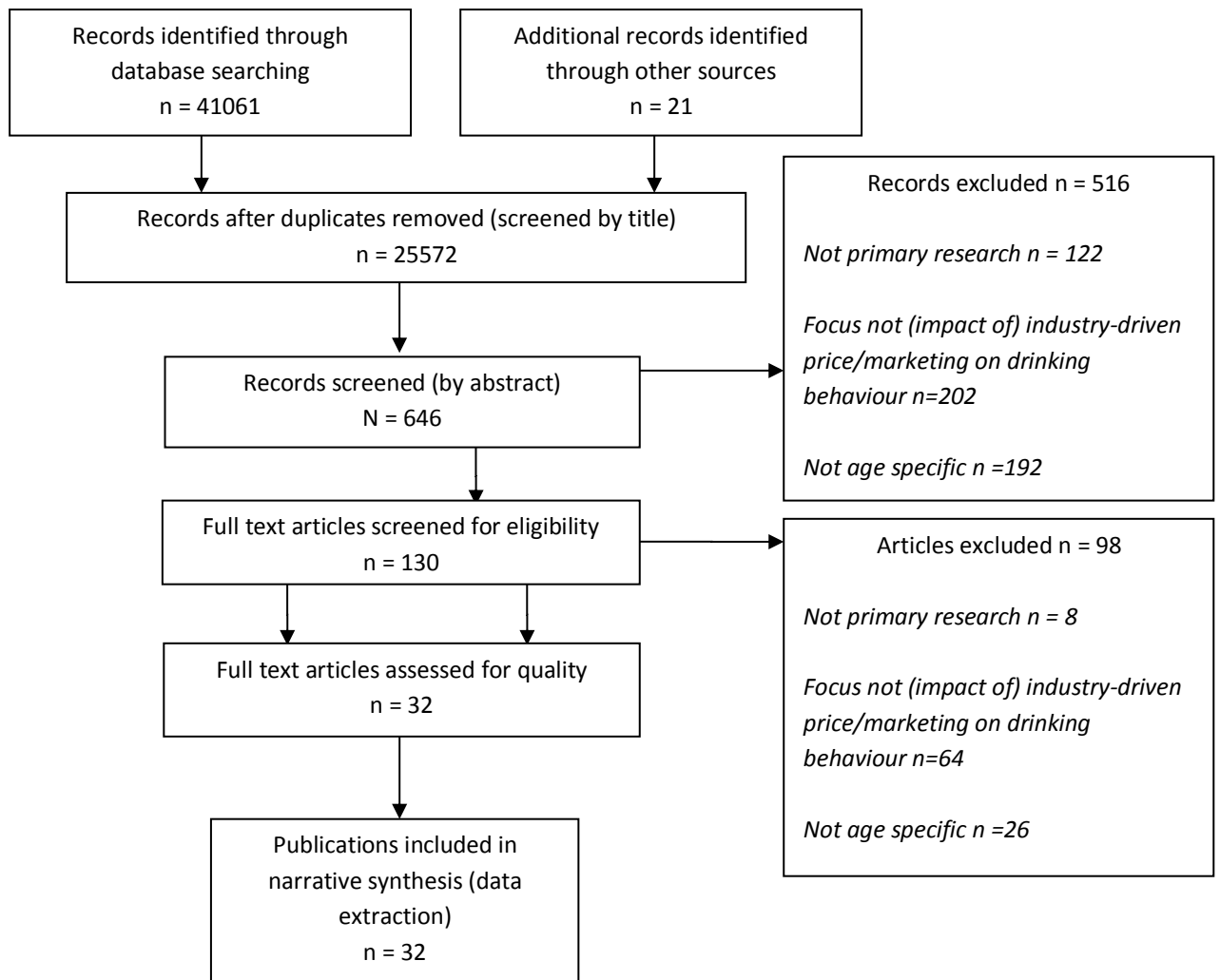


Figure 4.1: Flow chart of study selection process (based on PRISMA statement)

#### **4.6.4. *Synthesis of findings***

The process of integrating relevant findings and drawing studies together is termed data synthesis. This is the heart of any systematic review (Mays et al., 2005) and recognises that “science is a cumulative activity” (Chalmers, 2003:25). The diversity of studies identified can provide an interpretive context not available in one study (Light and Pillemer, 1984). More specifically, synthesis may entail juxtaposing findings from different sources; extracting common themes across studies or integrating data from several studies to produce new insights or theories (Mays et al., 2005).

Approaches to data synthesis can be both narrative and statistical; conducted with or without meta-analysis; and used to interpret both qualitative and quantitative data. Meta-analysis is a technique for pooling (or combining) and re-analysing the results of a number of studies that address the same question to produce a summary result (Pai et al., 2004; Clarke and Oxman, 2003; Khan et al., 2003; Egger et al., 1997). Importantly, results from individual studies are not simply combined as if they are from a single study and the ‘meta’ in meta-analysis simply refers to a higher order or overview form of analysis. In this way, the ‘lens’ crosses many studies, rather than only individual studies. Thus, quantitative meta-analysis focuses on establishing the size of an effect or issue whereas qualitative meta-analysis focuses on exploring different facets of an issue to increase explanatory understanding.

Importantly, the ability to perform meta-analysis rests on a high degree of homogeneity. In other words, there should be some consistency in the results of included studies. If not, alternative modes of presenting review findings, such as narrative synthesis, which can account for heterogeneity should be used (Pai et al., 2004). This approach differs from a conventional ‘expert’ narrative review by moving beyond a summary of study findings to an attempt at synthesis which generates new insights, recommendations or knowledge as well as being more systematic and transparent (Mays et al., 2005:12). The task in a narrative synthesis is to preserve the context and explanatory content of each study whilst extracting and synthesising enough of the ‘outcomes’ to make intelligible recommendations.

Results from studies included in this review were not pooled using a statistical meta-analysis. Upon advice from experienced statisticians, the researcher felt that data collected was not homogeneous enough to be able to do so, with papers reporting on a variety of populations, study designs, exposure measures and outcome measures. For example, outcome measures across the studies were diverse and included, amongst others, measures relating to 'deciding to drink' (*in the past month, past year or binge*), negative alcohol-related outcomes (*drinking in a public place, violence when drunk, regretted sex and tendency to forget things after drinking*), changes in drinking behaviour (*typical occasional quantity; frequency of drinking; and frequency of drunkenness*) and the self-reported number of alcoholic drinks consumed in the past month (*frequency; average / maximum quantity*) (outcome measures for all studies are presented in Tables 4.2, 4.3, 4.4 and 4.5).

Further, it is not always appropriate to combine a small number of homogeneous variables from heterogeneous studies as larger studies will contribute most to the pooled statistic and be given most weighting in a subsequent statistical meta-analysis. The researcher felt that pooling the data in this way would result in a misleading summary result, masking important differences between studies, and diminishing overall effect size. This summary result would not be meaningful to the review question and would be conditional on its contingent parts. Thus, a narrative synthesis has been conducted here in order to, firstly, give a comprehensive overview of the findings; and, secondly, to generate new insights, knowledge and recommendations for further research, policy and practice.

#### **4.7. Narrative synthesis of findings**

To aid coherent reporting of data, review findings are broken down into product, promotion, price and place (of sale or use). A breakdown of included papers (by marketing element) is provided in Figure 4.2 below. Three (out of four) papers that focused on 'product' also examined alcohol 'price' and are included in both elements (Kearns et al., 2011; Bellis et al., 2009; Brain et al., 2000). One paper focused on both 'price' and 'promotion' and is included in both elements (Saffer and Dave, 2006) and

two papers focused on both ‘product’ and ‘promotion’ and are included in both elements (Lin et al., 2012; Tanski et al., 2011). The following chapter sections explore each element individually in relation to young people’s alcohol use. For simplicity, key findings from each section are also compiled in a series of summary tables, which are included in the narrative. The limitations of studies identified are then examined, followed by the main conclusions and implications for policy and practice, before by a short chapter summary. Limitations of the approach taken by the researcher in this systematic review are explored in the discussion of the thesis in Chapter 10.

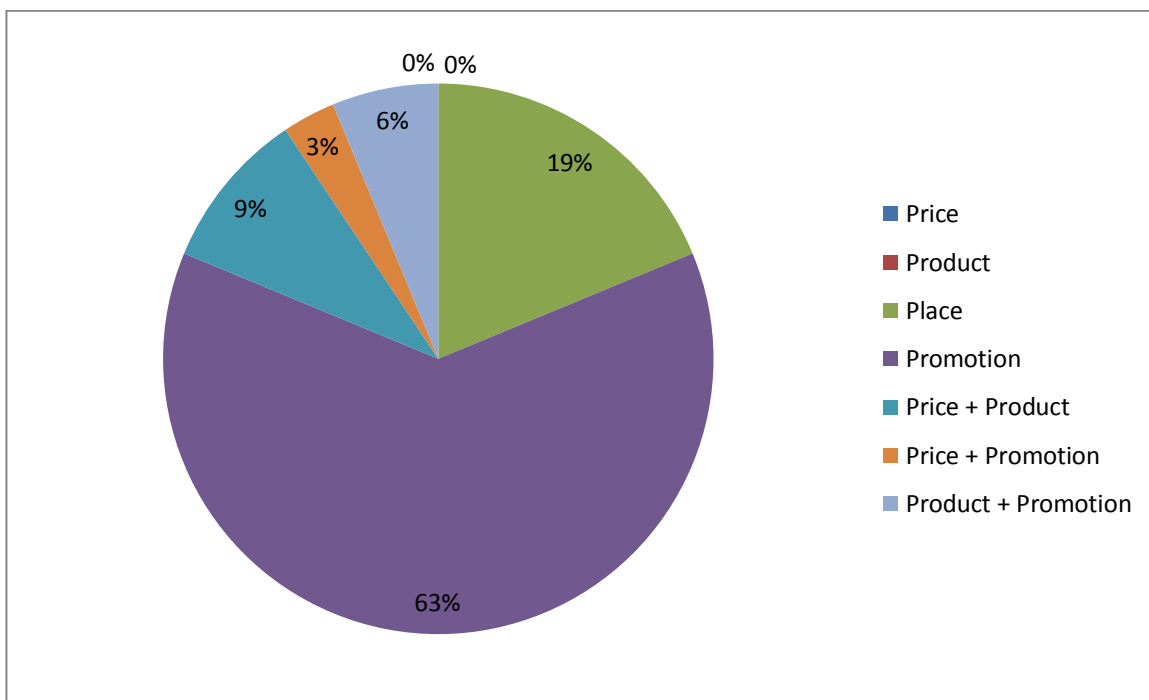


Figure 4.2: Breakdown of papers (by marketing element) included in the review

#### 4.7.1. Papers reporting the impact of alcohol ‘price’

Only four studies specifically explored the impact of alcohol price on underage drinkers, demonstrating a clear paucity of evidence about the effects of alcohol price in this age group. Two studies were conducted in the UK (Bellis et al., 2009; Brain et al., 2000), one was conducted in Ireland (Kearns et al., 2011) and one was conducted in the USA (Saffer and Dave, 2006). All four studies reported cross-sectional data. However, one study was mixed methods in design, and represented the only

qualitative data included in this review (Brain et al., 2000). A more detailed presentation of all four studies (including study design, main findings, limitations and conclusions drawn from the papers) is provided in Table 4.2 after this narrative on page 78.

Although three out of four studies reported a relationship between price and young people's drinking behaviour and its consequences, each paper reported different exposure and outcome measures, meaning that the impact of price on young people's alcohol consumption was not analysed in a standardised way. In contrast to the other three papers described below, Kearns et al (2011) found that young people aged 14-18 in Ireland who accessed alcohol treatment services were 'brand loyal' and chose leading brands of alcohol, which were more expensive per unit than other brands, a surprising finding considering that this particular group of young people could feasibly be expected to choose cheap alcohol in order to drink at a higher volume and frequency. Based on current drinking patterns, 50% of respondents chose 'Budweiser', priced at €0.89 per unit. The nearest competing lager was 'Dutch Gold', with 5.9% of responses, and priced at €0.55 per unit. Further, 'Smirnoff' had nine times as many respondents as 'Huzzar' at current episode of drinking (26.5% versus 2.9%). However, Smirnoff had the highest price of all vodka brands studied at €0.76 per unit.

In contrast, Bellis et al (2009) reported that, as the mean unit price of alcohol decreased, the percentage of young people aged 15-16 reporting that they experienced negative alcohol-related outcomes increased (*Drinking Outside*  $P < 0.01$ ; *Violence when drunk*  $P < 0.01$ ; *Alcohol-related regretted sex*  $P < 0.01$ ; *Tendency to forget things after drinking*  $P < 0.05$ ). Further, drinking large value cider bottles was strongly associated with the highest percentage of young people aged 15-16 experiencing all four negative alcohol-related outcomes studied (*Drinking outside* 71.56% OR=4.62 CI=3.91-5.47; *Violence when drunk* 50.48% OR=2.53 CI=2.16-2.96; *Alcohol-related regretted sex* 24.02% OR=2.27 CI=1.87-2.75; *Tendency to forget things after drinking* 60.79% OR=1.85 CI=1.58-2.16). This association remained significant after controlling for confounding relationships (*Drinking outside* AOR=2.78 CI=2.27-3.40  $P < 0.001$ ; *Violence when drunk* AOR=1.29 CI=1.07-1.56  $P < 0.01$ ; *Alcohol-related regretted sex* AOR=1.39 CI=1.12-1.73  $P < 0.01$ ; *Tendency to forget things after drinking*



AOR=1.31 CI=1.10-1.57 P=<0.01). Thus, drinking large value cider bottles increased the odds of drinking outside by 178%; experiencing violence when drunk by 29%; alcohol-related regretted sex by 39% and the tendency to forget things after drinking by 31%.

Using data from a cross-sectional survey, Brain et al (2000) found that the more frequently young people aged 13-16 drank, the more important they reported that price and strength became (and the less important taste became) when choosing an alcoholic drink. Alcohol price was most important to 24% of those who drank more than once per week compared to 19% of occasional drinkers. Further, data from semi-structured interviews suggested that drinkers aged 12-17 conducted a 'cost-benefit analysis' on the products they purchased. More specifically, purchasing alcohol and not getting drunk was considered to be a waste of money and the 'utility' of a product was reflected in its psychoactive properties (how drunk it could get you). It was these products which were deemed to deliver 'value for money'. Price was identified as most crucial to young people in more deprived locations, with some young people 'priced out' of certain brands / types of alcohol and forced to settle for cheaper, but 'respectable', versions.

Finally, using results from two datasets, Saffer and Dave (2006) reported that alcohol consumption appeared to be moderately price elastic, meaning that changes in price could have small effects on changes in demand (amongst US adolescents aged 13-18). Based on the full Monitoring The Future (MTF) sample of young people, annual drinking price elasticity was -0.19, past month drinking price elasticity was -0.26 and drinking price elasticity was -0.18. Thus, a 1% increase in price would reduce annual participation by 0.19% (-0.1902, SE = 0.0231); monthly participation by 0.26% (-0.2639, SE = 0.0370) and binge participation by 0.18% (-0.1842, SE = 0.0562). This means that a 10% increase in price could reduce annual participation by 1.9%; monthly participation by 2.6% and binge participation by 1.8%.

Based on the full National Longitudinal Survey of Youth (NLSY) sample of young people, past month participation price elasticity was -0.42 and binge participation price elasticity was -0.73. Therefore, a 1% increase in price, would reduce monthly alcohol participation by 0.42% (-0.4229, SE = 0.2779) and binge participation by 0.73%

(-0.7307, SE = 0.4897). Thus, a 10% increase in price could reduce young people's monthly participation by 4.2% and binge participation by 7.3%. The authors also found that results from one dataset (the MTF) indicated that alcohol price had a negative and significant effect on annual, monthly and binge drinking across the entire sample, with females and white young people most responsive to alcohol price. For example, across the entire sample, with each 1 unit increase in price, annual drinking decreased by 7% (-0.0708, Z score = -8.23); monthly drinking decreased by 6% (-0.0606, Z score = -7.13); and binge drinking decreased by 2% (-0.0230, Z score = -3.28).

Table 4.2: Studies reporting the impact of 'price' on young people's drinking behaviour

Full Study Reference	Country	Study Design	Sampling	Results	Limitations	Conclusions and Recommendations
<i>Bellis, M.A. et al (2009). Teenage drinking, alcohol availability and pricing: a cross-sectional study of risk and protective factors for alcohol-related harm in school children. BMC Public Health. 9:380</i>	UK	<p>Cross sectional survey of school pupils and 29 retail outlet stores.</p> <p><b>Duration of Study:</b> January-March 2007 (3 months)</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> mean price per unit of alcohol, type of alcohol consumed, source of alcohol and weekly income.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> negative alcohol-related outcomes (<i>drinking in a public place, violence when drunk, regretted sex and tendency to forget things after drinking</i>).</p> <p><b>Method(s) of analysis:</b> Correlation and logistic regression techniques.</p> <p><b>Quality Assessment:</b> ****</p>	<p><b>Age:</b> 15 = 4026 (49%) 16 = 4237 (51%)</p> <p><b>Gender:</b> m=3960 (48%) f = 4303 (52%)</p> <p><b>Deprivation Quintile (SES):</b> 1 = 1275 (15%) 2 = 1687 (20%) 3 = 1439 (17%) 4 = 1597 (19%) 5 = 1954 (24%)</p> <p>(n=8,263)</p>	<p>As the mean unit price of alcohol decreased, the % of young people experiencing all four negative alcohol-related outcomes increased (<i>Drinking Outside</i> P=&lt;0.01; <i>Violence when drunk</i> P=&lt;0.01; <i>Alcohol-related regretted sex</i> P=&lt;0.01; <i>Tendency to forget things after drinking</i> P=&lt;0.05).</p> <p>51% of young people drank alcopops, which had the highest mean unit price of alcohol (£0.70, P = &lt;0.001; CI = 0.61-0.78). Young people who drank alcopops (compared to the other beverages studied) were least likely to experience violence when drunk (30.40%, OR = 0.90, CI = 0.80-1.00) or alcohol-related regretted sex (14.58%, OR = 1.15, CI = 0.99-1.34).</p> <p>13% of young people drank large value cider bottles, which had the lowest mean price per unit of alcohol (£0.17; P=&lt;0.001; CI = 0.16-0.19). Drinking large value cider bottles was strongly associated with the highest % of young people experiencing all four negative alcohol-related outcomes (<i>Drinking outside</i> 71.56% OR=4.62 CI=3.91-5.47; <i>Violence when drunk</i> 50.48% OR=2.53 CI=2.16-2.96; <i>Alcohol-related regretted sex</i> 24.02% OR=2.27 CI=1.87-2.75; <i>Tendency to forget things after drinking</i> 60.79% OR=1.85 CI=1.58-2.16).</p> <p>This remained significant after controlling for confounding relationships (<i>Drinking outside</i> AOR=2.78 CI=2.27-3.40 P=&lt;0.001; <i>Violence when drunk</i> AOR=1.29 CI=1.07-1.56 P=&lt;0.01; <i>Alcohol-related regretted sex</i> AOR=1.39 CI=1.12-1.73 P=&lt;0.01; <i>Tendency to forget things after drinking</i> AOR=1.31 CI=1.10-1.57 P=&lt;0.01). Thus, drinking large value cider bottles increased the odds of drinking outside by 178%; experiencing violence when drunk by 29%; alcohol-related regretted sex by 39% and the tendency to forget things after drinking by 31%.</p>	<p>Cross-sectional self-reported data; cannot determine causal path.</p> <p>Opportunistic school-based data collection may lead to exclusions and sample bias.</p> <p>Survey of retail stores based on only 7 general product descriptions.</p> <p>Only 4 adverse alcohol-related outcomes were studied.</p> <p>Omission of outcomes such as prevalence of injury and effects on education or relationships.</p> <p>The rationale for 'drinking outside' as an adverse alcohol-related outcome for young people is unclear.</p>	<p>The authors conclude that parental enforcement efforts should be matched by legislative strategies to address the low cost of many products (through minimum price per unit), ease of access and size of containers (discouragement of large value bottle purchases).</p> <p>One of only a small number of UK studies exploring the impact of alcohol pricing which focuses specifically on underage drinkers.</p> <p>Consumption of the cheapest alcohol product studied (large value cider bottles) was strongly associated with the highest % of young people experiencing all four negative alcohol-related outcomes.</p> <p>Results from this paper demonstrate that the mean price of alcohol is significantly associated with negative alcohol-related harms experienced by young people.</p> <p>However, findings are based on only 4 adverse alcohol-related outcomes and 7 generalised alcohol products.</p>

<p><i>Brain, K. et al (2000)</i> <i>Drinking with Design: young drinkers as psychoactive consumers. Drugs: education, prevention and policy. 7(1) 5-20.</i></p>	<p>UK</p>	<p><b>Mixed methods:</b> Cross-sectional survey of school pupils (phase 1); semi-structured interviews with 'street drinkers' (phase 2).</p> <p><b>Duration of Study:</b> Phase 1 = 1 month; Phase 2 = 3 months</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> choice of drink; drinking frequency / prevalence.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> 'risk' behaviours; factors rated as most important when choosing a drink.</p> <p><b>Method(s) of analysis:</b> tests of comparisons of means and correlations (phase 1); thematic analysis and case study approach (phase 2).</p> <p><b>Quality Assessment:</b> ***</p>	<p><b>Phase 1:</b> <b>Age:</b> Year 9 (13-14) Year 10 (14-15) Year 11 (15-16)</p> <p>(n= 727)</p> <p><b>Gender:</b> m= 380 (52%) f= 347 (48%)</p> <p><b>SES:</b> representative of each of the socioeconomic groupings.</p> <p><b>Ethnic profile:</b> 11% non-white</p> <p><b>Phase 2:</b> <b>Age:</b> 12-13 = 9 (17%) 14-15 = 33 (60%) 16-17 = 13 (23%)</p> <p>(n=55)</p> <p><b>Gender:</b> m=35 (64%) f = 20 (36%)</p> <p><b>SES:</b> 3 geographical areas (1 middle class area, 1 socially deprived outlying town and 1 socially deprived inner-city neighbourhood).</p>	<p><b>Phase 1:</b> Price was most important to 19% of occasional drinkers (n=92), 21% of those who drank one to three times per month (n=121), 16% of those who drank weekly (n=149) and 24% of those who drank more than once per week (n=171).</p> <p><b>Phase 2:</b> Young people purchased pleasure (with alcohol or drugs) as a time-out from everyday life, with few other consumer options due to poverty and immediate surroundings (<i>'I'd drink every day if I had the money...'</i>). Young people conducted 'cost-benefit analysis' on the products they purchased. Purchasing alcohol and not getting drunk was considered a waste of money (<i>'...what's the point of spending money...and not getting drunk'</i>). The 'utility' of a product was reflected in its psychoactive properties i.e. how drunk it can get you. These products delivered 'value for money'.</p> <p>Some young people were 'priced out' of certain types of alcohol (<i>'Budweiser is a rich man's beer and Stella is a rich man's beer...'</i>) and settled for cheaper but respectable versions. Other products were stereotyped and not tolerated no matter how cheap they were (<i>'...a tramp's drink...'</i>).</p> <p>Price became more crucial in the most deprived locations and cheap cider was (reluctantly) the most cost-effective drink in this context (<i>'Strength and price that's why I drink Pulse... it's only £1.30 a (litre) bottle and strong. If I've got the money I'd rather get a quality like Stella but it's £1.09 (a small bottle)...I don't like Pulse...'</i>).</p>	<p>Cross-sectional self-reported data; cannot determine causal path. Opportunistic school-based data collection may lead to exclusions and sample bias.</p> <p>Wider age range than focused on in this systematic review (aged 14-17)</p> <p>Methods of data analysis (statistical/qualitative) could have been recorded more rigorously. For example, p-values and confidence intervals were not reported.</p> <p>Qualitative fieldwork undertaken with street-based 'drinking delinquents' - 'middle majority' of young drinkers may have been overlooked.</p> <p>No clear statement of the research question, aims or objectives; no discussion of study limitations.</p> <p>Published in 2000 – findings are time-bound and may be less relevant than others.</p>	<p>Outside of industry-driven marketing techniques, young people had their own ideas and priorities as demonstrated in the strength-price-taste formula utilised in drinking decisions.</p> <p>The more frequently young people drank, the more important price and strength became (and the less importance taste assumed) when choosing an alcoholic drink.</p> <p>The quantitative data presented does not determine whether it is the price of alcohol which dictates drinking frequency.</p> <p>However, the qualitative data indicates that spending money on alcohol and not getting drunk is considered to be a waste of money; and points to the use of low price-high strength products, such as cider and lager, and high frequency drinking, especially in marginalised areas with the highest rates of alcohol-related harm.</p> <p>Rates of illicit drug use in this study were also high, with young people choosing combinations of alcohol and drugs according to desired effect, setting and personal resources.</p> <p>Pricing interventions (such as setting a minimum price per unit) and restrictions on large bottle purchases may be effective but would need to be delicately balanced to ensure alcohol use is not simply displaced by increased rates of illicit drugs use amongst young people.</p>
<p><i>Kearns et al. (2011)</i> <i>Drinking Patterns and Preferences Among Irish</i></p>	<p>Ireland</p>	<p>Cross-sectional survey (from a pilot study) of young people attending</p>	<p><b>Age:</b> 14-18 (mean = 16.5 years)</p>	<p>Smirnoff vodka was the most common brand first tried by young people aged 14-18 (17.6%).</p>	<p>Cross-sectional self-reported data; cannot determine causal path.</p>	<p>Young people, even whilst accessing treatment services, showed brand preferences within the type of alcohol</p>

<p><i>Substance Abusing Teenagers: A Pilot Study. Journal of Addictions Nursing. 22. 124-129.</i></p>		<p>treatment services for alcohol problems.</p> <p><b>Duration of Study:</b> data collection was over a 2 month period.</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> type of alcohol typically drank; preference for particular alcohol brands.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> age of first drink; amount of alcohol typically drank; where alcohol was obtained.</p> <p><b>Method(s) of analysis:</b> descriptive statistics using SPSS.</p> <p><b>Quality Assessment:</b> ***</p>	<p><b>Gender:</b> Male = 79.4% (n=27) Female = 20.6% (n=7)</p> <p><b>SES:</b> not reported (n=34)</p>	<p>Based on current drinking patterns, a pattern of brand loyalty emerged, with 50.0% of respondents choosing Budweiser. The nearest competing lager was Dutch Gold (5.9%).</p> <p>Similarly, Smirnoff had nine times as many respondents as Huzzar at current episode of drinking (26.5% versus 2.9%). Bulmers cider was the only other brand to obtain over 10% of responses (14.7%).</p>	<p>Although indicative of client treatment attendance, most participants were male, which may account for a high proportion of young people who drank Budweiser (though this is an assumption on the part of the reviewer).</p> <p>Authors report descriptive statistics (percentages) only, making associations difficult to determine.</p> <p>Paper makes quite strong conclusions in light of the fact that it is a pilot study and based on a very small sample and a 1-page questionnaire.</p> <p>Recommendation regarding the impact of alcohol advertising and the need for further work are given without any prior exploration / explanation in the paper.</p>	<p>that they drank, and there was a leading brand chosen across categories (Smirnoff, Budweiser, and Bulmers).</p> <p>Young people in this study chose leading brands of alcohol, which are more expensive than other brands. Therefore, a minimum unit price would be unlikely to have an effect on young people accessing treatment services in Ireland. As well as the brand preferences identified above, drinks are more expensive in Ireland (in comparison to Scotland, England and Wales) than the 40-50p minimum unit price proposed.</p> <p>The authors recommend the need for further work examining the impact of alcohol advertising. However, this is given without any prior exploration / explanation in the paper.</p>
<p><i>Saffer, H. and Dave, D. (2006) Alcohol advertising and alcohol consumption by adolescents. Health Economics. 15:617-637.</i></p>	<p>USA</p>	<p>Two cross-sectional data sets (MTF and NLSY) augmented with advertising, price and cost-of-living data from the 75 largest US DMAs (Designated Marketing Areas).</p> <p><b>Duration of Study:</b></p>	<p><b>MTF:</b></p> <p><b>Age:</b> 8<sup>th</sup> grade (13-14) 10<sup>th</sup> grade (15-16) 12<sup>th</sup> grade (17-18)</p> <p>Weighted mean = 15.731</p> <p><b>Gender:</b></p>	<p>Based on the full MTF data set, with each 1 unit increase in price, annual participation decreased by 7% (-0.0708, Z score = -8.23); monthly participation by 6% (-0.0606, Z score = -7.13); and binge participation by 2% (-0.0230, Z score = -3.28).</p> <p>Male drinking was less responsive to price. Effects were negative but insignificant for monthly and binge consumption, but, for each 1 unit increase in price, male annual participation decreased by 5% (-0.0480, Z score = -3.75).</p>	<p>Complex, technical paper, which is not always broken down into clear findings.</p> <p>Cross-sectional self-reported data; cannot determine causal path.</p> <p>Wider age range than</p>	<p>Alcohol price had a negative and significant effect on annual, monthly and binge alcohol consumption across the entire MTF sample with females and white young people more responsive to alcohol price.</p> <p>However, across the NLSY sample, the effect of price was negative but insignificant. This may reflect that, for</p>

		<p>MTF: 1996 and 1998 survey data (2 years); NLF: 1997 and 1998 panels of the survey (2 years).</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> weighted mean average price of alcohol adjusted by the inter-city cost of living index and the annual consumer price index.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> decision to drink (<i>annual participation, past month participation, and binge drinking</i>).</p> <p><b>Method(s) of analysis:</b> Panel regression techniques.</p> <p><b>Quality Assessment:</b> ***</p>	<p>m=48% f = 52%</p> <p><b>Ethnicity:</b> White = 64.45% Black = 11.09% Hispanic = 10.68% Other = 13.78%</p> <p>(n&gt;63,000)</p> <p><b>NLF:</b> <b>Age:</b> 12-16</p> <p>Weighted mean = 15.1186</p> <p>(n=10,000)</p> <p><b>Gender:</b> m = 51.35% f = 48.65%</p> <p><b>Ethnicity:</b> White = 58.06% Black = 16.23% Hispanic =12.82% Other = 12.89%</p>	<p>Price effects were larger for females and white young people. For each 1 unit increase in price, female annual participation decreased by 9% (-0.0891, Z score = -7.62); monthly participation by 9% (-0.0880, Z score = -7.73) and binge participation by 3% (-0.0265, Z score = -2.95).</p> <p>For each 1 unit increase in price, annual participation amongst white young people decreased by 12% (-0.1175, Z score = -11.15); monthly participation by 11% (-0.1144, Z score = -10.65); and binge participation by 5% (-0.0503, Z score = -5.49). Based on the full MTF sample, annual participation price elasticity was -0.19, past month participation price elasticity was -0.26 and binge participation price elasticity was -0.18.</p> <p>Thus, a 1% increase in price would reduce annual participation by 0.19% (-0.1902, SE = 0.0231); monthly participation by 0.26% (-0.2639, SE = 0.0370) and binge participation by 0.18% (-0.1842, SE = 0.0562). This means that, a 10% increase in price could reduce annual participation by 1.9%; monthly participation by 2.6% and binge participation by 1.8%.</p> <p>Again, females and white young people were more responsive to alcohol price. A 1% increase in alcohol price would reduce annual male participation by 0.13% (-0.1301, SE = 0.0347) and annual female participation by 0.24% (-0.2375, SE = 0.0312); monthly male participation by 0.10% (-0.1026, SE = 0.0542) and monthly female participation by 0.40% (-0.3956, SE = 0.0513); male binge participation by 0.14% (-0.1384, SE = 0.0795) and female binge participation by 0.24% (-0.2369, SE = 0.0803).</p> <p>A 1% increase in price would reduce white young people's annual participation by 0.31% (-0.3053, SE = 0.0274); monthly participation by 0.46% (-0.4638, SE = 0.0436); and binge participation by 0.36% (-0.3611, SE = 0.0658). However, there was no significant relationship between an increase in price and a decrease in annual, monthly or binge drinking participation by black young people.</p> <p>Based on the full NLSY sample, past month participation price elasticity was -0.42 and binge participation price elasticity was -0.73. A 1% increase in price, would reduce monthly alcohol participation by 0.42% (-0.4229, SE = 0.2779) and binge participation by 0.73% (-0.7307, SE = 0.4897). Thus, a 10% increase in price could reduce young people's monthly participation by 4.2% and binge participation by 7.3%.</p>	<p>focused on in this systematic review (aged 14-17).</p> <p>Paper includes no clear discussion of study limitations.</p> <p>Price only has a significant negative effect on participation using MTF data and not data from the NLSY. Using NLSY data, the effect of price is negative but insignificant in all regressions.</p> <p>Based on US data and may not be generalisable to a UK setting.</p> <p>A weighted mean average alcohol price is used. However, it is unclear from the paper what constitutes a '1 unit' or '1%' increase in price. Analysis using a clear mean price per unit of alcohol would be beneficial.</p>	<p>underage drinkers, the money price of alcohol is only part of the cost of acquiring alcohol.</p> <p>Alcohol consumption is moderately price elastic, meaning that changes in price would have small effects on changes in demand.</p> <p>Results indicate that an increase in price would reduce young people's drinking on an annual, monthly or binge participation basis.</p> <p>A past month price-participation elasticity of -0.26 (as found in the NLSY sample) is consistent with prior studies.</p> <p>However, a weighted mean average alcohol price is used. It is unclear from the paper what constitutes a '1 unit' or '1%' increase in price. Analysis using a clear mean price per alcohol unit would be beneficial.</p> <p>The authors focus their conclusions on advertising effects, and related policy implications, and do not discuss the policy impact of price effects and the elasticity participation findings.</p>
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#### **4.7.2. Papers reporting the impact of alcohol 'product'**

Five studies examined the impact of different alcohol products (aspects of product characteristics, image and branding) on young people's drinking behaviour. For two studies (Bellis et al., 2009; Brain et al., 2000), price remained the primary research focus (see section 4.7.1) and the differential impact of specific alcohol products was discussed almost as a 'by-product' of price, indicating that 'product' and 'price' characteristics are not easily disentangled in the alcohol marketing mix. Two studies were conducted in the UK (Bellis et al., 2009; Brain et al., 2000), one in New Zealand (Lin et al., 2012), one in the USA (Tanski et al., 2011) and one in Ireland (Kearns et al., 2011). Four out of five studies reported findings from a cross-sectional survey only, whereas one paper was a mixed-methods study and reported findings from a cross-sectional survey as well as themes from in-depth qualitative interviews (Brain et al., 2000). A more detailed presentation of all five studies (including study design, main findings, limitations and conclusions drawn from the papers) is provided in Table 4.3 after this narrative on page 85.

Using data from their cross-sectional survey, Bellis et al (2009) found that negative drinking outcomes were associated with the consumption of all seven alcohol products identified for study. However, consumption of large value cider bottles (which had the lowest mean price per unit of £0.17) was strongly associated with the highest percentage of young people aged 15-16 experiencing all four negative alcohol-related outcomes studied (*Drinking outside* 71.56% OR=4.62 CI=3.91-5.47; *Violence when drunk* 50.48% OR=2.53 CI=2.16-2.96; *Alcohol-related regretted sex* 24.02% OR=2.27 CI=1.87-2.75; *Tendency to forget things after drinking* 60.79% OR=1.85 CI=1.58-2.16). This association remained significant after controlling for confounding relationships (*Drinking outside* AOR=2.78 CI=2.27-3.40 P=<0.001; *Violence when drunk* AOR=1.29 CI=1.07-1.56 P=<0.01; *Alcohol-related regretted sex* AOR=1.39 CI=1.12-1.73 P=<0.01; *Tendency to forget things after drinking* AOR=1.31 CI=1.10-1.57 P=<0.01). Thus, drinking large value cider bottles increased the odds of drinking outside by 178%; experiencing violence when drunk by 29%; alcohol-related regretted sex by 39% and the tendency to forget things after drinking by 31%.

Using data from a cross-sectional survey, Brain et al (2000) highlighted that taste was most important to young people aged 13-16 when choosing an alcoholic drink across the entire range of drinking frequencies studied (*Occasional 61%, One to three times per month 58%, Weekly 56%, More than once a week 40%*). However, the importance of taste decreased and was replaced gradually by price and strength as drinking frequency increased. Further, young people who drank more than once per week were most likely to drink lager (44%) or cider (30%) and those who drank occasionally were most likely to drink alcopops (32%). Young people who did not drink alcopops were more likely to engage in all risk behaviours identified (*smoke at least 3 times per week: 33% versus 26%; get drunk at least once per month: 36% versus 30%; tried a drug: 63% versus 52%; had sex: 40% versus 37%; have been arrested: 20% versus 14%; have been stopped by the police: 51% versus 41%; have been convicted: 19% versus 15%*).

Findings from the semi-structured qualitative interviews conducted by Brain et al (2000) with drinkers aged 12-17 suggested that, for young male drinkers, value for money (how drunk a product could get you for the least expense) was balanced with striving for an affluent or masculine identity. In more deprived areas, the image of certain cheaper products was subverted. Low-price high-volume cider was given an unexpected masculine image due to product strength and large bottle size. For example, 1 litre or 2 litre bottles represented 'competent' drinkers and drinkers who were willing to drink anything to achieve their goal of intoxication. Finally, alcopops were not appealing (as presently priced and promoted) to young people interviewed in this study. They were described as expensive, 'weak' or a 'girl's drink'.

No papers were identified which explored the impact of alcohol packaging on young people's drinking behaviour. However, three papers examined the influence of branding (Lin et al., 2012; Kearns et al., 2011; Tanski et al., 2011). First, Lin et al (2012) demonstrated that young drinkers in New Zealand aged 12-15 with a favourite alcohol brand drank more frequently (*11.2 drinking occasions per year versus 4.7, p-value <0.001*) and consumed a greater amount of alcohol on a typical occasion (*49.2 ml versus 15.7ml, p-value <0.001*). Using a logistic regression model, having a favourite brand increased the odds of being a drinker by 354% (OR = 4.56, CI = 3.62-5.76). For non-drinkers, having a favourite brand of alcohol was the only marketing channel



variable which significantly predicted young people's intention to drink in the next 12 months and increased the odds of intending to drink in the next 12 months by 73% (OR = 1.73, CI = 1.18-2.53). Further, using a linear regression model, having a favourite brand of alcohol increased frequency of alcohol consumption by 65% (OR = 1.65, CI = 1.41-1.92) and having a favourite brand of alcohol also increased drinking amount by 86% on a typical drinking occasion (OR = 1.86, CI = 1.57-2.21).

In cross-sectional data reported by Tanski et al (2011), two-thirds (68%) of underage drinkers in the US (aged 16-20) reported a favourite brand of alcohol. Further, this data identified higher rates of binge drinking among adolescents who named a favourite brand (*'no favourite brand'*: 0.11, CI = 0.08-0.14 versus *'favourite brand'*: 0.28 to 0.71). The most common brands chosen by underage females and males were Smirnoff, Budweiser and Coors (*females: Smirnoff: 15.3% (n=130), Budweiser: 6.0% (n=51); males: Budweiser: 13.0% (n=115), Smirnoff: 4.8% (n=42), Coors: 4.8% (n=42)*). Thus, in other words, distilled spirits were as likely to be associated with binge drinking as beer brands. Finally, Kearns et al (2011) found that young people aged 14-18 in Ireland who accessed alcohol treatment services were 'brand loyal' and chose leading brands of alcohol. More specifically, based on current drinking patterns, 50% of respondents chose 'Budweiser'. The nearest competing lager was 'Dutch Gold', with 5.9% of responses. Similarly, 'Smirnoff' had nine times as many respondents as 'Huzzar' at current episode of drinking (26.5% versus 2.9%).

Table 4.3: Studies reporting the impact of 'product' on young people's drinking behaviour

Full Study Reference	Country	Study Design	Sampling	Results	Limitations	Conclusions and Recommendations
<i>Bellis, M.A. et al (2009). Teenage drinking, alcohol availability and pricing: a cross-sectional study of risk and protective factors for alcohol-related harm in school children. BMC Public Health. 9:380</i>	UK	<p>Cross sectional survey of school pupils and 29 retail outlet stores.</p> <p><b>Duration of Study:</b> January-March 2007 (3 months).</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> mean price per unit of alcohol, type of alcohol consumed, source of alcohol and weekly income.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> negative alcohol-related outcomes (<i>drinking in a public place, violence when drunk, regretted sex and tendency to forget things after drinking</i>).</p> <p><b>Method(s) of analysis:</b> Correlation and logistic regression techniques.</p> <p><b>Quality Assessment:</b> ****</p>	<p><b>Age:</b> 15 = 4026 (49%) 16 = 4237 (51%)</p> <p><b>Gender:</b> m=3960 (48%) f = 4303 (52%)</p> <p><b>Deprivation Quintile (SES):</b> 1 = 1275 (15%) 2 = 1687 (20%) 3 = 1439 (17%) 4 = 1597 (19%) 5 = 1954 (24%)  (n=8,263)</p>	<p>Negative drinking outcomes (for a substantial % of young people) were associated with all 7 alcohol products.</p> <p>The largest % of young people drank beer cans/bottles (56.35%). Those who did were least likely to forget things after drinking (47.91%, OR = 1.03, CI = 0.93-1.14).</p> <p>Young people who drank wine were least likely to drink outside (34.10%, OR = 0.72, CI = 0.63-0.81); and young people who drank alcopops were least likely to experience violence when drunk (30.40%, OR = 0.90, CI = 0.80-1.00) or alcohol-related regretted sex (14.58%, OR = 1.15, CI = 0.99-1.34).</p> <p>The smallest % of young people drank large value cider bottles (12.71%), which had the lowest mean price per unit of alcohol (£0.17; P=&lt;0.001; CI 0.16-0.19).</p> <p>Drinking large value cider bottles was strongly associated with the highest % of young people experiencing all four negative alcohol-related outcomes (<i>Drinking outside</i> 71.56% OR=4.62 CI=3.91-5.47; <i>Violence when drunk</i> 50.48% OR=2.53 CI=2.16-2.96; <i>Alcohol-related regretted sex</i> 24.02% OR=2.27 CI=1.87-2.75; <i>Tendency to forget things after drinking</i> 60.79% OR=1.85 CI=1.58-2.16).</p> <p>This relationship remains significant after controlling for confounding relationships (<i>Drinking outside</i> AOR=2.78 CI=2.27-3.40 P=&lt;0.001; <i>Violence when drunk</i> AOR=1.29 CI=1.07-1.56 P=&lt;0.01; <i>Alcohol-related regretted sex</i> AOR=1.39 CI=1.12-1.73 P=&lt;0.01; <i>Tendency to forget things after drinking</i> AOR=1.31 CI=1.10-1.57 P=&lt;0.01).</p> <p>Drinking large value cider bottles increased the odds of drinking outside by 178%; experiencing violence when drunk by 29%; alcohol-related regretted sex by 39% and the tendency to forget things after drinking by 31%.</p>	<p>Cross-sectional self-reported data; cannot determine causal path.</p> <p>Opportunistic school-based data collection may lead to exclusions and sample bias.</p> <p>Survey of retail stores based on only 7 general product descriptions.</p> <p>Only 4 adverse alcohol-related outcomes were studied.</p> <p>Omission of outcomes such as prevalence of injury and effects on education or relationships.</p> <p>The rationale for 'drinking outside' as an adverse alcohol-related outcome for young people is unclear.</p>	<p>Negative drinking outcomes (for a substantial % of young people) were associated with all 7 products. However, as the mean unit price of alcohol decreases, the % of young people experiencing all four negative alcohol-related outcomes increases.</p> <p>In particular, consumption of large value cider bottles (which had the lowest mean price per unit) was strongly associated with the highest % of young people experiencing all 4 negative alcohol-related outcomes.</p> <p>Results from this paper indicate that legislative strategies to control larger bottle size and cheaper alcohol products would be successful. However, this finding is based on only 4 adverse alcohol-related outcomes and 7 generalised alcohol products.</p> <p>The smallest % of young people surveyed drank large value cider bottles (12.71%) and nothing is known of the demographics or characteristics of this group of young people in order to determine what may make them more likely to experience negative drinking outcomes. Qualitative work could help to understand why young people choose particular products.</p>
<i>Brain, K. et al (2000) Drinking with Design: young drinkers as psychoactive consumers. Drugs: education, prevention and policy. 7(1) 5-20.</i>	UK	<p><b>Mixed methods:</b> Cross-sectional survey of school pupils (phase 1); semi-structured interviews with 'street drinkers' (phase 2).</p>	<p><b>Phase 1:</b> <b>Age:</b> Year 9 (13-14) Year 10 (14-15) Year 11 (15-16)  (n= 727)</p>	<p><b>Phase 1:</b> Taste was most important to young people when choosing an alcoholic drink, across the entire range of drinking frequencies studied (<i>Occasional</i> 61%, <i>One to three times per month</i> 58%, <i>Weekly</i> 56%, <i>More than once a week</i> 40%). For young people who drank occasionally (n=92), 61% felt taste was most important, 12% strength and 19% price. Whereas, for young people who drank more than once per week (n=171), 40% felt taste was most important, 35%</p>	<p>No clear statement of the research question, aims or objectives; no discussion of study limitations.</p> <p>Cross-sectional self-</p>	<p>The authors suggest that designer drinks have been purposefully created by drinks manufacturers. However, outside of industry-driven marketing techniques, young people had their own ideas and priorities as demonstrated in the strength-price-taste formula utilised in</p>

		<p><b>Duration of Study:</b> Phase 1 = 1 month; Phase 2 = 3 months</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> choice of drink; drinking frequency / prevalence.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> 'risk' behaviours; factors rated as most important when choosing a drink.</p> <p><b>Method(s) of analysis:</b> tests of comparisons of means and correlations (phase 1); thematic analysis and case study approach (phase 2). <b>Quality Assessment ***</b></p>	<p><b>Gender:</b> m= 380 (52%) f= 347 (48%)</p> <p><b>SES:</b> representative of each of the socioeconomic groupings.</p> <p><b>Ethnic profile:</b> 11% non-white</p> <p><i>Phase 2:</i> <b>Age:</b> 12-13 = 9 (17%) 14-15 = 33 (60%) 16-17 = 13 (23%)</p> <p>(n=55)</p> <p><b>Gender:</b> m=35 (64%) f = 20 (36%)</p> <p><b>SES:</b> 3 geographical areas (1 middle class area, 1 socially deprived outlying town and 1 socially deprived inner-city neighbourhood).</p>	<p>strength and 24% price.</p> <p>Young people who drank more than once per week (n=179) were most likely to drink lager (44%) or cider (30%) and those who drank occasionally (n=88) were most likely to drink alcopops (32%).</p> <p>Young people who did not drink alcopops were more likely to engage in all risk behaviours identified (<i>smoke at least 3 times per week:</i> 33% versus 26%; <i>get drunk at least once per month:</i> 36% versus 30%; <i>tried a drug:</i> 63% versus 52%; had sex: 40% versus 37%; <i>have been arrested:</i> 20% versus 14%; <i>have been stopped by the police:</i> 51% versus 41%; <i>have been convicted:</i> 19% versus 15%.</p> <p><b>Phase 2:</b> The 'utility' of a product was reflected in its psychoactive properties i.e. how drunk it can get you. These products delivered 'value for money'.</p> <p>For many young male drinkers in the least deprived areas, the ideal drink was premium lager, which represented adult masculinity and an image of affluent consumption (<i>'Hardly any girls drink lager...Lager's a good drink...better taste...'</i>).</p> <p>Some young people were 'priced out' of certain types of alcohol and settled for cheaper but respectable versions. Other products were stereotyped and were not tolerated no matter how cheap they were (<i>'...a tramp's drink...'</i>).</p> <p>Alcopops were not appealing (as presently priced and promoted) to most underage street drinkers. They were seen as expensive, 'weak' or a 'girl's drink'.</p> <p>In more deprived areas, the image of certain cheaper products was subverted. Low-price high-volume cider was given an unexpected masculine image due to product strength and large bottle size. 1 litre or 2 litre bottles represented 'competent' drinkers and drinkers who were willing to drink anything to achieve their goal of intoxication.</p>	<p>reported data; cannot determine causal path; opportunistic school-based data collection may lead to exclusions and sample bias.</p> <p>Wider age range than focused on in this systematic review (aged 14-17)</p> <p>Methods of data analysis (statistical/qualitative) could have been recorded more rigorously. For example, p-values and confidence intervals were not reported.</p> <p>Qualitative fieldwork undertaken with street-based 'drinking delinquents' - 'middle majority' of young drinkers may have been overlooked.</p> <p>Published in 2000 – findings are time-bound.</p>	<p>drinking decisions.</p> <p>At times, they made sophisticated decisions and choices, albeit constrained by poverty and immediate surroundings.</p> <p>The more frequently participants drank, the more important price and strength became (and the less importance taste assumed). Value for money (how drunk a product could get you for the least expense) was balanced with striving for an affluent or masculine identity.</p> <p>Some products were not tolerated at all, and the images of others were subverted to fit an affluent or masculine ideal, pointing to use of low price-high strength products, such as cider and lager, and high frequency drinking, especially in marginalised areas with the highest rates of alcohol-related harm.</p> <p>On a policy level, findings question whether young people's alcohol use should be a matter of individual choice and responsibility, or whether population-level restrictions on marketing should be employed.</p> <p>However, rates of illicit drug use in this study were also high, with young people choosing combinations of alcohol and drugs according to desired effect, setting and personal resources.</p> <p>Marketing restrictions may be effective but would need to be delicately balanced to ensure alcohol use is not simply displaced by increased rates of illicit drugs use amongst young people</p>
<i>Kearns et al. (2011) Drinking Patterns and Preferences Among Irish</i>	Ireland	Cross-sectional survey (from a pilot study) of young people attending	<b>Age:</b> 14-18 (mean = 16.5 years)	Smirnoff vodka was the most common brand first tried by young people aged 14-18 (17.6%).	Cross-sectional self-reported data; cannot determine causal path.	Young people, even whilst accessing treatment services, showed brand preferences within the type of alcohol

<p><i>Substance Abusing Teenagers: A Pilot Study. Journal of Addictions Nursing. 22. 124-129.</i></p>		<p>treatment services for alcohol problems.</p> <p><b>Duration of Study:</b> data collection was over a 2 month period.</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> type of alcohol typically drank; preference for particular alcohol brands.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> age of first drink; amount of alcohol typically drank; where alcohol was obtained.</p> <p><b>Method(s) of analysis:</b> descriptive statistics using SPSS.</p> <p><b>Quality Assessment:</b> ***</p>	<p><b>Gender:</b> Male = 79.4% (n=27) Female = 20.6% (n=7)</p> <p><b>SES:</b> not reported  (n=34)</p>	<p>Based on current drinking patterns, a pattern of brand loyalty emerged, with 50.0% of respondents choosing Budweiser. The nearest competing lager was Dutch Gold (5.9%).</p> <p>Similarly, Smirnoff had nine times as many respondents as Huzzar at current episode of drinking (26.5% versus 2.9%). Bulmers cider was the only other brand to obtain over 10% of responses (14.7%).</p>	<p>Although indicative of client treatment attendance, most participants were male, which may account for a high proportion of young people who drank Budweiser (though this is an assumption on the part of the reviewer).</p> <p>Authors report descriptive statistics (percentages) only, making associations difficult to determine.</p> <p>Paper makes quite strong conclusions in light of the fact that it is a pilot study and based on a very small sample and a 1-page questionnaire.</p> <p>Recommendation regarding the impact of alcohol advertising and the need for further work are given without any prior exploration / explanation in the paper.</p>	<p>that they drank, and there was a leading brand chosen across categories (Smirnoff, Budweiser, and Bulmers).</p> <p>Young people in this study chose leading brands of alcohol, which are more expensive than other brands. Therefore, a minimum unit price would be unlikely to have an effect on young people accessing treatment services in Ireland.</p> <p>As well as the brand preferences identified above, drinks are more expensive in Ireland (in comparison to Scotland, England and Wales) than the 40-50p minimum unit price proposed.</p> <p>The authors recommend the need for further work examining the impact of alcohol advertising. However, this is given without any prior exploration / explanation in the paper.</p>
<p><i>Lin et al (2012). Engagement with alcohol marketing and early brand allegiance in relation to early years of drinking. Addiction Research and Theory. 20(4) 329-338.</i></p>	<p>New Zealand</p>	<p>Cross-sectional analysis of baseline data collected as part of a longitudinal design; computer-assisted telephone survey; respondents recruited via random digit dialling or contacted via 29 schools in the</p>	<p><b>Age:</b> 12-15 (more than 90% of the sample were aged 13-14 years).</p> <p><b>Gender:</b> Males=1302 (51.3%) Females=1236 (48.7%)</p>	<p>718 young people (28.3%) had a favourite alcohol brand, and 71% of these were drinkers. Young people who had a favourite alcohol brand were more likely to be a drinker than those without a favourite alcohol brand (71% versus 24%, <i>p-value</i> &lt;0.001). About a third of non-drinking young people (31%) who had a favourite brand intended to drink next year.</p> <p>Young drinkers with a favourite alcohol brand drank significantly more frequently (11.2 drinking occasions per year versus 4.7, <i>p-value</i> &lt;0.001) and consumed a significantly greater amount of alcohol on a</p>	<p>Cross-sectional self-reported data; cannot determine causal path.</p> <p>Focuses on a slightly younger age range than expected for inclusion in this systematic review (aged 14-17).</p>	<p>Establishment of a favourite brand at this age was a key marketing variable in this study, and strongly associated with the likelihood of being a drinker and intentions to drink in the next 12 months, as well as with patterns of drinking (volume and frequency).</p> <p>However, some other variables in the regression models were more or equally</p>

		<p>Auckland region stratified by area (rural and urban).</p> <p><b>Duration of Study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> awareness of alcohol marketing across 15 marketing channels (<i>television / movies, large posters / billboards, in-store signs / posters, newspapers / magazines, merchandise items, special price offers, celebrity endorsement, unusual product design, sport sponsorship, music event sponsorship, television sponsorship, emails, websites, mobile / computer screensavers, social networking sites</i>); engagement with alcohol marketing (<i>free samples of alcohol products, free gifts showing alcohol brand logos, special price offers, promotional mail / email mentioning alcohol brands, ownership of alcohol branded items, looked at websites for alcohol brands, downloaded mobile phone or computer screensavers</i>)</p>	<p><b>SES:</b> no breakdown provided.</p> <p><b>Ethnicity:</b> no breakdown provided. (n=2538)</p>	<p>typical occasion (<i>49.2 ml versus 15.7ml, p-value &lt;0.001</i>).</p> <p>Awareness of each additional marketing channel increased the likelihood of having a favourite brand by 11% (OR = 1.11, CI = 1.06-1.16), engagement in traditional marketing increased the likelihood of having a favourite brand by 63% (OR = 1.63, CI = 1.28-2.08) and engagement in both traditional and web-based alcohol marketing increased the likelihood of having a favourite brand by 148% (OR = 2.48, CI = 1.78-3.45).</p> <p>Using a logistic regression model (after all marketing variables have been added), having a favourite brand increased the odds of being a drinker by 354% (OR = 4.56, CI = 3.62-5.76). For non-drinkers, having a favourite brand of alcohol was the only marketing channel variable which significantly predicted young people's intention to drink in the next 12 months. Having a favourite brand of alcohol increased the odds of intending to drink in the next 12 months by 73% (OR = 1.73, CI = 1.18-2.53).</p> <p>Using a linear regression model (after all marketing variables have been added), having a favourite brand of alcohol increased frequency of alcohol consumption by 65% (OR = 1.65, CI = 1.41-1.92). Having a favourite brand of alcohol also increased drinking amount by 86% on a typical drinking occasion (OR = 1.86, CI = 1.57-2.21).</p>	<p>Other variables in the regression models were more significant / equally significant as those associated with alcohol marketing / brand allegiance (such as perceptions of others' views and drinking by close friends and siblings).</p> <p>Makes no policy and practice recommendations.</p>	<p>significant as those associated with alcohol marketing (such as perceptions of others' views and drinking by close friends and siblings).</p> <p>No critique is provided as to why brand allegiance could be problematic, and no discussion of emotional responses to marketing, assuming a straightforward, linear relationship between exposure and drinking behaviour.</p> <p>Further, despite strong findings, the paper makes no policy and practice recommendations, which is surprising and disappointing given the strong findings of the paper.</p>
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		<p>featuring alcohol brands, used social networking sites containing alcohol brands / logos); brand allegiance.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> alcohol use in the last 12 months; frequency of alcohol consumption; volume of alcohol consumption; future drinking intentions.</p> <p><b>Method(s) of analysis:</b> descriptive statistics, logistic regression models, linear regression models.</p> <p><b>Quality Appraisal:</b> ***</p>				
<p>Tanski et al. (2011) <i>Alcohol Brand Preference and Binge Drinking Among Adolescents. Arch Pediatr Adolesc Med. 165(7) 675-676.</i></p>	USA	<p>Cross-sectional data; part of a larger, earlier longitudinal telephone survey of US adolescents and media use (see Dal Cin et al., 2009; Stoolmiller et al., 2011)</p> <p><b>Duration of Study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> self-reported favourite alcohol brand; annual advertising</p>	<p><b>Age:</b> 16-20</p> <p><b>Gender:</b> Female: 852 (49%) Male 882 (51%)</p> <p><b>SES:</b> breakdown unknown; adolescents from all regions of the US were represented.  (n=1734)</p>	<p>Just over two thirds (68%) of ever drinkers (71% males, 65% females) endorsed a favourite alcohol brand to drink, naming 158 brands in total.</p> <p>The most common brands chosen by underage females and males were Smirnoff , Budweiser and Coors (females: Smirnoff: 15.3% (n=130), Budweiser: 6.0% (n=51); males: Budweiser: 13.0% (n=115), Smirnoff: 4.8% (n=42), Coors: 4.8% (n=42)).</p> <p>Binge drinking rates among young people identifying a favourite brand was higher than amongst those with no favourite brand (<i>no favourite brand</i>: 0.11, CI = 0.08-0.14 <i>favourite brand</i>: 0.28 to 0.71).</p> <p>There was a significant correlation between underage drinkers' brand preferences and marketing expenditures (0.64 p&lt;0.001).</p>	<p>Cross-sectional self-reported data; cannot determine causal path.</p> <p>By using telephone-based surveys, sectors without access to a telephone are under-represented.</p> <p>Wider age range than focused on in this systematic review (aged 14-17)</p> <p>Authors do not distinguish among products 'within brand'.</p>	<p>Concentrated forms of alcohol (such as spirits) are among the alcohol brands young people currently aspire to consume. Distilled spirits brands were as likely to be associated with binge drinking as beer brands, but a choice of wine or cider was not.</p> <p>A correlation between brand preference and marketing expenditure suggests a marketing influence on choice of beverage, coinciding with findings from Snyder et al (2006).</p> <p>Further, higher rates of binge drinking among young people who named a favourite brand indicate that alcohol advertising may influence the likelihood that alcohol will be consumed at levels</p>

		<p>expenditures for alcohol brands in all media for 95 named alcohol brands.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> ever drinking, binge drinking in the last 30 days</p> <p><b>Method(s) of analysis:</b> descriptive statistics</p> <p><b>Quality Assessment:</b> ***</p>			<p>Article is a 'research letter' and does not discuss the sample, methods or results in any great depth.</p> <p>Authors report descriptive statistics (percentages) only, making associations difficult to determine.</p> <p>Data discussed in the article is not fully presented in the included table. The results section is difficult for the reader to interpret as it is not easy to differentiate between results for 'ever' drinkers and 'binge' drinkers.</p> <p>Article does not explain the nature of all included statistics; confidence interval is not presented for rates of binge drinking amongst those who named a favourite brand.</p>	<p>that pose a risk to health.</p> <p>The authors recommend that more effective means are needed to reduce youth exposure to alcohol advertising. However, this is suggested without any acknowledgement as to why or how young people come to favour particular alcohol brands, and no critical discussion of emotional responses to marketing, instead assuming a straightforward, linear relationship between marketing and drinking behaviour.</p>
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### **4.7.3. Papers reporting the impact of alcohol 'place'**

Six studies examined the impact of alcohol outlets on young people's drinking behaviour and all six studies reported cross-sectional data. One study was conducted in New Zealand (Huckle et al., 2008), one study was conducted in Switzerland (Kuntsche et al., 2008) and three studies were conducted in the USA (Truong and Sturm, 2009; Treno et al., 2008; Paschall et al., 2007). Only one study was conducted in the UK (Alcohol Concern, 2011b), making cultural comparisons difficult. A more detailed presentation of each study (including study design, main findings, limitations and conclusions drawn from the papers) is provided in Table 4.4 following this narrative on page 95.

All six studies demonstrated that on and off premise outlet density (as well as perceived alcohol availability categorised as 'ease of purchase') influenced the behaviour and drinking patterns of young people. However, although outlet density was identified as a significant influence, four out of six papers (Huckle et al., 2008; Kuntsche et al., 2008; Treno et al., 2008; Paschall et al., 2007) reported that this association was nuanced and dependant on social factors such as norms and perceptions, informal supply, parent and peer relationships or social networks and the ubiquitous 'alco-genic' nature of social and built environments. Further, all four papers identified the mutually reinforcing nature of formal and informal sources of alcohol, which will later be examined in this thesis as an implication for policy and practice (see chapter section 4.9).

Paschall et al (2007) found that young people aged 16-17 were much more reliant on social, rather than commercial, sources of alcohol. Use of commercial and social alcohol sources were both positively related to past 30-day alcohol use (*commercial* OR = 5.93, CI = 2.99-11.74, p-value = <0.001; *social* OR = 139.95, CI = 104.47-187.49, p-value = <0.001) and heavy drinking (*commercial* OR = 5.78, CI = 4.03-8.30, p-value = <0.001; *social* OR = 35.33, CI = 27.41-45.54, p-value = <0.001). However, ORs for use of social sources were considerably larger than ORs for the use of commercial alcohol sources. Further, the use of commercial alcohol sources was more prevalent (12.6%) amongst a 'medium' school district alcohol sales rate. A 'medium' school district



alcohol sales rate was also positively associated with any past 30-day use of commercial alcohol sources (OR = 1.63, CI = 1.18-2.27, p-value <0.01); whereas a 'high' school district alcohol sales rate was not. Thus, a 'medium' alcohol sales rate increased the odds of past 30-day use of commercial alcohol sources by 63%.

Similarly, Huckle et al (2008) reported that the social supply of alcohol appears to be most important, with frequency of supply by parents, friends and others a significant predictor of all drinking measures studied (*typical-occasion quantity*: beta = 0.359, t-value = 9.447, p-value = <0.05; *annual frequency of drinking*: beta = 0.555, t-value = 12.333, p-value = <0.05; *frequency of drunkenness*: beta = 0.535, t-value = 9.553, p-value = <0.05). Nevertheless, the authors also found that, first, living within a '10-minute drive' of a relatively greater number of outlets was associated with larger quantities of alcohol consumption (beta = 0.004, t-value = 2.000, p-value = <0.05) and approached significance for frequency of drunkenness (beta = 0.005, t-value = 1.666, p-value = 0.058), but did not predict annual frequency of drinking amongst young people aged 12-17 (beta = -0.001, t-value = -0.333, p-value - NS); and, second, that self-reported purchasing predicted annual frequency of drinking (beta = 0.230, t-value = 4.791, p-value = <0.05), frequency of drunkenness (beta = 0.385, t-value = 6.416, p-value = <0.05); and approached significance for typical-occasion quantity of alcohol consumed (beta = 0.074, t-value = 0.180, p-value = 0.055).

Data collected by Kuntsche et al (2008) indicated that individual-level factors (including drinking peers / siblings, drinking in public settings and poor parental modelling) explained much more about what impacted on young people's drinking behaviour than community-level factors (such as the number of alcohol outlets). In other words, the level of explained variance demonstrated by the regression model was small for community-level factors in comparison to individual-level factors. Nevertheless, the authors also found that, at a community level, both the mean level of perceived alcohol availability and the number of on-premises (but not off-premises) outlets were related to the number of standard drinks consumed in the last 12 months (*perceived availability*: beta = 0.28, t-value = 2.4, p-value = <0.05; *on-premises*: beta = 0.19, t-value = 2.1, p-value = <0.05) but not to the frequency of risky drinking occasions in young people aged 12-17. At an individual level, perceived alcohol availability was

significantly associated with both the number of standard drinks consumed in the last 12 months (beta = 0.16, t-value = 12.6, p-value = <0.001) and the frequency of risky drinking occasions (beta = 0.09, t-value = 7.5, p-value = <0.001).

Treno et al (2008) also found that, although formal alcohol access (beta = 0.391, t-value = 2.99, p-value = <0.01) and perceived ease of formal access (beta = 0.081, t-value = 3.79, p-value = <0.001) were positively associated with off-premise outlet density within a 2-mile radius of a respondent's home, social access to alcohol dominated amongst young people aged 14-16 (*alcohol obtained from informal sources*: mean = 2.35 times in the past year, SD = 5.16; *alcohol self-purchased from formal sources*: mean = 0.13 times in the past year; SD = 0.88). Further, use of informal sources was negatively associated with off-premise alcohol outlets (beta = -0.228, t-value = -2.45, p-value = <0.05). Thus, the authors hypothesise that one of the effects of greater outlet density may simply be to shift adolescent drinking from informal to formal sources.

Alternatively, papers by Alcohol Concern (2011b) and Truong and Sturm (2009) classified the link between outlet density and adolescent drinking to be a straightforward, linear relationship. Alcohol Concern (2011b) found a moderate but statistically significant relationship between the density of UK off-license premises and alcohol specific hospital admissions in young people under 18 per 100,000 of the population, demonstrating that 9.8% of all alcohol specific hospital admissions for those under 18 were directly attributable to off-license density. This study also identified, using linear regression, that, nationally, on average, every two extra off-licences per 100,000 of the population resulted in one alcohol specific hospital admission of a person under 18. However, this data varied by region. For example, compared to the national average for England, Gateshead (NE England) has one of the highest rates of off-license density and alcohol specific hospital admissions in young people under 18 per 100,000 of the population (*off-license density per 100,000 of population*: England average: 62.9 versus Gateshead: 11.3; *alcohol specific under-18s hospital admissions per 100,000 of population*: England average: 79.4 versus Gateshead: 11.8).

Finally, Truong and Sturm (2009) reported, rather more straightforwardly, that on and off site outlets within 0.5 miles were significantly associated with increased binge drinking (in young people aged 12-17) and driving after drinking (in young people aged 16-17). For every extra alcohol outlet, the odds of adolescent binge drinking increased by 3% (OR = 1.03, CI = 1.01-1.05, p-value = <0.01). For every extra alcohol outlet, the odds of driving after drinking increased by 11% (OR = 1.11, CI = 1.05-1.17, p-value = <0.01). Thus, the addition of 10 alcohol outlets (within 0.5 miles) could increase the odds of adolescent binge drinking by 30% and the addition of 4 alcohol outlets (within 0.5 miles) could increase the odds of drinking after driving by 44%.

Table 4.4: Studies reporting the impact of 'place' on young people's drinking behaviour

Full Study Reference	Country	Study Design	Sampling	Results	Limitations	Conclusions and Recommendations
<i>Alcohol Concern (2011) One on every corner. The relationship between off-licence density and alcohol harms in young people.</i>	UK	<p>Cross-sectional data comprising individual-level information (alcohol specific hospital admissions data per 100,000 of population) and environmental measures (density of off-licensed premises by local authority per 100,000 of population).</p> <p><b>Duration of Study:</b> alcohol specific hospital admissions data was collected 2006 to 2009.</p> <p><b>Independent Variable(s) / Primary Measure(s) of exposure:</b> density of off-licensed premises by local authority per 100,000 of population</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> alcohol specific hospital admissions data per 100,000 of population.</p> <p><b>Method(s) of analysis:</b> descriptive statistics and linear regression.</p> <p><b>Quality Assessment:</b> **</p>	<p><b>Age:</b> no specific breakdown provided; paper only identifies that admissions for those under 18.</p> <p><b>Gender:</b> no breakdown provided.</p> <p><b>Ethnicity:</b> no breakdown provided.</p> <p><b>SES:</b> no breakdown provided.</p> <p>Total alcohol specific hospital admissions for those under 18: n=19,367</p> <p>Average for England per 100,000 of population: n=79.4</p> <p>Average off-licence outlet density for England per 100,000 of population: n=62.9</p>	<p>Excluding London, there was a moderate but statistically significant positive relationship between the number of off-licensed premises and underage alcohol specific admissions to hospital.</p> <p>9.8% of all alcohol specific hospital admissions for those under 18 were directly attributable to off-license density.</p> <p>Linear regression identified that, on average, every two extra off-licenses per 100,000 of population resulted in one alcohol specific hospital admission of a person under 18 per 100,000 of population. However, this varied by region.</p> <p>No statistical relationship between off-license density and underage alcohol specific admissions to hospital was found in data from the London boroughs.</p>	<p>Cross-sectional data; cannot determine causal path.</p> <p>No specific age range provided; an age range of 'under 18' is wider than focused on in this systematic review (aged 14-17).</p> <p>Short grey literature report which is not structured with academic rigour. For example, the report does not have distinct methods and findings sections, and does not provide specific details on the sample (such as gender, SES, ethnicity variations).</p> <p>Unclear how the authors determined that admissions were directly attributable to outlet density.</p> <p>Outlet density information collected for off-premises only; the authors assume that this will be a young person's main route of formal access, and that density of on-premises has no effect on adolescent access to (and use of)</p>	<p>Authors suggest that this is the first UK study to focus on the links between off licence density and harms in under-18s.</p> <p>Data appears to demonstrate that almost one in ten alcohol specific hospital admissions may be attributable to the density of local off-licensed premises.</p> <p>Therefore, the authors contend that regulation enforcing the sale of alcohol to minors may not be adequate, and that sheer availability (attributable at least in part to off-license density) and social access play a role in alcohol consumption by young people, yet more research is needed to explore this correlation.</p> <p>However, findings from this paper are based only on hospital admissions wholly attributable to alcohol and did not analyse other alcohol-related negative outcomes such as crime, violence or traffic accidents. Thus, the relationship between off-license density and harm is potentially underreported here and likely to be stronger than indicated in this paper.</p> <p>The authors argue that there is a need for more accurate reporting of admissions in hospital, and that A&amp;E data may reveal a bigger picture</p> <p>They also suggest that findings may reflect consequences of changing patterns of drinking and where we buy alcohol. However, this suggestion is made without examining on-trade</p>

					<p>alcohol.</p> <p>Data assumes a consistent average of young people per 100,000 of population and is not adjusted for variance.</p> <p>Data was only available for 214 of 293 English authorities, which represents 73% of the total areas published for England.</p> <p>Based only on alcohol admissions wholly attributable to alcohol (such as poisoning) and excludes conditions related to alcohol such as head injuries or sprains from alcohol-related assaults or falls, or attendances that are only dealt with in A&amp;E. Admissions specific to alcohol consumption may also not be recorded as such.</p> <p>Paper makes quite strong conclusions and draws links between both drinking frequency and teenage conception rates to off license outlet density but data presented does not draw statistical associations.</p>	<p>data.</p> <p>Finally, it is recommended in this paper that a new health objective related to outlet density and licensing should be covered in the Licensing Act. The 2012 UK Alcohol Strategy reflects this recommendation and announced a consultation on a new health-related objective for alcohol licensing related specifically to the 'cumulative impact' of alcohol outlets.</p>
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<p>Huckle, T. et al (2008) <i>Density of alcohol outlets and teenage drinking: living in an alcogenic environment is associated with higher consumption in a metropolitan setting. Addiction. 103: 1614-1621.</i></p>	<p>New Zealand</p>	<p>Cross-sectional data comprising environmental measures (outlet density of on- and off-licenses) and individual-level information (telephone survey).</p> <p><b>Duration of Study:</b> March-June 2005 (4 months).</p> <p><b>Independent Variable(s) / Primary Measure(s) of exposure:</b> outlet density, self-reported purchase, frequency of alcohol supplied socially (by parents, friends and others); demographics (income, gender and ethnicity).</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> change in drinking behaviour (typical occasional quantity; frequency of drinking; and frequency of drunkenness).</p> <p><b>Method(s) of analysis:</b> multi-level modelling; logistic regression.</p> <p><b>Quality Assessment:</b> ***</p>	<p>One eligible young person selected randomly within each household, weighted to account for household size.</p> <p><b>Age:</b> 12 years = 13% 13 years = 16% 14 years = 18% 15 years = 17% 16 years = 20% 17 years = 16%</p> <p><b>Gender:</b> m= 52% f = 48%</p> <p><b>Ethnicity:</b> European = 63% Maori = 12% Pacific people = 8% Asian = 16% Other = 1%</p> <p>(n=1,179)</p>	<p>Typical-occasion quantity of alcohol consumed was predicted by frequency of social supply (beta = 0.359, t-value = 9.447, p-value = &lt;0.05) and outlet density (beta = 0.004, t-value = 2.000, p-value = &lt;0.05), as well as age and ethnicity. Self-reported purchasing also approached significance (beta = 0.074, t-value = 0.180, p-value = 0.055).</p> <p>Annual frequency of drinking was predicted by frequency of social supply (beta = 0.555, t-value = 12.333, p-value = &lt;0.05) and self-reported purchasing (beta = 0.230, t-value = 4.791, p-value = &lt;0.05), as well as age and ethnicity. However, annual frequency of drinking was not predicted by outlet density (beta = -0.001, t-value = -0.333, p-value - NS).</p> <p>Frequency of drunkenness was predicted by frequency of social supply (beta = 0.535, t-value = 9.553, p-value = &lt;0.05) and self-reported purchasing (beta = 0.385, t-value = 6.416, p-value = &lt;0.05), as well as ethnicity and age. Outlet density (beta = 0.005, t-value = 1.666, p-value = 0.058) and gender (beta = -0.230, t-value = -1.854, p-value = 0.052) approached significance, with gender negatively associated.</p>	<p>Cross-sectional self-reported data; cannot determine causal path.</p> <p>10-minute travel measure introduces a degree of 'smoothing' and assumes outlets are always accessed by car.</p> <p>By using telephone-based surveys, sectors without access to a telephone are under-represented.</p> <p>Wider age range than focused on in this systematic review (aged 14-17).</p> <p>No discussion of study limitations in the paper.</p> <p>How the beta value is calculated is not explained thoroughly, therefore it is unclear as to what a change in 'one unit' would constitute.</p> <p>The level of explained variance is not presented in the regression model.</p>	<p>Findings from this paper are particularly important as most studies of outlet density are based on US data.</p> <p>Living within a 10-minute drive of a relatively greater number of outlets was associated with larger quantities of alcohol consumption approached significance for frequency of drunkenness, but did not predict annual frequency of drinking amongst young people aged 12-17.</p> <p>Self-reported purchasing predicted annual frequency of drinking and frequency of drunkenness; and approached significance for typical-occasion quantity of alcohol consumed. However, self-reported purchasing of alcohol from outlets was low and mostly confined to those aged 16-17.</p> <p>Social supply appears most important, and frequency of supply by parents, friends and others is a significant predictor of all drinking measures. However, social supply and physical access from outlets are not mutually exclusive; further research should explore the relationship between outlet density and social supply.</p> <p>Nevertheless, it is suggested that outlet density is most amenable to control by public policy. Introducing restrictions on numbers and density of licensed premises is a low-cost and effective approach to reduce heavier consumption associated with clustering of outlets.</p>
<p>Kuntsche, E. et al (2008) <i>Alcohol outlet density, perceived availability and</i></p>	<p>Swiss (CH)</p>	<p>Cross-sectional data comprising environmental measures (outlet density of on-</p>	<p>Survey data taken from the 2003 ESPAD survey; clustered in 358</p>	<p>At an individual level, perceived alcohol availability was significantly related to QF (beta = 0.16, t-value = 12.6, p-value = &lt;0.001) and RSOD (beta = 0.09, t-value = 7.5, p-value = &lt;0.001). For every 1 unit increase in perceived alcohol availability, QF increased by 0.16 and</p>	<p>Cross-sectional self-reported data; cannot determine causal path; school based</p>	<p>Again, findings from this paper are particularly important as most studies of outlet density are based on US data. At a community level, the mean level of</p>

<p><i>adolescent alcohol use: a multi-level structural equation model. J Epidemiol Community Health. 62: 811-816</i></p>		<p><i>and off-licenses) and individual-level information (school-based survey).</i></p> <p><b>Duration of Study:</b> unknown; survey data taken from the 2003 panel of the ESPAD survey, collected every 4 years.</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> outlet density.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> drinking volume (QF); risky single occasion drinking (RSOD); perceived alcohol availability; as well as drinking peers / siblings; poor parental knowledge and drinking in public settings.</p> <p><b>Method(s) of analysis:</b> two-level structural equation model; logistic regression.</p> <p><b>Quality Assessment:</b> ****</p>	<p>school classes in 254 communities (an average of 1.4 classes per community).</p> <p><b>Age:</b> 12-17 (mean = 14.8)</p> <p><b>Gender:</b> m= 3070 (49.7%) f = 3113 (50.3%)  (n=6,183)</p>	<p>RSOD increased by 0.09.</p> <p>At a community level, a significant link was found between on-premises (but not off-premises) alcohol outlet density and perceived alcohol availability (beta = 0.13, t-value = 2.5, p-value = &lt;0.05). For every 1 unit increase in on-premise outlet density (per 1000 residents), perceived availability increased by 0.13.</p> <p>At a community level, perceived availability was positively related to QF (beta = 0.28, t-value = 2.4, p-value = &lt;0.05) but not RSOD. For every 1 unit increase in perceived availability, QF increased by 0.28.</p> <p>At a community level, on-premises (but not off-premises) alcohol outlet density was positively related to QF (beta = 0.19, t-value = 2.1, p-value = &lt;0.05) but not RSOD. For every 1 unit increase in on-premises alcohol outlet density (per 1000 habitants), QF increased by 0.19.</p>	<p>data collection may lead to exclusions and sample bias.</p> <p>Wider age range than focused on in this systematic review (aged 14-17)</p> <p>No direct measure of the frequency with which participants obtained alcoholic beverages from social and commercial sources was available.</p> <p>Smaller ecological units of study (such as neighbourhoods or street blocks) may have provided a more accurate picture.</p> <p>The level of explained variance demonstrated by the regression model is small for community-level factors in comparison to individual-level factors (<i>perceived availability</i>: 1.8% versus 14.9%; <i>QF</i>: 13.0% versus 38.4%; <i>RSOD</i>: 6.4% versus 22.6%).</p>	<p>perceived alcohol availability and the number of on-premises (but not off-premises) outlets were related to the number of standard drinks consumed in the last 12 months but not to the frequency of risky drinking occasions.</p> <p>Adolescent drinking volume and risky drinking were directly related to characteristics of the social environment and indirectly to increased perceived alcohol availability.</p> <p>Individual-level factors (including drinking peers / siblings, drinking in public settings and poor parental modelling) appeared to explain much more of what impacts on young people's drinking behaviour than community-level factors. The level of explained variance demonstrated by the regression model is small for community-level factors in comparison to individual-level factors.</p> <p>The authors suggest that efforts to reduce underage sales of and the number of alcohol outlets could prove effective in lowering adolescent alcohol use. However, the authors also argue that it is living in a social and physical environment in which alcohol use is omnipresent which allows adolescents to believe that underage drinking is common and socially endorsed. They suggest that an overarching 'environment of disapproval' is needed and structural measures should be extended to cover the family and wider community.</p>
<p><i>Paschall, M.J. et al (2007) Is Commercial Alcohol Availability Related to Adolescent</i></p>	<p>USA</p>	<p>Cross-sectional data comprising environmental measures (<i>alcohol test purchase</i></p>	<p><b>School-based survey:</b> taken from the 2005 Oregon Healthy Teens</p>	<p>10.7% of young people had used a commercial alcohol source(s) in the past 30 days; 40.6% had used a social alcohol source(s) in the past 30 days and 53.1% thought alcohol was very easy to obtain. Of past-30 day drinkers, 23% obtained alcohol from at least one</p>	<p>Cross-sectional self-reported data; cannot determine causal path; opportunistic</p>	<p>In contrast to existing research, this paper indicates that young people aged 16-17 were much more reliant on social, rather than commercial, sources</p>

<p><i>Alcohol Sources and Alcohol Use? Findings from a multi-level study. Journal of Adolescent Health. 41:168-174</i></p>		<p>surveys) and individual-level information (school-based survey).</p> <p><b>Duration of Study:</b> purchase attempts July-September 2005 (3 months); survey data taken from the 2005 Oregon Healthy Teens Survey (OHT).</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> use of commercial / social alcohol sources; perceived ease of obtaining alcohol; district level alcohol sales.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> past 30-day alcohol use; heavy episodic drinking</p> <p><b>Method(s) of analysis:</b> multi-level logistic regression</p> <p><b>Quality Appraisal:</b> ***</p>	<p>Survey (OHT) conducted in 43 Oregon school districts (n=3,332).</p> <p><b>Age:</b> 16-17 (11<sup>th</sup> grade).</p> <p><b>Gender:</b> m = 48.2% f = 51.8%</p> <p><b>Ethnicity:</b> 84.5% white</p> <p><b>Environmental-level sampling:</b> alcohol test purchase surveys conducted at 403 off-premises alcohol outlets in 43 Oregon school districts; categorised into districts with a low (0-17%), medium (20-38%) and high (40-100%) underage alcohol sales rate.</p>	<p>commercial source; whereas 87% obtained alcohol from at least one social source; and 63% thought alcohol was very easy to obtain.</p> <p>Use of commercial alcohol sources was more prevalent (12.6%) amongst a 'medium' school district alcohol sales rate. A 'medium' school district alcohol sales rate was positively associated with any past 30-day use of commercial alcohol sources (OR = 1.63, CI = 1.18-2.27, p-value &lt;0.01); whereas a 'high' school district alcohol sales rate was not. Thus, a 'medium' alcohol sales rate increased the odds of past 30-day use of commercial alcohol sources by 63%.</p> <p>A 'high' school district alcohol sales rate was positively associated with the perception alcohol is very easy to obtain, increasing the odds by 22% (OR = 1.22, CI = 1.02-1.45, p-value = &lt;0.05).</p> <p>Use of commercial and social alcohol sources were both positively related to past 30-day alcohol use (<i>commercial</i> OR = 5.93, CI = 2.99-11.74, p-value = &lt;0.001; <i>social</i> OR = 139.95, CI = 104.47-187.49, p-value = &lt;0.001) and heavy drinking (<i>commercial</i> OR = 5.78, CI = 4.03-8.30, p-value = &lt;0.001; <i>social</i> OR = 35.33, CI = 27.41-45.54, p-value = &lt;0.001). However, ORs for use of social sources were considerably larger than ORs for the use of commercial alcohol sources.</p> <p>The perception that alcohol is easy to obtain was positively associated to past-30 day use (OR = 1.34, CI = 1.04-1.73, p-value = &lt;.05), but only marginally associated with past 30-day heavy drinking (OR = 1.23, CI = 1.00-1.53, p-value = &lt;.05).</p>	<p>school-based data collection may lead to exclusions and sample bias.</p> <p>Use of a smaller age range than other similar studies with no rationale.</p> <p>School districts may not be representative of the rest of the US; and findings may not be generalisable to a UK setting.</p> <p>Alcohol sales data and self-reported commercial sources of alcohol are categorised for the purpose of this review as 'industry-driven'. However, this is contestable and far from straightforward marketing 'exposure'.</p> <p>A wide CI(2.99-11.74) is reported in the positive relationship between past-30-day alcohol use and the use of commercial sources</p>	<p>of alcohol.</p> <p>There were strong positive associations between the use of social alcohol sources and past 30-day drinking behaviours.</p> <p>However, commercial availability may continue to have an indirect effect through the perception that alcohol is easy to obtain; and through some level of underage use of commercial sources (10.7% of the entire sample; 23% of past 30-day drinkers).</p> <p>The authors suggest that reducing the availability of alcohol from commercial sources alone may only have a modest influence on underage drinking.</p> <p>However, social supply and physical access from commercial outlets are not mutually exclusive. Further research should explore this relationship further.</p>
<p><i>Treno, A.J. et al (2008). Alcohol Outlets, Youth Drinking and Self-Reported Ease of Access to Alcohol: A Constraints and Opportunities</i></p>	<p>USA</p>	<p>Cross-sectional data comprising environmental measures (off-premise outlet density) and individual-level information (telephone survey).</p>	<p><i>Telephone survey:</i></p> <p><b>Age:</b> 14-16 (mean=14.98).</p> <p><b>Gender:</b> m= 50.70%</p>	<p>Ease of formal access was positively associated with alcohol outlet density within a 2-mile radius of a respondent's home (beta = 0.081, t-value = 3.79, p-value = &lt;0.001). For every extra alcohol outlet, ease of formal access increased by 0.081.</p> <p>Actual formal access was positively associated with alcohol outlet density within a 2-mile radius of a respondent's home (beta = 0.391, t-value = 2.99, p-value = &lt;0.01). For every extra alcohol outlet,</p>	<p>Cross-sectional self-reported data; cannot determine causal path.</p> <p>The racial distribution of the sample has fewer minorities and</p>	<p>Presents an 'ecological framework' of young people's alcohol use suggesting that the associations observed are a result of opportunism in response to alcohol availability. Both actual use and perceived ease of access to formal sources were positively associated with off-premise outlet density.</p>



<p><i>Approach. Alcoholism: Clinical and Experimental Research. 32 (8) 1372-1379.</i></p>		<p><b>Duration of Study:</b> Unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> outlet density within a 2-mile radius of the respondent's home or at the zip-code level.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> formal / informal perceived ease of access; alcohol use from formal / informal sources.</p> <p><b>Method(s) of analysis:</b> correlation analysis; separate hierarchical linear regression models for 4 outcome measures.</p> <p><b>Quality Assessment:</b> ****</p>	<p>f = 49.30%</p> <p><b>Ethnicity:</b> Hispanic = 34.46% African-American = 6.77% Asian or Pacific Islander = 5.07%  (n=1,419)</p> <p><i>Zip-code level sampling:</i> 30 completed surveys from 50 zip codes, stratified by off-premise outlet density and median household income.</p> <p>Off-premise licenses geocoded to zip code level; and ranked according to outlet density per roadway mile (relative to population value per roadway mile).</p> <p>Zip codes then allocated to one of 5 groups defined by outlet density and median income (<i>Low-Low, Low-High, Middle-Middle, High-Low, High-High</i>).</p>	<p>actual formal access increased by 0.391.</p> <p>However, social access to alcohol dominated across groups (<i>alcohol obtained from informal sources</i>: mean = 2.35 times in the past year, SD = 5.16; <i>alcohol self-purchased from formal sources</i>: mean = 0.13 times in the past year; SD = 0.88).</p> <p>Use of social sources for alcohol access was negatively associated with off-premise alcohol outlets within a 2-mile radius (beta = -0.228, t-value = -2.45, p-value = &lt;0.05). Thus, for every extra off-premise alcohol outlet, use of social sources decreased by 0.228.</p> <p>This relationship was no longer statistically significant when shoplifting and asking a stranger to purchase alcohol were categorized as 'formal access'.</p>	<p>fewer white people than expected; heavy selection of 'other' and 'multi-racial' as categories.</p> <p>An unexpectedly low rate of drinkers was found. This could be a result of using a listed sample. By using telephone-based surveys, sectors without access to a telephone are also under-represented.</p> <p>Outlet density information collected for off-premises only; the authors assume that this will be a young person's main route of formal access, and that density of on-premises has no effect on adolescent access to (and use of) alcohol.</p> <p>The level of explained variance is not presented in the regression model.</p> <p>Findings are based on US data and may not be generalisable to a UK setting.</p>	<p>Actual use of informal sources had a significant negative association with outlet densities; and it may be that one of the effects of greater outlet density is to shift adolescent drinking context from informal to formal sources. However, it is important to note that perceived easy access does not necessarily imply that an individual will consume alcohol obtained in that manner.</p> <p>Findings from this study suggest that differently situated young people may utilize different access routes to alcohol. As one form of access is constrained, youth may circumvent restrictions by relying on other modes of access.</p> <p>Formal and informal alcohol modes of access are not static or substitutes for one another. Instead, they may be mutually reinforcing and shift over time - older youths' formal access may be younger youths' social access.</p> <p>The authors argue that an exclusive shift to legislating social access at the expense of formal access (or vice versa) may not be successful.</p> <p>Longitudinal studies are needed to explore how alcohol 'flows' through communities and social networks.</p>
<p><i>Truong, K.D, and Sturm, R. (2009). Alcohol Environments and Disparities in Exposure Associated</i></p>	<p>USA</p>	<p>Cross-sectional data comprising environmental measures (<i>outlet density</i>) and individual-level</p>	<p>Data obtained from the California Health Interview Survey; 1 eligible young person selected</p>	<p>Analysed separately or together, the magnitude of effects for on- and off-premises was approximately the same.</p> <p>The total number of alcohol outlets within 0.5 miles was significantly associated with adolescent binge drinking. For every</p>	<p>Cross-sectional self-reported data; cannot determine causal path. Thus, drinkers may choose to live</p>	<p>Outlets within walking distance of homes were associated with increased binge drinking and driving after drinking among adolescents. On and off site outlets contribute to adolescent binge</p>

<p>with Adolescent Drinking in California. <i>American Journal of Public Health</i>. 99(2) 264-270.</p>		<p>information (<i>telephone survey</i>).</p> <p><b>Duration of Study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> alcohol on- and off- licence outlet density (combined and separately).</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> adolescent drinking measures (1 or more alcoholic drinks in the past 30 days, at least 1 heavy drinking episode in the past 30 days, and ever drinking after driving).</p> <p><b>Method(s) of analysis:</b> comparison of mean and median number of alcohol outlets; zero-inflated Poisson regression; 6 logistic regression models.</p> <p><b>Quality Assessment:</b> ****</p>	<p>randomly within each household; representative of the state's non-institutionalised population living in households.</p> <p>Separate samples used in each analysis: (i) alcohol environments (under 18 years old; n=14,595); (ii) adolescent drinking (aged 12-17; n=3,660; mean age = 14.3 years); (iii) adolescent drinking after driving (aged 16-17; n=687)</p>	<p>extra alcohol outlet, the odds of this drinking behaviour increased by 3% (OR = 1.03, CI = 1.01-1.05, p-value = &lt;0.01).</p> <p>The total number of alcohol outlets within 0.5 miles was also significantly associated with driving after drinking. For every extra alcohol outlet, the odds of this drinking behaviour increased by 11% (OR = 1.11, CI = 1.05-1.17, p-value = &lt;0.01).</p> <p>This could mean that the addition of 10 alcohol outlets (within 0.5 miles) would increase the odds of adolescent binge drinking by 30%; and the addition of 4 alcohol outlets would increase the odds of drinking after driving by 44% (within 0.5 miles).</p> <p>Outlets located further away appeared to have no relationship with the three measures of adolescent drinking studied.</p> <p>A greater mean number of outlets were found in residences of minorities and low-income families (<i>Asian / Pacific Islander = 9.51, binge drinking = 6.4%, drinking after driving = 7.9%; Lowest income level = 9.53, binge drinking = 6.4%, drinking after driving = 7.9%; Asian / Pacific Islander lowest income level = 12.55, binge drinking = 6.7%, drinking after driving = 9.8%</i>).</p> <p>Reducing the mean number of outlets to that found in non-Hispanic White neighbourhoods with the highest income level (5.37 outlets) would reduce binge drinking to 5.6% and drinking after driving to 5.9%.</p> <p>Reducing the mean number of outlets to that found in neighbourhoods with the highest income level (5.37 outlets) would reduce binge drinking to 5.6% and drinking after driving to 5.9%.</p> <p>Reducing the mean number of outlets to that found in non-Hispanic White neighbourhoods (5.48 outlets) would reduce binge drinking to 5.6% and drinking after driving to 6.0%.</p>	<p>near outlets or outlets may open in areas of higher demand. Focusing on adolescents (with no control over where they live) may alleviate this bias partially; and sensitivity analysis found households with children sort themselves into neighbourhoods with less alcohol availability.</p> <p>The sample was not large enough to detect interactions between socio-demographic groups and sales.</p> <p>By using telephone-based surveys, sectors without access to a telephone are under-represented.</p> <p>Wider age range than focused on in this systematic review (aged 14-17)</p> <p>Other variables had a larger odds ratio than outlet density, (e.g. marijuana use). However, they also had wider confidence intervals.</p> <p>Alcohol availability was significant in minority and lower-</p>	<p>drinking with the same magnitude of effects.</p> <p>This could mean that the addition of 10 alcohol outlets (within 0.5 miles) may increase the odds of adolescent binge drinking by 30%; and the addition of 4 alcohol outlets (within 0.5 miles) may increase the odds of drinking after driving by 44%.</p> <p>Changing the number of outlets within 0.5 miles from 9.5 to 5.5 would reduce binge drinking from 6.4% to 5.6% and driving after drinking from 7.9% to 6.0%.</p> <p>There are socio-economic disparities in alcohol environments. Even after controlling for population density, alcohol availability was significant around residences of minority and lower-income families.</p> <p>This contrasts with lower rates of drinking among minorities in previous research. Nevertheless, such population groups may still suffer disproportionately from additional alcohol-related problems, such as violent or vehicular crime.</p> <p>There was a surprising lack of association between proximity of outlets and 1 drink in the past 30 days was surprising. It may be that this drinking behaviour requires lower quantities of alcohol than binge drinking. This alcohol may come from parents stock or be served at home.</p> <p>The authors recommend that the proximity rule for licenses needs to be tightened and more stringently The authors also recommend tighter</p>
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					<p>income residencies but there is a tendency for those population groups to live in more densely populated areas.</p> <p>Findings are based on US data and may not be generalisable to a UK setting.</p>	<p>enforcement of the minimum age drinking laws, however the basis for this is unclear. The paper does not explore the relationship between alcohol sales data and adolescent drinking behaviours.</p>
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#### ***4.7.4. Papers reporting the impact of alcohol 'promotion'***

The majority of papers (23) explored the impact of alcohol promotion (primarily overt advertising but also including the ownership and awareness of alcohol merchandising) on young people's drinking behaviour. Thus, the findings of this review were skewed towards this section, and most papers examined alcohol advertising and youth drinking patterns. The majority of studies (18) were conducted in the USA. One study was conducted in Australia (Jones and Magee, 2011); one study was conducted in New Zealand (Lin et al., 2012) and one study was conducted in Germany (Morgenstern et al., 2011). Only one study was conducted in the UK (Gordon et al., 2010a; Gordon et al., 2010c), making cultural comparisons difficult. Further, this study took place in Scotland therefore some policy and practice recommendations may not be directly relevant to England and Wales. This study was a two-stage cohort study and two publications from the study are included in this systematic review, one of which reports cross-sectional data collected from baseline (Gordon et al., 2010a), the other reports follow up data collected two years later (Gordon et al., 2010c).

Thirteen papers presented cross-sectional data (Lin et al., 2012; Jones and Magee, 2011; Tanski et al., 2011; Gordon et al., 2010a; Kinard and Webster, 2010; Austin et al., 2006; Kinard, 2006; Saffer and Dave, 2006; Unger et al., 2003; Workman, 2003; Pinkleton et al., 2001; Austin and Knaus, 2000; Austin et al., 2000), whereas ten papers reported longitudinal data (Stoolmiller et al., 2012; Morgenstern et al., 2011; Gordon et al., 2010c; McClure et al., 2009; Grenard, 2008; Fisher et al., 2007; McClure et al., 2006; Snyder et al., 2006; Ellickson et al., 2005; Zogg, 2004). A more detailed presentation of each study (including study design, main findings, limitations and conclusions drawn from the papers) is provided in Table 4.5 following this narrative on page 112.

Importantly, papers demonstrated the tension between whether it is advertising exposure or advertising content which has the greater impact on young people's drinking behaviour. The introduction to this thesis highlighted that current industry self-regulation of alcohol promotion focuses poorly on both frequency of exposure and advertising content (see chapter section 1.1.3). In this section of the review, papers are

roughly divided into studies which (a) consider emotional and affective responses to alcohol advertising, and the subsequent influence of this on drinking behaviour, (b) measure the effects of exposure to alcohol advertising, and (c) explore the impact of alcohol promotional items. Six papers demonstrated that forming a favourable emotional response to alcohol advertising appeared to be the first step in a process of adolescent experimentation with alcohol (Morgenstern et al., 2011; Austin et al., 2006; Unger et al., 2003; Pinkleton et al., 2001; Austin and Knaus, 2000; Austin et al., 2000).

In particular, it was argued across these papers that beliefs about alcohol develop over time and lead to behavioural outcomes, and that perceptions about media messages are more important than sheer exposure, by beginning a 'chain' of decision-making stages (described as the 'message interpretation process', or MIP model) which ultimately leads to actual alcohol use. For example, using longitudinal data, Morgenstern et al (2011) found an *indirect* (as well as a direct) effect of alcohol advertising on the onset of alcohol use and initiation of binge drinking among young people aged 11-17 who were non-drinkers at baseline, which they measured using the variable 'change in attitudes'. Further, the size of the indirect effect suggests that approximately 35% of the total effect between alcohol advertising and onset of alcohol use and 51% of the total effect of alcohol advertising on initiation of binge drinking is mediated through an increase in positive alcohol-related attitudes (*onset of alcohol use total effect: standardised beta = 0.094; initiation of binge drinking total effect: standardised beta = 0.070*). In addition, Pinkleton et al (2001) reported that students (aged 14-18) rated the production quality of alcohol advertising more positively than the production quality for alcohol-related Pro Social Advertising (PSA) messages ( $t=9.31$ ,  $p\text{-value} < 0.001$ ,  $df = 577$ ). However, students rated the content of alcohol advertisements more negatively than the content of alcohol-related PSA messages ( $t=42.81$ ,  $p\text{-value} < 0.001$ ,  $df=577$ ). Favourable affect towards the content of alcohol advertisements positively predicted alcohol behaviour ( $\beta = .11$ ,  $p\text{-value} < 0.05$ ), expectancies for alcohol use ( $\beta = .38$ ,  $p\text{-value} < 0.001$ ) and desirability of portrayals ( $\beta = .13$ ,  $p\text{-value} < 0.01$ ).

Twelve papers examined the impact of alcohol advertising exposure on young people's drinking behaviour (Lin et al., 2012; Jones and Magee, 2011; Tanski et al., 2011;

Gordon et al., 2010a; Gordon et al., 2010c; Kinard and Webster, 2010; Grenard, 2008; Kinard, 2006; Saffer and Dave, 2006; Snyder et al., 2006; Ellickson et al., 2005; Zogg, 2004). Ten (of twelve) papers concluded, to varying degrees, that higher levels of advertising exposure resulted in changes to adolescent drinking patterns. Further, whilst outside of the age range for this systematic review, Collins et al (2007) provide further evidence in support of a relationship between alcohol advertising and changes to adolescent drinking behaviour. They found that young people's exposure to alcohol advertising (in magazines, in-store beer displays and beer concessions, radio-listening time and ownership of beer promotional items) during early adolescence (sixth grade, aged 11-12) appeared to strongly predict subsequent beer drinking and intention and intentions to drink one year later. More specifically, high exposure to alcohol advertising increased probability of predicted drinking by approximately 50%. However, two papers (Kinard and Webster, 2010; Kinard, 2006) demonstrated that, although reported exposure to advertising appeared to predict alcohol consumption amongst young people aged 13-19 (beta = 0.06, p-value <0.05), after controlling for other social cognitive variables, advertising only remained a significant predictor of alcohol consumption when coupled with self-efficacy (beta = 0.03, p-value <0.05).

Nevertheless, three (of twelve) papers highlighted a dose-response relationship between advertising exposure and young people's alcohol consumption (Tanski et al., 2011; Saffer and Dave, 2006; Snyder et al., 2006) Snyder et al (2006) found that, for each additional average alcohol advertisement they were exposed to, the amount of drinks consumed by young people aged 15-21 in the past month was reported to increase by 1% (event rate ratio = 1.01, CI = 1.001-1.021). Further, for every additional dollar per capita spent on alcohol advertising, individuals reportedly consumed 3% more alcoholic beverages per month (event rate ratio = 1.03, CI =1.00-1.06). Similarly, using cross-sectional data, Tanski et al (2011) found that there appeared to be a significant correlation between the brand preferences of young people aged 16-20 and marketing expenditures, suggesting that there is a marketing influence on young people's choice of beverage ( $r=0.64$   $p<0.001$ ).

Using results from two datasets, Saffer and Dave (2006) indicated that alcohol advertising had a positive, but modest, effect on annual, monthly and binge drinking

(amongst US adolescents aged 13-18), with white young people and females more responsive than black young people and males. Based on the full MTF dataset, for each 1 unit increase in advertising exposure, annual drinking increased by 13% (0.1322, Z score = 4.53), monthly drinking by 11% (0.1121, Z score = 4.00) and binge drinking by 7%. (0.0679, Z score = 2.99). Based on the full NLSY dataset, and results from four regression models, for each 1 unit increase in advertising exposure, past month drinking increased by between 16 and 25% (specification 2: 0.1627, Z score = 2.12; specification 3: 0.2463, Z score = 2.19) and past month binge drinking increases by between 8 and 14% (specification 1: 0.0809, Z score = 2.12; specification 2: 0.1441, Z score = 2.80).

Using data from the full MTF sample, annual drinking advertising elasticity was 0.0173, past month drinking advertising elasticity was 0.0238 and binge drinking advertising elasticity was 0.0265. Thus, a 1% increase in advertising would increase annual drinking by 0.017% (0.0173, SE = 0.0038); monthly drinking by 0.024% (0.0238, SE = 0.0059) and binge drinking by 0.027% (0.0265, SE = 0.0089). This means that, a 10% increase in advertising could increase annual drinking by 0.17%; monthly drinking by 0.24% and binge drinking by 0.27%. Similarly, using data from the full NLSY sample, a 1% increase in advertising would increase past month drinking between 0.03% and 0.12% and past month binge drinking between 0.07% and 0.26% (*past month drinking*: limited specification model: 0.0341 (SE = 0.0191), extended specification model: 0.0875 (SE = 0.0414); state fixed effects specification model: 0.0850 (SE = 0.0388); individual fixed effects specification model: 0.1161 (SE = 0.0655; *past month binge*: limited specification model: 0.0650 (SE = 0.0307); extended specification model: 0.2557 (SE = 0.0730); state fixed effects specification model: 0.1722 (SE = 0.0615); individual fixed effects specification model 0.2161 (SE = 0.1025). Thus, a 10% increase in advertising could increase past month drinking between 0.34% and 1.16% and past month binge drinking between 0.65% and 2.6%.

In addition to traditional marketing channels, four (of twelve) papers examined 'new' electronic media channels (Lin et al., 2012; Jones and Magee, 2011; Gordon et al., 2010a; Gordon et al., 2010c). First, Gordon et al (2010a) found, using cross-sectional data, that, amongst young people aged 12-14, being aware of a larger number of

alcohol marketing channels increased the odds of being a drinker by 12% (OR = 1.116, CI = 1.049-1.188, p-value = <0.01) and being aware of a greater number of different types of alcohol marketing channels increased the odds of being a drinker by 137% (OR = 2.374, CI = 1.301-4.333, p-value = <0.01). Further, liking a greater number of alcohol advertisements increased the odds of being a drinker by 31% (OR = 1.307, CI = 1.110-1.538, p-value = <0.01) and liking a greater number of different types of alcohol advertisements increased the odds of being a drinker by 28% (OR = 1.279, CI = 1.084-1.508, p-value = <0.01). Finally, involvement in electronic marketing increased the odds of being a drinker by 300% (OR = 4.000, CI = 1.485-10.776, p-value = <0.01) and was associated with intention to drink in the next year (beta = 0.074, t-value = 2.610, p-value = <0.01). However, in a paper reporting follow up data collected as part of the same overall study two years later (young people were now aged 14-16), Gordon et al (2010c) do not specifically explore the influence of social / digital marketing alone on young people's drinking behaviour at follow up, meaning that this association is not followed up over time. The authors suggest that the sample size at follow up does not allow sufficient power to detect the effect of individual marketing channels, and the effect of alcohol marketing on drinking behaviour is only ever reported cumulatively. Further findings from this longitudinal work are explored later in this narrative on page 108.

Using a similar study design and sample, Lin et al (2012) found that young people aged 12-15 in New Zealand who engaged with web-based marketing were 98% more likely to have drunk alcohol in the last 12 months and young people who engaged in both traditional and web-based marketing were 125% more likely to have drunk alcohol in the last 12 months (*web-based marketing*: OR = 1.98, CI = 1.22-3.24; *traditional and web-based marketing*: OR = 2.25, CI = 1.57-3.22). Engagement with both traditional and web-based marketing also increased frequency of alcohol consumption by 34% (OR = 1.34, CI = 1.08-1.66). Importantly, it was engagement rather than simply awareness which was significant in this study. Similar results were found among an Australian cross-sectional sample of young people aged 12-17 (Jones and Magee, 2011). Young people who reported that they had seen an alcohol advertisement over the internet were 36% more likely to have drunk alcohol in the last 4 weeks (AOR = 1.36, CI = 1.03-1.79). Further, when this data was analysed in smaller age and gender



sub-sets, young males aged 12-15 who reported that they had seen an alcohol advertisement over the internet were 118% more likely to have drunk alcohol in the last 12 months and 205% more likely to have drunk alcohol in the last 4 weeks (*12 months*: AOR = 2.18, CI = 1.02-4.70; *4 weeks*: AOR = 3.05, CI = 1.45-6.40). However, internet alcohol advertising subsequently no longer had a significant effect on the drinking behaviour of males aged 16-17 and females aged 12-15 and 16-17.

Five (of twelve) papers explored studies which examined longitudinal effects of alcohol advertising exposure on young people's drinking behaviour over time (Gordon et al., 2010c; Grenard, 2008; Snyder et al., 2006; Ellickson et al., 2005; Zogg, 2004). In particular, representing the only UK based longitudinal work identified in this systematic review, Gordon et al (2010c) found that appreciation of or involvement with alcohol marketing at baseline (aged 12-14) increased the odds of drinking initiation two years later (aged 14-16) by 27% and 31% respectively (*appreciation*: AOR = 1.272, CI = 1.005-1.610, p-value = <0.05; *involvement*: AOR = 1.31, CI = 1.003-1.711, p-value = <0.05). Uptake of fortnightly drinking at follow up was also more likely amongst young people with a greater awareness, appreciation or involvement in alcohol marketing at baseline (*awareness*: AOR = 1.11, CI = 1.005-1.234, p-value = <0.05; *appreciation*: AOR = 1.295, CI = 1.002-1.674, p-value = <0.05; *involvement*: AOR = 1.43, CI = 1.146-1.795, p-value = <0.01). Higher involvement with alcohol marketing at baseline also increased the odds of monthly drinking at follow up by 33% (AOR = 1.33, CI = 1.072-1.644, p-value = <0.05).

Amongst adolescents in the USA, Ellickson et al (2005) found that exposure to in-store beer displays increased the likelihood of drinking initiation among non-drinkers at baseline (OR = 1.42; p-value <0.05) and exposure via magazines and concession stands at sport and music events predicted drinking frequency among baseline drinkers (*magazines*: coefficient = 0.10; *sport / music events*: coefficient = 0.09; p-value <0.05). Young people were aged 12 at baseline and 13-15 at follow up. Zogg (2004) also demonstrated small, but persistent, effects of alcohol advertising exposure (in 7<sup>th</sup> grade, at age 12) on 8<sup>th</sup> grade drinking behaviours (aged 13-14) and 9<sup>th</sup> grade alcohol problems (aged 14-15) (*T2 beer*:  $r=.14$ , p-value <0.001; *T2 wine / liquor*:  $r=.11$ , p-value <0.001; *T2 binge*:  $r=.09$ , p-value <0.01; *T1 drinking and problems: beer*:  $b=.072$ , t-value

= 2.23, p-value <0.05; *wine / liquor*:  $b=0.076$ , t-value = 2.36, p-value <0.05; *binge*:  $b=0.079$ , t-value = 2.46, p-value <0.05).

Further, using data collected at four time points (from 7<sup>th</sup> to 10<sup>th</sup> grade, age 12-16), Grenard (2008) reported that exposure to alcohol advertising on TV (self-reported general frequency, exposure via popular TV shows and exposure via TV sports shows) had a small but significant influence on drinking and the development of alcohol-related problems in the 10<sup>th</sup> grade (*self-reported frequency*: past month beer: beta = 0.12, p-value <0.001; past month wine / liquor: beta = 0.10, p-value <0.001; past month beer binges: beta = 0.08, p-value <0.001; past month wine / liquor binges: beta = 0.08, p-value <0.001; alcohol-related problems: beta = 0.08, p-value <0.001; *via popular TV shows*: past month beer: beta = 0.10, p-value <0.001; past month wine / liquor: beta = 0.08, p-value <0.001; past month beer binges: beta = 0.09, p-value <0.001; past month wine / liquor binges: beta = 0.09, p-value <0.001; alcohol-related problems: beta = 0.09, p-value <0.001; *via TV sports shows*: past month beer: beta = 0.05, p-value <0.01; past month wine / liquor: beta = 0.06, p-value <0.01; past month beer binges: beta = 0.09, p-value <0.001; past month wine / liquor binges: beta = 0.08, p-value <0.001; alcohol-related problems: beta = 0.08, p-value <0.001). Further, self-reported 'liking' of alcohol advertisements moderated the influence of exposure on alcohol use. In other words, among those who liked alcohol advertisements more, exposure was a stronger predictor of increased alcohol use than among those students who liked alcohol advertisements less (*girls*: beta = 0.093, SE = 0.044, p-value <0.05; *boys*: beta = 0.112, SE = 0.041, p-value <0.01).

The final five papers reported that ownership of (and exposure to) alcohol-related merchandise and promotional items increased alcohol use among adolescents and altered subsequent drinking patterns (Stoolmiller et al., 2012; McClure et al., 2009; Fisher et al., 2007; McClure et al., 2006; Workman, 2003). Using data from a cross-sectional survey, Workman (2003) demonstrated that young people (aged 12-18) who owned Alcohol Promotional Clothing Items (APCIs) were more likely to drink at least once per week (but not every day) and 'sometimes' (less than once per week) compared to non-owners (*at least once per week*:  $n=16$ , 16.8% versus  $n=7$ , 4.2%; *sometimes*:  $n=36$ , 37.9% versus  $n=31$ , 18.7%). Non-owners were also more likely to

have never tried an alcoholic beverage or to be occasional drinkers only (*never tried*: n=59, 35.5% versus n=13, 13.7%; *occasional*: n=65, 39.2% versus n=23, 24.2%).

Similarly, Fisher et al (2007) found that, amongst young people aged 11-18, owning or being willing to use Alcohol Promotional Items (APIs) increased the odds of alcohol initiation by 78% among boys and 74% among girls (*boys*: OR = 1.78, CI = 1.36-2.33; *girls*: OR = 1.74, CI = 1.37-2.19). Further, owning or being willing to use APIs had a greater effect on alcohol initiation among older boys (aged 15 or over) than younger boys. Boys over the age of 15 were 143 times more likely to try alcohol if they owned or were willing to use APIs whereas those under the age of 15 were 50 times more likely to try alcohol if they owned or were willing to use APIs (*older*: OR = 2.43, CI = 1.51-3.91; *younger*: OR = 1.50, CI = 1.08-2.09). Owning or being willing to use APIs also predicted binge drinking among girls but not boys (OR = 1.79, CI = 1.16-2.77 versus OR = 0.87, CI = 0.51-1.48).

McClure et al (2006) reported that young people (aged 10-14 at baseline) who owned an ABM item at follow-up (on average, 17 months later) were 1.5 times more likely to have initiated alcohol use than those who did not (CI = 1.1-2.0, p<0.001). However, after controlling for covariates, the relationship between ABM ownership and the early onset of alcohol use was significant for females only (OR = 3.33, CI = 1.7-6.3, p-value = 0.02). In a second study, McClure et al (2009) examined this relationship (and the relationship between ABM ownership and adolescent binge drinking initiation) longitudinally over three waves of data collection (young people were aged 10-14 at baseline and final follow up was 24 months later). They found a 'reciprocal' relationship between susceptibility to alcohol use and ABM ownership. More specifically, young people who owned ABM at 8 months were 1.66 times more likely to become susceptible to alcohol use by 16 months (HR = 1.66, CI = 1.15-2.40). However, non-ABM owners who were susceptible to alcohol use at 8 months were also 1.41 times more likely to own ABM by 16 months (HR = 1.41, CI = 1.09-1.83).

Further, ABM ownership had a direct effect on trying alcohol and binge drinking initiation through lagged effects 16 to 24 months later (*trying alcohol and change in ABM ownership from 8 to 16 months*: HR = 2.31, CI = 1.60-3.35; *binge drinking*

*initiation and change in ABM ownership from 8 to 16 months*: HR = 2.22, CI = 1.49-3.32), and ABM ownership had a more immediate indirect effect on trying alcohol and binge drinking initiation (through increasing susceptibility to alcohol use) at 8 months (*trying alcohol*: HR = 2.43, CI = 1.84-3.20; *binge drinking initiation*: HR = 2.84, CI = 1.90-4.27). Finally, ABM ownership also had an indirect effect on trying alcohol and binge drinking 16 to 24 months later through lagged effects (*trying alcohol*: change in susceptibility to alcohol use from 8 to 16 months: HR = 3.54, CI = 2.56-4.89; susceptibility to alcohol use at 8 months: HR = 3.58, CI = 2.54-5.05; *binge drinking initiation*: change in susceptibility to alcohol use from 8 to 16 months: HR = 2.72, CI = 1.70-4.35; susceptibility to alcohol use at 8 months: HR = 2.99, CI = 1.84-4.85).

Finally, Stoolmiller et al (2012) used longitudinal data taken from the same overall study as McClure et al (2009) but presented a slightly different statistical analysis. In this paper, ownership of ABM was examined in conjunction with movie alcohol exposure (MAE) and characteristics of the family (parental alcohol use, home availability of alcohol and parenting). Young people (aged 10-14 at baseline) who reported ownership of ABM at time point 2 (8 months) were 1.44 times more likely to have initiated drinking and 1.24 times more likely to have initiated binge drinking at time point 4 (24 months) (*onset of drinking*: AHR = 1.44 CI = 1.19-1.74; *initiation of binge drinking*: AHR = 1.24, CI = 1.00-1.54). However, four other variables (*peer alcohol use, age, movie alcohol exposure and sensation seeking*) appeared to be more significant for the initiation of drinking by 24 months than ABM ownership. A similar pattern was demonstrated for the initiation of binge drinking by 24 months, with peer alcohol use and white race reported to be more significant than ABM ownership.

Table 4.5: Studies reporting the impact of ‘promotion’ on young people’s drinking behaviour

Full Study Reference	Country	Study Design	Sampling	Results	Limitations	Conclusions and Recommendations
Austin, E. W. and Knaus, C. (2000). <i>Predicting the potential for risky behaviour among those “too young” to drink as the result of appealing advertising.</i> <i>Journal of Health Communication.</i> 5. 13-27	USA	<p>School-based cross-sectional survey.</p> <p><b>Duration of Study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> alcohol expectancies; identification with media portrayals; desirability of media portrayals; age; predrinking behaviour index (<i>preferences for alcohol-branded items</i>); scepticism.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> alcohol expectancies; identification with media portrayals; desirability of media portrayals; predrinking behaviour index (<i>preferences for alcohol-branded items</i>); risky behaviour (<i>drinking frequency</i>).</p> <p><b>Method(s) of analysis:</b> tests of means and correlations; hierarchical multiple regression.</p> <p><b>Quality Assessment:</b></p>	<p><b>Age:</b> 8-9 (3rd grade) 11-12 (6th grade) 14-15 (9th grade )</p> <p><b>Gender:</b> m= 48.7% f= 50.2%</p> <p><b>Ethnicity:</b> 90% white (consistent with population of the state)</p> <p><b>SES:</b> parent income survey; 63% earned more than the median income for the state.</p> <p>(n=273)</p>	<p>Expectancies and desirability correlated with a preference for alcohol-branded items (<i>expectancies</i>: <math>r=.17</math>, <math>p &lt; 0.05</math>; <i>desirability</i>: <math>r=.11</math>, <math>p &lt; 0.10</math>). Both expectancies and a preference for alcohol-branded items correlated with drinking frequency (<i>expectancies</i>: <math>r=.59</math>, <math>p &lt; 0.001</math>; <i>preference for alcohol-branded items</i>: <math>r=.20</math>, <math>p &lt; 0.01</math>).</p> <p>Desirability and identification positively predicted expectancies (<i>desirability</i>: <math>\beta = .31</math>, <math>p &lt; 0.001</math>; <i>identification</i>: <math>\beta = .18</math>, <math>p &lt; 0.05</math>) and expectancies predicted actual drinking frequency (<math>\beta = .43</math>, <math>p &lt; 0.001</math>). Thus, alcohol expectancies <i>directly</i> predicted drinking frequency and desirability and identification <i>indirectly</i> predicted drinking frequency.</p> <p>As young people got older (measured by school grade), mean levels of identification, desirability, expectancies, pre-drinking behaviour and risky behaviour <i>all</i> increased (<i>identification</i>: 1.63 to 1.99, <math>p &lt; 0.000</math>; <i>desirability</i>: 1.92 to 2.75, <math>p &lt; 0.00</math>; <i>expectancies</i>: 1.19 to 1.73, <math>p &lt; 0.00</math>; <i>pre-drinking behaviour</i>: -4.23 to -3.12; <i>risky behaviour</i>: 3.59 to 5.45).</p>	<p>Cross-sectional self-reported data; cannot determine causal path.</p> <p>Opportunistic school-based data collection may lead to exclusions and sample bias.</p> <p>Focuses on a wider age range than expected for inclusion in this systematic review (aged 14-17).</p> <p>The opportunity to collect data from all age groups was limited. No risky behaviour data was gathered for 3<sup>rd</sup> graders and no predrinking behaviour data was gathered for 9<sup>th</sup> graders; the only age at which both data exists is 6<sup>th</sup> grade.</p> <p>A moderate correlation only was demonstrated between predrinking and risky behaviour.</p> <p>Measures of scepticism were too unreliable for hypothesis testing. Further work should explore measures of scepticism in comparison to positive beliefs about alcohol using longitudinal</p>	<p>The authors conclude that beliefs about alcohol develop over time leading to behavioural outcomes, both of which increase with age. Identification with desirable images in alcohol advertising was apparent in those as young as 8-9 years old (third grade).</p> <p>Although this begins to level off amongst those aged 11-12 (sixth grade), the belief that drinking brings rewards is predicted by this desire and continues to increase. In turn, the belief that drinking brings rewards correlates with a desire for alcohol-branded products and, among older children, predicts frequency of drinking (risky behaviour).</p> <p>Alcohol expectancies <i>directly</i> predicted drinking frequency and desirability and identification <i>indirectly</i> predicted drinking frequency. This provides support for the MIP theoretical model which suggests decision-making goes through a number of steps to produce a cumulative effect on behaviour over time.</p> <p>The authors conclude that prevention campaigns take place too late and attempts to counter the appeal of advertising need to occur before 6th grade. However, they do not suggest a ban or tighter restrictions on alcohol advertising or discuss this as a possibility in any critical way which is surprising and disappointing given the strong findings of the paper.</p>

		****			design.	
<i>Austin, E.W. et al (2000). The role of interpretation processes and parental discussion in the media's effects on adolescents' use of alcohol. Paediatrics. 105. 343-349.</i>	USA	<p>School based cross-sectional survey in two schools.</p> <p><b>Duration of Study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> predrinking behaviour (<i>preference for alcohol-branded products</i>); perceived realism, desirability and identification with media portrayals; parental positive / negative reinforcement; similarity; alcohol expectancies; media use (<i>no of days watched primetime TV in the past week</i>).</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> perceived realism, desirability and identification with media portrayals; parental positive / negative reinforcement; alcohol expectancies; predrinking behaviour (<i>preference for alcohol-branded products</i>); drinking behaviour in the past 6 months (<i>no of times offered an alcoholic</i></p>	<p><b>Age:</b> 14-15; n=252 (9<sup>th</sup> grade); 17-18; n=326 (12<sup>th</sup> grade)</p> <p><b>Gender:</b> m=263 (46%) f=312 (54%)</p> <p><b>Ethnicity:</b> schools chosen because of a high representation of ethnic minorities, particularly Latino, students.</p> <p>10% Asian (n=55) 2% Black (n=11) 34% White (n=197) 45% Latino (n=258) 1% Native American (n=6)</p> <p><b>SES:</b> schools chosen based on their economic diversity. Young people, on average, identified their households as 'middle income' and their parent's education level as having some college education without a bachelor's degree.</p> <p>(n=578)</p>	<p>The primary predictor of drinking behaviour was expectancies followed by a preference for alcohol-branded products (<i>expectancies: beta = 0.59, p-value &lt;0.001; predrinking behaviour: beta = 0.22, p-value &lt;0.001</i>). No media exposure variables associated with alcohol expectancies and thus drinking behaviour. Expectancies were also the largest predictor of predrinking behaviour, associated with 13% greater desire for alcohol-themed products (<i>beta = 0.37, p-value &lt;0.001</i>)</p> <p>The largest predictor of expectancies was similarity, associated with 12% more positive beliefs about the benefits of drinking (<i>similarity: beta = 0.34, p-value &lt;0.001</i>), followed by identification with portrayals, associated with 7% more positive beliefs (<i>identification: beta = 0.26, p-value &lt;0.001</i>). Boys and non-white students exhibited more positive expectancies for alcohol use (<i>gender: beta = -0.21, p-value &lt;0.001; white: beta = -0.15, p-value &lt;0.01</i>). Negative reinforcement from parents associated with 3% reduced expectancies, whereas positive reinforcement associated with 1% higher expectancies (<i>negative: beta = -0.18, p-value &lt;0.001; positive: beta = 0.12, p-value &lt;0.05</i>). Desirability of portrayals associated with an added 1% (<i>desirability: beta = 0.10, p-value &lt;0.05</i>).</p> <p>Comparing mean data, 9<sup>th</sup> grade students had slightly higher levels of positive parental reinforcement (<i>mean: 2.6 versus 2.5</i>); thought media portrayals more realistic (<i>mean: 2.5 versus 2.3</i>); identified more with media portrayals (<i>mean: 2.1 versus 1.9</i>) and desired products with alcohol logos more than 12<sup>th</sup> grade students (<i>mean: 2.3 versus 2.0</i>). Older students thought media portrayals more desirable (<i>mean: 3.0 versus 2.9</i>) and had higher levels of drinking behaviour (<i>mean: 14.2 versus 12.6</i>).</p> <p>Regression analysis confirmed this. Younger students identified with media portrayals more (<i>beta = -0.13, p-value &lt;0.01</i>). Perceived realism increased identification by 8% (<i>beta = 0.29, p-value &lt;0.001</i>), desirability added 4% (<i>beta = 0.21, p-value &lt;0.001</i>), positive reinforcement added another 2% (<i>beta = 0.15, p-value &lt;0.001</i>), exposure to music videos added 1% (<i>beta = 0.13, p-value &lt;0.01</i>), exposure to news programming reduced identification by just under 1% (<i>beta = -0.09, p-value &lt;0.05</i>), and exposure to prime-time television added almost 1% (<i>beta = 0.10, p-value &lt;0.05</i>).</p> <p>Younger students also found media portrayals more realistic (<i>beta = -0.13, p-value &lt;0.01</i>); whereas boys and whites found them slightly</p>	<p>Cross-sectional self-reported data; cannot determine causal path.</p> <p>Opportunistic school-based data collection may lead to exclusions and sample bias.</p> <p>Does not specifically break down which measures impact on different drinking behaviours; instead they are all pooled together as 'behaviour'.</p> <p>No discussion of the explained variance in the regression model.</p> <p>No media exposure variables were associated with alcohol expectancies and thus drinking behaviour. However, it may be that different, more sensitive media use measures are required to account for the role of media in decision-making.</p> <p>No discussion of study limitations in the paper.</p>	<p>Similar to findings from Austin and Knaus (2000) above (albeit with a different age range), results suggest that beliefs about drinking develop over time and are influenced by perceptions of media messages rather than sheer exposure. The decision to drink was driven to some extent by media perceptions and this process was well underway by 3<sup>rd</sup> grade, proving support for the MIP model which suggests that decision making goes through a number of steps over time to produce a cumulative effect on behaviour.</p> <p>The biggest predictor of behaviour was alcohol expectancies, explaining 33% more frequent drinking behaviour and 13% more positive predrinking behaviour. The largest predictor of expectancies was similarities, followed by identification. Thus, alcohol expectancies <i>directly</i> predicted drinking behaviour and identification <i>indirectly</i> predicted drinking behaviour. No media exposure variables were associated with alcohol expectancies and subsequent drinking behaviour.</p> <p>Parents had weak but significant associations with expectancies, identification and perceived realism; and it is suggested such influences may be stronger at an earlier age. Exposure-based findings regarding media effects may be disguising important parental influences; and media effects may be indicative of a more permissive home environment.</p> <p>The authors suggest that multi-year, multi-age panel design analysed using structural equation models would be helpful to investigate the role of different variables over time; and that the logical and emotional processes of decision</p>

		<p>drink; attended a party where alcohol was served; drank an alcoholic beverage; had 4 or more drinks in a row; rode with a driver who had been drinking alcohol)</p> <p><b>Method(s) of analysis:</b> hierarchical multiple regression</p> <p><b>Quality Appraisal:</b> ***</p>		<p>more desirable (gender: beta = -0.17, p-value &lt;0.001; white: beta = 0.11, p-value &lt;0.05). Further, boys, Latinos and 9<sup>th</sup> grade students were more attracted to alcohol-branded products (gender: beta = -0.26, p-value &lt;0.001; Latino: beta = 0.20, p-value &lt;0.001, grade: beta = -0.12, p-value &lt;0.05).</p>		<p>making need to be explored.</p> <p>They conclude that health campaigns should include media literacy components. However, they do not suggest tighter restrictions on advertising or discuss this in any critical way which is surprising and disappointing given the strong findings of the paper.</p>
<p>Austin, E. W. et al. (2006). How does alcohol advertising influence underage drinking? The role of desirability, identification and scepticism. <i>Journal of Adolescent Health</i>. 38: 376-384.</p>	USA	<p>Cross-sectional data from wave 1 of a 3-year longitudinal survey.</p> <p><b>Duration of Study:</b> 2000-2001.</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> TV viewing (hours viewed on each weekday; hours of TV sport viewed in the past 12 months; frequency of viewing 7 pre-selected TV shows in the past 30 days); magazine readership; scepticism; desirability of / identification with advertising portrayals; alcohol expectancies; liking of beer brands (5 pre-selected brands); preference for beer-themed items; parental guidance;</p>	<p>1 child per household; stratified by age and gender to fill 16 quota cells (eight age x two gender).</p> <p><b>Age:</b> 9-17 (mean = 12.8).</p> <p>Split into two age subsets during some analyses: 9-11 and 12-17.</p> <p><b>Gender:</b> m= 53% f= 47%</p> <p><b>Ethnicity:</b> Caucasian 47%; Latino 20%; Asian and Pacific Islander 10%; African American 8%; Native American 2%; Multi-Ethnicity and Ethnicity Unknown 13%</p>	<p>For males and females, alcohol expectancies, liking of beer brands and parental guidance were all significantly associated with alcohol use (males: positive expectancies: beta = 0.21, p-value &lt;0.001; negative expectancies: beta = -0.24, p-value &lt;0.001; liking of beer brands: beta = 0.20, p-value &lt;0.001; parental guidance: beta = -0.15, p-value &lt;0.001; females: positive expectancies: beta = 0.23, p-value &lt;0.001; negative expectancies: beta = -0.26, p-value &lt;0.001; liking of beer brands: beta = 0.18, p-value &lt;0.001; parental guidance: beta = -0.19, p-value &lt;0.001).</p> <p>Desirability and identification positively predicted expectancies (males: desirability: beta = 0.16, p-value &lt;0.01; identification: beta = 0.26, p-value &lt;0.001; females: desirability: beta = 0.14, p-value &lt;0.01; identification: beta = 0.24, p-value &lt;0.001) and liking of beer brands (males: identification: beta = 0.20, p-value &lt;0.001; females: identification: beta = 0.22, p-value &lt;0.001) which, in turn, predicted favouring beer-themed items (males: liking of beer brands: beta = 0.46, p-value &lt;0.001; females: liking of beer brands: beta = 0.58, p-value &lt;0.001) and actual drinking (males: liking of beer brands: beta = 0.20, p-value &lt;0.001; females: liking of beer brands: beta = 0.18, p-value &lt;0.001).</p> <p>Those who watched more primetime TV found portrayals in alcohol advertising more desirable (males: beta = 0.11, p-value &lt;0.01; females: beta = 0.12, p-value &lt;0.01) and held more positive alcohol expectancies (males: beta = 0.11, p-value &lt;0.01; females: beta = 0.10, p-value &lt;0.01). As a result, watching primetime TV was indirectly related to favouring beer-themed items (males: beta = 0.04, p-value &lt;0.001; females: beta = 0.06, p-value &lt;0.001) and alcohol use (males: beta = 0.06, p-value &lt;0.001; females: beta =</p>	<p>Cross-sectional self-reported data; cannot determine causal path.</p> <p>Focuses on a wider age range than expected for inclusion in this systematic review (aged 14-17).</p> <p>It is unclear why the authors chose to compare these two age ranges. Doing so means that some age-related differences are missed which may help to explain relevant MIP stages.</p> <p>The authors asked young people about only a certain number of pre-defined primetime TV shows and alcohol brands.</p> <p>Favouring beer-themed items was the only outcome variable in the</p>	<p>Results suggest that the interpretation of messages is at least as important as media exposure to adolescent alcohol use. Interpretation processes are similar for males and females; and for youth aged 9-11 and 12-17.</p> <p>Thus, conclusions based primarily on potential exposure measures, and which ignore intervening decision-making, may underestimate the influences of advertising on underage drinking, providing support for the MIP model which suggests that decision making goes through a number of steps over time to produce a cumulative effect on behaviour.</p> <p>Desirability of media portrayals predicted identification with media portrayals, which also predicted liking of beer brands and positive alcohol expectancies. In turn, this predicted a desire for beer-themed merchandise in all youth and alcohol use in those aged 12-17. However, it is difficult to see the full MIP path with the age split used in this study.</p> <p>Parental guidance was negatively related to alcohol use and also affected scepticism, desirability, positive</p>

		<p>demographics.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> scepticism; desirability of / identification with advertising portrayals; alcohol expectancies; liking of beer brands (5 pre-selected brands); preference for beer-themed items; alcohol use (drinking frequency in the past 12 months; drinking quantity and frequency in the past 30 days for beer, malt liquor, wine cooler, wine and liquor).</p> <p><b>Method(s) of analysis:</b> latent variable structural equation models (cross-gender and cross-age comparisons).</p> <p><b>Quality Assessment:</b> ***</p>	<p>SES: not reported (n=652)</p> <p>0.06, <i>p</i>-value &lt;0.001).</p> <p>Total hours of TV viewing was also positively related to favouring beer-themed items (males: <i>beta</i> = 0.10, <i>p</i>-value &lt;0.01; females: <i>beta</i> = 0.14, <i>p</i>-value &lt;0.01) and indirectly and negatively related to alcohol use only for males (<i>beta</i> = 0.01, <i>p</i>-value &lt;0.05). Magazine readership was indirectly and positively related to favouring beer-themed items for males (<i>beta</i> = 0.003, <i>p</i>-value &lt;0.05); and indirectly and negatively related to alcohol use for females (<i>beta</i> = 0.01, <i>p</i>-value &lt;0.05).</p> <p>Perceived parental guidance was negatively related to positive alcohol expectancies (males: <i>beta</i> = -0.16, <i>p</i>-value &lt;0.001; females: <i>beta</i> = -0.19, <i>p</i>-value &lt;0.001), favouring beer-themed items (males: 0.12, <i>p</i>-value &lt;0.001; females: <i>beta</i> = -0.23, <i>p</i>-value &lt;0.001) and alcohol use (males: <i>beta</i> = -0.15, <i>p</i>-value &lt;0.001; females: <i>beta</i> = -0.19, <i>p</i>-value &lt;0.001). Scepticism was also indirectly and negatively related to alcohol use for females (<i>beta</i> = 0.07, <i>p</i>-value &lt;0.01); and indirectly and positively related to favouring beer-themed items for males (<i>beta</i> = 0.03, <i>p</i>-value &lt;0.01).</p> <p>For those aged 12-17, alcohol expectancies, liking of beer brands and parental guidance were all significantly associated with alcohol use (positive alcohol expectancies: <i>beta</i> = 0.22, <i>p</i>-value &lt;0.001; negative alcohol expectancies: <i>beta</i> = -0.31, <i>p</i>-value &lt;0.001; liking beer brands: <i>beta</i> = 0.18, <i>p</i>-value &lt;0.001; parental guidance: <i>beta</i> = -0.13, <i>p</i>-value &lt;0.05); and scepticism was negatively related to alcohol use (<i>beta</i> = -0.31, <i>p</i>-value &lt;0.001).</p>	<p>9-11 model as 9-11 year olds reported almost no alcohol use. Thus, alcohol use measures were ascertained for the 12-17 model but are not subject to cross-age comparisons. It would have made sense to break down the 12-17 model further.</p> <p>No discussion of study limitations in the paper.</p>	<p>expectancies and favouring beer-themed items in beneficial ways. Further, there was no significant relationship between scepticism and alcohol use. The authors suggest that scepticism may develop at a much slower rate and too late to have a real effect on adolescent alcohol use.</p> <p>On the other hand, alcohol expectancies are part logic, part affective processing. This is important as expectancies are unlikely to be refuted successfully by pure logic-based health campaigns.</p> <p>However, the authors do not suggest a ban or tighter restrictions on persuasive alcohol advertising or discuss this as a possibility in any critical way which is surprising and disappointing given the strong findings of the paper. Instead, they suggest further research should explore the nature of advertising and scepticism; and that parents can help counter media effects by teaching children to 'improve' information processing and critical skills.</p>	
<p>Ellickson, P.L. et al. (2005) Does alcohol advertising promote adolescent drinking? Results from a longitudinal assessment. <i>Addiction</i>. 100:235-246.</p>	<p>USA</p>	<p>Prospective cohort study; school-based survey at three time points; augmented with an RCT measuring the impact of the ALERT Plus intervention.</p> <p><b>Duration of Study:</b> unknown</p> <p><b>Independent</b></p>	<p><b>Age:</b> 12 at baseline; 13-15 at follow-up (n=3,111).</p> <p><b>Gender:</b> F=50% M=50%</p> <p><b>Ethnicity:</b> White = 88% N. American = 6.3% Other = 5.4%</p>	<p>Baseline drinkers were exposed to advertisements in magazines, in-store displays, on television and at sports and music events more frequently than non-drinkers (magazines: mean 3.22 versus 2.45; in-store displays: mean 4.83 versus 4.55; TV: mean 1255.00 versus 1158.43; sport / music events: mean 4.01 versus 3.59).</p> <p>Using a bivariate regression model, each form of advertising increased the likelihood of drinking initiation by non-drinkers in the following year (TV: OR = 1.25; magazines: OR = 1.27; in-store displays: OR = 1.36; sport / music events: OR = 1.31; <i>p</i>-value &lt;0.05).</p> <p>Using a multivariate regression model, a relationship between drinking initiation and televised beer advertising was no longer significant. However, all three other forms of advertising remained</p>	<p>Reliance on self-report data; school-based data collection may lead to exclusions and sample bias.</p> <p>Focuses on a slightly younger age range than expected for inclusion in this systematic review (aged 14-17).</p> <p>A high level of exposure</p>	<p>Exposure to in-store beer displays increased the likelihood of drinking initiation among non-drinkers at baseline. Exposure via magazines and concession stands at sport and music events predicted drinking frequency among baseline drinkers. TV beer advertising did not predict drinking initiation or drinking frequency despite this being the mode of advertising young people reported being exposed to most frequently.</p> <p>Exposure to the ALERT Plus intervention</p>



		<p><b>Variable(s) / Measure(s) of exposure:</b> exposure to alcohol advertising (<i>televised beer commercials, frequency of reading magazines that advertise alcohol, frequency of seeing beer concession stands and in-store beer displays</i>).</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> drinking frequency / initiation.</p> <p><b>Method(s) of analysis:</b> logistic regression models.</p> <p><b>Quality Assessment:</b> ****</p>	<p><b>SES:</b> not addressed.</p>	<p>significant (<i>magazines</i>: OR = 1.16; <i>in-store displays</i>: OR = 1.27, <i>sport / music events</i>: OR = 1.16; p-value &lt;0.05). However, controlling for other variables, only in-store displays continued to predict drinking initiation (OR = 1.42; p-value &lt;0.05). Exposure to the ALERT plus intervention counteracted some of this effect (OR = 0.71, p-value &lt;0.05).</p> <p>Using a bivariate regression model, exposure to magazines containing alcohol advertising, in-store displays and beer concession stands at sport and music events predicted drinking frequency in baseline drinkers (<i>magazines</i>: coefficient = 0.21; <i>in-store displays</i>: coefficient = 0.11; <i>sport / music events</i>: coefficient = 0.22; p-value &lt;0.05). Televised beer advertising did not (coefficient = 0.05).</p> <p>Using a multivariate regression model, only exposure to magazines containing alcohol advertising and beer concession stands at sports and music events were significant predictors of drinking frequency in baseline drinkers (<i>magazines</i>: coefficient = 0.19; <i>sport / music events</i>: coefficient = 0.19; p-value &lt;0.05). After controlling for other variables, both factors remained significant (<i>magazines</i>: coefficient = 0.10; <i>sport / music events</i>: coefficient = 0.09; p-value &lt;0.05).</p>	<p>to advertising in both groups at baseline means it is difficult to determine that advertising is the causal factor even in a prospective rather than cross-sectional sample.</p> <p>The authors asked young people about televised beer advertisements during sports programming and certain popular entertainment shows only. Therefore, the effect of television may be underestimated; and results may not generalise to a UK context where it is the norm to heavily advertise other alcohol products during a wide variety of programme schedules.</p> <p>Similarly, the authors only asked young people about certain popular magazines, meaning that this effect size may also be underestimated, and did not explore digital 'new' media advertising.</p> <p>In the abstract and main body of the text, it is exposure to in-store beer displays which remains a significant predictor for</p>	<p>counteracted the effect of in-store displays but did not appear to effect the types of advertising that best predicted subsequent drinking among previous drinkers (magazines and concession stands at sport / music events).</p> <p>Multiple modes of advertising influence drinking during mid-adolescence; no single type dominates. The relationship between drinking and advertising differs according to prior experience with alcohol.</p> <p>Other (non-advertising) variables were significant for both groups (exposure to certain types of TV shows; adult approval; insufficient parental monitoring). For baseline non-drinkers, weak school or religious bonds were significant; and for baseline drinkers, peer drinking, personal experience and participation in sport.</p> <p>The authors suggest that prevention programs and interventions should foster media awareness and take into account the multiple sources of advertising that young people are exposed to. However, they do not suggest a ban or tighter restrictions on alcohol advertising or discuss this as a possibility in any critical way which is surprising and disappointing given the strong findings of the paper.</p> <p>They conclude that future research should either be with younger adolescents or focus on identifying ways to counter the impact of 'special venue' advertising on youth who have already started drinking.</p>
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					drinking onset by grade 9 (model 2). However, in Table 2 beer concession stands is starred as the significant factor. Authors were contacted for clarification, and this is a printing error which was not corrected pre-publication.	
<i>Fisher, L.B. et al (2007) Predictors of initiation of alcohol use among US adolescents: findings from a prospective cohort study. Arch Pediatr Adolesc Med. 161(10) 959-966.</i>	USA	<p>Prospective school-based cohort study (longitudinal).</p> <p><b>Duration of Study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> awareness of alcohol advertising; owning / being willing to use alcohol-promotional items (APIs).</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> first whole drink of alcohol; binge drinking.</p> <p><b>Method(s) of analysis:</b> logistic regression models.</p> <p><b>Quality Assessment:</b> ****</p>	<p>Survey data taken from the Growing Up Today Study (GUTS).</p> <p><b>Age:</b> 11-18</p> <p><b>Gender:</b> m= 2228 (40%) f = 3283 (60%)</p> <p><b>Ethnicity:</b> predominantly white (94%).</p> <p><b>SES:</b> not reported; mothers all hold nursing degrees.</p> <p>(n=5,511)</p>	<p>Owning or being willing to use APIs was predictive of alcohol initiation among boys and girls (boys: OR = 1.78, CI = 1.36-2.33; girls: OR = 1.74, CI = 1.37-2.19). Owning or being willing to use APIs increases the odds of trying alcohol by 78% among boys and by 74% among girls.</p> <p>Owning or being willing to use APIs had a greater effect on alcohol initiation among older boys (aged 15 or over) than younger boys (older: OR = 2.43, CI = 1.51-3.91; younger: OR = 1.50, CI = 1.08-2.09). Thus, boys over the age of 15 were 143 times more likely to try alcohol if they owned or were willing to use APIs; those under the age of 15 were 50 times more likely to try alcohol if they owned or were willing to use APIs.</p> <p>Girls classified as 'precontemplators' (those who indicated that they definitely would not try drinking alcohol in the next year) were more likely to own or be willing to use APIs than 'contemplators' (those who indicated that they may try drinking alcohol in the next year) or 'experimenters' (those who indicated that they had tried alcohol but had never consumed a whole drink) (OR = 2.27, CI = 1.49-3.47 versus OR = 1.24, CI = 0.93-1.67).</p> <p>Boys classified as 'precontemplators' were more likely to own or be willing to use APIs and more likely to be aware of alcohol advertising than 'contemplators' or 'experimenters' (APIs: OR = 2.63, CI = 1.61-4.30 versus OR = 1.24, CI = 0.88-1.76; alcohol advertising: OR = 1.70, CI = 1.06-2.72 versus OR = 1.00, CI = 0.71-1.40).</p> <p>Owning or being willing to use APIs predicted binge drinking among girls but not boys (OR = 1.79, CI = 1.16-2.77 versus OR = 0.87, CI = 0.51-1.48).</p>	<p>Despite the use of a prospective study design, it is still difficult to determine the causal path: it is possible that unobserved confounders can have an effect.</p> <p>Reliance on self-report data; school-based data collection may lead to exclusions and sample bias.</p> <p>Focuses on a slightly wider age range than expected for inclusion in this systematic review (aged 14-17).</p> <p>Young people sampled are all children of nurses.</p> <p>Alcohol advertising measures did not incorporate 'frequency'; this may have increased / broadened the effect.</p>	<p>Owning or being willing to use APIs had a greater impact than advertising on alcohol initiation, increasing risk especially among pre-contemplators.</p> <p>Owning or being willing to use APIs was further associated with binge drinking among girls. However, a positive association between awareness of alcohol advertising and alcohol initiation was limited to boys who were pre-contemplators.</p> <p>Further, some 'individual-level' variables appeared to have a bigger effect on drinking initiation (girls: peer drinking, cigarette smoking, siblings drinking, adults drinking at home, coming from a single-parent family; boys: peer drinking, cigarette smoking) and binge drinking among girls (sibling drinking).</p> <p>Nevertheless, APIs contribute to underage alcohol use and abuse; and the longitudinal design of the study means tentative conclusions can be drawn about the temporal effect of multiple factors on adolescent drinking.</p> <p>The authors suggest that advertising and marketing guidelines for the alcohol industry need more formalized</p>

<p><i>Gordon, R. et al (2010). Assessing the cumulative impact of alcohol marketing on young people's drinking: cross-sectional data findings. Addiction Research and Theory. Early Online 1-10.</i></p> <p>*This paper reports cross-sectional data collected at baseline only as part of the same overall study as data reported in the paper by Gordon et al (2010c) below.</p>	<p>UK</p>	<p>Cross-sectional data from interview-administered and self-complete questionnaires.</p> <p><b>Duration of study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> awareness (<i>across 15 types of marketing; asked to recall brands</i>); appreciation and involvement (<i>free samples of alcohol products; free gifts showing alcohol brand logos; special price offers for alcohol; promotional mail or e-mails mentioning alcohol brands; owned clothing or other alcohol-branded items; looked at websites for alcohol brands; downloaded alcohol-branded electronic content; used social networking sites containing alcohol brands or logos</i>) in alcohol marketing.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> drinking status, drinking</p>	<p><b>Age:</b> 12-14 years (mean = 13 years)</p> <p><b>Gender:</b> m= 47.1% (n=433) f= 52.9% (n=487)</p> <p><b>Ethnicity:</b> White = 93.3% Asian = 3.3% Mixed Race = 1.3% Black = 1.2% Chinese = 0.1% Other = 0.4%</p> <p><b>SES:</b> evenly distributed by social grade based on the occupation of the head of the household (middle class = 46.3%, n=426; working class = 53.3%, n=491).</p>	<p><b>Awareness:</b> Based on the <i>total number of marketing channels that adolescents were aware of</i>, being aware of more alcohol marketing channels increased the odds of being a drinker by 12% (OR = 1.116, CI = 1.049-1.188, p-value = &lt;0.01).</p> <p>Based on the <i>types of alcohol marketing channels that young people were aware of</i>, greater awareness of advertisements and promotions increased the odds of being a drinker by 137% (OR = 2.374, CI = 1.301-4.333, p-value = &lt;0.01).</p> <p>Based on the <i>total number of marketing channels that adolescents were aware of</i>, the more alcohol marketing channels that young people were aware of, the more likely they were to think they would drink alcohol in the next year (beta = 0.118, t-value = 4.290, p-value = &lt;0.001). For every 1 unit increase in the total number of marketing channels that young people are aware of, intention to drink alcohol increases by 12%.</p> <p>Based on the <i>types of alcohol marketing channels that young people were aware of</i>, greater awareness of alcohol advertising and promotions was associated with intention to drink alcohol in the next year (beta = 0.085, t-value = 3.079, p-value = &lt;0.01). For every 1 unit increase in young people's awareness of alcohol marketing, intention to drink alcohol increases by 9%.</p> <p><b>Appreciation:</b> Based on the <i>total number of marketing channels that adolescents were aware of</i>, liking alcohol advertisements increased the odds of being a drinker by 31% (OR = 1.307, CI = 1.110-1.538, p-value = &lt;0.01).</p> <p>Based on the <i>types of alcohol marketing channels that young people were aware of</i>, greater liking of alcohol advertisements increased the odds of being a drinker by 28% (OR = 1.279, CI = 1.084-1.508, p-value = &lt;0.01).</p> <p>Based on the <i>total number of marketing channels that adolescents were aware of</i>, the better young people's liking of alcohol advertisements, the more likely they were to think they would drink alcohol in the next year (beta = 0.127, t-value = 4.564, p-value = &lt;0.001). For every 1 unit increase in young people's appreciation of alcohol marketing, intention to drink alcohol increases by 13%.</p> <p>Based on the <i>types of alcohol marketing channels that young people</i></p>	<p>Cross-sectional self-reported data; cannot determine causal path.</p> <p>Difficult to determine whether exposure (categorised as awareness, appreciation and participation) can robustly measure the impact of marketing on behaviour.</p> <p>Assumes a simplistic, linear effect, and does not discuss emotional responses to marketing.</p> <p>Focuses on a slightly younger age range than expected for inclusion in this systematic review (aged 14-17).</p> <p>Provision of a gift voucher for participation could be deemed coercive.</p> <p>Other variables in the regression models were more significant / equally significant as those associated with alcohol marketing (such as perceptions of others' views and drinking by close friends and siblings).</p> <p>CIs reported for</p>	<p>restrictions.</p> <p>Awareness and appreciation of alcohol marketing was significantly associated with being a drinker and intending to drink within the next year among young people aged 12-14.</p> <p>This paper included new digital media (and a vast number of ways that young people could participate and interact with industry) in analyses whereas most research typically focuses on conventional print and broadcast media. It also highlights the breadth of awareness and involvement that young people have with alcohol marketing.</p> <p>One of only four papers in this systematic review which examined the influence of digital marketing on young people's drinking behaviour.</p> <p>One of only a small number of UK studies exploring the impact of alcohol marketing which focuses specifically on underage drinkers.</p> <p>However, other variables in the regression models were more or equally significant as those associated with alcohol marketing (such as perceptions of others' views and drinking by close friends and siblings).</p> <p>Involvement in price promotions by underage drinkers in the UK is also briefly mentioned and it would be interesting to explore the impact of this on drinking behaviour due to a paucity of literature in this area.</p> <p>The authors conclude that, although the current regulatory system is focuses on controlling content, these findings suggest</p>
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		<p>initiation (<i>age of first drink and no of alcohol units last consumed</i>) and future drinking intentions</p> <p><b>Method(s) of analysis:</b> logistic and linear regressions</p> <p><b>Quality Assessment:</b> ****</p>		<p>were aware of, greater liking of alcohol advertisements, was significantly associated with stronger intention to drink alcohol in the next year (beta = 0.121, t-value = 4.328, p-value = &lt;0.001). For every 1 unit increase in young people's appreciation of alcohol marketing, intention to drink alcohol increases by 12%.</p> <p><b>Participation:</b> Involvement in electronic marketing increased the odds of being a drinker by 300% (OR = 4.000, CI = 1.485-10.776, p-value = &lt;0.01).</p> <p>Involvement in electronic marketing was associated with intention to drink alcohol in the next year (beta = 0.074, t-value = 2.610, p-value = &lt;0.01). For every 1 unit increase in young people's participation in electronic marketing, intention to drink alcohol increases by 7%.</p>	<p>awareness of alcohol marketing and participation in electronic marketing channels were wide.</p> <p>Use of standardised coefficients can be misleading - a change of one standard deviation in one variable has no reason to be equivalent to a similar change in another. Nevertheless, standardising variables does not affect whether or not the coefficients are significant.</p>	<p>that the more pertinent issue is level of exposure. However, this is suggested without any acknowledgement as to why sheer exposure could be problematic, and no discussion of emotional responses to marketing, assuming a straightforward, linear relationship between exposure and drinking behaviour.</p> <p>Nevertheless, the authors suggest that current regulation does not afford adolescents adequate protection from alcohol marketing exposure; and that the regulation of alcohol marketing (especially new media channels), requires serious examination.</p>
<p>Gordon, R. et al (2010). <i>The Impact of Alcohol Marketing on Youth Drinking Behaviour: A Two-stage Cohort Study. Alcohol and Alcoholism. 45(5) 470-480</i></p> <p>*This paper reports follow up data collected two years later as part of the same overall study as data reported in the paper by Gordon et al (2010a) above.</p>	UK	<p>Cohort data collected at 2 time points from interview-administered and self-complete questionnaires.</p> <p><b>Duration of Study:</b> three years</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> awareness (<i>across 15 types of marketing; asked to recall brands</i>); appreciation and involvement (<i>free samples of alcohol products; free gifts showing alcohol brand logos; special price offers for alcohol</i>);</p>	<p><b>Age:</b> 12-14 years (mean = 13 years) at baseline; 14-16 years (mean = 15 years) at follow up</p> <p><b>Gender:</b> m= 50% (n=275) f= 50% (n=277)</p> <p><b>SES:</b> ABC1 (middle class) = 41% (n=224) C2DE (working class) = 59% (n=326)</p> <p><b>Ethnicity:</b> White = 94% (n=515) Asian = 3% (n=19) Mixed Race = 1% (n=7) Black = 1% (n=6) Chinese = &lt;1% (n=1) Other = &lt;4% (n=1)</p>	<p><b>Initiation of drinking:</b> Involvement with alcohol marketing at baseline increased the odds of drinking initiation at follow up by 31% (AOR = 1.31, CI = 1.003-1.711, p-value = &lt;0.05).</p> <p>Initiation of drinking at follow up was also more likely among young people with a greater appreciation of alcohol marketing at baseline (AOR = 1.272, CI=1.005-1.610, p-value = &lt;0.05).</p> <p>Controlling for confounders, no association was found between uptake of drinking at follow up and baseline awareness of alcohol marketing or number of brands recalled at baseline.</p> <p><b>Frequency of drinking:</b> Higher involvement with alcohol marketing at baseline increased the odds of fortnightly drinking at follow up by 43% and monthly drinking at follow up by 33% (<i>fortnightly</i>: AOR = 1.43, CI = 1.146-1.795, p-value = &lt;0.01; <i>monthly</i>: AOR = 1.33, CI = 1.072-1.644, p-value = &lt;0.05).</p> <p>Uptake of fortnightly drinking at follow up was also more likely among young people with a greater awareness of alcohol marketing at baseline (AOR = 1.11, CI=1.005-1.234, p-value = &lt;0.05) and those with a greater appreciation of alcohol marketing at baseline (AOR = 1.295, CI=1.002-1.674, p-value = &lt;0.05).</p>	<p>Based on self-reported data.</p> <p>Authors did not assess sheer volume of marketing exposure.</p> <p>Difficult to determine whether exposure (categorised as awareness, appreciation and participation) can robustly measure the impact of marketing on behaviour.</p> <p>Assumes a simplistic, linear effect, and does not discuss in any depth emotional responses to marketing.</p>	<p>This paper builds on cross-sectional data reported above and highlights a small but significant association between awareness of and involvement in alcohol marketing and drinking behaviour.</p> <p>More specifically, higher awareness of alcohol marketing at baseline predicted increased frequency of drinking two years later.</p> <p>A small but significant association was also demonstrated between appreciation of alcohol marketing and drinking behaviour.</p> <p>This paper included new digital media (and a vast number of ways that young people could participate and interact with industry) in analyses whereas most research typically focuses on conventional print and broadcast media. It also highlights the breadth of awareness and involvement that young people have with</p>

		<p><i>promotional mail or e-mails mentioning alcohol brands; owned clothing or other alcohol-branded items; looked at websites for alcohol brands; downloaded alcohol-branded electronic content; used social networking sites containing alcohol brands or logos</i> in alcohol marketing.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> drinking status; uptake of drinking (<i>based on changes in drinking status between wave one and wave two</i>); frequency of drinking; units of alcohol consumed at follow-up</p> <p><b>Method(s) of analysis:</b> logistic and multiple regressions</p> <p><b>Quality Assessment:</b> ****</p>	<p><b>Religion:</b>          Christian = 65% (n=354)          No religiosity = 31% (n=169)          Muslim = 3% (n=19)          Other = 1% (n=5)            (n=552)</p>	<p>Controlling for confounders, no association was found between uptake of fortnightly drinking at follow up and the number of brands recalled at baseline.</p> <p>Further, controlling for confounders, no association was found between uptake of monthly drinking at follow up and baseline awareness of alcohol marketing, number of brands recalled at baseline or baseline appreciation of alcohol marketing.</p> <p><b>Volume of drinking:</b> Controlling for demographics, baseline drinking status, amount consumed at baseline and other drinking related variables, there was no association between units consumed at follow up and baseline measures of awareness or involvement in alcohol marketing, number of brands recalled or appreciation of alcohol advertising.</p>	<p>Effect size of alcohol marketing on drinking behaviour, albeit significant, featured fairly wide confidence intervals.</p> <p>Other variables in the regression models were more significant / equally significant as those associated with alcohol marketing (such as having siblings who drink; perceptions that others consider it ok for them to drink and having a mum who drinks).</p> <p>Although controlled for in each analysis, there was a loss of respondents due to attrition between baseline and follow up.</p> <p>Specific effects on drinking behaviour per type of marketing channel are not reported; paper only states which types of marketing young people were most aware / involved with.</p> <p>However, the authors suggest that sample size does not allow sufficient power to detect the effect of individual marketing channels.</p>	<p>alcohol marketing.</p> <p>However, other variables in the regression models were more or equally significant as those associated with alcohol marketing (such as having siblings who drink; perceptions that others consider it ok for them to drink and having a mum who drinks).</p> <p>One of only four papers in this systematic review which examined the influence of digital marketing on young people's drinking behaviour and the only UK based longitudinal work identified in this systematic review.</p> <p>However, the authors do not specifically explore the effect of social / digital marketing on drinking behaviour at follow up, meaning that this association is not followed up over time.</p> <p>This work identifies a need to assess the cumulative impact of all alcohol marketing on youth drinking and the need for additional research exploring the impact of new 'global' or digital media and other less researched forms of alcohol marketing, such as sponsorship.</p> <p>Further, as the authors did not assess volume of exposure, they recommend further research in this area as well as studies tracking young people through to adulthood.</p> <p>The authors suggest that current regulation does not adequately protect adolescents from alcohol marketing exposure and that the regulation of alcohol marketing (especially new media channels, sponsorship and e-marketing), requires serious examination.</p>
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					<p>Thus, although earlier cross-sectional data reported by the same authors explores associations between digital / social media alcohol advertising and young people's drinking behaviour, in this paper, they do not specifically explore the effect of social / digital marketing on drinking behaviour at follow up, meaning that this association is not followed up over time. The authors only discuss the proportion of the cohort aware and involved with digital / social media at baseline and follow up.</p> <p>No tabular data is included in the paper exploring the association between appreciation of alcohol marketing and drinking behaviour; AORs are included in the narrative only.</p>	
<p><i>Grenard. (2008). Exposure to alcohol advertising on television and alcohol use among younger adolescents. University of Southern California (dissertation).</i></p>	USA	<p>Prospective school-based cohort survey; data collected at 4 time points.</p> <p><b>Duration of Study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of</b></p>	<p>23 public middle schools across 11 districts.</p> <p><b>Age:</b> 12-16 (7<sup>th</sup> – 10<sup>th</sup> grade).</p> <p><b>Gender:</b> M=1894 (49.86%) F=1905 (50.14%)</p>	<p>Alcohol use and alcohol-related problems were weakly correlated with measures of exposure to advertising (self-reported general frequency, exposure via popular TV shows and exposure via TV sports shows).</p> <p><i>Self-reported frequency:</i> lifetime beer: beta = 0.14, p-value &lt;0.001; lifetime wine / liquor: beta = 0.13, p-value &lt;0.001; lifetime beer binges: beta = 0.09, p-value &lt;0.001; lifetime wine / liquor binges: beta = 0.09, p-value &lt;0.001; past month beer: beta = 0.12, p-value &lt;0.001; past month wine / liquor: beta = 0.10, p-value &lt;0.001; past month beer binges: beta = 0.08, p-value &lt;0.001; past month wine /</p>	<p>Reliance on self-reported data; limited in ability to control for 3<sup>rd</sup> variable effects.</p> <p>5 of 19 high schools refused to allow surveys to be administered in class to those students already surveyed in middle</p>	<p>Findings suggest that exposure to alcohol advertising on TV and affective reactions have a small but significant influence on drinking and the development of alcohol-related problems. An increase in use of alcohol over time influenced the number of problems reported in 10<sup>th</sup> grade.</p> <p>First study to examine the influence of TV alcohol advertising on the development of spontaneous alcohol-related associations</p>

		<p><b>exposure:</b> general TV viewing frequency; observation of TV alcohol advertisements (<i>self-reported general frequency and exposure in sports and popular shows</i>); liking of alcohol advertisements; memory measures for alcohol advertisements (<i>word association tasks; top of mind awareness and cued recall</i>).</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> alcohol use in the past 30 days; problems associated with alcohol use.</p> <p><b>Method(s) of analysis:</b> descriptive statistics; chi-squared statistics; bivariate correlations; structural equation models (<i>exposure via popular TV shows; exposure via sports TV shows; cued recall; self-reported frequency of exposure</i>).</p> <p><b>Quality Assessment:</b> ****</p>	<p><b>Ethnicity:</b> 13.37% non-Hispanic Whites; 47.87% Latino; 17.02% Asian, 3.08% African American, 0.77% Native Hawaiian or Pacific Islander, 0.95% American Native, 4.32% mixed, and 12.62% didn't know.</p> <p><b>SES:</b> measured by the participant's living arrangement, parents' occupation and parents' education.</p> <p>Originally surveyed in 7<sup>th</sup> grade (mean = 12.51, n=2,986).</p> <p>Wave 1: n=2,986 Wave 2: n=2,849 Wave 3: n=2,093 Wave 4: n=1,609</p> <p>n=3,890 completed the survey in at least one wave.</p>	<p>liquor binges: beta = 0.08, p-value &lt;0.001; alcohol-related problems: beta = 0.08, p-value &lt;0.001.</p> <p><i>Exposure via popular TV shows:</i> lifetime beer: beta = 0.10, p-value &lt;0.001; lifetime wine / liquor: beta = 0.09, p-value &lt;0.001; lifetime beer binges: beta = 0.06, p-value &lt;0.01; lifetime wine / liquor binges: beta = 0.05, p-value &lt;0.05; past month beer: beta = 0.10, p-value &lt;0.001; past month wine / liquor: beta = 0.08, p-value &lt;0.001; past month beer binges: beta = 0.09, p-value &lt;0.001; past month wine / liquor binges: beta = 0.09, p-value &lt;0.001; alcohol-related problems: beta = 0.09, p-value &lt;0.001.</p> <p><i>Exposure via TV sports shows:</i> lifetime beer: beta = 0.05, p-value &lt;0.05; lifetime wine / liquor: beta = 0.04, p-value &lt;0.05; lifetime beer binges: beta = 0.06, p-value &lt;0.01; past month beer: beta = 0.05, p-value &lt;0.01; past month wine / liquor: beta = 0.06, p-value &lt;0.01; past month beer binges: beta = 0.09, p-value &lt;0.001; past month wine / liquor binges: beta = 0.08, p-value &lt;0.001; alcohol-related problems: beta = 0.08, p-value &lt;0.001.</p> <p>Product cued recall had small but significant correlations with lifetime beer use (beta = 0.06, p-value &lt;0.05) but not to other alcohol use measures; and a strong correlation was found between liking of advertisements and alcohol use measures (<i>lifetime beer:</i> beta = 0.33, p-value &lt;0.001; <i>lifetime wine / liquor:</i> beta = 0.30, p-value &lt;0.001; <i>lifetime beer binges:</i> 0.30, p-value &lt;0.001; <i>lifetime wine / liquor binges:</i> beta = 0.29, p-value &lt;0.001; <i>past month beer:</i> beta = 0.29, p-value &lt;0.001; <i>past month wine / liquor:</i> beta = 0.27, p-value &lt;0.001; <i>past month beer binges:</i> beta = 0.28, p-value &lt;0.001; <i>past month wine / liquor binges:</i> beta = 0.24, p-value &lt;0.001; <i>alcohol-related problems:</i> beta = 0.15, p-value &lt;0.001).</p> <p>Using a structural equation model, the level of exposure to alcohol advertisements in popular shows predicted a higher level of alcohol use in 7<sup>th</sup> grade for those students who reported a greater liking of alcohol advertisements (<i>girls:</i> beta = 0.093, SE = 0.044, p-value &lt;0.05; <i>boys:</i> beta = 0.112, SE = 0.041, p-value &lt;0.01). <i>Exposure to advertisements in popular TV shows</i> predicted the slope of alcohol use for females (beta = 0.160, SE = 0.057, p-value &lt;0.01); whereas <i>liking of advertisements</i> predicted the slope of alcohol use for males (beta = 0.283, SE = 0.095, p-value &lt;0.05).</p> <p>A structural equation model focusing on cued recall found a significant interaction between exposure and liking of advertisements in the prediction of drinking level for males but not</p>	<p>school, leading to the drop out of entire school cohorts.</p> <p>Opportunistic school-based data collection may lead to exclusions and sample bias.</p> <p>Focuses on a slightly younger (and wider) age range than expected for inclusion in this systematic review.</p> <p>Alcohol use measures skewed towards zero due to a young baseline age; young people were recruited purposefully in order to examine early development of alcohol use, but may have contributed to some null findings.</p> <p>Alcohol association measures were developed using high school and college participants, and resulting measures might be less than optimal for middle school students.</p> <p>The study only focuses on televised alcohol advertising. Further, it is difficult to determine whether the exposure measures used can robustly measure the impact of marketing on</p>	<p>in memory among young adolescents; and, unlike most studies in this review, this paper demonstrates the temporal ordering of predictors and outcomes.</p> <p>Latent growth curve modelling demonstrated that exposure to alcohol advertisements and liking of those advertisements in 7<sup>th</sup> grade influenced the growth of alcohol use over time.</p> <p>Liking alcohol advertisements moderated the influence of exposure on alcohol use. In other words, among those who liked alcohol advertisements more, exposure was a stronger predictor of increased alcohol use than among those students who liked alcohol advertisements less.</p> <p>Exposure to alcohol advertisements encouraged both genders to drink more. However, males and females appeared to react in slightly different ways. Frequency of exposure via popular TV shows at time one predicted the slope of growth in alcohol use for females; whereas liking of advertisements at time one predicted the slope of growth in alcohol use for males.</p> <p>Exposure to TV advertisements also contributed to the development of spontaneous alcohol-related memory associations. In particular, liking alcohol advertisements was a positive predictor of the growth of alcohol-related associations.</p> <p>Cued recall of alcohol advertisements, self-reported exposure and liking alcohol advertisements predicted the number of alcohol-related associations in the 7<sup>th</sup> grade; and liking of advertisements predicted the growth of associations over time.</p>
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			<p>females (p-value &lt;0.01); no significant interactions between exposure and liking of advertisements were observed in the self-reported frequency or the exposure via TV sports shows models.</p> <p>Liking of advertisements consistently predicted drinking level for both males and females across all models (p-value &lt;0.001). None of the three exposure models predicted drinking level or slope for females (p-value &lt;0.05) but cued recall predicted the level and slope for males in the self-reported frequency and exposure via TV sports shows models (p-value &lt;0.05).</p> <p>Females reporting higher levels of exposure and liking of advertisements reported a higher slope and level of alcohol-related problems at time 4 (<i>slope</i>: beta = 0.091, SE = 0.040, p-value &lt;0.05; <i>intercept level</i>: beta = 0.105, SE = 0.048, p-value &lt;0.05). In males, liking of alcohol advertisements significantly and negatively predicted alcohol-related problems (beta = 0.164, SE = 0.069, p-value &lt;0.05). In all three models for females, the level of growth in alcohol use mediated the influence of liking alcohol advertisements at time 1 on alcohol-related problems at time 4 (p-value &lt;0.05).</p> <p>Self-reported exposure to alcohol advertisements on TV (beta = 0.058, SE = 0.028, p-value &lt;0.05) and liking of those advertisements at time 1 (beta = 0.158, SE = 0.020, p-value &lt;0.001) predicted a growth in the number of spontaneous associations provided in response to alcohol-related homograph cue words (CBAT). None of the predictors related to advertising or the initial level of alcohol use significantly predicted the slope of alcohol-related associations.</p> <p>Cued recall (beta = -0.098, SE = 0.035, p-value &lt;0.01), self reported observation of alcohol advertisements (beta = -0.052, SE = 0.021, p-value &lt;0.05), liking of alcohol advertisements (beta = 0.281, SE = 0.032, p-value &lt;0.001), peer drinking (beta = 0.573, SE = 0.037, p-value &lt;0.001) and adult drinking (beta = 0.178, SE = 0.043, p-value &lt;0.001) all significantly predicted the initial level of alcohol use.</p> <p>The level of growth in alcohol-related associations was a significant predictor of the slope for the growth of alcohol use (beta = -0.168, SE = 0.062, p-value &lt;0.01). In other words, a growth in alcohol-related associations was very strongly correlated with the growth of alcohol use over time.</p> <p>Liking of alcohol advertisements (beta = 0.124, SE = 0.043, p-value &lt;0.01) and cued recall (beta = 0.140, SE = 0.045, p-value &lt;0.01) predicted the initial number of spontaneous associations provided</p>	<p>behaviour. For example, it is difficult to assess what 'liking' of advertisements actually measures.</p> <p>Cannot determine whether beta coefficients are standardised or un-standardised.</p>	<p>The initial level of alcohol use did not predict the growth of alcohol-related associations, but the growth of alcohol use was significantly (and strongly) correlated with the growth of alcohol-related associations over 3 time periods. Further, the relative frequency of alcohol-related responses increased over time compared to other categories of responses to homograph cue words with an alcohol-related meaning.</p> <p>However, self-reported observation of alcohol advertising and cued recall were negative predictors of the intercept for alcohol use, suggesting that those who used more alcohol in the 7<sup>th</sup> grade reported seeing fewer alcohol advertisements and had a poorer memory for images from specific advertisements.</p> <p>This contradicts the notion that those who are drinking more tend to be more aware of alcohol advertisements. However, it is also possible that those with higher levels of awareness / drinking simply have lower scope for growth.</p> <p>The authors acknowledge that limiting alcohol advertising exposure (although difficult) could have small but important protective effects; there may be unintended consequences of doing so and any policy intervention must be comprehensive, including TV, web, print, display and so on. Instead of pushing towards formal restrictions, the authors conclude that there is a role for media literacy training; and that the role of peers / adults in conjunction with formal advertising needs further evaluation.</p> <p>They suggest that there is a need to understand how alcohol-related associations in memory develop and how</p>
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				<p>in response to phrases depicting alcohol use outcomes (COBT) at time 1. Further, liking of advertisements was a significant predictor of the slope for the growth of associations over three time periods (beta = 0.183, SE = 0.081, p-value &lt;0.05).</p> <p>Liking of alcohol advertisements (beta = 0.280, SE = 0.032, p-value &lt;0.001), and peer / adult drinking (<i>peer</i>: beta = 0.576, SE = 0.040, p-value &lt;0.001; <i>adult</i>: beta = 0.179, SE = 0.044, p-value &lt;0.001) significantly predicted the intercept for alcohol use. However, self-reported observation of alcohol advertising (beta = -0.053, SE = 0.021, p-value &lt;0.05) and cued recall (beta = -0.093, SE = 0.035, p-value &lt;0.01) were negative predictors of the intercept for alcohol use. This suggests that those who used more alcohol in the 7<sup>th</sup> grade reported seeing fewer alcohol advertisements and had a poorer memory for images from specific alcohol advertisements.</p> <p>The relative frequency increased over time for alcohol-related responses compared to other categories of responses to homograph cue words with an alcohol-related meaning (<i>bud</i>: grade 7: 20.87%, grade 8: 29.30%, grade 9: 28.25%; <i>draft</i>: grade 7: 3.99%, grade 8: 5.90%, grade 9: 7.95%; <i>hammered</i>: grade 7: 6.81%, grade 8: 11.86%, grade 9: 18.19%; <i>pitcher</i>: grade 7: 17.88%, grade 8: 20.03%, grade 9: 21.81%; <i>shot</i>: grade 7: 1.10%, grade 8: 2.66%, grade 9: 6.14%; <i>tap</i>: grade 7: 11.63%, grade 8: 14.16%, grade 9: 18.01%).</p>		<p>to direct these associations towards more adaptive and healthy behaviours. A 'reciprocal' model is outlined, which suggests that alcohol use experiences and associations in memory fuel each other over time.</p> <p>Importantly, the authors conclude that a rational or deliberate approach to decision-making must not be assumed. Emotional responses to marketing and why exposure could be problematic need to be explored so that a overly simplistic, straightforward linear relationship between exposure and drinking behaviour is not presumed.</p>
<p>Jones and Magee (2011). <i>Exposure to Alcohol Advertising and Alcohol Consumption among Australian Adolescents. Alcohol and Alcoholism. 46(5) 630-637.</i></p>	Australia	<p>Cross-sectional survey across metropolitan, regional and rural New South Wales (young people recruited via high schools, shopping malls, Facebook and a previous focus group study).</p> <p><b>Duration of Study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> exposure to alcohol advertising across eight media</p>	<p><b>Age:</b> 12-17; analyses provided for full sample and in two smaller subsets (12-15 and 16-17).</p> <p><b>Gender:</b> Male=446 (40.1%) Female=667 (59.9%)</p> <p><b>SES:</b> breakdown not provided.</p> <p><b>Ethnicity:</b> breakdown not provided.</p> <p>(n=1113)</p>	<p>Across the full sample, young people who reported that they had seen alcohol advertisements in a magazine, bottleshop, bar / pub or on promotional materials were significantly more likely to have initiated alcohol consumption (<i>magazine</i>: AOR = 1.69, CI = 1.20-2.38; <i>bottleshop</i>: AOR = 1.49, CI = 1.04-2.14; <i>bar / pub</i>: AOR = 1.49, CI = 1.10-2.01; <i>promotional</i>: AOR = 1.36, CI = 1.01-1.84).</p> <p>There was no significant association between alcohol initiation and exposure to alcohol media of any type for males and females aged 12-15 and males aged 16-17. However, among females aged 16-17, alcohol initiation was associated with exposure to alcohol advertising in magazines, bottleshops and pubs / bars (<i>magazines</i>: AOR = 1.85, CI = 1.05-3.26; <i>bottleshops</i>: AOR = 2.04, CI = 1.11-3.74; <i>pubs / bars</i>: AOR = 2.22, CI = 1.32-3.74).</p> <p>Across the full sample, young people who reported that they had seen an alcohol advertisement in a pub / bar were significantly more likely to have drunk alcohol in the last 12 months (AOR = 1.69, CI = 1.27-2.25). However, seeing an alcohol advertisement on television was actually significantly associated with reduced odds of drinking</p>	<p>Cross-sectional self-reported data; cannot determine causal path; opportunistic data collection may lead to exclusions and sample bias.</p> <p>Focuses on a slightly wider age range than expected for inclusion in this systematic review (aged 14-17).</p> <p>Levels of exposure to different types of alcohol advertising were not quantified and the impact of alcohol advertising</p>	<p>For young people aged 12-17, exposure to alcohol advertising in magazines, bottleshops, pubs / bars and via promotional materials was associated with alcohol initiation. Alcohol advertising in pubs / bars was also associated with consumption in the last 12 months; and, magazine, internet and pub / bar advertising was associated with consumption in the last 4 weeks.</p> <p>Associations differed by age and gender. Among younger and older males and younger females, no advertising media was associated with alcohol initiation after controlling for other factors. For females aged 16-17, exposure to advertising in magazines, bottleshops and pubs / bars was associated with alcohol initiation.</p>

		<p>(television, newspapers, magazines, bars or pubs, billboards / posters, internet and promotional materials, advertisements in bottleshops / liquor stores.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> alcohol consumption assessed using three questions (initiation, recent consumption and frequency / regularity of consumption in the last 12 months).</p> <p><b>Measure(s) of analysis:</b> logistic regression models; AOR with p-values of &lt;0.05 are presented as significant.</p> <p><b>Quality Assessment:</b> ****</p>		<p>alcohol in the last 12 months (AOR = 0.55, CI = 0.30-0.99).</p> <p>Exposure to internet alcohol advertising was significantly associated with alcohol consumption in the last 12 months for males aged 12-15 (AOR = 2.18, CI = 1.02-4.70). For males aged 16-17, alcohol consumption in the last 12 months was significantly associated with alcohol advertising in bottleshops and pubs / bars (<i>bottleshops</i>: AOR = 2.88, CI = 1.21-6.90; <i>pubs / bars</i>: AOR = 2.10, CI = 1.13-3.88). However, seeing an alcohol advertisement on television was associated with reduced odds of alcohol consumption in the last 12 months for males aged 16-17 (AOR = 0.16, CI = 0.03-0.92).</p> <p>Exposure to alcohol advertising in a bar / pub predicted greater alcohol consumption in the last 12 months among females aged 12-15 (AOR = 2.73, CI = 1.29-5.76). Again, television advertising was associated with reduced odds of drinking alcohol in the last 12 months (AOR = 0.24, CI = 0.06-0.91). There was no significant association between alcohol consumption in the last 12 months and exposure to alcohol media of any type among females aged 16-17.</p> <p>Across the full sample, young people who reported that they had seen an alcohol advertisement in a magazine, over the internet or in a pub / bar were significantly more likely to have drunk alcohol in the last 4 weeks (<i>magazine</i>: AOR = 1.54, CI = 1.11-2.14; <i>internet</i>: AOR = 1.36, CI = 1.03-1.79; <i>pub / bar</i>: AOR = 1.44, CI = 1.09-1.91).</p> <p>Alcohol advertising in magazines and over the internet was associated with alcohol consumption in the last 4 weeks among males aged 12-15 (<i>magazines</i>: AOR = 2.38, CI = 1.00-5.67; <i>internet</i>: AOR = 3.05, CI = 1.45-6.40). For females aged 12-15, alcohol advertisements in newspapers and bars / pubs was associated with drinking alcohol in the last 4 weeks (<i>newspapers</i>: AOR = 2.15, CI = 1.12-4.13; <i>bars / pubs</i>: AOR = 2.11, CI = 1.08-4.10).</p> <p>Again, for males aged 16-17, reported exposure to alcohol advertising on television was associated with reduced odds of drinking in the last 4 weeks (AOR = 0.12, CI = 0.02-0.82). There was no other significant association between alcohol consumption in the last 4 weeks and exposure to alcohol media of any type among females and males aged 16-17.</p>	<p>could depend on the amount of exposure to different forms of advertising.</p>	<p>For younger males, exposure to alcohol advertising through the internet and in magazines was associated with drinking in the last 12 months, and internet advertising was also associated with drinking in the last 4 weeks. Among older males, alcohol advertising at POS (bottleshops and pubs / bars) was significantly associated with drinking alcohol in the last 12 months.</p> <p>For younger females, alcohol advertisements in newspapers and in pubs / bars predicted consumption in the last 4 weeks. A relationship with advertising in pubs / bars is surprising given that the legal drinking age in Australia is 18 years old, however younger young people may still be exposed to advertising if entering a pub / bar with a responsible adult.</p> <p>As data is cross-sectional, it is difficult to determine whether exposure contributes to increased consumption or whether young people who already regularly consume alcohol are more likely to remember and recall advertisements.</p> <p>The authors acknowledge the growing need to regulate and monitor digital advertising, mirroring recommendations from Gordon et al (2010), a paper which is also included in this review. Only four papers in this systematic review examine the influence of digital marketing on young people's drinking behaviour.</p> <p>The authors also recommend stricter regulation of alcohol advertising in magazines with high youth readership.</p> <p>However, this is suggested without any acknowledgement as to why sheer exposure could be problematic, and no</p>
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						discussion of emotional responses to marketing, assuming a straightforward, linear relationship between exposure and drinking behaviour.
<p><i>Kinard. (2006). A comparison of advertising, social and cognitive predictors of adolescent and adult risk behaviours. Mississippi State University (dissertation).</i></p> <p><i>Kinard and Webster. (2010). The effects of advertising, social influences and self-efficacy on adolescent tobacco use and alcohol consumption. The Journal of Consumer Affairs, 44 (1) 24-43 (journal article).</i></p>	USA	<p>Opportunistic cross-sectional survey.</p> <p><b>Duration of study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> recalled exposure and attitudes to alcohol advertising in the last 30 days via broadcast and print media; parental / peer influence; self-efficacy.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> alcohol use (<i>no of drinks in the past month</i>).</p> <p><b>Measure(s) of analysis:</b> hierarchical regression analysis.</p> <p><b>Quality Assessment:</b> ***</p>	<p>Systematic sampling; towards the end of data collection, a quota technique was used to minimise bias.</p> <p><b>Age:</b> 13-19; (mean=16.3)</p> <p><b>Gender:</b> M=46% F=54%</p> <p><b>Ethnicity:</b> not reported</p> <p><b>SES:</b> measured by parental occupation and educational attainment; upper income households were under-represented.</p> <p>(n=89)</p>	<p>Advertising (beta = 0.06, p-value &lt;0.05), parental influence (beta = 0.22, p-value &lt;0.01), peer influence (beta = 0.26, p-value &lt;0.01) and self-efficacy (beta = 0.04, p-value &lt;0.05) all predicted alcohol consumption. However, advertising only remained a significant predictor of alcohol consumption when coupled with self-efficacy (beta = 0.03, p-value &lt;0.05).</p> <p>After controlling for other social cognitive variables, only parental and peer influence were significant predictors of alcohol consumption (<i>parental influence beyond advertising and peer influence:</i> beta = 0.07, p-value &lt;0.05; <i>parental influence beyond advertising and self-efficacy:</i> beta = 0.17, p-value &lt;0.01; <i>peer influence beyond advertising and parental influence:</i> beta = 0.18, p-value &lt;0.01; <i>peer influence beyond advertising and self-efficacy:</i> beta = 0.09, p-value &lt;0.05; <i>peer influence beyond parental influence and self-efficacy:</i> beta = 0.07, p-value &lt;0.05).</p> <p>After controlling for other social cognitive variables and demographics, only parental and peer influence were significant predictors of alcohol consumption (<i>parental influence beyond advertising, peer influence and self-efficacy:</i> beta = 0.15, p-value &lt;0.01; <i>peer influence beyond advertising, parental influence and self-efficacy:</i> beta = 0.20, p-value &lt;0.01).</p> <p>Peer influence (beta = 0.273, p-value &lt;0.01) was the strongest predictor of alcohol consumption followed by parental influence (beta = 0.208, p-value &lt;0.01). Advertising and self-efficacy alone did not significantly predict adolescent alcohol consumption.</p>	<p>Cross-sectional self-reported data; cannot determine causal path; opportunistic data collection may lead to exclusions and sample bias.</p> <p>Quota sampling is non-random and it is impossible to assess the possible sampling error. Thus, those who 'look most helpful' may be asked meaning that the method is not always entirely representative.</p> <p>Focuses on a slightly wider age range than expected for inclusion in this systematic review (aged 14-17).</p> <p>Upper income households were under-represented.</p> <p>Use of counter-biasing statements could have unintended adverse (and normalising) effects on adolescent risk behaviours.</p> <p>\$2 monetary reward for taking part could be deemed coercive.</p> <p>No discussion of study</p>	<p>Findings suggest that self-efficacy and advertising are important correlates of alcohol consumption but that their predictive power sharply declines when taking into account the explanatory power of peer and parental influence. Advertising explains only about 1% of unique variance across adolescent risk behaviours whereas parental and peer influence combined to account for 35% of unique variance in adolescent alcohol consumption.</p> <p>Aimed to examine relative influences on alcohol consumption and demonstrates that social and cognitive factors are interwoven rather than independent sources of influence. Environmental media is a secondary source of influence; and largely neutralised by interactive interpersonal communications with parents and peers.</p> <p>The authors suggests that public policy directed at eliminating all alcohol advertising may not prove to be effective in reducing prevalence; and programs designed to increase self-efficacy are currently ineffective. Instead, they conclude that interventions are needed which focus on an individual's entire external environment. Collaborative effort between the individual, advertising agencies and parental / peer figures is necessary to reduce risk behaviours.</p>

					limitations in the published journal article.	
<p><i>Lin et al (2012). Engagement with alcohol marketing and early brand allegiance in relation to early years of drinking. Addiction Research and Theory. 20(4) 329-338.</i></p>	New Zealand	<p>Cross-sectional analysis of baseline data collected as part of a longitudinal design; computer-assisted telephone survey; respondents recruited via random digit dialling or contacted via 29 schools in the Auckland region stratified by area (rural and urban).</p> <p><b>Duration of Study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> awareness of alcohol marketing across 15 marketing channels (<i>television / movies, large posters / billboards, in-store signs / posters, newspapers / magazines, merchandise items, special price offers, celebrity endorsement, unusual product design, sport sponsorship, music event sponsorship, television sponsorship, emails, websites, mobile / computer screensavers, social</i></p>	<p><b>Age:</b> 12-15 (more than 90% of the sample were aged 13-14 years).</p> <p><b>Gender:</b> Males=1302 (51.3%) Females=1236 (48.7%)</p> <p><b>SES:</b> no breakdown provided.</p> <p><b>Ethnicity:</b> no breakdown provided.</p> <p>(n=2538)</p>	<p>With the exception of TV sponsorship and alcohol marketing in TV or movies, drinkers showed significantly higher awareness of alcohol marketing when compared to non-drinkers (p-value &lt;0.001).</p> <p>One third (approximately 36%) of drinkers reported awareness of screen savers and social networking sites compared to approximately 16% of non-drinkers. Drinkers also showed significantly higher engagement in all forms of alcohol marketing studied than non drinkers (p-value &lt;0.001).</p> <p>Using a logistic regression model (after all marketing variables have been added), awareness of alcohol marketing in each channel studied increased the probability of drinking by 8% (OR = 1.08, CI = 1.03-1.13); young people who engaged with traditional marketing were 51% more likely to have drunk alcohol (OR = 1.51, CI = 1.19-1.93); young people who engaged with web-based marketing were 98% more likely to have drunk alcohol (OR = 1.98, CI = 1.22-3.24); young people who engaged in both traditional and web-based marketing were 125% more likely to have drunk alcohol (OR = 2.25, CI = 1.57-3.22); and having a favourite brand increased the odds of being a drinker by 354% (OR = 4.56, CI = 3.62-5.76). For non-drinkers, having a favourite brand of alcohol was the only marketing channel variable which significantly predicted young people's intention to drink in the next 12 months. Having a favourite brand of alcohol increased the odds of intending to drink in the next 12 months by 73% (OR = 1.73, CI = 1.18-2.53).</p> <p>Using a linear regression model (after all marketing variables have been added), engagement with both traditional and web-based alcohol marketing increased frequency of alcohol consumption by 34% and having a favourite brand of alcohol increased frequency of alcohol consumption by 65% (<i>traditional and web based:</i> OR = 1.34, CI = 1.08-1.66; <i>favourite brand:</i> OR = 1.65, CI = 1.41-1.92). Having a favourite brand of alcohol also increased drinking amount by 86% on a typical drinking occasion (OR = 1.86, CI = 1.57-2.21).</p>	<p>Cross-sectional self-reported data; cannot determine causal path.</p> <p>Difficult to determine whether exposure (categorised as awareness, appreciation and participation) can robustly measure the impact of marketing on behaviour.</p> <p>Assumes a simplistic, linear effect, and does not discuss emotional responses to marketing.</p> <p>Focuses on a slightly younger age range than expected for inclusion in this systematic review (aged 14-17).</p> <p>Other variables in the regression models were more significant / equally significant as those associated with alcohol marketing (such as perceptions of others' views and drinking by close friends and siblings).</p> <p>Makes no policy and practice recommendations.</p>	<p>Study design and findings are similar to Gordon et al (2010). This paper adds to the analysis provided by Gordon et al (2010) by examining the impact of brand allegiance as a marketing variable.</p> <p>Exposure to alcohol marketing (in terms of awareness and engagement) was significantly associated with being a drinker even after controlling for demographic and psycho-social variables. Awareness of marketing became non-significant after the introduction of engagement variables, which suggests that, once drinking is established, engagement in alcohol marketing is a more important factor than awareness.</p> <p>Establishment of a favourite brand at this age was a key marketing variable in this study, and strongly associated with the likelihood of being a drinker and intentions to drink in the next 12 months, as well as with patterns of drinking (volume and frequency).</p> <p>This paper included new digital media (and a vast number of ways that young people could participate and interact with industry) in analyses whereas most research typically focuses on conventional print and broadcast media. It also highlights the breadth of awareness and involvement that young people have with alcohol marketing.</p> <p>One of only four papers in this systematic review which examined the influence of digital marketing on young people's drinking behaviour.</p>

		<p>networking sites); engagement with alcohol marketing (free samples of alcohol products, free gifts showing alcohol brand logos, special price offers, promotional mail / email mentioning alcohol brands, ownership of alcohol branded items, looked at websites for alcohol brands, downloaded mobile phone or computer screensavers featuring alcohol brands, used social networking sites containing alcohol brands / logos); brand allegiance.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> alcohol use in the last 12 months; frequency of alcohol consumption; volume of alcohol consumption; future drinking intentions.</p> <p><b>Method(s) of analysis:</b> descriptive statistics, logistic regression models, linear regression models.</p> <p><b>Quality Appraisal:</b> ***</p>				<p>However, some other variables in the regression models were more or equally significant as those associated with alcohol marketing (such as perceptions of others' views and drinking by close friends and siblings).</p> <p>No critique is provided as to why sheer exposure could be problematic, and no discussion of emotional responses to marketing, assuming a straightforward, linear relationship between exposure and drinking behaviour.</p> <p>Further, despite strong findings, the paper makes no policy and practice recommendations, which is surprising and disappointing given the strong findings of the paper.</p>
<p>McClure, A.C. (2006). <i>Ownership of alcohol-branded merchandise</i></p>	USA	<p>School-based survey; followed up by telephone.</p>	<p>Young people who had not initiated alcohol use at</p>	<p>14.2% of the sample reported owning an ABM item at follow up; ownership was associated with age and gender. 8<sup>th</sup> graders were 1.7 times more likely to own an ABM item as 5<sup>th</sup> graders (CI = 1.1-2.6);</p>	<p>Reliance on self-report data; unable to determine causal path.</p>	<p>ABM ownership is associated with the initiation of alcohol use. ABM ownership may have a stronger relationship with the</p>

<p>and initiation of teen drinking. <i>Am J Prev Med.</i> 30(4) 277-283.</p>		<p><b>Duration of Study:</b> Average follow-up period: 17 months (range of 12-26 months).</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> ownership of alcohol-branded merchandise (ABM).</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> initiation of alcohol use.</p> <p><b>Method(s) of analysis:</b> adjusted odds ratios (for other variables in the table and clustering by schools); 95% confidence intervals.</p> <p><b>Quality Appraisal:</b> ****</p>	<p>baseline and could be re-contacted at follow up (n= 2,406).</p> <p><b>Age:</b> 10-14 at baseline</p> <p>5<sup>th</sup> grade = 249 6<sup>th</sup> grade = 702 7<sup>th</sup> grade = 779 8<sup>th</sup> grade = 676</p> <p><b>Gender:</b> m=1111 (46%) f=1295 (54%)</p> <p><b>Ethnicity:</b> primarily Caucasian (95%)</p> <p><b>SES:</b> measured using level of parent education; Neither or one completed high school = 383 (16%); Both completed high school = 2023 (84%)</p>	<p>and males were slightly more than twice as likely as females to own ABI (OR = 0.4, CI = 0.3-0.5).</p> <p>Controlling for other covariates, young people who owned an ABM item at follow-up were 1.5 times more likely to have initiated alcohol use than those who did not (CI = 1.1-2.0, p=&lt;0.001). Controlling for covariates, the relationship between ABM ownership and the early onset of alcohol use was significant for females only (OR = 3.33, CI = 1.7-6.3, p-value = 0.02).</p>	<p>Ownership of ABM was only assessed at follow-up, and the relationship between ABM ownership and adolescent drinking is cross-sectional.</p> <p>Opportunistic school-based data collection may lead to exclusions and sample bias. Focuses on a slightly younger age range than expected for inclusion in this systematic review (aged 14-17). As the sample was a young population, and had not initiated drinking at baseline, 'higher-risk' adolescents were excluded.</p> <p>Due to the age of the sample, only initiation of drinking was studied; and a relationship between ABM ownership and the development of binge / problem drinking could not be assessed.</p> <p>Due to wording of questionnaires, young people were asked only about initiation of drinking of which their parents were unaware. Parent alcohol use was also not controlled for, and how the young person acquired ABM was not determined.</p>	<p>initiation of alcohol use in girls. However, gender differences were not predicted by the authors a priori and should be interpreted with caution until replicated.</p> <p>Further longitudinal research is needed, where ABM ownership is assessed at baseline; and explores the relationship of ABM ownership with other drinking behaviours, such as binge drinking. The authors conclude that parents and schools should be urged to limit the ownership and display of these items among adolescents.</p> <p>However, this is suggested without any critical acknowledgement as to why ABM ownership could be problematic, and no discussion of emotional responses to marketing (except to indicate that where ABM is acquired could hold importance), assuming a straightforward, linear relationship between ownership and initiation of alcohol use.</p>
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					Some results are referred to in the body of the article but not presented in tables. P-values are also not displayed in tables, meaning the significance of other variables in comparison to ABM ownership cannot be critically appraised.	
<p>McClure, A.C. et al (2009) Alcohol-branded merchandise and its association with drinking attitudes and outcomes in US adolescents. Arch Pediatr Adolesc Med. 163(3) 211-217.</p>	USA	<p>3-wave longitudinal cohort study; data collected via a telephone survey.</p> <p><b>Duration of Study:</b> 24 months</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> ownership of ABM (first assessed at the 8-month survey).</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> initiation of drinking that parents did not know about; initiation of binge drinking.</p> <p><b>Method(s) of analysis:</b> panel and hazard logistic regression models; adjusted odds / hazard ratios reported.</p> <p><b>Quality Assessment:</b></p>	<p><b>Age:</b> 10-14 at baseline (mean: 12 years)</p> <p>10=1186 (18%) 11=1303 (20%) 12=1338 (21%) 13=1418 (22%) 14=1277 (20%)</p> <p><b>Gender:</b> Male=3350 (51%) Female=3172 (49%)</p> <p><b>Ethnicity:</b> White = 62% Black = 11% Hispanic = 19% Mixed race / other = 8%</p> <p><b>SES:</b> measured using level of parent education; Less than a high school degree (17%); High school degree only (23%); Post high school education but no degree (21%); associate degree (9%); bachelor's</p>	<p>Prevalence of ABM ownership ranged from 11% (at 8 months) to 20% (at 24 months). Older adolescents were more likely to report ABM ownership (OR = 1.41, CI = 1.01-1.98). At 24 months, 71% reported that the item was a gift from family or a friend.</p> <p>A number of social influences significantly predicted ABM ownership (susceptibility to alcohol use: OR = 1.94, CI = 1.52-2.49; exposure to movie alcohol: OR = 2.91, CI = 2.09-4.06; peer drinking: OR = 1.50, CI = 1.19-1.89; ability to access alcohol at home: OR = 2.10, CI = 1.56-2.85; extra-curricular activities: OR = 1.45, CI = 1.01-2.09).</p> <p>There appeared to be a reciprocal relationship between susceptibility to alcohol use and ABM ownership. Young people who owned ABM at 8 months were 1.66 times more likely to become susceptible to alcohol use by 16 months (HR = 1.66, CI = 1.15-2.40). However, non-ABM owners who were susceptible to alcohol use at 8 months were 1.41 times more likely to own ABM by 16 months (HR = 1.41, CI = 1.09-1.83).</p> <p>ABM ownership had a direct effect on trying alcohol and binge drinking initiation through lagged effects 16 to 24 months later (<i>trying alcohol and change in ABM ownership from 8 to 16 months:</i> HR = 2.31, CI = 1.60-3.35; <i>binge drinking initiation and change in ABM ownership from 8 to 16 months:</i> HR = 2.22, CI = 1.49-3.32).</p> <p>ABM ownership had a more immediate indirect effect on trying alcohol and binge drinking initiation (through increasing susceptibility to alcohol use) at 8 months (<i>trying alcohol:</i> HR = 2.43, CI = 1.84-3.20; <i>binge drinking initiation:</i> HR = 2.84, CI = 1.90-4.27).</p> <p>ABM ownership also had an indirect effect on trying alcohol and binge drinking 16 to 24 months later through lagged effects (<i>trying</i></p>	<p>Reliance on self-reported data; unobserved confounders cannot be ruled out.</p> <p>Focuses on a slightly younger age range than expected for inclusion in this systematic review (aged 14-17).</p> <p>By using telephone-based surveys, sectors without access to a telephone are under-represented.</p> <p>'Differential attrition', means 'high-risk' young people were more likely to be lost at follow-up. Although weights were used by the authors, the follow up sample may not be as representative as those at baseline.</p>	<p>Results demonstrated a prospective relationship between ABM ownership and initiation of alcohol use / binge drinking. This relationship is independent of a number of known social, personality and environmental risk factors for alcohol use.</p> <p>First study to examine the longitudinal relationship between ABM ownership, attitudinal susceptibility and measures of alcohol use in a multiple-wave study that includes binge drinking as an outcome.</p> <p>ABM ownership also had indirect effects by increasing susceptibility to alcohol use (in other words, acting as a prompt for more favourable attitudes) which, in turn, had a direct effect on drinking behaviour.</p> <p>The relationship between ABM ownership and susceptibility to alcohol use was reciprocal. This means that it is difficult to determine whether young people who drink are more likely to acquire ABM items or vice versa.</p> <p>As only one aspect of alcohol promotion (ABM ownership) was studied, the authors suggest that it is likely that the full impact of marketing influences has been underestimated.</p>

		****	degree (18%); education beyond a bachelor's degree (12%).  <b>Retention rate:</b> Baseline: 6,522 8 months: 5,503 16 months: 5,019 24 months: 4,575	<i>alcohol</i> : change in susceptibility to alcohol use from 8 to 16 months: HR = 3.54, CI = 2.56-4.89; susceptibility to alcohol use at 8 months: HR = 3.58, CI = 2.54-5.05; <i>binge drinking initiation</i> : change in susceptibility to alcohol use from 8 to 16 months: HR = 2.72, CI = 1.70-4.35; susceptibility to alcohol use at 8 months: HR = 2.99, CI = 1.84-4.85).		However, the paper offers no discussion of policy implications, other than to suggest that these results provide a basis for policies to restrict the scope of alcohol marketing practices. As most ABM items were acquired from family or friends it is difficult to see how adolescent ownership could be restricted, other than by implementing a ban on all ABM items.
<i>Morgenstern et al. (2011) Attitudes as Mediators of the Longitudinal Association Between Alcohol Advertising and Youth Drinking. Arch Pediatr Adolesc Med, 165(7), 610-616.</i>	Germany	School-based longitudinal survey with a 9-month interval.  <b>Duration of Study:</b> unknown  <b>Independent Variable(s) / Measure(s) of exposure:</b> exposure to alcohol and non-alcohol advertising at baseline with masked images of 17 commercial advertisements with all brand information digitally removed (contact frequency and brand recall).  <b>Dependent Variable(s) / Outcome measure(s):</b> current alcohol use; lifetime binge drinking.  <b>Method(s) of analysis:</b> descriptive statistics; linear path modelling  <b>Quality Assessment:</b>	29 public schools in 3 German states; students were non-drinkers at baseline.  <b>Age:</b> 11-17 at baseline (mean = 12.2); young people were sixth to eighth grade students.  11=548 (26%) 12=782 (37%) 13=582 (27%) 14-17=210 (10%)  <b>Gender:</b> Male=47% Female=53%  <b>Ethnicity:</b> breakdown not provided.  <b>SES:</b> 46% of students attended 'Gymnasium' schools which recruit students from a higher SES background; 54% attended other	Few students (n=45) reported not having seen any of the alcohol advertisements; 6% (n=126) reported seeing all of the advertisements at least once; and an average of 5 alcohol advertisements were seen.  The most frequently recalled alcohol brand was Jaegermeister, with 48% of students successfully recalling this brand.  Exposure to alcohol advertising at baseline was positively correlated with both onset of alcohol use and binge drinking initiation at follow up ( <i>alcohol use</i> : $r=.21$ , $p$ -value $<0.001$ ; <i>binge drinking</i> : $r=.14$ , $p$ -value $<0.001$ ).  Results from the linear path model demonstrate that alcohol advertising exposure had a significant direct effect on alcohol use at follow up (standardised beta = 0.061, $p$ -value $<0.01$ ).  Indirect effects of alcohol advertising are drawn from the variable 'changes in attitudes', which is statistically significant (standardised beta = 0.033, $p$ -value $<0.02$ ).  The size of the indirect effect suggests that approximately 35% of the total effect (standardised beta = 0.094) between alcohol advertising and alcohol use is mediated through an increase in positive alcohol-related attitudes.  An analysis for binge drinking revealed similar results with a significant indirect effect (standardised beta = 0.036, $p$ -value $<0.001$ ), which comprised 51% of the total effect of alcohol advertising on binge drinking (standardised beta = 0.070).	Potential for unobserved variables; cannot determine causal path; based on self-report data; opportunistic school-based data collection may lead to exclusions and sample bias.  Wider age range than focused on in this systematic review (aged 14-17)  Students were only followed up for 9 months. It is questionable whether a 9-month follow up constitutes a longitudinal study.  Did not use a representative sample of all broadcasted advertisements, affecting the ability to generalise to wider rates of advertising exposure.  Unclear whether a change in attitudes can	A direct and indirect effect (measured using the variable 'change in attitudes') of alcohol advertising on alcohol use and initiation of binge drinking was found among young people aged 11-17 who were non-drinkers at baseline.  The authors suggest that this builds on other work and represents the first study to identify a mental mechanism for alcohol advertising exposure using a longitudinal design.  The authors argue that positive attitudes towards alcohol were the most powerful predictor of alcohol use, and identify that it is content rather than exposure which is problematic.  However, students were only followed up for 9 months and only a short term effect could be demonstrated. Further, it is questionable whether the variable 'change in attitudes' can be robustly attributed to advertising rather than other psycho-social influences such as family and peers.  Finally, the authors recommend measures to reduce advertising exposure (via a ban) as well as intervention techniques that focus on the processing of advertising contents. However, policy and practice recommendations in the paper are very



		***	<p>school types with lower academic requirements and lower SES.</p> <p>(n=2130)</p>		<p>be robustly used to measure the indirect effects of advertising.</p> <p>Use of cued recall: adolescents with positive attitudes towards alcohol (for other reasons) might be more likely to remember an alcohol advertisement.</p> <p>Statistical modelling in the paper is very complex and difficult to interpret. More detail on the linear path model was needed, and how the beta value is calculated was not explained thoroughly.</p> <p>Policy and practice recommendations in the paper are very short.</p>	<p>short, and would have benefitted from being more extensive.</p>
<p><i>Pinkleton et al. (2001) The Relationship of Perceived Beer Ad and PSA Quality to High School Students' Alcohol-Related Beliefs and Behaviours. Journal of Broadcasting &amp; Electronic Media, 45 (4) 575-597</i></p>	USA	<p>School-based cross-sectional survey. Students (1) exposed to advertising and PSA messages and completed a free-recall test; (2) watched the advertising and PSA messages again and evaluated each clip based on 9 dimensions (3) took part in an interactive media literacy discussion with researchers.</p>	<p><b>Age:</b> 14-15 (9<sup>th</sup> grade) = 252 (44%) 17-18 (12<sup>th</sup> grade) = 326 (56%)</p> <p><b>Gender:</b> M=263 (46%) F=312 (54%)</p> <p><b>Ethnicity:</b> high representation of minorities, particularly Latino students.</p> <p>10% Asian (n=55);</p>	<p>Beer-themed items correlated positively with alcohol-related behaviour (<math>r=.45</math>, <math>p</math>-value <math>&lt;0.001</math>) while soda pop-themed items correlated negatively (<math>r=-.10</math>, <math>p</math>-value <math>&lt;0.05</math>).</p> <p>Students rated the production quality of alcohol advertising more positively than the production quality for alcohol-related PSA messages (<math>t=-9.31</math>, <math>p</math>-value <math>&lt;0.001</math>, <math>df = 577</math>). However, students rated the <i>content</i> of alcohol advertisements more negatively than the content of alcohol-related PSA messages (<math>t=42.81</math>, <math>p</math>-value <math>&lt;0.001</math>, <math>df=577</math>).</p> <p>Favourable affect towards the content of alcohol advertisements positively predicted alcohol behaviour (<math>\beta = .11</math>, <math>p</math>-value <math>&lt;0.05</math>), expectancies for alcohol use (<math>\beta = .38</math>, <math>p</math>-value <math>&lt;0.001</math>) and desirability of portrayals (<math>\beta = .13</math>, <math>p</math>-value <math>&lt;0.01</math>).</p> <p>Favourable affect towards the content of PSA messages positively</p>	<p>Cross-sectional self-reported data; cannot determine causal path; opportunistic school-based data collection may lead to exclusions and sample bias.</p> <p>Advertising and PSA messages were selected a priori; and there was an exclusive focus on video messages.</p> <p>No discussion focusing on the subsequent</p>	<p>Alcohol advertisements appeared to be more effective than PSA messages in explaining young people's attitudes and behaviours towards alcohol even while their content was rated less positively. However positively the content of PSA messages was rated, these ratings did not translate reliably into the targeted attitudinal and behavioural outcomes.</p> <p>Regression analysis confirmed that adolescents arrived at the decision to drink by way of a partially affective and partially logical series of interrelated beliefs. In other words, teenagers seemed to know that information in PSAs was more truthful, but wishful thinking</p>

		<p><b>Duration of Study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> exposure to alcohol advertising and PSA message clips.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> perceived realism, desirability and identification, alcohol expectancies, the pre-drinking behaviour index, alcohol-related behaviours (<i>no of products owned that display alcohol logos or products; preference for products with beer or soda pop logos; no of times in the past 6 months offered an alcoholic beverage; attended a party where alcohol was served; drank an alcoholic beverage; had 4+ drinks in a row; rode with a driver who had been drinking alcohol; got sick from drinking alcohol</i>).</p> <p><b>Method(s) of analysis:</b> correlation analysis; t-tests; multiple regression analysis</p> <p><b>Quality Assessment:</b></p>	<p>2% African-American (n=11); 34% Caucasian (n=197); 45% Latino (n=258); 1% Native American (n=6).</p> <p><b>SES:</b> On average, respondents identified themselves as 'middle income' and their parent's education level as having 'some college education without a bachelor's degree'. (n=578)</p>	<p>predicted desirability of / identification with portrayals (<i>desirability:</i> beta = .12, p-value &lt;0.01; <i>identification:</i> beta = .12, p-value &lt;0.01) and negatively predicted expectancies for alcohol use and alcohol behaviour (<i>expectancies:</i> beta = -.10, p-value &lt;0.05; <i>behaviour:</i> beta = -.09, p-value &lt;0.05).</p> <p>Positive evaluations of the production quality of alcohol advertisements positively predicted perceived realism, identification with portrayals and pre-drinking behaviour (<i>perceived realism:</i> beta = .22, p-value &lt;0.001; <i>identification:</i> beta = .23, p-value &lt;0.001; <i>pre-drinking behaviour:</i> beta = .20, p-value &lt;0.001). Positive evaluations of the production quality of PSA messages negatively predicted desirability of portrayals only (beta = -.16, p-value &lt;0.001).</p>	<p>interactive media literacy session.</p> <p>Not all of the statistical data included in the body of the paper is represented in the tables included.</p> <p>Regression analysis does not break down into individual alcohol-related behaviours; and the level of explained variance is not presented in the regression model. Use of standardised coefficients can be misleading - a change of one standard deviation in one variable has no reason to be equivalent to a similar change in another. Nevertheless, standardising variables does not affect whether or not the coefficients are significant.</p> <p>How the beta value is calculated is not explained thoroughly, therefore it is unclear as to what a change in 'one unit' would constitute.</p>	<p>outweighed logical processing.</p> <p>The authors suggest that ratings of message production are more strongly associated with early decision-making stages. Message content seems to matter more at later stages of decision-making. This indicates that the logical content of PSAs comes too late in the decision-making process. Instead, decision-making is more susceptible to the influence of production techniques.</p> <p>It is difficult for a logical PSA packaged without appealing production techniques to compete with an appealing but less logical commercial message. Health campaigns must acknowledge the real benefits, physiological and psychosocial, gained from otherwise unhealthy behaviours. Alcohol advertisements tap into real-life observations and experiences; and have emotional appeal. This is especially important for health campaigns often advocating inconvenient, difficult or unpopular behaviour changes.</p> <p>Practitioners should not rely on PSAs alone. Campaigns must incorporate the interrelationships of parents, peers, norms, and other influences along with young people's needs, skills and existing attitudes and behaviours. However, the authors do not suggest a ban or tighter restrictions on alcohol advertising or discuss this as a possibility in any critical way which is surprising and disappointing given the strong findings of the paper.</p>
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<i>Saffer, H. and Dave, D. (2006) Alcohol advertising and alcohol consumption by adolescents. Health Economics. 15:617-637.</i>	USA	<p>Two cross-sectional data sets (MTF and NLSY) augmented with advertising, price and cost-of-living data from the 75 largest US DMAs (Designated Marketing Areas).</p> <p><b>Duration of Study:</b> MTF: 1996 and 1998 survey data (2 years); NLF: 1997 and 1998 panels of the survey (2 years).</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> per capita equivalent mean units of beer, wine and spirits advertising on spot television, spot radio, outdoors, newspapers, and magazines and liquor advertising outdoors, in newspapers, and magazines in the respondent's city of residence.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> decision to drink (<i>past month participation, past year participation and binge drinking</i>).</p> <p><b>Method(s) of analysis:</b> Panel regression techniques.</p>	<p><b>MTF:</b> <b>Age:</b> 8<sup>th</sup> grade (13-14) 10<sup>th</sup> grade (15-16) 12<sup>th</sup> grade (17-18) Weighted mean = 15.731  (n=&gt;63,000)</p> <p><b>Gender:</b> m=48% f = 52%</p> <p><b>Ethnicity:</b> White = 64.45% Black = 11.09% Hispanic = 10.68% Other = 13.78%</p> <p><b>NLF:</b> <b>Age:</b> 12-16  Weighted mean = 15.1186  (n=10,000)</p> <p><b>Gender:</b> m = 51.35% f = 48.65%</p> <p><b>Ethnicity:</b> White = 58.06% Black = 16.23% Hispanic =12.82% Other = 12.89%</p>	<p>Based on the full MTF data set, for each 1 unit increase in advertising exposure, annual participation increased by 13% (0.1322, Z score = 4.53); monthly participation by 11% (0.1121, Z score = 4.00); and binge participation by 7% (0.0679, Z score = 2.99). Both males and females were responsive to advertising but effects were much larger for females. Male annual participation was the only drinking behaviour significantly affected. For each 1 unit increase in advertising exposure, annual participation increased by 11% (0.1056, Z score = 2.26). For females, with each 1 unit increase in advertising exposure, annual participation increased by 15% (0.1479, Z score = 3.93); monthly participation by 16% (0.1559, Z score = 4.39); and binge participation by 6% (0.0632, Z score = 2.30).</p> <p>For white young people, with each 1 unit increase in advertising exposure, annual participation increased by 12% (0.1245, Z score = 3.72); monthly participation by 10% (0.1002, Z score = 3.01); and binge participation by 6% (0.0581, Z score = 2.07). However, no measure of black young people's alcohol use was responsive to advertising.</p> <p>Based on the full NLSY data set, advertising exposure was significant in two out of four regressions exploring past month alcohol participation (specification 2: 0.1627, Z score = 2.12; specification 3: 0.2463, Z score = 2.19); and two out of four regressions exploring past month binge participation (specification 1: 0.0809, Z score = 2.12; specification 2: 0.1441, Z score = 2.80). In other words, for each 1 unit increase in advertising, past month alcohol participation increased by between 16 and 25%; and past month binge participation increased by between 8 and 14%.</p> <p>Across the full MTF sample, annual participation advertising elasticity was 0.0173, past month participation advertising elasticity was 0.0238 and binge participation advertising elasticity was 0.0265. Thus, a 1% increase in advertising would increase annual participation by 0.017% (0.0173, SE = 0.0038); monthly participation by 0.024% (0.0238, SE = 0.0059) and binge participation by 0.027% (0.0265, SE = 0.0089). This means that, a 10% increase in advertising could increase annual participation by 0.17%; monthly participation by 0.24% and binge participation by 0.27%.</p> <p>Again, females and white young people were more responsive to alcohol advertising. For females, a 1% increase in alcohol advertising would increase annual participation by 0.02% (0.0195, SE = 0.0050); monthly participation by 0.035% (0.0348, SE = 0.0079) and binge</p>	<p>Complex, technical paper, which is not always broken down into clear findings. Cross-sectional self-reported data; cannot determine causal path.</p> <p>Wider age range than focused on in this systematic review (aged 14-17)</p> <p>Paper includes no clear discussion of study limitations.</p> <p>Based on US data - findings may not be generalisable to a UK setting.</p> <p>A weighted mean average advertising exposure measure is used. However, it is unclear from the paper what constitutes a '1 unit' or '1%' increase in advertising. Analysis using a clear mean unit measurement would be beneficial.</p>	<p>Alcohol advertising has a positive, but modest, effect on annual, monthly and binge alcohol participation. Blacks and males are less responsive to advertising than whites and females respectively. Based on NLSY data, controlling for heterogeneity increased the effects of advertising. This suggests that results from the MTF may understate the true effect of alcohol advertising. However, gender and racial differences are most likely unaffected by the lack of control for heterogeneity in the MTF.</p> <p>Based on a simulation approach (which assumes the use of alternative media outlets, such as sponsorship and product placement, would not increase as a result of a traditional media ban), a 28% reduction in total advertising would reduce monthly alcohol participation from about 25% to between 24 and 21%. Binge participation would also fall from about 12% to between 11 and 8%.</p> <p>Elimination of all alcohol advertising (with restrictions on additional expenditure on other marketing techniques) or elimination of all forms of alcohol marketing would result in further decreases in monthly and binge alcohol participation among adolescents.</p> <p>However, this is suggested without any acknowledgement as to why sheer exposure could be problematic, and no discussion of emotional responses to marketing, assuming a straightforward, linear relationship between exposure and drinking behaviour.</p>

		<b>Quality Assessment:</b> ***		<p>participation by 0.03% (0.0280, SE = 0.0122). For males, a 1% increase in alcohol advertising would increase annual participation by 0.014% (0.0136, SE = 0.0060) and binge participation by 0.021% (0.0213, SE = 0.0132). There is no significant relationship between an increase in advertising and past month participation by males. A 1% increase in advertising would increase white young people's annual participation by 0.02% (0.0165, SE = 0.0044); monthly participation by 0.02% (0.0207, SE = 0.0069); and binge participation by 0.021% (0.0213, SE = 0.0103). There is no significant relationship between an increase in advertising and annual, monthly or binge participation by black young people.</p> <p>Across the full NLSY sample, past month participation advertising elasticity was 0.0341 (SE = 0.0191) in the limited specification; 0.0875 (SE = 0.0414) in the extended specification; 0.0850 (SE = 0.0388) in the state fixed effects specification; and 0.1161 (SE = 0.0655) in the individual fixed effects specification. A 1% increase in advertising would increase past month participation between 0.03 and 0.12%. Thus, a 10% increase in advertising could increase past month participation between 0.34% and 1.16%.</p> <p>Across the full NLSY sample, past month binge advertising elasticity was 0.0650 (SE = 0.0307) in the limited specification; 0.2557 (SE = 0.0730) in the extended specification; 0.1722 (SE = 0.0615) in the state fixed effects specification; and 0.2161 (SE = 0.1025) in the individual fixed effects specification. A 1% increase in advertising would increase past month binge participation between 0.07 and 0.26%. Thus, a 10% increase in advertising could increase past month binge participation between 0.65 and 2.6%.</p>		
<i>Snyder et al. (2006). Effects of Alcohol Advertising Exposure on Drinking Among Youth. Arch Pediatr Med, 160 18-24.</i>	USA	<p>Longitudinal panel telephone survey; augmented with data on alcohol advertising expenditures and alcohol sales data per capita.</p> <p><b>Duration of Study:</b> April 1999 to February 2001. Individuals interviewed 4 times over 21 months.</p> <p><b>Independent</b></p>	<p>Individuals randomly sampled from households in 24 US media markets; markets systematically selected from the top 75 media markets.</p> <p><b>Age:</b> 15-26</p> <p>15-21: 60.0% (baseline) &lt;18: 27.0%</p>	<p>Across the entire sample, alcohol advertising exposure was positively related to an increase in drinking. Individuals who saw 1 more alcohol advertisement (on average) than other individuals had 1% more alcoholic drinks per month (event rate ratio = 1.01, CI = 1.01-1.02).</p> <p>Within-individual variation in advertising exposure was not a statistically significant factor in drinking so whether a young person saw more or fewer advertisements in a particular month than he or she typically saw was not as important as average level of exposure over time.</p> <p>For every additional dollar per capita spent on alcohol advertising individuals consumed 3% more alcoholic beverages per month (event rate ratio = 1.03, CI = 1.01-1.05).</p>	<p>Wider age range than focused on in this systematic review (aged 14-17)</p> <p>Some reliance on self-report data. High sample attrition; those who drank more at baseline were more likely to drop out.</p> <p>Industry data used to measure advertising exposure largely</p>	<p>The amount of advertising recalled and level of advertising expenditure related to greater youth drinking. Underage youth displayed a similar pattern of effects as the entire age range sampled. Youth who lived in markets with more advertising drank more, increased their drinking levels more over time, and continued to increase drinking levels into their late 20s. Youth who lived in markets with less advertising drank less and showed a pattern of increasing their drinking modestly until their early 20s, when their drinking levels started to decline. Findings are consistent with theories of</p>

		<p><b>Variable(s) / Measure(s) of exposure:</b> market alcohol advertising expenditures per capita (<i>for television, radio, magazines and billboards / outdoor advertising</i>); alcohol sales per capita; self-reported alcohol advertising exposure in the past month (<i>via television, radio, magazines and billboards</i>); demographics.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> self-reported number of alcoholic drinks consumed in the past month (<i>frequency; average / maximum quantity</i>).</p> <p><b>Method(s) of analysis:</b> hierarchical linear regression model.</p> <p><b>Quality Assessment:</b> ****</p>	<p>18 (&lt;21): 25.0% 21 (&lt;23): 16.0% 23-26: 32.0%</p> <p>Analysis was repeated for a subset of the sample (under the age of 21).</p> <p><b>Gender:</b> M=51.2% F=48.8%</p> <p><b>Ethnicity:</b> Hispanic = 8.2% Black = 11.4% White = 69.9%</p> <p><b>SES (Education, Baseline):</b> In high school: 28% In college: 31% Not in school: 41%</p> <p>Wave 1 (n=1872) Wave 2 (n=1173) Wave 3 (n=787) Wave 4 (n=588)</p>	<p>In 15-21 year olds, similar results were found. Drinking was greater among underage youth reporting higher mean levels of alcohol advertising exposure. Each additional average alcohol advertisement exposure was associated with an increase of 1% in drinks consumed in the past month (event rate ratio = 1.01, CI = 1.001-1.021).</p> <p>Drinking levels were also higher among 15-21 year olds living in markets with greater per capita alcohol advertising expenditures. For every additional dollar per capita spent on alcohol advertising individuals consumed 3% more alcoholic beverages per month (event rate ratio = 1.03, CI =1.00-1.06).</p> <p>A 3-way interaction effect occurred in both samples among time, age and market advertising expenditures. Therefore, greater alcohol advertising expenditures in a market were also related to steeper increases in drinking over time.</p>	<p>reflected the most expensive medium for advertising (television).</p> <p>During this period, data on outdoor advertising was spotty and may have been incomplete in some markets.</p> <p>May be variation in the national advertising expenditures in markets, through differences in cable systems and presence of national stations or programming, which were not measured. Other forms of marketing were not included (such as product placements, promotions, sports sponsorship, digital media)</p> <p>Did not control for the effects of peer or parental influences.</p> <p>Also fails to explain the process by which advertising affects youth or make any policy / practice recommendations.</p>	<p>cumulative effects. In other words, young people reporting greater amounts of exposure over the long term drank more than young people who saw fewer advertisements. Thus, alcohol consumption was more sensitive to long term differences (rather than short term differences) in advertising exposure.</p> <p>Results contradict the argument that a correlation between advertising exposure and drinking could be caused entirely by selective attention on the part of drinkers. Results also contradict claims that advertising is unrelated to youth drinking amounts; only affects those over the legal drinking age; only impacts on brand switching and are effectively countered by current educational efforts. The authors suggest that the impact of alcohol advertng may even be underestimated with television, radio and billboards only representing approximately one-fifth of expenditure.</p> <p>However, the study did not control for the effects of peer or parental influences; and fails to explain the process by which advertising affects youth or make any policy / practice recommendations. In other words, there is no acknowledgement as to why sheer exposure / expenditure could be problematic, and no discussion of emotional responses to marketing.</p> <p>Further, the authors do not suggest a ban or tighter restrictions on alcohol advertising / expenditure or discuss this as a possibility in any critical way which is surprising and disappointing given the strong findings of the paper.</p>
Stoolmiller et al (2012). Comparing	USA	3-wave longitudinal cohort study; data	<b>Age:</b> 10-14 at baseline	Young people who reported ownership of ABM at T2 (8 months) were 1.44 times more likely to have initiated drinking at T4 (24	Reliance on self-reported data;	Receptivity to alcohol marketing (measured as ABM ownership) predicted

<p><i>media and family predictors of alcohol use: a cohort study of US adolescents. BMJ Open. 1-9.</i></p> <p>* Data taken from the same overall study as McClure et al (2009) but presents a slightly different statistical analysis.</p>		<p>collected via a telephone survey.</p> <p><b>Duration of Study:</b> 24 months</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> receptivity to alcohol marketing, measured as ownership of ABM (first assessed at the 8-month survey).</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> initiation of drinking that parents did not know about; initiation of binge drinking.</p> <p><b>Method(s) of analysis:</b> panel and hazard logistic regression models; adjusted odds / hazard ratios reported.</p> <p><b>Quality Assessment:</b> ****</p>	<p>(mean: 12 years)</p> <p>10=1186 (18%) 11=1303 (20%) 12=1338 (21%) 13=1418 (22%) 14=1277 (20%)</p> <p><b>Gender:</b> Male=3350 (51%) Female=3172 (49%)</p> <p><b>Ethnicity:</b> White = 62% Black = 11% Hispanic = 19% Mixed race / other = 8%</p> <p><b>SES:</b> measured using level of parent education; Less than a high school degree (17%); High school degree only (23%); Post high school education but no degree (21%); associate degree (9%); bachelor's degree (18%); education beyond a bachelor's degree (12%).</p> <p><b>Retention rate:</b> Baseline: 6,522 8 months: 5,503 16 months: 5,019 24 months: 4,575</p>	<p>months) (AHR = 1.44 CI = 1.19-1.74), a relationship which was statistically significant.</p> <p>However, four other variables had an AHR of over '2' and were more significantly associated with initiation of drinking by 24 months than ABM ownership: peer alcohol use (AHR = 2.88, CI = 2.35-3.53), age (AHR = 2.24, CI = 1.81-2.77), movie alcohol exposure (AHR = 2.13, CI = 1.76-2.57) and sensation seeking (AHR = 2.08, CI = 1.67-2.59).</p> <p>Young people who reported ABM ownership at T2 (8 months) were also 1.24 times more likely to initiate binge drinking at T4 (24 months) (AHR = 1.24, CI = 1.00-1.54).</p> <p>Again, two other variables had an AHR of over '2' and were more significantly associated with initiation of binge drinking by 24 months than ABM ownership: peer alcohol use (AHR = 2.80, CI = 2.10-3.74) and white race (AHR = 2.40, CI = 1.62-3.56).</p>	<p>unobserved confounders cannot be ruled out.</p> <p>Focuses on a slightly younger age range than expected for inclusion in this systematic review (aged 14-17). By using telephone-based surveys, sectors without access to a telephone are under-represented, and the response rate for this study is described by the authors as 'moderate'.</p> <p>'Differential attrition', means 'high-risk' young people were more likely to be lost at follow-up. Although weights were used by the authors, the follow up sample may not be as representative as those at baseline.</p> <p>Use of ABM ownership as the only marker of industry-driven marketing fails to capture television or internet alcohol advertising exposure.</p>	<p>both initiation of drinking and progression to binge drinking amongst young people aged 10-14 at baseline.</p> <p>The authors suggest that ABM ownership furthers the modelling of alcohol in positive situations, as does movie alcohol exposure (MAE), which, when controlling for multiple covariates, accounted for 28% of drinking initiation in this study.</p> <p>They also argue that wearing ABM engages a young person in the actual marketing campaign, as this adolescent is seen by others as an endorsement of the brand.</p> <p>As per McClure et al (2006; 2009), the authors conclude that parents should be urged not to allow ABM in their homes. However, it is unclear how this could be managed or legislated, and no discussion is provided of emotional responses to marketing, assuming a straightforward, linear relationship between ownership and initiation of alcohol use.</p> <p>No further legislation regarding ABM is suggested; whereas it is implied that alcohol product placement in films should be banned.</p>
<p><i>Tanski et al. (2011) Alcohol Brand Preference and Binge Drinking Among</i></p>	<p>USA</p>	<p>Cross-sectional data; part of a larger, earlier longitudinal telephone survey of US</p>	<p><b>Age:</b> 16-20</p> <p><b>Gender:</b> Female: 852 (49%)</p>	<p>Just over two thirds (68%) of ever drinkers (71% males, 65% females) endorsed a favourite alcohol brand to drink, naming 158 brands in total.</p>	<p>Cross-sectional self-reported data; cannot determine causal path.</p>	<p>Concentrated forms of alcohol (such as spirits) are among the alcohol brands young people currently aspire to consume. Distilled spirits brands were as</p>

<p>Adolescents. Arch Pediatr Adolesc Med. 165(7) 675-676.</p>		<p>adolescents and media use (see Dal Cin et al., 2009; Stoolmiller et al., 2011)</p> <p><b>Duration of Study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> self-reported favourite alcohol brand; annual advertising expenditures for alcohol brands in all media for 95 named alcohol brands.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> ever drinking, binge drinking in the last 30 days</p> <p><b>Method(s) of analysis:</b> descriptive statistics</p> <p><b>Quality Assessment:</b> ***</p>	<p>Male 882 (51%)</p> <p><b>SES:</b> breakdown unknown; adolescents from all regions of the US were represented.</p> <p>(n=1734)</p>	<p>The most common brands chosen by underage females and males were Smirnoff, Budweiser and Coors (females: Smirnoff: 15.3% (n=130), Budweiser: 6.0% (n=51); males: Budweiser: 13.0% (n=115), Smirnoff: 4.8% (n=42), Coors: 4.8% (n=42)).</p> <p>Binge drinking rates among young people identifying a favourite brand was higher than amongst those with no favourite brand (<i>no favourite brand</i>: 0.11, CI = 0.08-0.14 <i>favourite brand</i>: 0.28 to 0.71). There was a significant correlation between underage drinkers' brand preferences and marketing expenditures (0.64 p&lt;0.001).</p>	<p>By using telephone-based surveys, sectors without access to a telephone are under-represented.</p> <p>Wider age range than focused on in this systematic review (aged 14-17)</p> <p>Authors do not distinguish among products 'within brand'.</p> <p>Article is a 'research letter' and does not discuss the sample, methods or results in any great depth.</p> <p>Data discussed in the article is not fully presented in the included table.</p> <p>The results section is difficult for the reader to interpret as it is not easy to differentiate between results for 'ever' drinkers and 'binge' drinkers.</p> <p>Article does not explain the nature of all included statistics; confidence interval is not presented for rates of binge drinking amongst those who named a favourite brand.</p>	<p>likely to be associated with binge drinking as beer brands, but a choice of wine or cider was not.</p> <p>A correlation between brand preference and marketing expenditure suggests a marketing influence on choice of beverage, coinciding with findings from Snyder et al (2006). Further, higher rates of binge drinking among young people who named a favourite brand indicate that alcohol advertising may influence the likelihood that alcohol will be consumed at levels that pose a risk to health.</p> <p>The authors recommend that more effective means are needed to reduce youth exposure to alcohol advertising. However, this is suggested without any acknowledgement as to why or how young people come to favour particular alcohol brands, and no critical discussion of emotional responses to marketing, instead assuming a straightforward, linear relationship between marketing and drinking behaviour.</p>
<p>Unger, J.B. et al (2003). Alcohol</p>	<p>USA</p>	<p>Cross-sectional school-based survey</p>	<p><b>Age:</b> 12-19 (m=14.3 years)</p>	<p>Media receptivity was associated with a greater risk of lifetime alcohol use (OR = 1.27, CI = 1.01-1.59) and lifetime drunkenness (OR</p>	<p>Cross-sectional self-reported data; cannot</p>	<p>Adolescent alcohol use was associated significantly with liking alcohol</p>

<p><i>advertising exposure and adolescent alcohol use: a comparison of exposure measures. Addiction Research and Theory. 11(3) 177-193.</i></p>		<p>of 8<sup>th</sup> and 10<sup>th</sup> grade classes in 3 high schools and 5 middle schools.</p> <p><b>Duration of Study:</b> unknown</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> exposure to alcohol advertising (<i>general TV viewing; TV sporting events; self-reported frequency of exposure to alcohol advertisements; cued recall; media receptivity measures; recall of beer brands; liking of alcohol advertisements</i>).</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> susceptibility to alcohol use; lifetime alcohol use; lifetime drunkenness; 30-day alcohol use; 30-day drunkenness.</p> <p><b>Method(s) of analysis:</b> correlation analysis; logistic regression analysis.</p> <p><b>Quality Assessment:</b> ***</p>	<p>12-13 = 218 (37%) 14-15 = 268 (45%) 16-19 = 105 (18%)</p> <p><b>Gender:</b> M=298 (50%) F= 293 (50%)</p> <p><b>Ethnicity:</b> Latino / Hispanic = 298 (50%); Asian / Pacific Islander = 132 (22%); White = 58 (10%); African American = 10 (2%); Other = 93 (16%).</p> <p><b>SES:</b> not reported.  (n=591)</p>	<p>= 1.52, CI = 1.16-1.99); as well as 30-day alcohol use and 30-day drunkenness. In other words, being more receptive to (and thus aware of) alcohol brands increased the odds of having already drunk alcohol by 27% and having already been drunk by 52%.</p> <p>Recall of brand names was associated with a greater risk of susceptibility to alcohol use (OR = 1.13, CI = 1.02-1.25) and lifetime drunkenness (OR = 1.09, CI = 1.01-1.18) as well as 30-day alcohol use. In other words, the ability to recall alcohol brand names increased the odds of intending to drink alcohol by 13% and of having already been drunk by 9%.</p> <p>Liking of alcohol advertisements was associated with a greater risk of all 5 alcohol outcomes (<i>susceptibility</i>: OR = 4.29, CI = 2.52-7.30; <i>lifetime alcohol use</i>: OR = 3.21, CI = 2.17-4.74; <i>lifetime drunkenness</i>: OR = 3.00, CI = 2.09-4.30). In other words, liking alcohol advertisements increased the odds of intending to drink alcohol by 329%, of having already drunk alcohol by 221% and having already been drunk by 200%.</p> <p>Cued recall of product type was also associated with a lower risk of 30-day drunkenness. Further, after controlling for the other advertising exposure measures, general TV viewing, TV sports event viewing, self-reported frequency of advertising exposure and cued recall of brand name were not associated with any of the alcohol use outcome variables.</p>	<p>determine causal path; opportunistic school-based data collection may lead to exclusions and sample bias.</p> <p>Wider age range than focused on in this systematic review (aged 14-17)</p> <p>Tabular data reports on only 3 out of 5 alcohol outcomes; cannot see data for the 30-day measures discussed as significant in the body of the paper making it difficult to interpret p-values, ORs and CIs.</p> <p>Difficult to determine whether exposure measures used can robustly measure the impact of marketing on behaviour.</p> <p>The media receptivity scale was only used partially; items pertaining to the ownership and willingness to use promotional items were not assessed.</p> <p>Analysis did not control for previous drinking behaviour which might affect the ability of respondents to recall advertisements and express brand preferences.</p>	<p>advertisements, recall of brand names and media receptivity. However, after controlling for specific cognitive and affective measures, more general measures of the opportunity to view alcohol advertisements, such as general TV viewing and sporting event viewing, were not associated with alcohol use.</p> <p>Items measuring preference of alcohol advertisements were associated with lifetime and recent alcohol use. Further, unaided recall of brand names was associated significantly with alcohol use intentions and behaviour; whereas cued recall measures were not strongly associated with alcohol use.</p> <p>This suggests that the act of forming a favourable emotional response to alcohol advertising might be a crucial step in the process of adolescent experimentation with alcohol. Over time, multiple exposures to pro-alcohol messages might generate more favourable emotional reactions which, in turn, may increase the risk of alcohol use.</p> <p>Studies are more likely to find significant associations between advertising exposure and alcohol use by incorporating cognitive and affective measures of advertising exposure. In comparison, studies that use more distal proxy measures of exposure, such as amount of TV viewing, may have lower power to detect associations. In order to do so, longitudinal work is required.</p> <p>The authors recommend media literacy education and anti-alcohol media campaigns. They also briefly mention minimising opportunities for exposure but do not elaborate on how this should be done. They do not suggest a ban or tighter</p>
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					No detailed or critical discussion of policy implications in the paper.	restrictions on alcohol advertising / expenditure or discuss this in any critical way which is surprising and disappointing given the strong findings of the paper.
<i>Workman, J.E. (2003). Alcohol promotional clothing items and alcohol use by underage consumers. Family and Consumer Sciences Research Journal. 31(3) 331-354.</i>	USA	<p>Cross-sectional school-based survey.</p> <p><b>Duration of Study:</b> December 2000 to February 2001 (2 months).</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> awareness, exposure and ownership of Alcohol Promotional Clothing Items (APCIs); parental provision of APCIs.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> alcohol use status (<i>drinking volume, frequency and intention to drink again</i>); perceived parental approval of drinking.</p> <p><b>Method(s) of analysis:</b> descriptive statistics, t tests and chi-square tests.</p> <p><b>Quality Assessment:</b> ****</p>	<p><b>Age:</b> 12-18 (m = 14.79)</p> <p><b>Gender:</b> F=154 M=106 (2 missing data on gender)</p> <p><b>Ethnicity:</b> Caucasian = 205 Black = 36 Other = 21 (n=262)</p> <p><b>SES:</b> self-reported, ranging from 1 (lower-lower) to 9 (upper-upper); mean = 5 (middle-middle).</p>	<p>Young people who reported seeing an APCI were more likely to have consumed 21-100 or 100+ drinks in their life (so far) compared to those who did not report seeing an APCI (<i>21-100</i>: n=28, 20.9% versus n=15, 11.7%; <i>100+</i>: n=28, 20.9% versus n=3, 2.3%).</p> <p>Young people who reported seeing an APCI were more likely to drink at least once per week (but not every day) or 'sometimes' (less than once per week) compared to those who did not report seeing an APCI (<i>at least once per week</i>: n=17, 12.7% versus n=6, 4.7%; <i>sometimes</i>: n=44, 32.8% versus n=23, 18.1%).</p> <p>There was an increase in the % of students who owned APCIs according to alcohol use status (<i>established drinkers</i>: n=26, 83.9%; <i>susceptible experimental drinkers</i>: n=46, 36.2%; <i>susceptible non-drinkers</i>: n=3, 33.3%; <i>non-susceptible experimental drinkers</i>: n=11, 28.9%; <i>non-susceptible non-drinkers</i>: n=10, 17.5%).</p> <p>Young people who owned APCIs were more likely to drink at least once per week (but not every day) and 'sometimes' (less than once per week) compared to non-owners (<i>at least once per week</i>: n=16, 16.8% versus n=7, 4.2%; <i>sometimes</i>: n=36, 37.9% versus n=31, 18.7%). Non-owners were more likely to have never tried an alcoholic beverage or be occasional drinkers only (<i>never tried</i>: n=59, 35.5% versus n=13, 13.7%; <i>occasional</i>: n=65, 39.2% versus n=23, 24.2%).</p> <p>Young people who owned APCIs were more likely to indicate that they would drink again compared to non-owners (<math>X^2</math> likelihood ratio (4df) = 22.36, p-value &lt;0.001, n=60, 62.5% versus n=55, 33.3%). Further, non-owners were more likely to indicate that they do not drink and never will compared to owners of APCIs (n=48, 29.1% versus n=13, 13.5%).</p> <p>Young people who received an APCI from parents were more likely to perceive that their parents approved of them drinking compared to those who had not received an APCI from their parents (<math>X^2</math> likelihood ratio (1df) = 12.65, p-value = &lt;0.004, n=10, 33.3% versus n=19, 8.2%).</p>	<p>Cross-sectional self-reported data; cannot determine causal path. Opportunistic school-based data collection may lead to exclusions and sample bias.</p> <p>Wider age range than focused on in this systematic review (aged 14-17)</p> <p>Provision of a gift voucher for participation could be deemed coercive.</p> <p>Results are not tabulated and are difficult to interpret from the main body of the text.</p> <p>The use of descriptive statistics can only, by definition, describe what is seen in an existing dataset; and cannot be used to predict trends or significant relationships. In order to do so, more sophisticated regression models are needed.</p>	<p>Results from this study demonstrate a relationship between <i>awareness</i> and <i>ownership</i> of APCIs and alcohol use (in terms of volume, frequency and future drinking intentions).</p> <p>The authors conclude that efforts should be aimed at reducing the appeal of APCIs and reducing young people's exposure to APCIs, suggesting that an outright ban would be effective in restricting the influence of APCIs on adolescents. Although APCIs are just one of many cultural factors, they are modifiable.</p> <p>If not an outright ban, then advice / education is suggested to reduce the appeal of APCIs, which would need to begin as early as elementary school (aged 5-12). However, these responses are suggested without any critical discussion of emotional responses to marketing, assuming an almost straightforward, linear relationship between ownership and alcohol use.</p> <p>Further, the authors also identify that parents were the primary source of APCIs and that supervisory adults appeared relatively insensitive to the visibility of APCIs. This indicates that education of young people alone will not eradicate the ubiquity or appeal of APCIs or wider alcohol marketing techniques.</p>
<i>Zogg. (2004). Adolescent exposure</i>	USA	Prospective school-based cohort survey;	Stratified random selection procedure	Implicit memory for alcohol concepts was significantly correlated with gender at T1 suggesting boys have more alcohol-consistent	Despite the use of a prospective study	Used a Strickland framework, results underscore findings from previous cross-

<p>to alcohol advertising: a prospective extension of Strickland's model. University of Southern California (dissertation).</p>		<p>3-waves from 7<sup>th</sup> to 9<sup>th</sup> grade.</p> <p><b>Duration of Study:</b> 4 years. T1 : 7<sup>th</sup> grade T2: 8<sup>th</sup> grade T3: 9<sup>th</sup> grade</p> <p><b>Independent Variable(s) / Measure(s) of exposure:</b> self-reported observation of TV alcohol advertising; frequency of watching popular TV shows in the past month (list of 28 provided); TV sports exposure; alcohol-consistent memory associations (<i>cue-behaviour and outcome behaviour association tests</i>); sports activity; general TV watching; norms; 7<sup>th</sup> grade alcohol use / problem alcohol use (<i>beer, wine / liquor / binge drinking</i>); drinking intentions; peer alcohol use; adult alcohol use; gender; ethnicity.</p> <p><b>Dependent Variable(s) / Outcome measure(s):</b> 8<sup>th</sup> grade alcohol use (<i>beer, wine / liquor use; binge drinking</i>); 9<sup>th</sup> grade alcohol problems.</p>	<p>used to select schools for inclusion.</p> <p><b>Age:</b> 12-15</p> <p><b>Gender:</b> M=539 (49%) F=558 (51%)</p> <p><b>Ethnicity:</b> 60% Latino / Hispanic; 13% White; 18% Asian-American; 1.5% African-American; almost 1% Native American, American Indian or Alaska Native; less than half of 1% Pacific Islander.</p> <p><b>SES:</b> not reported (n=1,097)</p>	<p>memories associations than girls (<math>r=.15</math>, <math>p</math>-value <math>&lt;0.001</math>; <math>t(1,050) = 4.94</math>, <math>p</math>-value <math>&lt;0.0001</math>). Those with more alcohol-consistent memory associations were significantly more likely to report more frequent alcohol use at all time points (<math>t(1,050) = 6.15</math>, <math>p</math>-value <math>&lt;0.0001</math>; <math>t(1,081) = 5.85</math>, <math>p</math>-value <math>&lt;0.0001</math>; and <math>t(1,083) = 4.84</math>, <math>p</math>-value <math>&lt;0.0001</math> for beer use at T1, T2 and T3 respectively).</p> <p>Mean consumption of boys and girls who had alcohol-consistent memory biases was greater at all three time points than for those who did not (<u>Girls:</u> <i>beer:</i> 0.65, 0.86, 1.06 versus 0.31, 0.47, 0.77; <i>wine / liquor:</i> 0.51, 0.90, 1.16 versus 0.28, 0.43, 0.74; <i>binge:</i> 0.25, 0.65, 0.87 versus 0.13, 0.23, 0.47; <u>Boys:</u> <i>beer:</i> 0.65, 0.98, 1.30 versus 0.36, 0.50, 0.77; <i>wine / liquor:</i> 0.51, 0.85, 1.17 versus 0.28, 0.42, 0.66; <i>binge:</i> 0.30, 0.67, 1.06 versus 0.15, 0.24, 0.52).</p> <p>Beer / wine / liquor use and binge drinking at T1 and T2 were correlated with implicit memory for alcohol-related concepts at T1 (<u>T1:</u> <i>beer:</i> <math>r=.26</math>, <math>p</math>-value <math>&lt;0.001</math>; <i>wine / liquor:</i> <math>r=.21</math>, <math>p</math>-value <math>&lt;0.001</math>; <i>binge:</i> <math>r=.19</math>, <math>p</math>-value <math>&lt;0.001</math>; <u>T2:</u> <i>beer:</i> <math>r=.17</math>, <math>p</math>-value <math>&lt;0.001</math>; <i>wine / liquor:</i> <math>r=.17</math>, <math>p</math>-value <math>&lt;0.001</math>; <i>binge:</i> <math>r=.18</math>, <math>p</math>-value <math>&lt;0.001</math>). Alcohol problems at T1 and T3 were also significantly associated with implicit memory for alcohol concepts at T1 (<i>T1 alcohol problems:</i> <math>r=.08</math>, <math>p</math>-value <math>&lt;0.01</math>; <i>T3 alcohol problems:</i> <math>r=.12</math>, <math>p</math>-value <math>&lt;0.001</math>). Self-reported exposure to alcohol advertisements was significantly correlated with beer / wine / liquor use and binge drinking at T1; beer / wine / liquor use and binge drinking at T2; and alcohol problems in 7<sup>th</sup> grade and 9<sup>th</sup> grade (<i>T1 beer:</i> <math>r=.12</math>, <math>p</math>-value <math>&lt;0.001</math>; <i>T1 wine / liquor:</i> <math>r=.11</math>, <math>p</math>-value <math>&lt;0.001</math>; <i>T1 binge:</i> <math>r=.09</math>, <math>p</math>-value <math>&lt;0.01</math>; <i>T2 beer:</i> <math>r=.14</math>, <math>p</math>-value <math>&lt;0.001</math>; <i>T2 wine / liquor:</i> <math>r=.11</math>, <math>p</math>-value <math>&lt;0.001</math>; <i>T2 binge:</i> <math>r=.09</math>, <math>p</math>-value <math>&lt;0.01</math>; <i>T1 alcohol problems:</i> <math>r=.08</math>, <math>p</math>-value <math>&lt;0.01</math>; <i>T3 alcohol problems:</i> <math>r=.10</math>, <math>p</math>-value <math>&lt;0.01</math>).</p> <p>Including only T1 drinking and problems in a hierarchical regression model, followed by the addition of T1 peer use then T1 implicit memory, demonstrated that self-reported exposure to advertising predicted alcohol problems at T3 for all three drinking behaviours (<i>T1 drinking and problems: beer:</i> <math>b=.072</math>, <math>t</math>-value = 2.23, <math>p</math>-value <math>&lt;0.05</math>; <i>wine / liquor:</i> <math>b=.076</math>, <math>t</math>-value = 2.36, <math>p</math>-value <math>&lt;0.05</math>; <i>binge:</i> <math>b=.079</math>, <math>t</math>-value = 2.46, <math>p</math>-value <math>&lt;0.05</math>; <i>plus T1 peer use: beer:</i> <math>b=.072</math>, <math>t</math>-value = 2.23, <math>p</math>-value <math>&lt;0.05</math>; <i>wine / liquor:</i> <math>b=.074</math>, <math>t</math>-value = 2.27, <math>p</math>-value <math>&lt;0.05</math>; <i>binge:</i> <math>b=.078</math>, <math>t</math>-value = 2.42, <math>p</math>-value <math>&lt;0.05</math>; <i>plus T1 implicit memory: beer:</i> <math>b=.066</math>, <math>t</math>-value = 2.05, <math>p</math>-value <math>&lt;0.05</math>; <i>wine/liquor:</i> <math>b=.067</math>, <math>t</math>-value = 2.07, <math>p</math>-value <math>&lt;0.05</math>; <i>binge:</i> <math>b=.072</math>, <math>t</math>-value = 2.22, <math>p</math>-value <math>&lt;0.05</math>).</p>	<p>design (and hierarchical models), it is still difficult to determine the causal path; it is possible that unobserved confounders can have an effect.</p> <p>Reliance on self-reported data; opportunistic school-based data collection may lead to exclusions and sample bias.</p> <p>High sample attrition; students from 5 schools (who completed the T1 survey) were not able to be followed up at later time points because school administrations refused subsequent data collections; largely due to students moving from middle to high school.</p> <p>The level of attrition meant that 483 students (16% of the original sample) were lost at T3. An additional 4% (n=112) were lost when a middle school refused follow up at T2.</p> <p>Missing data as a result of inadequate class time given to the survey. Thus, analyses conducted involved data imputation</p>	<p>sectional analyses and show small but persistent effects of advertising exposure (in 7<sup>th</sup> grade) on 8<sup>th</sup> grade drinking behaviours, and 9<sup>th</sup> grade alcohol problems, even after adjusting for numerous potential confounding mechanisms.</p> <p>Of the measures hypothesized to affect 9<sup>th</sup> grade alcohol problems indirectly through 8<sup>th</sup> grade alcohol use, only self-reported exposure appeared to do so.</p> <p>Implicit memory for alcohol concepts in 7<sup>th</sup> grade significantly predicted later alcohol problems, independently of the effects of TV advertising exposure, but did not significantly influence 8<sup>th</sup> grade alcohol use.</p> <p>Gender had a larger direct effect than exposure measures, suggesting that alcohol problems may have more to do with gender constructs than frequency of exposure to advertisements.</p> <p>Conflicting with a large proportion of studies in this review, peer alcohol use had no effect on later problems, and did not predict 8<sup>th</sup> grade alcohol use once previous alcohol use was controlled. This suggests the possibility that perceived peer use and one's own alcohol use are so highly correlated as to be proxy measures of the same underlying construct.</p> <p>Each of the televised alcohol advertising measures significantly prospectively predicted several measures of later alcohol use. With respect to TV sports and shows indexes, this was true only for White respondents. In other words, given comparable levels of TV sports and shows exposure, White adolescents reported more alcohol use in the 8<sup>th</sup> grade merely</p>
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		<p><b>Method(s) of analysis:</b> univariate frequency and means analyses; correlation analysis; multiple regression analysis; hierarchical regression techniques (for T3 problems and T2 alcohol use); stepwise regression analysis.</p> <p><b>Quality Assessment:</b> ***</p>		<p>When gender, acculturation and ethnicity were added (and non-significant peer use was dropped) self-reported frequency was only marginally significant for T3 alcohol problems related to beer use. It remained significant for wine / liquor use and binge drinking (<i>plus gender, acculturation and ethnicity: wine / liquor: b=.064, t-value = 1.97, p-value = &lt;0.05; binge: b=.067, t-value = 2.07, p-value &lt;0.05</i>). Adding 7<sup>th</sup> grade adult alcohol use, norms, intentions and TV viewing (and dropping acculturation and ethnicity) meant self-reported frequency dropped to non-significance for T3 alcohol problems relating to all three alcohol behaviours.</p> <p>Implicit memory remained significant in all variations of the model, for all three drinking behaviours (<u>Beer: T1 problems and T1 drinking: b=.096, t-value = 2.90, p-value &lt;0.01; plus T1 advertising exposure: b=.091, t-value = 2.69, p-value &lt;0.01; plus T1 peer use: .090, t-value = 2.69, p-value &lt;0.01; plus gender, acculturation and ethnicity: b=.079, t-value = 2.31, p-value &lt;0.05; plus adult use, norms, intentions, TV viewing: b=.072, t-value = 2.07, p-value &lt;0.05; Wine / liquor: T1 problems and T1 drinking: b=.109, t-value = 3.31, p-value &lt;0.01; plus T1 advertising exposure: b=.105, t-value = 3.11, p-value &lt;0.01; plus T1 peer use: b=.103, t-value = 3.04, p-value &lt;0.01; plus gender, acculturation, and ethnicity: b=.092, t-value = 2.73, p-value &lt;0.01; plus adult use, norms, intentions, TV viewing: b=.081, t-value = 2.32, p-value &lt;0.05; Binge drinking: T1 problems and T1 drinking: b=.100, t-value = 3.07, p-value &lt;0.01; plus T1 advertising exposure: b=.094, t-value = 2.82, p-value &lt;0.01; plus T1 peer use: b=.093, t-value = 2.77, p-value &lt;0.01; plus gender, acculturation, and ethnicity: b=.082, t-value = 2.44, p-value &lt;0.05; plus adult use, norms, intentions, TV viewing: b=.089, t-value = 2.55, p-value &lt;0.05</u>).</p> <p>Self-reported exposure to alcohol advertisements at T1 significantly predicted T2 beer use when T1 alcohol use, problems and intentions were included in the model (b=.058, t-value = 2.14, p-value &lt;0.05) but did not predict T2 wine / liquor use or T2 binge drinking. Self-reported exposure to alcohol advertisements remained significant for T2 beer use when T1 peer use and implicit memory were added to the model (b=.057, t-value = 2.09, p-value &lt;0.05) but did not predict T2 wine / liquor use or T2 binge drinking. However, when gender, acculturation, ethnicity, adult alcohol use, norms and TV viewing were added to the model (and peer use and implicit memory dropped), self reported exposure to alcohol advertisements became only borderline significant for T2 beer and wine / liquor use and not significant for T2 binge drinking.</p> <p>The direct effect of T1 self-reported advertising exposure on T3</p>	<p>procedures to allow comparison of results across imputed and unimputed case data sets.</p> <p>Sample was predominantly Hispanic raising concern that results may not generalise to other populations. However, tests conducted suggested that results did not differentially affect this group.</p> <p>Focuses on a slightly younger age range than expected for inclusion in this systematic review (aged 14-17).</p> <p>Difficult to determine whether exposure measures used can robustly measure the impact of marketing on behaviour; only focused on TV advertising. Other forms of marketing were not included (such as product placements, promotions, sports sponsorship, digital media)</p> <p>Also fails to explain the process by which advertising affects youth or make any policy / practice recommendations.</p>	<p>as a function of their ethnicity. However, this did not translate into increased levels of alcohol-related problems in 9<sup>th</sup> grade.</p> <p>First known three-wave longitudinal investigation of televised alcohol advertising and alcohol use behaviour. The study attempts to show effects over a period of time rather than just a snapshot view. This is especially meaningful in a younger population just beginning to establish drinking patterns.</p> <p>Results confirmed the usefulness of word association measures as indexes of associative strength, even in a population presumably too young to have established drinking patterns. The authors suggest that this demonstrates the ability to challenge alcohol-consistent memories with prevention programmes designed to make healthy behavioural alternatives as equally spontaneous in high-risk situations as alcohol-use options could conceivably change the course of the development of deviant behaviours.</p> <p>They contend that there is no 'gold standard' measure of exposure. Diverging results from the three core exposure measures suggest significant sources of unknown variance, but also that the effects of advertising are multifaceted, and that no one measure will ever capture the myriad processes involved, both implicit and explicit.</p> <p>However, although indexes of exposure used are imperfect, taken together, they strengthen the inferences made. Enough evidence suggests advertising exposure is a relevant factor; but the key mechanisms remain unknown. Future research should focus on this measurement issue; additional prospective designs with longer</p>
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				<p>alcohol problems was smaller when controlling for T2 beer consumption (b=.054, p-value = 0.107 versus b=.061, p-value = 0.071), suggesting T2 beer consumption mediated the two variables.</p>	<p>The level of explained variance is not presented in the regression model.</p> <p>Use of standardised coefficients can be misleading - a change of one standard deviation in one variable has no reason to be equivalent to a similar change in another. Nevertheless, standardising variables does not affect whether or not the coefficients are significant.</p> <p>How the beta value is calculated is not explained thoroughly, therefore it is unclear as to what a change in 'one unit' would constitute.</p> <p>Study used only continuous variables for alcohol problems; future research might evaluate whether there are any differences using binary dependent variables and logistic regression.</p>	<p>time periods should be examined.</p> <p>The authors suggest that it is problematic to separate alcohol use from other problem behaviours. Other than this, there is no critical appraisal of policy or practice implications of the study. Further, although the authors state that the models analyzed integrate relevant theory from cognitive psychology, social psychology, advertising and health behaviour literatures, there is no critical discussion of emotional responses to marketing.</p>
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#### **4.8. Limitations of the papers included in the review**

23 of 32 papers reported findings from cross-sectional studies and 31 (out of 32) papers were based on self-report data. Self-report data may suffer from problems of recall and the use of cross-sectional data renders it difficult to determine causality. The influence of unobserved co-variables and cultural or structural changes cannot be ruled out. For example, Unger et al (2003) and Morgenstern et al (2011) hypothesised that the 'causal path' in relation to young people and alcohol advertising could be in the opposite direction to that concluded by them and other authors. In other words, the use of alcohol and familiarity with alcohol may cause adolescents to attend more closely to alcohol advertising and to form more positive opinions of alcohol advertisements. Similarly, a high level of baseline exposure to alcohol advertising for both study groups in Ellickson et al (2005) meant it was difficult to determine that advertising was the causal factor even in a prospective, rather than cross-sectional, study design. Further, Morgenstern et al (2011) attribute 'changes in attitudes towards alcohol' to an indirect effect of advertising. However, other variables could also feasibly contribute to this change, such as social norms and inter-personal relationships.

24 of 32 papers analysed survey data collated by conducting questionnaires in a school setting or over the telephone. Both methods of data collection have limitations, especially in relation to sampling. Collecting data via school classes can result in large attrition rates, omits young people not present at school that day; those who are excluded and those who are not in school-based education. For example, Grenard (2008) found that five of 19 high schools refused to allow surveys to be administered in class to students already surveyed in middle school, leading to the drop out of entire school cohorts. By using telephone-based surveys, sectors without access to a telephone are under-represented. Further, wherever possible, the purpose of this systematic review was to explore the impact of industry-driven alcohol price and wider marketing processes on young people aged 14-17. However, 24 of 32 papers reported results from wider age groups, which could not be broken down further to aid analysis. In particular, Alcohol Concern (2011b) did not provide a specific age range for the data, only indicating that findings were based on alcohol-specific hospital admissions for

those 'under 18'. The authors also assumed a consistent average of young people per 100,000 of population and did not adjust for variance.

There were a number of additional limitations which were specific to particular studies. Individual study limitations are also presented in more detail in Table 4.2, 4.3, 4.4 and 4.5. Kearns et al (2011) drew fairly strong conclusions based on descriptive statistics and a very small sample size. Similarly, Alcohol Concern (2011b) drew links between drinking frequency, teenage conception rates and off-license outlet density without running any statistical tests or models to demonstrate any relationships or associations. Kinard (2006) and Kinard and Webster (2010) selected subjects based on quota sampling. Quota sampling is non-random and it is impossible to assess the possible sampling error. Thus, those who 'look most helpful' may be asked meaning that the method is not always entirely representative. Truong and Sturm (2009) highlighted that their sample size may not be large enough to detect interactions between socio-demographic groups and alcohol sales, especially as factors associated with adolescent drinking may offset one another. Similarly, Treno et al (2008) contended that an unexpectedly low rate of drinkers may have affected the analysis power of the survey, suggesting that this may be the result of using a listed sample (an inherent limitation in those studies which use telephone-based surveys) and difficulties in contacting the adolescent population.

Treno et al (2008) and Alcohol Concern (2011b) collected outlet density information for off-premises only. The authors appeared to assume that off-premises would be a young person's main route of formal access, and that density of on-premises would have no effect on adolescent access to (and use of) alcohol. Further, Pinkleton et al (2001) used a purposeful selection of only a limited number of video-based advertising messages when exploring young people's affective responses to alcohol-related advertisements and PSAs; Bellis et al (2009) studied only 4 adverse alcohol-related outcomes, omitting outcomes such as prevalence of injury and effects on education or relationships; and Alcohol Concern (2011b) based their data only on alcohol admissions wholly attributable to alcohol (such as poisoning) and excluded conditions related to alcohol such as head injuries or sprains from alcohol-related assaults or falls, or attendances that are only dealt with in A&E. In addition, measures used by Snyder

et al (2006), Grenard (2008) and Zogg (2004) to examine advertising exposure largely reflected the most expensive medium for advertising (television) and other forms of marketing were not included. Similarly, Austin et al (2006) only asked young people about a certain number of pre-defined primetime TV shows and alcohol brands.

It is also unclear why Austin et al (2006) chose to compare young people aged 9-11 and 12-17. Doing so meant that age-related differences may have been missed. It may have made more sense to break down the 12-17 into smaller age sub-groups, which may have helped to explain relevant MIP stages. In particular, favouring beer-themed items was the only outcome variable in the 9-11 model as 9-11 year olds reported almost no alcohol use. Thus, alcohol use measures were ascertained for the 12-17 model but were not subject to cross-age comparisons. In addition, alcohol use measures in Grenard (2008) were skewed towards zero due to a young baseline age. Although young people were recruited purposefully in order to examine early development of alcohol use, this may have contributed to some null findings. Further, alcohol association measures were developed using high school and college participants, and resulting measures might have been less than optimal for middle school students.

A substantial number of papers which appeared to demonstrate an association between industry-driven alcohol promotion and young people's drinking behaviour did not recommend tighter legislative sanctions or discuss alcohol marketing restrictions in any critical way (Stoolmiller et al., 2012; McClure et al., 2009; Grenard, 2008; Austin et al., 2006; McClure et al., 2006; Snyder et al., 2006; Ellickson et al., 2005; Unger et al., 2003; Pinkleton et al., 2001; Austin and Knaus, 2000; Austin et al., 2000). However, those that did, tended to suggest that exposure to alcohol marketing was problematic without any critical discussion of emotional responses to marketing, assuming an almost straightforward, linear relationship between exposure and alcohol use (Lin et al., 2012; Jones and Magee, 2011; Tanski et al., 2011; Gordon et al., 2010a; Gordon et al., 2010c; Fisher et al., 2007; Saffer and Dave, 2006; Workman, 2003). Finally, Huckle et al (2008) and Treno et al (2008) did not present the level of explained variance in their regression model, and the level of explained variance was not discussed by Austin et al (2000), making the interpretation of results more difficult. Further, Zogg (2004),

Pinkleton et al (2001) and Huckle et al (2008) did not explain how the beta value was calculated, meaning it was unclear as to what a change in 'one unit' would constitute.

## **4.9. Key Conclusions and Implications for Policy and Practice**

### **4.9.1. Key Conclusions**

A narrative account of 32 papers highlighted four key findings. First, 23 (of 32) papers explored studies which were cross-sectional in design, underlining a shortage of longitudinal work which establishes the effects of alcohol marketing on young people's alcohol consumption over time. Although industry-driven alcohol marketing appeared to influence young people's drinking behaviour (only two studies reported otherwise), studies were diverse and reported on a variety of populations, study designs, exposure measures and outcome measures, making synthesis and extrapolation difficult, and only one paper included in this review presented qualitative findings. Further, formal and informal influences on young people's alcohol use were not mutually exclusive. In addition to industry-driven marketing, inter-personal relationships with parents and peers and wider psycho-social factors must also be considered in relation to young people's drinking behaviour.

Second, only five papers included in this review report studies which were conducted in the UK (Alcohol Concern, 2011b; Gordon et al., 2010a; Gordon et al., 2010c; Bellis et al., 2009; Brain et al., 2000), making it harder for this particular set of studies to directly inform a UK field of work. One study conducted in the UK actually took place in Scotland therefore some policy and practice recommendations may not be directly relevant to England and Wales (Gordon et al., 2010a; Gordon et al., 2010c). One further study took place in Ireland (Kearns et al., 2011). Third, the findings of this review were heavily skewed towards literature exploring the impact of alcohol promotion (23 out of 32 papers), rather than the other three areas of marketing. In particular, there was a distinct paucity of work interrogating the impact of price on young people's alcohol use. It could be hypothesised that, as it is reported that price changes would impact on population-level drinking, and that adults can constitute a



key access route to alcohol for young people, a reduction of the amount of alcohol that adults can buy would, by proxy, reduce young people's alcohol consumption. Nevertheless, as suggested earlier in this chapter, a lack of evidence surrounding alcohol price demonstrates that all four elements of the 'marketing mix' need to be studied, rather than just alcohol promotion in isolation. Further, findings from this review demonstrate how hard it is to disentangle elements of the marketing mix (particularly 'price' and 'product') and suggest that the concept of a marketing 'mix' is far more apt than four clearly separable facets of marketing.

Fourth, work exploring alcohol promotion continues to focus predominantly on traditional media and only four papers were identified which examined the impact of electronic marketing (Lin et al., 2012; Jones and Magee, 2011; Gordon et al., 2010a; Gordon et al., 2010c). This is particularly surprising given the heavy investment in 'new' and digital media by alcohol industry described in the introduction to this thesis (see chapter section 1.1.3) and the influence of digital and social media marketing on young people's drinking behaviour needs to be examined further. In three (of four) papers electronic marketing appeared to influence young people's drinking behaviour. Among young people aged 12-14, involvement in electronic marketing was reported to increase the odds of being a drinker by 300% (Gordon et al., 2010) and young people aged 12-15 who engaged with web-based marketing were 98% more likely to have drunk alcohol in the last 12 months (Lin et al., 2012).

Similar results were found among an Australian cross-sectional sample of young people aged 12-17 (Jones and Magee, 2011) and web-based marketing appeared to have a larger effect on males aged 12-15. Those who reported that they had seen an alcohol advertisement over the internet were 118% more likely to have drunk alcohol in the last 12 months and 205% more likely to have drunk alcohol in the last 4 weeks. However, in a paper reporting follow up data collected as part of the same overall study two years later (young people were now aged 14-16), Gordon et al (2010c) do not specifically explore the influence of social / digital marketing alone on young people's drinking behaviour at follow up, meaning that this association is not followed up over time.

#### ***4.9.2. Implications for policy and practice***

An alcohol MUP was recommended by Bellis et al (2009). More specifically, the authors recommended that parental monitoring be matched by legislative strategies to address the low cost of many alcohol products, ease of access to alcohol and the size of containers (discouragement of large value bottle purchases). However, the influence of price on young people's drinking behaviour may not be quite so linear and straightforward. Thus, although an alcohol MUP is acknowledged in this thesis as an effective and appropriate *population-level* policy response, data from this systematic review suggests it will not have a 'one-size-fits-all' effect on young people's drinking behaviour. Thus, Kearns et al (2011) indicate that young people in their study (who were accessing alcohol treatment services) were unlikely to be effected by an alcohol MUP. These young people chose leading brands of alcohol, which were more expensive than other brands. Further, findings presented by Brain et al (2000) indicated that, in addition to price, a range of other factors contributed to the decisions young people made about alcohol products, such as taste, strength, ease of access and the reputation of alcohol products and brands. The authors acknowledged that, outside of industry-driven marketing techniques, young people had their own ideas and priorities as demonstrated in the 'strength-price-taste' formula utilised in drinking decisions. Further, rates of illicit drug use in Brain et al (2000) were also high with young people choosing combinations of alcohol and drugs according to desired effect, setting and personal resources. Pricing interventions and restrictions on large bottle purchases need to be delicately balanced to ensure alcohol use is not simply displaced by increased rates of illicit drugs use amongst young people.

Four out of six papers which examined the association between outlet density and young people's drinking behaviour demonstrated that social influences and supply are more important to young people than formal sources of alcohol (Huckle et al., 2008; Kuntsche et al., 2008; Treno et al., 2008; Paschall et al., 2007). Further, five (of six) papers identified the mutually reinforcing nature of formal and informal sources of alcohol (Huckle et al., 2008; Kuntsche et al., 2008; Treno et al., 2008; Paschall et al., 2007; Truong and Sturm., 2009). In other words, formal and informal modes of alcohol access were not static or substitutes for one another. Instead, they were mutually

reinforcing and shifted over time - older youths' formal access may be younger youths' social access. Thus, Treno et al (2008) argued that an exclusive shift to legislating social access at the expense of formal access (or vice versa) would not be successful. Instead, Kuntche et al (2008) reported that an 'environment of disapproval' was needed and structural measures should be extended to cover the family and wider community. Nevertheless, all six studies recommended introducing restrictions on numbers and density of licensed premises as a low-cost and effective approach to reducing heavier consumption associated with the clustering of outlets (a recommendation identified as a public health need in the UK study conducted by Alcohol Concern 2011b).

A substantial number of papers included in this review which demonstrated an association between industry-driven alcohol promotion and young people's drinking behaviour did not recommend tighter legislative sanctions or discuss alcohol marketing restrictions in any critical way (Stoolmiller et al., 2012; McClure et al., 2009; Grenard, 2008; Austin et al., 2006; McClure et al., 2006; Snyder et al., 2006; Ellickson et al., 2005; Unger et al., 2003; Pinkleton et al., 2001; Austin and Knaus, 2000; Austin et al., 2000). It is unclear why and both surprising and disappointing given that a considerable proportion of these papers identified a strong relationship between alcohol promotion (particularly advertising or alcohol-related promotional items) and young people's drinking behaviour. Instead, several papers recommended education focusing on self efficacy, media training and greater parental monitoring. This observation is particularly true of studies which pinpointed the importance of emotional and affective responses to alcohol advertisements. Finally, tighter regulation of young people's exposure to alcohol promotion (or a complete ban) is recommended in eight papers (Lin et al., 2012; Jones and Magee, 2011; Tanski et al., 2011; Gordon et al., 2010a; Gordon et al., 2010c; Fisher et al., 2007; Saffer and Dave, 2006; Workman, 2003). However, this is done without any critical discussion of emotional responses to marketing, assuming an almost straightforward, linear relationship between exposure and alcohol use.

The following chapter moves on to consider the next 'phase' of empirical data collection conducted as part of this doctoral work and details the methodology and method of conducting in-depth interviews with young people aged 14-17.

## **Chapter 5: Qualitative Methods and Methodology**

### **5.1. Overview of the Chapter**

This chapter presents a rationale for exploring young people's accounts of their drinking behaviour using qualitative methods (in-depth interviews). The process of conducting in-depth interviews in this study is then outlined followed by a description of the recruitment and sampling strategies employed, and a breakdown of participants who took part. In this study, the terms participant and respondent are used interchangeably, though a preference is afforded to 'participant' to denote the active, co-constructed nature of research. Finally, the chapter concludes by situating the research approach taken within wider debates about the ethical dilemmas and 'unique' nature of conducting research with children and young people, followed by a short summary.

### **5.2. Why Qualitative Interviews?**

Interviews are widely used in health and social research and a distinction is commonly made between quantitative and qualitative interviewing techniques. Although differences in approach are underpinned by the philosophical orientations of the researcher (and far more nuanced than the following description conveys) quantitative interviews are usually highly structured, positivist in orientation and aim to discover a 'single truth' or existence of an objective 'reality'. Such interviews regularly take the form of surveys where answers can be standardised and analysed numerically or statistically. In this approach, the interviewer is expected to remove themselves from the interview and subsequent data as much as they possibly can in order to minimise bias. As a result, data is expected to be sterile and uncontaminated (Miller and Glassner, 2004).

Holstein and Gubrium (2004) describe this as a 'vessel-of-answers' approach which assumes that 'unspoiled' data can simply be extracted from respondents, providing the

researcher follows a standardised and replicable process. As such, the respondent is viewed as passive and not actively engaged in knowledge production. More pragmatically, the rigid design of quantitative interviews does not allow for iterative changes to the topic guide or interview questions. Instead, the interviews conducted as part of this doctoral work take a qualitative approach, which can be structured, semi-structured or completely unstructured. The term 'qualitative research' is not always used consistently and can represent a generalised term comprising diverse methods located within different theoretical approaches and which represent different epistemological and ontological assumptions (Britten, 2011). Nevertheless, qualitative studies traditionally seek answers to questions about the 'what', 'how' or 'why' of a phenomenon whilst seeking to understand social situations from the point(s) of view of those involved (Green and Thorogood, 2004).

In this study, the researcher wanted to explore how young people articulate the choices and decisions they make about alcohol. In particular, qualitative interviews sought to examine young people's accounts of when, why, where and how they drink alcohol in their own terms and based on their own experiences. In this study it is assumed that young people's 'expert' knowledge, understandings, interpretations, interactions and experiences about alcohol are meaningful properties of social reality (Mason, 2002b) and that participants (and researchers) are co-conspirators in the interview process, engaging in what Holstein and Gubrium (2004) describe as an 'active' interview.

Whilst acknowledging that exploratory interviews provide 'second hand' knowledge and an 'artificial' situation removed from a more natural environment, it is argued here that the researcher's presence even as an observer would have had the potential to alter what was being observed. Further, an ethnographic approach would not have been possible or ethically acceptable with young people under 18 years of age. Inescapably those interviewed were underage drinkers for whom consuming alcohol represents an illegal leisure pursuit.

Undeniably, the interview process is dependent on what participants choose to disclose and interviews have been criticised for providing 'unreliable' self-reported

data. Respondents may withhold important information about themselves and their experiences or disclose what they believe the researcher is expecting to hear. They may also have never articulated a point of view about the interview topic before and thus may not have a readily constructed account. Because of this, Minichiello et al highlight that the task of the qualitative researcher is not finding the truth *per se* but rather the truth “as the informant sees it to be” (1990:128). This particular point supports the philosophical underpinnings of this study and its critical realist approach, which suggests that people interpret reality in different ways (see chapter 3 for a more detailed examination of the philosophical framework for this research study).

### **5.3. Research Process**

In the following section, the collection and analysis of qualitative in-depth interviews; and the sampling and recruitment strategy employed during this study is outlined.

#### ***5.3.1. In-depth Interviews***

##### *Data collection*

31 exploratory in-depth interviews were carried out with young people aged 14-17 across NE England examining young people’s own accounts of when, why, where and how they drink alcohol. Data collection commenced in May 2009 and concluded in March 2010 when new or novel themes ceased to be identified in analysis. Interviews lasted approximately one hour and all young people consented to their interview being audio recorded. Interviews were transcribed verbatim by the researcher and a research administrator at the university, with extensive field notes maintained in a research diary. Wherever possible, transcripts remain in each respondent’s own words. However, they were edited slightly for sense, dialect and grammar, and colloquialisms used by participants have been neutralised to aid understanding.

Interviews aimed to understand the choices young people make about alcohol and what impacts on their relationship with alcohol. Within this, there was an explicit focus on extrinsic factors such as price and further marketing techniques (industry-driven or otherwise) and how such factors knit together with intrinsic behavioural triggers such as parents, peers, age, gender and so on. Most interviews were conducted on a one-to-one basis. However, on a number of occasions, interviews were carried out in dyads, usually upon request by potential participants (there were also ethical reasons for choosing to use interview dyads in this study which are explored further in section 5.4.1).

Hearing individual participant voices and adequately managing information that may be sensitive or personal can be challenging in the context of a joint interview and interview data “should be analysed transparently in the context in which they were generated” (Kendell et al., 2009:198). In other words, it is important to recognise that accounts collected from research dyads may allow a ‘public’ account to emerge, especially when participants know each other well. Therefore, this research dynamic may have had both a positive and negative impact on the data collected in this study as well as upon how it was subsequently analysed. It is impossible to determine whether choosing to interview participants individually would have altered the data collected. More specifically, when young people were interviewed together, a largely interactive narrative was built, with participants ‘playing off’ each other’s words. On the other hand, when interviewed alone, more personal accounts from young people emerged which explored individual opinions and even vulnerabilities.

A recursive model of questioning was used in this study, allowing each interview encounter with a young person to be treated as unique (Minichiello et al., 1990) whilst still covering the general themes of interest to the researcher. In this way, interviews resembled a ‘conversation with a purpose’ and a semi-structured approach was undertaken to afford the maximum freedom to the interviewee whilst meeting the needs of the study. Therefore, a topic guide was used to inform but not direct the interview. This topic guide was developed iteratively throughout data collection based first on extant literature and later on emergent findings. The final topic guide is documented in Appendix F of the thesis. Such an approach allowed the direction of the

interview and discussion points to be modified according to the main themes emerging from previous interviews. In other words, this enabled the researcher to concentrate on the meaning ascribed to the events and experiences of the young person currently being interviewed and to use this grounded understanding to inform further interviews and the iterative analysis of themes identified from the data (Jones, 1985).

### *Data analysis*

Drawing on Pope, Ziebland and Mays (2000), data analysis began during data collection and continued throughout the writing process. Braun and Clarke suggest that writing is an integral part of analysis and not something which simply takes place at the end of a project (2006). In this study, verbatim interview transcripts were analysed thematically. Thematic analysis is a method for identifying, analysing (as well as interpreting) and reporting patterns (themes) within data. A theme “captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set” (Braun and Clarke, 2006:79-82).

In this study, thematic analysis comprised an inductive ‘bottom up’ approach and was influenced by the constant comparative technique used most heavily in grounded theory (Charmaz, 2006). Thus, analysis was, as much as possible, data-driven and involved the process of coding data “without trying to fit it into a pre-existing coding frame or the researcher’s analytic preconceptions” (Braun and Clarke, 2006:83). More specifically, data analysis was conducted ‘by hand’. Interview transcripts and fieldnotes taken by the researcher formed the foundation of analysis and were first analysed individually. Ideas and quotes from individual transcripts were shaped and categorised into key themes. Separate interviews were then related to each other and common patterns identified. Here, small sub-themes from individual transcripts were grouped together to construct larger ‘meta-themes’ drawn from the entire data set, resembling a process of ‘open’ coding followed by more detailed ‘axial’ coding from which final themes emerged (Hamilton, 2012; Crawshaw and Bunton, 2009).



For data validation, regular meetings were held within the supervisory team in order to discuss, challenge and agree the themes identified. Themes identified were constantly re-assessed with mind maps used to show linkages between ideas and data, involving what Braun and Clarke (2006) describe as detailed theoretical mapping, and following an iterative process “in which a ‘part’ of the qualitative data (or text) is interpreted and reinterpreted in relation to the developing sense of the ‘whole’” (Thompson et al., 1994:433). In this way, data was ‘reduced’ down into component parts and subsequently reassembled to make sense of theoretical concepts (Boeije, 2010) representing a move towards interpretation rather than merely analysis of the data (Silverman, 2005). Braun and Clarke (2006) describe this process as ‘recursive’, involving a constant moving back and forth between the entire data set and the extracts of data analysed so far. Drawing on Hamilton (2012), this allowed a holistic understanding to develop over time, with initial understandings modified as new information emerged.

Unlike alternative techniques of data analysis (such as interpretive phenomenological analysis) thematic analysis is characterised as an approach largely independent of ontology and epistemology, so long as the philosophical assumptions of the researcher have been made explicit from the outset (Braun and Clarke, 2006; Holloway and Todres, 2003). Such theoretical freedom means that “thematic analysis is a flexible and useful research tool, which can provide a rich and detailed, yet complex, account of data” (Braun and Clarke, 2006:78). Therefore, a thematic approach was considered to be the most appropriate method to analyse qualitative data in an already complex study which employs mixed methods and is underpinned by a critical realist worldview.

### ***5.3.2. Sampling, Recruitment and Participants***

Both Barbour (2008) and Coyne (1997) argue that all sampling in qualitative research can be classed as different types of purposive sampling where the sample is selected intentionally based upon the needs of the study. In this study, the intention was not to provide a statistically representative sample, but rather to generate a thorough and rich understanding of the subjective decisions and choices that young people make

concerning alcohol use. However, young people interviewed did not need to be drinkers. Instead, drawing on Russell et al (2011), the researcher wanted to speak to young people who had something to say about young people's use of alcohol. As such, participants were sampled purposively and this study aimed to achieve maximum variation of perspectives and data saturation.

Young people were recruited from diverse venues across Northumberland and Tyne and Wear. Settings included inter-generational and community youth projects, detached youth centres, youth parliament, youth offending teams, and drop-in centres. Adolescents from affluent areas initially appeared to be a closed, hard-to-reach group and proved difficult to recruit for this study. This is unusual as middle class adolescents tend to be over-represented in research and the hardest to reach are usually those from a lower socio-economic status. It is presumed that part of the explanation for this in this study is that the researcher chose to follow a community provision route, rather than contacting young people through schools, a point which is reflected on further below. It was felt that, while affluent young people were missing from the sample, a 'voice' would be missing from subsequent findings. To overcome this, the researcher's contact details were passed on to colleagues with family members aged 14-17. After being granted an interview with one young person, this participant acted as a pseudo-gatekeeper by circulating contact details to friends, which resulted in three further interview sessions.

It was necessary to build solid working relationships with many projects, contacts and gatekeepers (from regional heads of Children's Services to detached youth workers) in order to gain access to interview participants. Occasionally, this involved attending youth projects for several weeks before asking young people to take part in an interview. Doing so embedded the researcher within the project, making her a familiar presence, and gained the trust of both staff members and young people. On occasion this even included competing in activities such as air hockey tournaments with young people in order to be granted an interview. Most notably, this consisted of attending 'mobile' youth centres (outdoor youth work) on Friday evenings and during school breaks in and around the Newcastle area alongside youth worker contacts. Although an ethnographic approach is in no way being presented, the latter provided an

additional dimension or context layer to interview findings, grounding the work in local policy and practice.

School-based and college settings were deliberately avoided as the researcher did not want young people to perceive the interview as 'school work' (Darbyshire et al., 2005). More importantly, interviews involved a significant investment of time with a young person either on a one-to-one basis or in dyads. The small number of schools and colleges that were contacted during early recruitment enquiries misunderstood the nature of the research method, assuming that it constituted a survey which could be quickly administered to a large number of young people. Further, recruiting young people via schools and colleges may have resulted in a particular 'type' of young person taking part, such as those who 'over volunteer' or want to impress teaching staff. In the same vein, young people not regularly attending school or college and those attending day units or vocational training would have been excluded. Drawing on the work of Russell et al (2011), the researcher wanted to ensure that, as much as possible, groups of young people who are 'easily ignored' did not miss their opportunity to contribute to the research.

Certain groups of young people were excluded from the research study. Young people with a known history of psychiatric disturbance, learning difficulties, 'looked after' children and pregnant teenagers were not included in the sample as such groups could comprise a particularly troubled or vulnerable sub-group. In other words, it was felt that certain groups of young people would have particularly chaotic circumstances and other more important concerns which they would accord as higher priority in their daily lives than taking part in this research study. Further, the study did not aim to explore alcohol use problems or the socio-emotional impacts of drinking in certain vulnerable sub-groups nor did it intend to identify alcohol use as a causal link or precursor to such circumstances. Instead, the study attempted to explore a wide range of views and attitudes from young people towards alcohol. A homogenous or consensus view was not expected or wanted. Rather, it was important that 'missing voices' were minimised, maximising the array of perspectives obtained.

Because the recruitment of young people was opportunistic, it is important to recognise that the above exclusion criteria were not always easily detected. To some extent, gatekeepers and agency staff provided informal advice on selection but potential participants were not formally assessed. Adolescents access a wide range of youth services, projects and agencies and individuals do not remain on a project's 'records' for a prolonged period of time. A diverse set of young people attended the research sites listed and the make-up of attendees was regularly different on a week-to-week basis. Therefore, on some occasions it was necessary for agency staff, such as those working in youth offending teams, to set up an official appointment with an interviewee on the researcher's behalf. Without doing so, the voices of some young people may have been missed and recruitment would have been lengthier and more difficult.

However, this also opened up the possibility of staff members selecting young people based on their own interpretation as to the 'type' of young person required. A level of control as to which participants take part in the research study can then be lost. Reeves (2010) acknowledges that negotiating on-going access to research sites is more complex than simply obtaining initial access. From the beginning of participant recruitment, the researcher forged good working relationships with gatekeepers and members of staff, engaging in open dialogue as to what the anticipated aims and outcomes of the research project would be. Part of this process was to provide regular and firm direction on both the age range and inclusion criteria, as well as stressing that particularly troubled young people were not preferential.

When appointments were pre-arranged, extra care was taken to ensure that participants did not feel coerced and that they were fully aware that taking part was completely voluntary. In any circumstances where the researcher had concerns about young people interviewed, observations were captured in fieldnotes and a decision was made within the research team about whether to use this data in subsequent analysis. This issue is discussed in more detail later in this chapter when the ethical implications of conducting research with children are explored (see section 5.4.1).

Young people interviewed were aged 14-17. As per the study inclusion criteria for the systematic review outlined in the previous chapter, this age range was selected for two main reasons: (i) updates to the Alcohol Harm Reduction Strategy for England (Safe, Sensible, Social 2007), in circulation at the beginning of this research project, identified drinkers under the age of 18 as a priority group; and (ii) evidence from previous research has drawn attention to the ethical difficulties of engaging young people in research without obtaining consent 'by proxy' from a parent or guardian for those under 16 years of age, and especially for young people under 14 years of age. Again, this issue is discussed in more detail later in this chapter when the ethical implications of conducting research with children are explored (see section 5.4.1).

Despite not aiming to recruit a statistically representative sample, a balanced breakdown of the age and gender of respondents was obtained. The sample of participants were (n=15) male and (n=16) female. The characteristics of interview participants split are presented in Table 5.1 below. All interviewees were white British, reflecting the predominant population of NE England. Individual-level data relating to SES was not collected from respondents and data was not analysed specifically according to SES. Data relating to SES is notoriously difficult to collect for young people with indicators of parental SES often used as a proxy measure, despite many such indices being deemed inappropriate for use in research with adolescents (Currie et al., 1997). Further, it is also suggested that young people do not readily associate their health behaviours on markers of SES such as parental income or occupation. Instead, a simple marker of SES was noted based upon the location from which young people were sampled throughout data collection for this study (in both qualitative interviews and Q sorts) to ensure that the accounts collected were generally representative of the urban / rural population of NE England.

		N (31)	%
Age	13	1	3
	14	6	19
	15	8	26
	16	7	23
	17	8	26
	18	1	3
Gender	Female	16	52
	Male	15	48
Location	Newcastle-Upon-Tyne (city)	15	48
	Morpeth and neighbouring villages	6	19
	Gateshead	3	11
	Sunderland (city)	6	19
	North Shields	1	3

*Table 5.1: Characteristics of Qualitative Interview Participants*

It is important to note two exceptions to the age range of interview participants at this point, both of which the researcher had limited prior control over, and which were discussed thoroughly within the research team. These young people were identified and appointments set up by study gatekeepers or members of staff, such as youth workers. One young person was 13 years old (Participant 24), and the other was 18 years old (Participant 20). In both cases, a decision was made to retain and analyse the interview data but for slightly different reasons. Participant 24 was two months short of his / her fourteenth birthday and was interviewed with the door open and a youth worker present. However, on a different occasion, an interview had to be terminated as an appointment had been made with a 13-year-old male and there were no members of staff present. As a safeguarding exercise, a consent form was signed by both the young person and the researcher and full fieldnotes were documented in the project research diary. There were no such ethical dilemmas with Participant 20, but the young person was over the legal drinking age and, as such, should have been excluded from the remit of the study. However, this particular interview account was rich and detailed. More importantly, it was considered that the young person was still close enough to the study age range to have tangible memory, knowledge and experience of their drinking practices whilst under 18 years old.

## **5.4. The nature of conducting research with young people**

### ***5.4.1. Ethical considerations***

Conducting qualitative research with children and young people raises greater ethical concerns than in other areas of research, some of which may involve the researcher in a dilemma, balancing between participation and protection (Birbeck and Drummond, 2007; Harden et al., 2000; Jamison and Gilbert, 2000). Children and young people can be perceived as both vulnerable and incompetent (Morrow and Richards, 1996). However, Alderson and Goodey (1996) argue that, although the protection of young people is imperative, a 'child-centred' ethical framework is questionable and serves to imply that children constitute a separate species for ethical purposes.

It is crucial for social researchers to be reflexive and report such 'untidy' ethical issues rather than simply taking them for granted (Duncan et al., 2009; Harden et al., 2000). Thus, the study protocol and materials received ethical approval from Newcastle University's ethics group and this involved specific discussions around the issue of parental consent. From the beginning of this research project it was anticipated that in-depth interviews would be carried out without the involvement of parents. In some cases, the requirement for parental consent, instead of promoting high ethical standards, can result in children's rights and ethical considerations being ignored or receiving only cursory attention (Baines, 2011; Coyne, 2010). After a full appraisal of ethical guidelines and extant literature, parental consent was not sought in this study for a number of reasons. Most importantly, it was felt that involving parents would affect a young person's freedom to openly express their opinions and responses may have become inhibited. This view is based predominantly on Article 12 ('Respect for the Views of the Child') of the UN Convention On The Rights Of The Child (United Nations, 1989) and is in line with guidance on interviewing children issued by Save The Children (McCrum and Hughes, 2003). The researcher also felt that, as competent social actors, young people are the 'experts' in their own lives and were able to offer the 'unique' perspective warranted in such exploratory interviews (Fleming, 2011; Langhout and Thomas, 2010; Aitken et al., 2007; Thomas and O'Kane, 2000).

Further, Allmark (2002) suggests that gaining parental consent involves telling parents why a child is a candidate for the research, or at the very least leaves parents speculating as to why their child has been approached. Arguably, this is especially important when a sensitive topic is being discussed, in this case the illegal use of alcohol. Supported by both Barnardo's Statement of Ethical Research Practice and the ESRC Research Ethics Framework, this study also constituted minimal, if any, risk. Researchers are required to assess the 'ethical risk' or potential impact that a qualitative interview may have upon participants (Duncan et al., 2009; Orb et al., 2001) and consider the benefits and harm that it may have on the respondent. In this study, the intention was not to explore the socio-emotional reasons for drinking alcohol. Instead, it sought to uncover the contextual influences on young people's decisions about drinking alcohol. Finally, the researcher was confident that young people aged 14-17 asked to take part in an interview were competent to consent of their own accord. In part, this decision was informed by guidelines on 'Gillick competence' which are used to decide whether a young person (aged 16 years or younger) is able to consent to his or her own medical treatment, without the need for parental permission or knowledge (Wheeler, 2006). This line of reasoning is applicable to sociological and public health research.

All study documentation was piloted with a small number of young people aged 14-17 prior to finalisation and subsequent data collection. This was to check their understanding of the language and structure of the documents, and to ensure that they knew what taking part in the study would involve. All suggestions and comments were collected, compiled in a table and evaluated in turn. Following this exercise, where relevant, documents were amended in line with recommendations from the panel. Throughout the project this study was referred to as '*Qualitative Understandings In Youth Drinking*' (QUID) when speaking to young people or gatekeepers. This was to minimise confusion and keep the research memorable by using a snappy title. This title was used in all study documentation.

All potential participants were provided with an information leaflet about the study and given the opportunity to ask questions. Prior to interview, the researcher explained the aims and objectives of the study to the young people involved, and



stressed that all information would remain anonymous and confidential. Duncan et al suggest that “the nature of qualitative methods and the way in which researchers and participants interact with each other creates a space that invites disclosure of personal, intimate information” (2009:1694) and that the integrity of data collected can be hampered if participants think confidentiality is conditional (Duncan et al., 2009:1698). In practice, this can be difficult to maintain. In this study, young people were told that the researcher would work to the same standards of confidentiality as a doctor or nurse. This meant that confidentiality could only be broken in very exceptional circumstances, i.e. if the researcher saw or was told something which raised serious concern for a young person’s personal safety (Wiles et al., 2008; Wiles et al., 2007b).

It was also explained to young people that: (i) the consent form was the only document to include their name, and would be kept in a locked drawer to which only the research team would have access; (ii) they would be allocated a participant number and in the presentation of findings throughout the study (and in subsequent papers or reports) they would only ever be referred to by the participant number allocated to them. In this way, written informed consent was obtained from participants prior to taking part in an interview, and the consent form acted as an ‘agreement’ between researcher and participant, with both parties signing and dating the document. Each young person was offered a copy of their completed consent form for their records.

Gaining informed consent was a process rather than a one-off event (Richards and Schwartz, 2002). A two-stage consent process was adopted meaning that young people began by consenting to a single in-depth interview session only. At the end of the interview, young people were reminded about the subsequent Q study and asked if they would be happy to be re-contacted at a later date to take part. In this way, young people’s understanding was sought at every stage of the research process, in order that they did not feel pressured to make a quick decision about continuing their participation in the project. Only a very small number of young people did not wish to be re-contacted about taking part in the Q study. A copy of the study information leaflet and both consent forms are included in Appendix G, H and I of this thesis.

Existing inequalities of power between children and adults can be duplicated in the research process (Punch, 2002). Research with young people tends to be a process which is devised and applied by adults, and then generalised and interpreted as a theory of childhood by adults (Birbeck and Drummond, 2007; Hill and Borland, 1996). One of the implications of this is that young people may say what they think the researcher wants to hear, exacerbating the tendency to give public rather than private accounts, particularly in one-to-one interviews (Harden et al., 2000; Hill and Borland, 1996).

In this study, two distinct methods were used (consciously and unconsciously) to alter this dynamic, the presentation of a researcher 'identity' and the use of interview dyads. Deliberate physical strategies were adopted in appearance, such as choice of casual clothing, in an attempt to distinguish the researcher from other adults, such as parents and teachers. It is commonly accepted that researchers 'perform' specific types of identity with specific types of participants in order to facilitate their research (Richards and Emslie, 2000). These identities are considered a key resource in gaining entry to the research environment and developing and maintaining relationships with informative actors within that environment (Murray, 2003).

Further, Lavis (2010) suggests that a singular conception of identity within qualitative research interviewing is problematic and at odds with first-hand experience. Much literature seeking to guide interviewers focuses on role and function rather than identity, essentially serving to construct the researcher as a research instrument, a human tool which gathers information (Lavis, 2010). Drawing on the work of Goffman (1990) and postmodern social constructionists, Mason (2002a) and Lavis (2010) argue that identity is fluid and requires the ability to 'act the part'. In other words, identity is something which is 'performed' in relation to and in conjunction with others.

In an interview context, different identities can be required of the researcher by participants and/or formed by the researcher as both a form of ethical practice and to enable or enhance the success of the interview (Lavis, 2010). Boundaries between the roles of researcher, friend, therapist or clinician can become blurred (Duncan et al., 2009:1694). For example, upon reflection, the age of respondents may have been a

factor in the presentation of identity in this study. This was not a decision made by the researcher *a priori*. In practice, this simply meant that, for those respondents closer in age to the researcher, the identity of a 'peer researcher' could at times be adopted, allowing the researcher to play on communalities which were not present with younger participants.

Some young people were interviewed in dyads. The primary aim of interviewing in dyads was to enable or allow for the possibility of a shift in the power relationship from interviewer to interviewees, and it is felt that – in some cases - this helped young people to feel as comfortable, relaxed and safe as possible. However, issues of safety and risk in research are twofold and the decision to interview in dyads was also a result of considering researcher safety. Though it was felt that there was minimal risk to the researcher in carrying out this fieldwork, as a lone female researcher, it was important to have a firm grasp of any situations which could be deemed risky. In particular, when working with adolescents (and especially teenage boys) potential risks to the professional 'reputation' of the researcher needed to be assessed and acknowledged. Both Cameron et al (1999) and Barker and Weller (2003) advise that researchers must protect both children and themselves by adopting 'cautionary practice' to ensure they are not the sole adult in a closed room with children. Interviews that were carried out on a one-to-one basis were never conducted in an empty building or closed room; and gatekeepers or relevant professionals were readily available, often in the room next door. On one occasion a youth worker needed to be present during an interview with two male participants as the only available space was a small, windowless room.

Further, a copy of the researcher's Criminal Records Bureau (CRB) check was provided to each research venue. Although individual interview sessions were risk-assessed as thoroughly as possible, as suggested by the example above, some fieldwork decisions called upon the researcher to act instinctively, using professional judgement as a researcher. In addition, a research 'buddy' system was set up with a trusted colleague and agreed within the supervisory team; no interview sessions took place late at night and interviews were never conducted in a risky environment. A potential interview session was abandoned on only one occasion after youth workers stepped in to break up a fight (unrelated to the interviewing) which resulted in minor damage to youth

centre facilities. If a detrimental change in atmosphere had been noted in an interview at any point, the session would have been terminated.

The location of the interview was also identified as significant. Barker and Weller (2003) stress the importance of geography, suggesting that location may influence the authenticity of responses provided by participants. McCrum and Hughes (2003) argue that the interview space should put the young person at ease. Further, they recommend letting participants choose the interview venue, if this is possible, after first explaining your own needs, for example, privacy and minimal background noise. In this study, this decision became a trade-off between convenience, safety and comfort for interviewees. Interviews predominantly took place in 'their space' using on-site facilities, such as quiet rooms or space, within recruited organisations. This was usually an environment akin to a community centre. A small number of interviews took place in a public coffee shop, and one further interview was held in my university building. Most importantly, interviews took place in a quasi-private space where the research session could be seen but not overheard. Whilst the location of the interview must be both quiet and comfortable for the researcher and participant, child protection issues such as those discussed above must be recognised and taken into account (Barker and Welling, 2003).

The potential disclosure of sensitive information was considered by the researcher prior to data collection. This was highlighted on only one occasion during the study when a young person disclosed self-harm. Continuing with the interview revealed that this was not the first time the young person had disclosed this information. As parents, social workers and youth workers were aware of the situation, the researcher did not feel that this was a child protection issue. In such situations, other interviewers may have considered the ethical thing to do to walk away. However, it may have been more detrimental to the young person (and perhaps unethical) to terminate the interview. For example, Mishler (1983) suggests that for some participants, taking part in research and telling their story is a way of making sense of their own experiences. Further, a one-off interview may have been akin to a cathartic experience for the young person in question, providing a research 'black box' with an interviewer that they never again have to have any contact with.

#### ***5.4.2. Further methodological issues of conducting research with young people***

During some interviews props were used to elicit conversation. Darbyshire et al (2005) contend that using a variety of research strategies to interest and engage young people is both philosophically appropriate and pragmatically valuable. Mason (2006) and Bagnoli (2009) suggest that the use of imaginative tools and creatively mixing methods can encourage thinking 'outside of the box'. At the beginning of the interview, participants in this study were asked to fill in a very brief and simplistic 'timeline' of their drinking experiences to date. Each completed timeline was filed with the participant's signed consent form, a copy of which is included in Appendix J of the thesis.

It was not anticipated that the young people in this study would have difficulty in expressing their views and opinions verbally, a dominant assumption in reflections of carrying out research with children and young people (Bagnoli, 2009). This assumption is usually levelled at younger children, particularly those who are under eight years of age (Darbyshire et al., 2005). However, drawing or writing can allow participants time to reflect on the issues being explored (Gauntlett, 2007). Many young people interviewed had never taken part in research and had no idea what to expect. The use of timelines constituted a way of easing participants into the interview session, something which might otherwise have been a daunting experience for them.

At a later stage in the interview, pictures of various types of alcohol or alcohol brands were spread out. Based on this visual stimulus, participants were asked to discuss their own experiences and opinions. Young people were encouraged at all points to comment on all alcohol types and brands, not just those included in the pictures presented. As with timelines, photographs were not used as a mode of analysis. Visual stimulus was used as a trigger or platform for further discussion, akin to 'photo elicitation' methods advocated by Boxall and Ralph (2009). Further, Morrow (1998) also contends that drawings may work well as 'openers' and 'icebreakers'; whereas Scott (2000) highlights that drawings and pictures can help to make the process of interviewing more concrete by being good memory-aids.

## **5.5. Chapter Summary**

In this chapter, the methodology and method of conducting qualitative and semi-structured interviews with 31 young people aged 14-17 was outlined in full, followed by the sampling and recruitment strategy employed to achieve this. A process of thematic analysis described earlier in this chapter identified a number of key themes in relation to the research question(s) posed by this study. These themes are explored over the course of the following two chapters of this thesis. Chapter 6 examines how young people articulate small-scale 'micro' level choices about alcohol, and the impact that alcohol marketing has on attitudes and behaviour. Chapter 7 builds on the ideas presented in chapter 6, and considers the wider function of alcohol as a consumer product and social construct. In doing so, 'macro' level concepts of structure and agency, choice and social control in relation to young people and alcohol are explored.

## **Chapter 6: 'Intoxigenic' Environments - Extending Interpretations of Young People's Engagement with Alcohol Marketing (Qualitative Interview Findings)**

### **6.1. Overview of the Chapter**

In this chapter (and that which follows) findings from qualitative interviews conducted with young people aged 14-17 are explored. To illustrate the themes identified, extensive but not exhaustive quotes from participants are included. This chapter examines how young people articulate small-scale 'micro' level choices about alcohol, and the impact that alcohol marketing is perceived by young people to have on their own attitudes and behaviour. Finally, the nuanced role of inter-personal relationships (with parents and peers) in young people's engagement with alcohol will also be presented, and positioned as the potential 'fifth P' in alcohol marketing.

### **6.2. Young people's engagement with price and other marketing techniques**

#### *The 'cost' of alcohol and the role of 'price'*

Young people in this study appeared to make critical and measured choices about the type of alcohol they drank, irrespective of age or where sampled from, and many practical decisions about what to drink appeared to be framed by the price of alcohol. Thus, '*because it's cheap*' was the default response for a large number of young people interviewed when asked what matters to them when they choose a drink. Most young people discussed purchasing significant volumes of alcohol for a very low price, and were knowledgeable about the cost of different products. When prompted for more detail, young people articulated (to varying degrees) a sense of economic rationality in wanting to 'maximise utility' or, in other words, get '*...the most for your money kind of thing*' (Participant 31, Female, Aged 17). For some (invariably older) participants this meant drinking certain drinks in certain bars (because of price or promotional offers),

drinking 'house' spirits and choosing to go to pubs and clubs on certain nights of the week (such as student nights) because the drinks are cheaper. For other participants, this meant sharing alcohol and buying in bulk, as well as drinking cheap, high strength products.

*'if you're just going to drink for drinking sake you don't buy anything that's half decent; you just buy something crap to get tipsy off'* (Participant 3, Male, Aged 15)

*'I don't go out like on weekends, I go out during the week so I go out on a Monday and Thursday then like, it's like everything is cheaper, but if I went out on a Saturday then I'd probably have to like buy different types of drinks, because I wouldn't be able to afford it because they're like double the price.'* (Participant 18, Female, Aged 17)

However, price was not always considered in the ways it was expected to be and young people did not always perceive their choice of drink to be a simple economic cost-benefit analysis. Instead, the price of alcohol appeared to be considered in conjunction with various other factors. Most notably, these were taste, effect, image, expectancies, experience, convenience and accessibility, reflecting one of the findings from the systematic review conducted in this thesis, that it is difficult to disentangle elements of the marketing mix. In particular, that it is difficult to separate the facet of 'product' from 'price'. For example, there were alcohol products which groups of young people stated they did not enjoy and would never drink. Often, this decision was linked to cultural stereotypes about the alcohol brand or product. Yet, when there was no (or very low) economic cost attached and the product became a 'freebie', considerations such as taste and image seemed to matter far less. In this way, young people displayed product and brand preferences but only to a certain extent. After this, they appeared willing to accept a ready alternative in order to be able to drink. Further, young people sometimes seemed constrained in their choices by factors beyond their immediate control. Access routes were limited and they could not always simply 'choose' exactly what they wanted to drink.

*'Heineken is my preferred brand but to be honest I'm not really bothered, I'll just drink whatever's there...'* (Participant 12, Male, Aged 16)



*'I wouldn't dare touch that, we wouldn't drink that...Piss water...it tastes horrible...I wouldn't touch it in me life...Unless someone else bought it...Wouldn't drink it unless I got it for nowt...Wouldn't waste me money...'* (Participants 4 and 5, Male, Aged 14)

*'I'm not bothered, it's just like when you go for a drink or when you're canny drunk you don't really care. But I can't just drink it when I'm sober it's disgusting...'* (Participant 10, Female, Aged 15)

Drinks appeared to be chosen based on a combination of expectancies, past experience (usually their own) and the desire to experiment with different types of alcohol in order to test boundaries and limits. Drawing on the work of Russell et al (2011), young people in this study appeared to have their own way of categorising alcohol, and it was specific brands or products (rather than alcohol *per se*) which were 'imbued with agency' and associated with unwanted effects or consequences.

*'I just drink drinks what I've always drank since the first time I drank...the only reason I try different drinks is, just mess about, like experiment, see what's better or what tastes nicer; or what gets you more drunk while having to drink less of it...'* (Participant 21, Male, Aged 16)

The taste of alcohol was deemed particularly important, with a substantial number of young people in this study highlighting a preference for drinks which mask the taste of alcohol.

*'I like the orange one 'cos it tastes like Irn Bru...'* (Participant 5, Male, Aged 14)

*I like it 'cos it doesn't taste particularly strong and it's no different to sort of like lemonade or whatever without the fizz...'* (Participant 6, Female, Aged 16)

Yet, taste was sometimes accorded less importance as the night wore on, usually after a substantial amount of alcohol had been consumed. On a number of occasions, stronger alcohol was mixed with non-traditional mixers such as very sweet soft drinks or energy drinks to make it more palatable. Despite a recent trend in literature

suggesting that many young people no longer consume alcopops (often because they are too expensive), this finding suggests that boundaries are still being actively blurred between soft drinks and alcohol and that the basic premise behind this type of product remains, with young people simply categorising the product differently. Amongst young people in this study there was a massive misconception that alcopops are not a strong type of alcohol, yet drinks which taste like soft drinks were still preferred. Because young people perceived alcopops to be low in strength, they were effectively 'mixing their own'.

*'...you just buy a bottle of cherryade or a blue bottle of bubblegum pop...just pour it in so it tastes nicer...'* (Participant 21, Male, Aged 16)

Despite this, there were conflicting accounts about the role that product strength played when making decisions about alcohol. To some young people, it was important to use self-imposed 'limits' (rather than those recommended in government campaigns or social media) and choose products which were not too strong and did not result in immediate and obvious drunkenness, a point which has been referred to in existing literature as an 'intoxication tightrope' (Percy et al., 2011) and 'bounded' or 'calculated' hedonism (Measham and Brain, 2005).

*'...drinking to get drunk...that's like not really what I want to do...not like your entire life sort of like focused on getting drunk or whatever, it's sort of something that happens rather than something that you set out to do...'* (Participant 6, Female, Aged 16)

*'I tend to go for the taste rather than, you know, the actual getting drunk part. I don't like drinking stuff I don't like...I'm not too keen on like really, really strong drinks'* (Participant 19, Female, Aged 17)

Others drank for 'effect' and it was important for it to be obvious that they were drinking alcohol. Consuming 'weak' products defeated the object of drinking and represented a 'waste of money'.

*'...it doesn't get you pissed or nowt and you just think well I've wasted my money on something what's not going to get us pissed.'* (Participant 25, Male, Aged 15)

*'...you can get this VK stuff for three quid, I wouldn't pay that because it doesn't really do nowt, you know what I mean. It's only like four per cent or something and it's like three quid for a daft alcopop...I wouldn't pay nowt for that like...'* (Participant 26, Male, Aged 15)

Certain types of alcohol performed different functions or reflected different drinking purposes or expectancies for the young people interviewed in this study. Some products even performed multiple functions. For example, shots were consumed to get drunk quickly but also out of convenience because they were easy to carry, despite some participants describing them as 'disgusting' (*'...you can't really take a beer out onto the dancefloor...'* Participant 29, Male, Aged 17). Further, shots were also consumed to reflect a sense of adventure and have 'a laugh' with friends. Products which could be 'stashed', shared or bottles which could be closed were also frequently mentioned over the course of interviews.

*'Well all my friends like drinking it so like there would be 'shot o clock' as we say, that's what we'll all get and it's just nice that everyone has it...if it's more alcoholic and you shot it, it's like congratulations kind of thing...'* (Participant 31, Female, Aged 17)

*'It depends where I am or what I'm doing...if it was just like I was just sitting in the house like me and me mam just decide we're going to have like a couple of bottles but like if I was at a party I might have a bit more.'* (Participant 15, Female, Aged 14)

Nevertheless, all participants stated, to some extent, that they do have a cut off as to how much they can or will pay for alcohol. For some, a change in price *'would put me off [a product] totally'* (Participant 31, Female, Aged 17). However, this did not always correspond with reducing the amount of alcohol consumed. Instead, switching to cheaper alternatives was suggested (*'get used to it or find something different...'* Participant 13, Female, Aged 14) otherwise *'you'll have no more money left for anything else you want'* (Participant 14, Female, Aged 15). At no point was it suggested

by young people that they would not drink alcohol at all and some young people also discussed 'subbing' which was used to describe friends paying for their drinks or *vice versa* when short of money.

*'I'd probably drink something else cheaper and possibly stronger. Because a lot of the time the shots are higher alcohol content which you would drink for the feeling and also it would be cheaper for a smaller amount.'* (Participant 19, Female, Aged 17)

For others, the price of alcohol was not a central concern. Either, finding enough disposable income was not a problem, or they felt that they had 'better' things to spend their money on (*'...usually things will mean more to me than alcohol'* Participant 11, Female, Aged 16). However, despite appearing to display adult decision-making and behaviours in relation to alcohol, especially with regards to price, most did not have to budget or substitute other things in order to have fun because money spent on alcohol tended to come from parents, a point which will be explored in more depth later in this chapter (see section 6.3).

*'Nah I don't feel like that [missing out on anything]. I've got nowt else to spend it on really.'* (Participant 25, Male, Aged 15)

*'...just however much it costs really...I don't really pay attention to the price to be honest...I always get enough money from my parents...it's not really an issue, the price...'* (Participant 12, Male, Aged 16)

Money was used by some (older) participants to control alcohol consumption and as a self-imposed measure of harm minimisation. For example, this meant not going to a cash machine during a night out or going home once money has ran out.

*'The most I've ever taken out is ten pound, because I don't like getting drunk, if that makes sense. So I take enough that it would be fun but not ever dangerous, because I'm quite careful...I'd stay [after her money has ran out] but I wouldn't drink. Or my friends would buy me or drink or something but that would be the max.'* (Participant 31, Female, Aged 17)

*'...now if I go out and I take £30 with me, I won't take my bank cards with me because I know what I'm like...'* (Participant 20, Male, Aged 18)

Older participants in the study also discussed 'preloading', defined here as drinking in home environments before continuing to drink in pubs and clubs in the night-time economy, and described it as 'expected of you'. Although some recognised that they did this to make the night cheaper, this practice was more nuanced and took place when young people were unable to access alcohol in pubs and clubs, or used to boost confidence and to 'extend' the night out, resulting, for some, in the consumption of a higher volume of alcohol.

*'...either way I'd drink in the house...the night's better when you're not sober so you start the night not sober so it's better from the start...'* (Participants 1 and 2, Female, Aged 17)

*'If I know I'm going somewhere I can get served I would drink when I got there but otherwise I would just drink at someone's house beforehand.'* (Participant 12, Male, Aged 16)

Further, young people were ambivalent about whether the price of alcohol should be changed and whether this would affect theirs or other people's drinking habits.

*'I think it depends...people scrimping and saving obviously...might stop them drinking as regularly and as much but I think a lot of people will not be in that sort of section...say if they put the prices up a couple of pound I'd still be able to sort of carry on my habit...but then again...I said sometimes that I might sort of sacrifice, I might not bother because of other stuff, I think it might do that more often so I might have to sacrifice it more often so maybe...I think it will stop some people, limit a few but the rest it will not affect at all.'* (Participant 11, Female, Aged 16)

### *The Role of Wider Alcohol Marketing*

Young people in this study positioned themselves as unaffected by overt forms of alcohol marketing. However, young people did not see the pricing of alcohol as a form of marketing and did not appear to recognise less visible aspects of promotion (e.g. sponsorship, viral and digital marketing) as a form of marketing. Thus, when asked about the messages that would affect their drinking decisions, they highlighted marketing which promoted price-related 'special offers', such as those from major supermarkets or retailers and those noticed in pubs and clubs on a night out.

*'...if you were in a club and you had been drinking and there's like an advertisement that's saying it's cheap or something, I'd probably go for that, but TV has never influenced me.'* (Participant 31, Female, Aged 17)

*'...if like I went into somewhere, a shop, and there was like four different brands of lager and one was on offer I would buy the one that was on offer because it was going to be cheaper...that would be the only way I would pay attention to any sort of offer or advertising or that sort of thing...'* (Participant 12, Male, Aged 16)

*'...Just what I see like on cheapness and that and whether it's got the picture of what it is...'* (Participant 25, Male, Aged 15)

Further, the majority of participants were aware of brand marketing campaigns and could recount many brands and slogans unprompted, and a small number of young people interviewed felt that they had consciously chosen a particular drink as a result of brand marketing.

*'...they're quite good adverts actually. They're always quite good how like they manage to do all these amazing things...I'm sure that's Carlsberg...Australia always springs to mind...that's what comes to mind when I think of Fosters'* (Participant 12, Male, Aged 16)

*'...somebody does something bad and it says "have you got your WKD side?"'*  
(Participant 4, Male, Aged 14)

*'I seen one of the adverts off Jack Daniels...I was like 'oh I wonder if I'd do that if I'm on Jackie D's' and I just had to get a bottle of Jackie D's and nowt happened...I liked the taste of it and that. Same with Southern Comfort. I've seen the advert for that and I was like 'oh' and decided to have a drink of it'* (Participant 20, Male, Aged 18)

However, for the majority of young people interviewed, although advertising was not linked to purchasing *at the moment*, it appeared to play a distinctive role in normalising alcohol use and building up associations and expectancies related to drinking, such as a sense of belonging, escape, fun, hedonism, carnival, as well as a feeling that alcohol use is 'owed' after a hard week of working and forms a 'rite of passage' into adulthood. In addition, young people in this study did not bracket alcohol use in films or popular entertainment shows as alcohol promotion (industry driven or otherwise), yet many young people remembered and reflected on images portraying alcohol use as fun and as providing ideas for new things to try.

*'...whenever anybody says Baileys I always think of The Mighty Boosh. There's an episode, old Greg, he's like "you're having Baileys from a shoe. That always makes us laugh. I've always wanted to try that.'* (Participant 6, Female, Aged 16)

*'...when I was younger I always watched Absolutely Fabulous and the vodka, and my sisters always said 'oh I need to try that one day' so that could influence but it's never influenced me really.'* (Participant 31, Female, Aged 17)

Thus, those interviewed held quite a one-dimensional view of what alcohol marketing actually is, and young people predominantly discussed only 'traditional' advertising techniques. Although they felt that they rarely noticed sponsorship, certain types of alcohol were readily associated with different sports, such as beer with football and rugby, and price appeared to be interpreted as a separate construct rather than as part of culture or larger, integrated marketing strategies. Further, young people appeared not to recognise material posted to social networking sites as marketing, and indicated

that it would be what they saw as ‘word of mouth’ advertising from their friends which would grab more of their attention.

*‘I don’t really pay attention to them than what I’m actually looking at on the screen...friends over social networking sites saying ‘oh this is great, give it a try’, I would probably listen to them.’* (Participant 19, Female, Aged 17)

*‘...sometimes there’s like send a drink to a friend, but that wouldn’t influence me or anything...’* (Participant 31, Female, Aged 17)

### **6.3. Young people as ‘sophisticated’ and ‘critical’ consumers**

Participants presented themselves as rational, critical and sophisticated (alcohol and media) consumers, by appearing to demonstrate a level of scepticism about entertainment and advertising media. This point is reinforced in findings from the Q study discussed later in this thesis (see chapter 9).

*‘...shows like Skins which are aimed at our age group...I always find them a bit patronising myself...just like the idea that they’ve pushed it full of these drugs or these things which they think will grab our attention but then I think well it’s not very realistic. It’s not actually what I want to watch.’* (Participant 29, Male, Aged 17)

*‘Like especially for sort of programmes for my age range, like you know you’ve got like Skins and the Inbetweeners and all that sort of thing...it’s like a frequent part...especially Skins...scares us...a lot of the time they’re not just sitting with a drink, normally they’re getting like sort of wasted...’* (Participant 11, Female, Aged 16)

Stereotypes (gendered or otherwise) were assigned to certain types of alcohol or brands. Yet, it is unclear exactly how much of these associations were industry-driven or subverted, blurred and co-constructed by young people. For example, cheap wine and cider were associated with those from a lower socio-economic class (accorded the derogatory term of ‘chavs’ or ‘charvas’ by participants); alcopops were, at times,



described as a drink for girls and younger adolescents; and cocktails, champagne, white wine or expensive brandy and whisky were described as mature or 'sophisticated' drinks.

*'Some drinks the guys would never go near like WKDs, Apple Sours because it's quite feminine for them, they'd go for the hard tequila and everything, show off about it...all about image, because they'd get taken the mick out of if they had something that was colourful...it's more manly to have a drink in your hand I think than to just take little shots.'* (Participant 31, Female, Aged 17)

*'...it's a chava drink. You can tell when I would go into a shop and buy a bottle of Bellabrusco it's like 'oh that's for the kids'...'* (Participant 22, Female, Aged 16)

*'...I might grow to acquire a taste for like more sophisticated drinks like whisky and brandy...when I'm a more mature man ...'* (Participant 12, Male, Aged 16)

Young people also thought that, although they may not be influenced, 'others' (especially those younger than themselves) may be. This phenomenon is described by Davison (1983) as a 'third person effect' in marketing.

*'No, they wouldn't influence me. I watch them but they don't influence me. But I know they influence, well like my little sister, she's only 14 and she watches it and she says everybody watches it in her year and the year below...And I know for a fact people get influenced over them, cos you can tell if they say one daft thing they'll say it...And, aw, it's just, aw I hate it; I hate it when people get influenced by stuff...'* (Participant 22, Female, Aged 16)

*'I know that they have advertisements quite a lot, especially in bars and stuff but no, I don't really particularly notice them. I'm not really into like the real alcohol scene...knowing all your brands and knowing all the sophisticated stuff...I would say if people are first starting to drink then it would have more of an effect because they won't really know what's out there...so they just see like a poster...maybe I'll have one of those see what it tastes like...'* (Participant 28, Male, Aged 17)

Finally, young people in this study appeared to learn how to access alcohol through experience. Those interviewed were savvy about where would and would not serve them alcohol. Younger participants discussed 'shoulder-tapping' (defined here as asking strangers to walk into a shop and buy alcohol on their behalf) and acknowledged the importance of social networks to their alcohol access. In other words, it is as much about who you know as where you go. For example, not one young person suggested that they would attempt to purchase alcohol in a major supermarket or retailer as it was felt that they would not be successful and, when drinking in pubs and clubs, young people discussed arriving in larger groups with older friends and choosing bar staff and doormen carefully.

*'...you sort of get to learn the places where you will and won't get served where they will and won't ask for ID so you go to those places rather than other places...'*  
(Participant 12, Male, Aged 16)

*'...I'll go in first before I get someone to go in [to a shop]...I'll have a look see what the prices are on some of the drink and see what drink there is and then just go for whatever. Just get them to go in for it...'* (Participant 25, Male, Aged 15)

#### **6.4. Personal Relationships: The 'Fifth P' in Alcohol Marketing**

The nuanced role of inter-personal relationships (with parents and peers) in young people's engagement with alcohol is positioned in this thesis as the potential 'fifth P' in alcohol marketing. The role of relationships with peers will be considered in the following chapter, whereas this chapter section reflects on the role that parents can play in young people's practical choices about what to drink. Most of the young people in this study had their first experiences of drinking alcohol with parents. Although the influence of parents on young people's drinking behaviour was more prevalent amongst younger participants in this study, older adolescents recounted similar experiences. In existing literature, the role of parents is traditionally referred to as one of 'teacher' or 'transmitter' of cultural attitudes and social norms. This theme was also identified in this study.

*'...basically they told me...what's out there and they tried to introduce me...at a young...just saying no you can have a sip of my wine or whatever...so it wouldn't be...the first time you do it it wouldn't be like something new that you just go out and do it loads because you've never done it before.'* (Participant 28, Male, Aged 17)

*'Dad told me how to make Moscow Mules...'* (Participant 3, Male, Aged 15)

According to young people interviewed, parents appeared to advocate moderate drinking and preferred to know *where* young people were drinking rather than *whether* they were drinking. As such, there was a preoccupation with physical safety rather than additional alcohol harms.

*'...sometimes my mam knows I'm drinking but me dad doesn't like us...she doesn't always do but she lets wer like sit in mine but we've got to be really quiet...because she knows I'm safe and that and she knows that me friends are safe as well...he [father] thinks I'm too young and that but he would prefer us in the house than on the streets until I'm old enough.'* (Participant 8, Female, Aged 15)

*'...my dad, well, what he does say is I'm quite good with alcohol he says I'm self-regulating now...He can trust me with it so I think that's why he lets me take a bit out of the house and stuff like that.'* (Participant 29, Male, Aged 17)

Further, a large proportion of those interviewed drank with their parents. As such, drinking alcohol was routine and normalised with young people receiving mixed messages about moderate or 'sensible' drinking habits.

*'I go...with my dad to the rugby a lot and like he usually buys me...like we usually have a pint after the match...'* (Participant 12, Male, Aged 16)

Findings from this study build on a description of parents as cultural 'teachers' and suggest a wider role for parents as a 'gatekeeper' or 'access route' to alcohol for young people. Invariably, parents were the traditional source of alcohol for young people in this study, either via direct purchasing or by being the main route of disposable

income. Further, it is suggested that access to alcohol was negotiated rather than simply controlled with implicit 'contracts' in place between adults and young people.

*'...if I ask for eight cans of Fosters my mam and dad would be like well is that not a bit too much, and so then I'd ask for four...'* (Participant 2, Female, Aged 17)

*'...I normally just ask my dad if it's alright if I grab a couple of beers and stuff and he'll go sure.'* (Participant 29, Male, Aged 17)

Nevertheless, it also appeared that parents were 'unwitting' providers and it was unclear whether they always knew that money was being kept to one side and spent on alcohol.

*'She [mother] gives us like two pound or something she thinks I'm buying chips with it.'*

(Participant 13, Female, Aged 14)

## **6.5. Chapter Summary**

In this chapter, three main themes identified from in-depth interviews conducted with young people aged 14-17 were explored. First, it is argued that, on the surface, young people appeared to make critical and measured choices about alcohol and that many of these decisions were framed by alcohol price. However, it is suggested here that young people consider the cost of alcohol alongside of a finite number of additional factors such as taste, effect, strength, expectancies, past experience, purpose and convenience. Second, despite being aware of brands and slogans, young people interviewed positioned themselves as unaffected by overt alcohol marketing, instead portraying themselves as rational and autonomous alcohol consumers. Further, young people did not appear to recognise less visible aspects of promotion (e.g. sponsorship, viral and digital marketing) and did not associate the pricing of alcohol as a form of marketing. However, advertising and other promotional activity seemed to play a role in building recognisable imagery linked to alcohol products, as well as associations and

expectancies related to drinking. The volume and ubiquitous nature of alcohol marketing (industry driven or otherwise) in society means that such depictions are routine for young people. This point is reinforced by the role of personal relationships, especially parents, described in this study as the 'fifth p' in marketing. For many young people in this study, parents were a role model and access route all rolled into one. The findings in this chapter highlight how young people interact with alcohol marketing on a micro, almost daily, level. Yet, it is important to examine young people's choices about alcohol on a much deeper, macro level. The following chapter builds on the themes identified here and explores structure and agency in young people's drinking choices, drawing on Bourdieu's model of the habitus and 'political economies of health' as a theoretical framework.

## **Chapter 7: Using Structure and Agency and Bourdieu's 'Habitus' as a Framework for Exploring Young People's Alcohol Use (Qualitative Interview Findings)**

### **7.1. Overview of the Chapter**

Using data from in-depth interviews with young people, this chapter builds on the previous one by examining how young people make decisions about drinking alcohol, the rules, rituals and patterns which govern drinking choices, and how sites of consumption (and changing modes of social control) can impinge on the way young people drink alcohol. In doing so, this chapter explores how structurally embedded forces and social norms can drive the ideas and themes identified in the previous chapter, culminating in 'political economies of health'. Further, the idea that young people can make free, autonomous choices about alcohol is critically examined, using Bourdieu's framework of the 'habitus' (outlined in chapter 2) as a way in which to position young people's alcohol choices within a wider framework of structure and agency in relation to health behaviours.

### **7.2. 'Choosing To Drink'**

Although young people in this study appeared to make critical and measured choices between alcohol types and brands, the more substantive decision about whether to drink alcohol at all was not necessarily quite so free and autonomous. Although perhaps in part symptomatic of this sample of young people and not generalisable to all young people, it is interesting to note that every participant in this study drank alcohol at least to some degree (*'...I don't know anyone who has never had a drink in my year'* – Participant 31, Female, Aged 17). However, not every young person drank frequently or in large quantities. Choosing to drink alcohol was framed as normal and alcohol was used by young people to relax, to have fun with friends, to aid confidence and on rare occasions to relieve stress.

*'...it's sociable to drink...it makes you feel more relaxed and I guess it's just something that everybody does really'* (Participant 19, Female, Aged 17)

*'I feel a lot better when I have had something to drink...I always feel a lot more able to go and like dance on the dancefloor and that and enjoy the music a lot more than just I would probably if I hadn't had anything to drink I'd probably just stand at the side and watch'* (Participant 12, Male, Aged 17)

*'Cos you don't care...you're more confident...and you do whatever and you just have a laugh. It's like you don't care that you look stupid; it's funnier'* (Participants 1 and 2, Female, Aged 17)

In itself, the observation that young people use alcohol to relax and have fun with friends is not something new. It is in framing this against structurally embedded forces (such as the dominance of industry processes, capitalist endeavour and deeply embedded practices, ideologies and norms) that a more interesting and nuanced picture begins to emerge. Industry-driven processes and sociocultural norms appeared to make *not* drinking the harder choice for young people to make. To not drink broke with what was recognised as 'normal' in society and would result in potentially exclusionary practices. In other words, young people's choices about alcohol appeared to be funnelled into specific, seemingly naturalised directions and practices in order to 'function without deficiency' and create the illusion of being 'free' to 'choose' whether and how to consume alcohol.

*'It's just what I've learnt to do'* (Participant 2, Female, Aged 17)

*'I didn't like it at first 'cause like I was sick and that all over and my ma found out...but as I got used to it I was alright...I just love the buzz of getting drunk now like'* (Participant 24, Female, Aged 13)

*'...if I go to someone's house and we're not going out or something, I don't drink. Like I only drink if I'm going out, I can't like socially like drink, with a meal or something...I*

*don't like the taste so it's like not worth it...I don't know it's just more fun.'* (Participant 18, Female, Aged 17)

To follow this dominant, naturalised order in relation to alcohol use means to abide by certain rules, rituals and patterns, and it is these practices and societal communalities which are explored in the section which follows.

### **7.3. Alcohol Rules, Rituals and Patterns**

In the previous chapter, it was suggested that alcohol marketing appeared to play a distinctive role in reflecting and building up both associations and expectancies surrounding alcohol use. A high level of alcohol imagery in marketing and wider culture is arguably an inevitable consequence of realistic depictions of social life. As illustrated in the previous chapter, different alcohol types and brands appeared to hold particular connotations or to be used in distinct ways by the young people in this study. In other words, certain types of alcohol were used to 'relax' and others were used to 'get hyper' or intoxicated. Industry processes and sociocultural norms not only seemed to impinge on choosing whether to drink alcohol but they also appeared to feed into the ways in which young people felt they were expected to behave when drinking alcohol.

As well as representing a distinctly social practice, drinking alcohol appeared to offer a sense of belonging to the young people in this study (*'...it was all our little community in that park'* – Participant 20, Male, Aged 18). To some, it was not shameful to be drunk and, in this way, drunkenness offered almost a 'badge of (dis)honour'. There was also a distinct storytelling element to interviews, with some young people displaying a sense of bravado, expertise and pride in the stories that they told about alcohol.

*'...it's always funny, you're always gonna laugh at it you always are...I don't care, I go out with the intention to get drunk'* (Participant 1, Female, Aged 17)



*'I can actually handle my drink. I only get tipsy, I don't get mortal...'* (Participant 24, Female, Aged 13)

*'...hardly any of them drink. It's usually just like me and him and a couple of them like have a little bit...When they see us getting a bit tipsy they gan "ah drop me, I'll have a drink of this", and then they get it like they don't even drink much they have like a mouthful and maybe just take it back and just then a few other people come up and say can I have a sip and me and X are just like giving them a sip then and just drink the rest'* (Participants 4 and 5, Male, Aged 14)

Alcohol use represented a 'rite of passage' into adulthood for those interviewed. The joy of drinking was often emphasised, with alcohol used as a means of 'escape' from the banality of life and, even for young people under a legal drinking age, as a reward after a hard week of work. Young people illustrated a sense of fun, hedonism, and even carnival in their alcohol narratives, striving to avoid boredom.

*'Never sit down 'til your feet's gone'* (Participant 22, Female, Aged 16)

*'All we do is we just have a chat and just sit down, talk like about what we've been doing through the week...gossip, just loads of gossip...we just sit and have a dance...and then just go home.'* (Participant 24, Female, Aged 13)

*'...if I wasn't drunk I wouldn't go up to a guy and be really, really flirtatious or dance with someone I didn't know but if I was drunk I would...I think it's not only the alcohol but also sort of 'well I'm drunk, everyone else is drunk, what the hell''* (Participant 19, Female, Aged 17)

Loss of control as well as loss of memory was articulated by some young people interviewed. As suggested earlier in this thesis, Crawshaw and Bunton (2009) recognise that even 'risky' consumption practices or health behaviours can have a 'cultural logic' within a specific habitus or cultural milieu. In other words, to some young people, this is exactly the 'logic' of consuming alcohol. Social marketing and health campaigns related to alcohol were largely ignored for this very reason. Young people described

health promotion advertisements as 'funny' or 'stupid', arguing that they '*know how the night ends*' (Participant 20, Male, Aged 18).

Yet, not all young people drank in risky ways or to lose control. Instead, they negotiated the boundary or 'edge' of consumption so as to not become 'too drunk', become an embarrassment or miss out on enjoying their evening. Such a sense of 'bounded' hedonism reflects a sense of being constrained by what is structurally possible or acceptable within the 'habitus' of alcohol use (this idea is also explored within the Q study findings in chapter 9). More specifically, some young people simultaneously described reining in their alcohol consumption by only spending a certain amount of money, planning ahead for how to get home or by looking after their friends whilst also illustrating becoming more spontaneous, flirtatious, dancing and acting on 'their instincts'. Further, some young people were quite vocal about their own unwillingness to be visibly out of control or intoxicated.

SO) '*Do you ever take any notice of what your friends drink?*'

P014) '*No because like whatever they drink it's like stronger than what we drink, well I drink so they'll get like mortal as straightaway then me so I would know I'm doing but like they might not know.*'

SO) '*Why do you think they pick stronger drinks?*'

P014) '*So they can get mortal quicker.*'

SO) '*...Why do you think they want to do that?*'

P014) '*I think it's to show off a bit.*'

SO) '*...what stops you from wanting to get as drunk as them as quickly as them?*'

P014) '*Cause you don't know what might happen so if you drink...it's like you can drink but not as much as that they drink because you know what will happen but they don't even...probably won't even know what was going to happen because of that.*'

(Participant 14, Female, Aged 15)

The rules, ritual and routine involved in drinking occasions is implicit, almost unconscious and articulated throughout young people's narratives. Some seemed to

work to extend, promote and structure drinking whereas some provides limits or constraints on risk emerging from too much drinking. For example certain drinks consumed in certain locations at certain points in the evening, illustrated in the following, absolutely precise, quote from one participant.

*'On Saturday I would get up about 10:00/10:00, give everyone time to go and have a shower and that; get ready; iron some clothes and that; and then meet everyone at mine about 11:30/11:45; go and get a couple of cans from the shop; come back to mine or go to one of me mates; drink four or six cans then walk across to The Jacksons. Couple of pints in there, couple of games of pool in there. Walk to the Albion...go to The Fort, go to The Prem, get to about 6:00. Go back down the shop, get a bottle of vodka, have a couple of shots; sit with me mates for a bit...talk like with the lasses...then 9:00/9:30 go and get changed, meet everyone back at mine for 10:00/10:30, go over the town...we always get two pints and four shots and we just drink, like, at the same time and then drink whatever we want after that'* (Participant 21, Male, Aged 16)

Importantly, the ritualistic nature of drinking was evident in young people's narratives regardless of age, as suggested from the quote below, this time from a younger interviewee.

*'What we basically do is we go in, we get changed...go on Facebook and talk to each other, we meet each other, we get wor money, we go out, sometimes, not all the time, sometimes have a little drink and we just dance about, talk, tell jokes, take pictures and then go in.'* (Participant 24, Female, Aged 13)

Further, the pleasure derived from a night out was extended both retrospectively and prospectively. For example, older young people who drank in pubs and clubs discussed drinking alcohol whilst getting ready at each others houses or at parties before heading into town (*'...we're drunk before we even go out...it's expected of you'* - Participant 1, Female, Aged 17). However, the practice of extending the night was not restricted to older youth. Regardless of age, young people in this study articulated becoming excited about and discussing the weekend ahead with friends over the course of the school, college or working week (*'...most of my nights out are planned...'*

– Participant 18, Female, Aged 17), as well as discussing the night retrospectively over the coming days (*‘...ringing you the next morning oh my god look where I am’* – Participant 1, Female, Aged 17). The increasing use of social media aided this practice with young people able to plan the upcoming night together as well as disseminate it and look at photographs via social network sites such as Facebook.

*‘Dance, sing, take pictures and just have a talk’* (Participant 24, Female, Aged 13)

Extending the night in these ways, both retrospectively and prospectively, appeared to bind young people tightly as a group. Further, for the young people in this study, there were additional routines, rituals and patterns as to how they operated as a group (*‘We always meet at one o’clock outside to make sure we can all go home’* – Participant 31, Female, Aged 17). In particular, drinking shots was deemed to be a social behaviour, and a drink to be enjoyed with friends. Some behaviour was simply deemed unacceptable (*‘...that’s like ruining it for everyone around you really because you feel uncomfortable...’* – Participant 31, Female, Aged 17) and managed within the group.

*‘well we do...like tend to emphasise to each other that you should know your limitations so if someone kind of goes over...and like doesn’t know his limits then we would be kind of well he’s not really that cool to hang out with...I guess there is a borderline between funny and embarrassing...like the new people who come in sometimes they go over the top of it and then they know that that’s not really the way to go so they kind of buckle down next time’* (Participant 28, Male, Aged 17)

There were also subtle, almost unwritten rules governing group roles and responsibility for friends (*‘I guess it’s like drinking etiquette’* – Participant 19, Female, Aged 17). For example, certain members of the group (often but not always female) took on the role of the ‘sensible’ sober friend who took responsibility for the others, whereas others (male or female) performed the opposite role of the ‘drunken’ friends within the group. This role was not always static and appeared to shift in some friendship groups depending on the occasion.

*'...sometimes like if I'm the one not drinking then I feel kind of responsible for the people who are and like if it goes a bit too far then I feel like I'm the one who's got to look after them...cause nobody else would really be capable of it.'* (Participant 6, Female, Aged 16)

*'Well one of my friends, she never seems to get drunk no matter how much she drinks, so she is always the one looking after people. And there is the odd two that only a couple of drinks and they're absolutely drunk as anything. So usually me and someone else would be looking after them.'* (Participant 31, Female, Aged 17)

Young people also articulated distinct routines regarding financial transactions. Certain group members provided alcohol for their friends because they looked older, were the 'regular' at a shop or because they had an alternative easy access route (through parents, older friends or siblings).

*'...I look the oldest I'm usually the nominated one who has to go and buy the drink for my friends...'* (Participant 12, Male, Aged 17)

Purchasing or providing the alcohol seemed to provide certain young people with more power within the group to make decisions and choices about drinking. Other young people illustrated additional financial 'rules' such as 'subbing' (borrowing of money or alcohol) or '*...gan halvers*' (Participant 4, Male, Aged 14), meaning to share alcohol and usually purchase in bulk in order to obtain better value for their money, a practice discussed in more detail in the previous chapter.

*'...we all chip in a few quid...if there's loads of us sharing then it's never like a lot of money that we have to put in but then like sometimes it might kick off a bit if some people have like not put any money in but are still taking most of the drink...we'll say if there is anything we specifically want and then like we'll agree on something to share or whatever'* (Participant 6, Female, Aged 16)

*'I think a couple of Fridays ago we all hardly had any money but we thought it would be better if we just put our money into...see how much it would all come to and we worked*

*it out better, it works out better like that so we've started doing it like that...there wasn't people running out of drink and drinking other people's drink; it was everyone's drink' (Participant 20, Male, Aged 18)*

Further, drinking alone was universally abhorred and described as pathetic, sad, boring and 'only for old people' by young people interviewed. To drink alone seemed to contradict the dominant order which dictates that consuming alcohol is a distinctly social, fun and pleasurable practice.

*'Lonely, kind of desperate kind of thing, because I do it socially, I'd never do it just by myself to drink, because it's nice in an atmosphere with friends but, no' (Participant 31, Female, Aged 17)*

#### **7.4. Social control, Sites of Consumption and Changing Drinking Behaviours**

Drawing on Urry's (2010) work on the nature of consumption practices and social control, the habitus of young people's alcohol use can potentially be mapped over time, and by age. Young people's trajectories of drinking can be seen to shift from behaviour which is contained and regulated by informal and local sanctions of social control, such as parents, family members or street-based community support or police officers (*'...depends what time I had to go home to me mum and dad's'* – Participant 6, Female, Aged 16), to behaviour which is hedonistic, seemingly less restrained and policed by more formal measures of social control in the night-time economy. Some of the differences in young people's narratives in relation to sites of discipline and sites of control are illustrated in Table 7.1 below.

<b>Sites of discipline</b>	<b>Sites of control</b>
<i>'Where I've been drinking has changed...where I used to drink I used to drink more in public areas where there was more people generally but now I really don't go into like fields and that...'</i> (Participant 5, Male, Aged 14)	<i>'...The influence that has and the atmosphere as well like in town you've got music and dark and you can go to the bar and there's loads of different people there...'</i> (Participant 2, Female, Aged 17)
<i>'...I'll ring your da to move because he knows, like off past experiences, that if he rings me dad I wouldn't like it; I'd be pissed off and all that. And I will shut up or whatever he asks me to do...'</i> (Participant 21, Male, Aged 16)	<i>'It's different down the town though because you're surrounded by people drinking, that just sends you looped anyway...'</i> (Participant 27, Male, Aged 16)
<i>'...neighbours over where I live everyone knows me from mine so if I go out drinking I would have to go...somewhere where nobody knows us because the neighbours would probably tell me mam and me mam would probably kick off with us so I'll just go somewhere where I don't hardly know anyone.'</i> (Participant 14, Female, Aged 15)	<i>'I guess it's just the environment I would say. Environment in a club is like more full on, more contact...'</i> (Participant 28, Male, Aged 17)
<i>'...I know the shop keeper like in the local shop, me and all me friends all know him and he's got no problem as long as we don't like tell people...'</i> (Participant 6, Female, Aged 16)	

*Table 7.1: Differences in young people's narratives in relation to sites of discipline and sites of control*

Changing drinking behaviours, sites of consumption and social control practices can also be linked to the financial 'rules' outlined earlier in this chapter and differing access routes to alcohol illustrated both here and in the previous chapter. For example, in the narrative presented by Participant 18, 'younger' drinking behaviours were recollected as the following:

*'We used to go like the beach and stuff, I don't know, it was just because like everyone from school used to go, we were all just little charvas, and it was disgusting'*  
(Participant 18, Female, Aged 17)

This participant goes on to recount sharing a bottle of wine and a quarter litre bottle of vodka in this interview passage. When asked to describe how she drinks now in pubs and clubs, she illustrated buying only her own drinks except for occasional rounds of shots. Further, for older participants, earlier drinking behaviours were sometimes portrayed as childish compared to their current 'mature' attitude towards drinking, as illustrated by Participant 18's comments above and those from Participant 11 and Participant 20 below.

*'I think the novelty's worn off...it's not so much of a...oh let's get drunk for the sake of going and getting drunk, it's a lot more like alright I'm going out so I'll have a drink because it's nice when I'm going out but I'm not going to do it just for the sake of getting drunk...'* (Participant 12, Male, Aged 17)

P020) *'I drink a lot more...Cause my body is getting used to it...'*

SO) *'...does it take a lot to get you drunk?'*

P020) *'Aye now it does, never used to...I think I used to have four cans or something and I would just throw them back...now I have four cans and don't even feel like it's touched me'*

(Participant 20, Male, Aged 18)

In other words, when control was informal and localised (and access routes are more tightly regulated) young people shared alcohol making the most of the channels and social networks available to them. When control was more fluid, de-centralised and young people approached adulthood, they appeared to assert some level of independence and buy their own drinks.

SO) *'So do you tend to stick completely by yourself or would you drink in rounds?'*

P019) *'I tend to stick completely by myself...I prefer not to feel obligated to other people...and basically you're just going to get more drunk'*

SO) *'What if you're not drinking in the town and it's like a party or something like that...'*



P019) *'We do drink all together if we're, like, say at a beach party...pass the bottle around usually'*

(Participant 19, Female, Aged 17)

Further, in comparison to illicit drugs, alcohol use was conceptualised by young people as something that you just 'deal with' and which was largely policed informally. Although no data was collected directly from parents to indicate why they were prepared to be relatively tolerant, participants' accounts suggested that parents saw drinking as the 'lesser evil' in comparison to illicit drug use or anti-social behaviour, and preferred to see young people engaged in what they consider to be a 'normal' drinking culture rather than a deviant drug culture. Using Bourdieu's habitus as a framework, young people's 'harder' illicit drug use or anti-social behaviour is thus negatively sanctioned as it is incompatible with the 'logic' of the habitus.

P05) *'...She'd [mother] be more mad with drugs than drink'*

SO) *'Okay so what do you think your mum or your dad would do if they found you with weed then?'*

P04) *'Probably take it off we. Probably make us eat it...'*

SO) *'And then what do you think they would do if they found you with a can of lager then?'*

P04) *'Probably wouldn't do that much. Probably just go...only if it's one can it's not really that bad 'cause it's just like one can.'*

(Participants 4 and 5, Male, Aged 14)

## **7.5. Chapter Summary**

This chapter built on the previous chapter and explored findings from in-depth interviews conducted with young people about alcohol. In particular, it was suggested that, although young people appeared to make critical and measured choices between alcohol types and brands, the more substantive decision as to whether to engage in

alcohol consumption was far less free and autonomous. Instead, marketing (industry-led or otherwise), inter-personal relationships and sociocultural norms, operating as almost 'invisible hands', normalise the use of alcohol as a consumer product and sanction young people to behave in distinct ways. Further, although a sense of carnival and hedonism was sometimes articulated in their drinking experiences, young people's alcohol consumption also appeared structurally embedded, ritualistic, bounded and governed by group functions. Here, interview data was analysed thematically; but it was later used to inform the Q study. The next two chapters outline this Q study in more detail, first exploring the method and methodology employed, followed by a presentation of the study findings.

## **Chapter 8: Q Methodology**

### **8.1. Overview of the Chapter**

This chapter explains what Q methodology is and why it was used in this work to explore young people's opinions about alcohol. First, the epistemological and ontological assumptions of the method are explained, which focus on the importance of self-reference and subjectivity. More specifically, the reasons that shared opinions or perspectives can be made operant or measurable are examined. The components of a Q study are then described, roughly in the order in which they are undertaken, including the key techniques and methods of analysis and interpretation used. Finally, the strengths and limitations of Q methodology are considered. A glossary of Q methodology terms is included in Appendix K of this thesis.

### **8.2. What is Q Methodology?**

Devised by Stephenson (1935), Q methodology combines a card sort technique and factor analysis to explore shared perspectives, views, opinions or beliefs. Respondents sort a set of cards printed with statements about the topic in question according to their own subjective opinion. These card sorts form the main source of data in Q methodology. Traditional techniques of factor analysis are concerned with the analysis of tests or questionnaires and the search for generalisable factors, representing underlying dimensions which connect and help to explain observed scores. Such techniques are particularly associated with psychology and psychometrics and can be described as 'by item' factor analysis.

Q methodology inverts these recognized techniques in 'by person' factor analysis. It aims to explore a person's gestalt opinion on a topic by "keeping parts together in their interrelation" (Brown, 1997:3) and without breaking up its subject matter into a series of constituent themes (Watts and Stenner, 2005). Shared opinions are subsequently grouped together as factors. As such, Q methodology reveals the ways in

which ideas and opinions are interconnected or otherwise related by a group of participants. Thus, unlike scales which measure 'traits' or objective knowledge in a stand-alone manner, Q methodology examines how people feel about a particular topic relationally, and respondents are expected to make decisions and rank judgements between and across statements.

### **8.3. Key principles of Q methodology**

#### ***8.3.1. Epistemology and Ontology***

There is an absence of literature examining the principles of Q methodology framed explicitly as epistemology and ontology. However, this does not mean that it cannot be articulated in this way (Robbins and Kruegar, 2000). Like all methods, Q methodology is based on a way of seeing the world and ideas about how these observations should then be measured. The rest of this section will focus on the importance of self-reference and subjectivity to Q methodology. More specifically, the reasons that, and means by which, shared opinions or perspectives can be made operant or measurable are examined.

#### ***8.3.2. Subjectivity and Self-Reference***

Although subjectivity is not a concept exclusive to Q methodology, it is used in a specific way. The term subjective can be defined as being "based on or influenced by personal feelings, tastes or opinions; dependent on the mind or on an individual's perception for its existence" (Oxford Dictionaries, 2012); and is used in qualitative research to denote the understanding of social situations from the point(s) of view of those involved, recognising the potential for multiple truths, realities, opinions and experiences (Britten, 2011; Green and Thorogood, 2004).

In Q methodology, subjectivity refers to a person's presentation of their point of view on any matter of personal and / or social importance. Stephenson believed that every idea, concept or experience in life has innumerable self-referent possibilities (1980:882). Further, he considered subjectivity to be the "internal frame of reference an individual calls upon to make sense of the world around them" (Robbins and Kruegar, 2000:637).

### ***8.3.3. Operant Subjectivity***

Stephenson was interested in an approach to study human subjectivity and render it 'operant' or, in other words, measurable. The word 'operant' is associated with a well-known body of psychological research exploring the concept of 'behaviourism' and social learning theory. This school of thought emphasises that it is only the external behaviour of people and their reactions in a given situation which can be measured and which provide insight into human action. The internal, mental state of people is dismissed. Thus, this area of psychology considers the study of human behaviour and action to be a purely objectivist branch of natural science (Albery et al., 2004).

For Stephenson, examining human behaviour and action in this way was too narrow. In contrast to behaviourism, he believed that a valid separation could not be made between objective and subjective behaviour. In other words, subjectivity is also behaviour, albeit behaviour from the inner standpoint - from the mind as well as the body (Febbraro, 1995:146). Importantly, Stephenson argued that everything subjective can be given inherent form, marking the end of splitting the world in two (the objective and the subjective), and reflecting an "ontology that assumes subjectivity has a measurable internal structure" (Robbins and Kruegar, 2000:637).

In other words, Q methodology reflects a belief that subjectivity can be scientifically investigated (Febbraro, 1995; McKeown and Thomas, 1988). In sorting the items presented to them, a respondent assembles a model of their own subjectivity, reflecting on their own perspectives, views, opinions and beliefs of the phenomena in

question. Therefore, it is in the performance of a card sort that respondents make subjective views 'operant'.

## **8.4. Research Process**

Q methodology involves a number of key steps which will now be outlined, roughly in the order in which they are undertaken, beginning with the concourse.

### ***8.4.1. The Concourse***

The concourse is the starting point of any Q study and denotes the 'universe' of subjective viewpoints, perspectives, opinions and beliefs (rather than statements of fact) around any given phenomenon under investigation. Arrived at empirically, it is from here that the subsequent Q set is drawn, a representative set of statements to be presented to participants. With roots in aspects of communication theory (Stephenson, 1986; Stephenson, 1980) and originating from the Latin word 'concursum', the term 'concourse' is defined as "the running or flocking together of people; the condition or state of being so gathered together; the action of coming together or meeting; the running, flowing together, or meeting of things (material or immaterial); confluence" (Oxford Dictionaries, 2012).

The concourse can be seen in terms of the 'conversational' and not merely informational possibilities around a subject. Stephenson (1986) contends that there is a concourse (or concourses) for any topic, notion, idea, gesture, object or concept when viewed subjectively. From this 'universe' of conversational possibilities a representative set of statements can be gathered – known as a Q set. This set of statements is only a sample of the concourse. Stephenson (1986) suggested that the universe of statements is far bigger, and Brown (1993) contends that a concourse gathered is far from complete.

Brown (1993) refers to the concourse in Q methodology as the flow of communicability surrounding any topic in the ordinary conversation, commentary and discourse of everyday life. This is not restricted to verbal statements, and Q sets have been designed using photographs, cartoons and objects (Dewar et al., 2007; Kinsey and Taylor, 1982). Different methods can be used to access the concourse and the aim is to gather a wide range of diverse viewpoints. Public documents, academic literature, group discussions (Kinsey and Kelly, 1989) and publications such as the popular press can be drawn on (Shinebourne, 2009; Stainton Rogers, 1991). Most commonly, interviews are conducted prior to a Q study to 'tap into' the multitude of views around the subject at issue (Shinebourne, 2009; Webler et al., 2009; McKeown and Thomas, 1988).

Interviewing is considered to be the most efficient and practical way of re-creating the concourse as the researcher can aim to sample enough people with different views that all aspects of a topic are covered and attempt to ensure that nothing is omitted. Constructing a concourse from interviews also means that the statements in the Q set come directly from the people being studied. Thus, McKeown and Thomas (1988) suggest that interviewing is most consistent with the principle of self-reference. Consequently, the researcher's influence in designing the stimuli is minimised to the act of subsequently selecting statements (Webler et al., 2009).

#### ***8.4.2. Selection of Statements (developing the Q set)***

After gathering a long list of potential statements, the next step is to condense this list into a representative and manageable number of heterogeneous items that can be ranked in the Q sort. The selection of statements for inclusion in the Q set is of crucial importance in Q methodology. Decisions made at this stage affect the range of possibilities presented to respondents to represent their viewpoint. In contrast with other techniques, such as survey research, statements in Q methodology are intentionally designed to have 'excess meaning'. In other words, statements may be interpreted differently by different respondents and statements may also hold different meanings for the same respondent in different contexts (Brown, 1993).

A long list of items is first sifted for duplicates and opposites to eliminate repetition. Statements can also be 'split' if they comprise different viewpoints or merged if they convey very similar views. As much as possible, statements should aim to retain the language of respondents. However, once removed from their original context, statements might require rewording, shortening or lengthening for the sake of clarity, to engage participants. Though meaning is ascribed to statements by respondents, clarity remains essential. Statements consisting of more than one viewpoint may make it difficult for participants to agree or disagree (Akhtar-Danesh et al., 2008; Cross, 2005; Stainton Rogers, 1995).

Brown (1993) suggests that the main goal in selecting a Q set is to provide "a miniature which contains the comprehensiveness of the larger process being modelled" (page 99). A practical way to aid the selection process is to classify the statements under broad categories or themes, which can be (but does not have to be) informed by a predefined hypothesis or theoretical framework. If there is no theoretical hypothesis, an inductive approach is used in which categories or themes emerge from the statements in the concourse (Akhtar-Danesh et al., 2008; Brown, 1980).

More technically, the selection of statements can be expressed as structured or unstructured approaches (McKeown and Thomas, 1988; Brown, 1980). Structured Q sets are composed systematically and promote theory testing by incorporating a priori hypothetical considerations into the sample of statements (Akhtar-Danesh et al., 2008; McKeown and Thomas, 1988). In other words, using a simple matrix, an equal number of statements is selected from each of the cells. Chosen statements represent particular dimensions of the concourse. This approach to selecting statements draws on the principles of Fisher's experimental design (Brown, 1993; McKeown and Thomas, 1988; Brown, 1980).

Unstructured Q sets provide "a 'survey' of positions taken or likely to be taken on a given issue" (McKeown and Thomas, 1988:28). The aim is to simply select a representative set of statements from the concourse so that the Q set represents all the major perspectives, views, beliefs, and opinions in the concourse (Akhtar-Danesh et al., 2008). Depending on the number of statements in each category, all or a



random sample are selected with an appropriate number of statements from each category (Akhtar-Danesh et al., 2008).

The exact size of the final Q set will, to a great extent, be dictated by the subject matter itself. The number of items varies between studies but a Q set of somewhere between 40 and 80 statements is usual (Shinebourne, 2009). Watts and Stenner suggest that “much less than this and issues of adequate coverage may be a problem. Any more and the sorting process can become unnecessarily unwieldy” (2005:75). The larger the number of statements, the more time is needed for participants to order them (Akhtar-Danesh et al., 2008) and thus the greater chance there is that participants will become bored or fatigued by the process. As such, Akhtar-Danesh et al (2008) suggest that piloting is essential to achieving a workable number of statements; and to explore whether respondents understand the statements presented to them and feel able to rank order them in a Q sort.

#### ***8.4.3. Sampling and Participants (the P Set)***

The objective in Q methodology is to be able to describe typical representations of different viewpoints rather than to find the proportion of individuals with specific viewpoints (Akhtar-Danesh et al., 2008). Participants (commonly described as the P set) are purposefully chosen because of attributes they are assumed to have, different views they might express or the position that they hold, professionally or otherwise in order to achieve maximum variation of perspectives. As such, Q sampling has more affinity with modes of theoretical or purposive sampling employed in qualitative research than with sampling methods conventionally associated with quantitative research. It is not necessary to ensure that participants are representative of the general population when structuring the P set. Instead, the sampling design should serve as a formula for the purposes of selecting participants who are expected to have a salient viewpoint on a particular issue (Brown, 1980).

Therefore, there is no recommended minimum or maximum number of respondents in a Q study and no items-to-persons formula that can be applied. Instead, the aim of

sampling is to be able to represent the narratives of the factors as demonstrated by sufficient numbers of respondents. The final number of participants in a Q study may not even be firmly established until after factor analysis has begun. Again, this bears resemblance to some aspects of qualitative data analysis. The term 'saturation' is used in qualitative research to describe the point, in a process of concurrent respondent sampling and data analysis, at which no new themes or concepts are emerging from the data (Barbour, 2008; Bryman, 2001). At this point it is usually felt that enough participants have been sampled and increasing the sample size no longer contributes new evidence. In Q methodology, preliminary data from card sorts is interpreted iteratively in a similar way to 'constant comparative' thematic methods of data analysis employed in some aspects of qualitative research. In this way, further sampling may be required to elucidate a newly established factor or firm up an existing one in final analysis.

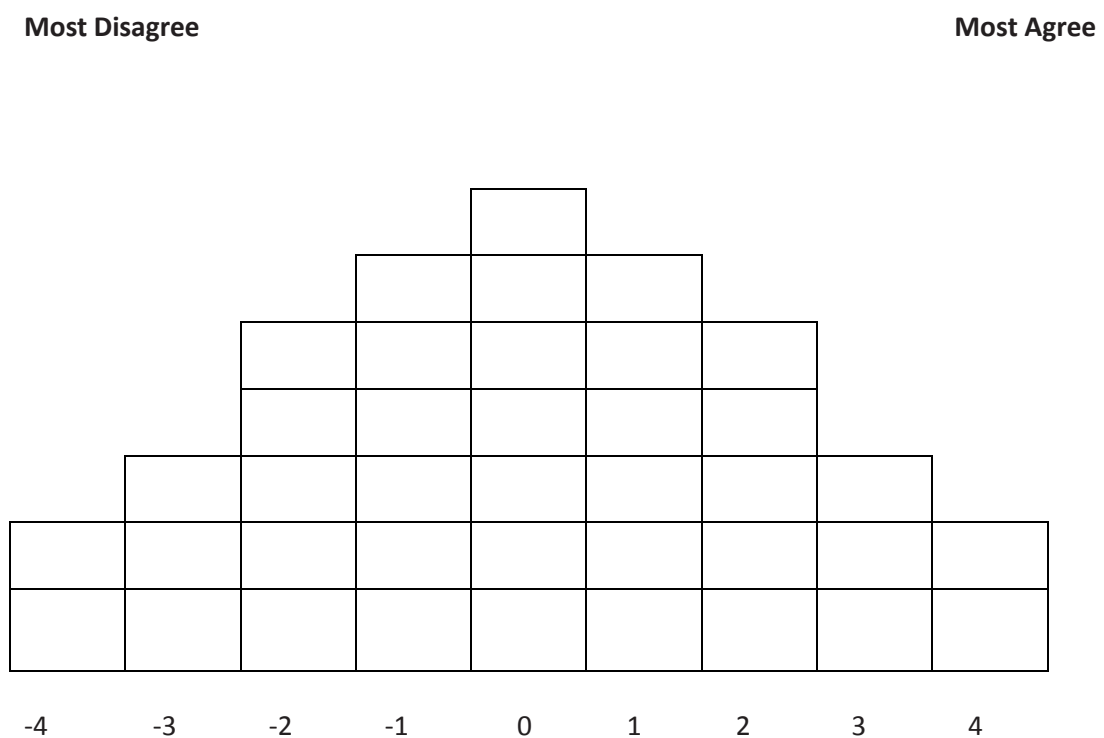
However, as a guide only, Brown (1980) suggests using between 40 and 60 participants. In this way, the aim of sampling in Q methodology is to have four or five persons defining each anticipated viewpoint, which are often two to four and rarely more than six (van Exel and de Graaf, 2005). All that is required are enough subjects to firmly establish the existence of a factor for purposes of comparing one factor to another. The extent to which a point of view prevails in a wider population is not at issue, and Q methodology is not designed to explore variations in points of view grouped by specific demographic categories (such as SES). In other words, Q methodology seeks to explore whether a point of view exists on a given topic, not how many people hold that point of view.

#### ***8.4.4. The Q Sort***

The focus of data collection in Q methodology is a card sorting procedure where individuals are asked to model their point of view by rank ordering items presented to them (the Q set). Items are ranked according to a 'condition of instruction'. A condition of instruction is a guide for sorting items in the Q set and is based firmly upon the research question of the study. Importantly, the interpretation of factors (and shared

opinions) is contingent on the fact that individuals are ranking the same set of statements according to the same instruction.

To facilitate the Q sort, a Q grid is often used which tends to have a quasi-normal distribution. Structuring the grid in this way means that fewer cards are permitted at the 'poles' of the grid (denoting strongly held views) and a larger number of cards are placed in the centre. The grid is usually labelled, for example from 'most disagree' (or similar) on the left to 'most agree' on the right. An example of a Q sorting grid is included in Figure 8.1 below.



*Figure 8.1: Q Sort Response Grid*

The Q grid includes a scaled distribution marker ranging, for example, from  $-4$  to  $+4$  where 0 indicates the mid-point. There is no ideal range; this predominantly depends on the number of statements. A larger volume of statements requires a wider range and the distribution can be made flatter (platykurtic). Each space on the grid denotes where a statement could potentially be placed, and each space must be filled with a card.

The Q sort is usually a two-step process. First, participants are asked to read each item carefully and sort the cards into three rough piles. One pile for cards that they 'agree' with, another for those that they 'disagree' with and a final pile for items about which they are unsure, neutral or ambivalent. This initial categorisation of cards is a way of familiarising respondents with the statements, allowing them to make broad distinctions before the finer classification of the Q sort.

Next, participants are asked to begin with the pile of cards identified as those that they 'agree' with. They are asked to select the two cards that they agree with the most and place these cards in the rightmost (most agree) column of the grid. Laying aside this pile, participants are asked to turn to the pile of cards identified as those that they 'disagree' with. This time they are asked to select the two cards that they disagree with the most and place these cards in the leftmost column of the grid.

In this way, card sorting toggles between the extreme poles of the grid. Participants complete the Q sort by working towards the middle, with neutral cards (those which hold the least meaning for the sorter) placed last. To aid analysis, all statements are given a number and the positioning of cards is transferred by the interviewer onto a data sheet which replicates the sorting grid. Finally, a brief 'post sort' interview is conducted to explore participants' understanding of the sorting process and to probe the explanations that they give for how cards are placed in the grid.

## **8.5. Analysis**

After respondents have sorted the statements, the resulting patterns or 'Q sorts' are analysed through a combination of computer processing (statistical factor analysis) and theoretical interpretation supplemented by post sort qualitative interviews (Eden et al., 2005). In the sections that follow, the key steps undertaken during Q analysis are outlined before the findings of the Q analysis conducted in this study are presented in Chapter 9.

### ***8.5.1. Data Entry***

Using the data sheet, the positioning of statements from each Q sort (denoted by their statement number) is entered into a computer software programme for analysis. Although generic statistical software (such as SPSS) can be used, data derived from Q sorts are usually analysed using a dedicated software programme which can calculate (or 'merge') shared points of view automatically from individual Q sorts (Watts and Stenner, 2007). PQ Method developed by Schmolck (2002) and the PCQ program developed by Stricklin (1996) are software programmes specifically designed for Q analysis. Both programmes produce a detailed statistical output report, used to aid the interpretation of factors and the selection of an appropriate factor solution.

### ***8.5.2. Factor Analysis in Q methodology***

Factor analysis is a correlational technique used to determine meaningful clusters of shared variance. It aims to "reduce a dataset to a simple structure of factors based on the correlations between a larger number of variables" (Kline, 1994:28). There are specific terms used in Q factor analysis and so a glossary is provided for this chapter and presented in Table 8.1 below.

<b>Correlation Matrix</b>	<i>Represents the level of (dis)agreement between individual Q sorts.</i>
<b>Factor</b>	<i>Cluster of similar Q sorts that correlate significantly with each other.</i>
<b>Factor Loading</b>	<i>Extent to which each Q sort is correlated with each factor.</i>
<b>Factor Score</b>	<i>The placing of statements in the factor array; represents the score for a statement by all of the Q sorts associated with the factor.</i>
<b>Factor Array</b>	<i>Set of responses to statements held by a person who typifies a particular standpoint; calculated using the weighted averages of factor scores from defining Q sorts; also referred to as a 'synthetic' or 'composite' Q sort.</i>
<b>Defining Q sort</b>	<i>Q sorts which correlate significantly and purely with one factor.</i>
<b>Confounded Q sort</b>	<i>Q sorts which load significantly on more than one factor.</i>
<b>Null Loader</b>	<i>Q sorts which do not load significantly on any factor.</i>
<b>Bipolar Factor</b>	<i>Contains both positive and negative significant loadings.</i>
<b>Difference Score</b>	<i>The magnitude of difference between a statement's score on any two factors that is required for it to be statistically significant.</i>
<b>Distinguishing Statement</b>	<i>Statement which distinguishes between any of the identified factors; if a difference score is deemed statistically significant, it is described as a distinguishing statement.</i>
<b>Consensus Statement</b>	<i>Statement that does not distinguish between any of the identified factors.</i>

*Table 8.1: Glossary of Q factor analysis terms used*

The first step in Q factor analysis is the calculation of the correlation matrix for all Q sorts (Brown, 1993; Brown, 1980). Van Exel and De Graaf suggest that this represents “the level of (dis)agreement between the individual sorts, that is, the degree of (dis)similarity in points of view between the individual Q sorters” (2005:8). In other words, Q factor analysis calculates the ‘correlation coefficients’ between Q sorts to identify common viewpoints among participants (Akhtar-Danesh et al., 2008). The correlation matrix is then subject to factor analysis. Similar Q sorts that correlate significantly with each other form a group, which is known as a factor in statistical terminology. Each factor represents a perspective characterised by similar views, feelings, or experiences in relation to the theme of the study. Original ‘extracted’

factors derived from Q sorts are used as the raw material for further analysis (Akhtar-Danesh et al., 2008; Brown, 1980).

Each factor is represented by a 'synthetic' or 'composite' Q sort (the factor array). The factor array symbolises the set of responses to statements that are held by a person who typifies that particular perspective (Akhtar-Danesh et al., 2008). In order to generate a factor array, a factor loading is first determined for each Q sort, expressing the extent to which each Q sort is associated (or correlated) with each factor (van Exel and de Graaf, 2005; Brown, 1993). Q sorts which correlate significantly and purely with a particular factor are 'flagged' (using the automatic flagging facility in PQMethod) as 'defining' that factor. To guide whether correlations are high enough to be considered significant, 2 to 2.5 Standard Error (SE) is used. SE is defined as  $1/\sqrt{N}$  where N is the number of statements in the Q set. Therefore, using this study as an example, there are 39 statements and so 2 to 2.5 (SE) =  $2.5(1/\sqrt{39})$  falls in or above the range 0.32-0.40.

However, it is factor scores rather than factor loadings which form the basis of Q factor analysis (Brown, 1993). Factor scores are simply the positioning of statements in the factor array. A factor score represents the score for a statement by all of the Q sorts associated with the factor. It is the weighted averages of factor scores from defining Q sorts which are used to calculate the factor array (Akhtar-Danesh et al., 2008; Eden et al., 2005; Brown, 1993). For example, the two statements with the highest weighted factor score are assigned +4, the next three highest are scored +3, and so forth (Akhtar-Danesh et al., 2008; Brown, 1993). The 'difference score' is the magnitude of difference between a statement's score on any two factors that is required for it to be statistically significant (van Exel and de Graaf, 2005; Brown, 1993). If a difference score is deemed statistically significant, it is described as a distinguishing statement. A statement that does not distinguish between any of the identified factors is labelled as a consensus statement.

In generating the factor array, statistical programs use only the score for those participants who significantly loaded on to the factor. However, some Q sorts do not load significantly on any factor, and are described as null loaders. Others may load

significantly on more than one factor. These particular Q sorts are described as confounded. Finally, a single factor may contain both positive and negative significant loadings. In this case, the factor is described as bipolar, indicating that two opposite, though not necessarily diametrically opposed, viewpoints exist amongst two groups of participants. The interpretation and analysis of bipolar factors is explored in greater detail in the context of the analysis conducted in this study (see chapter 9).

### ***8.5.3. Factor Extraction and Rotation Techniques***

Factor rotation simply means to examine the data from different angles (van Exel and de Graaf, 2005). In order to do so, a number of 'raw' factors are first extracted. Importantly, factor extraction and rotation are iterative rather than absolute stages. In other words, the analyst jumps back and forth between a number of different factor solutions as factors are interpreted and different stories or accounts are identified. However, as a guide, it is recommended to extract more than the number of factors anticipated as needed in the next step of the analysis (factor rotation) in order to preserve as much of the variance as possible (van Exel and de Graaf, 2005). Factor rotation can be conducted statistically or theoretically; both techniques are outlined in more depth below.

#### *Principle components analysis and varimax rotation*

The aim of principle components analysis (PCA) and varimax rotation is to enable the maximum 'explained variance' to be calculated. Explained variance is the percentage of the variance in the correlation matrix explained by the factor. PCA and varimax rotation also allow a 'simple structure' to be derived based on 'orthogonal' factors (Thurstone, 1947). The term 'orthogonality' denotes that two factors are not correlated. Geometrically, it means that vectors are at right angles. Factors are distinguished from each other using right angled axes, maximising the factor loadings within a factor and minimising the correlations between factors.



The decision to extract and rotate factors statistically may also relate to a philosophical or theoretical perspective. For example, some Q studies conducted using a social constructionist approach (Stainton Rogers and Stainton Rogers, 1990) argue for the interpretation of *all* potential factors, sometimes as many as 10, and report only the PCA / varimax solution. This decision rests on whether the purpose of Q methodology is to extrapolate 'shared' meanings (thus a lower number of factors) or to use Q as a method of cultural analysis (or pattern analytic) whereby people's 'voices' are explored and not 'altered' or 'trodden' on by way of analysis.

### *Centroid factor analysis and theoretical rotation*

Factor analysis can also be undertaken visually, using centroid factor extraction (which offers a potentially infinite number of rotated factor solutions) and theoretical (or judgemental) rotation (Eden et al., 2005; Robbins and Kruegar, 2000; Brown, 1996). Proponents argue that the statistical procedures outlined above are too prescriptive in such an interpretive methodological approach. Instead, they suggest that there are many possible factor solutions and, at times, individual participants may not correlate highly with (and load onto) any particular factor. To counter this, factors can be rotated judgementally so that individuals correlate highly with one or more factors in order to bring hidden relationships which might exist 'into focus' (Eden et al., 2005:418).

Doing so does not constitute a change to the data and the correlations between Q sorts are not affected by factor rotation. Instead, it allows data to be viewed from different perspectives – for example from the perspective of an individual's Q sort that holds special interest (such as from someone in a position of authority or with a level of expertise on the topic in question). Eden et al suggest that "close scrutiny of the factors might reveal that a respondent who is theoretically important to the study loads highly on a factor that would be ignored if the usual selection criteria are followed" (2005:418).

#### **8.5.4. Interpretation and deciding on a number of factors**

As suggested earlier in this chapter, stages in Q factor analysis are not linear. Instead, the interpretation of factors is an iterative process, which involves examining a number of different factor solutions. Factor solutions are analysed in conjunction with respondents' post sort interviews using a method which "directly integrates words and numbers" (Eden et al., 2005:418).

Webler, Danielson and Tuler outline that "there is no objectively correct number of factors to use, and that any number of factors will give you some insight into how people think about the issue" (2009:31). Drawing parallels with qualitative analysis, this decision rests on the judgement of the researcher. However, Webler, Danielson and Tuler (2009) also highlight several criteria which could be used to help decide on a final number of factors: simplicity, clarity, distinctness and stability.

**Simplicity** means that, all else being equal, fewer factors are better as it makes the viewpoints identified easier to understand. **Clarity** suggests that, wherever possible, sorters should load highly on only one factor and the number of confounding sorts should be minimised. **Distinctness** refers to low correlations between factors as, traditionally, highly correlating factors hold similar points of view. Finally, **stability** highlights that groups of people tend to cluster together. A factor solution should preserve as many stable clusters as possible (Webler et al., 2009).

Factor scores (the placing of statements in the factor array) are first used to identify salient statements which deserve particular attention in describing and interpreting a factor (van Exel and de Graaf, 2005). Although the entire factor array is central to interpretation, it is the statements which are ranked at the extreme or 'poles' of the factor array that are used to shape an initial description of the point of view represented by that factor.

Next, special attention is paid to statements highlighted as consensus or distinguishing items. Despite this, it is important not to ignore why statements are placed in more neutral positions (this tends to be towards the middle of the grid). These items are still

helping to tell the story of the factor. Finally, Eden et al (2005) acknowledge that it is crucial to examine where statements are placed relative to other specific statements, rather than taking their allotted positions at face value.

## **8.6. Strengths of Q Methodology**

Q methodology shares much in common with qualitative traditions (Lazard et al., 2011). Both methods acknowledge that communication is complex and that data (like the world around us) is an unruly, messy and 'real' account of ideas, views, feelings and meanings (Beazley et al., 2009; Mason, 2002b). As suggested at the beginning of this chapter, unlike scales which measure 'traits' or objective knowledge in a stand-alone manner, a Q sort is a representation of how people feel about a particular topic relationally. In positioning the cards in rank order on the grid, respondents make decisions and judgements between and across statements. Using factor analysis, Q methodology is a means of creating structure and making sense of shared opinions in a similar way to qualitative coding and thematic analysis. What Q provides is an additional layer or tool of interpretation; or a different way of exploring the data. As such, Watts and Stenner (2005) highlight that 'unusual tasks' such as Q methodology can yield useful insights.

Sell and Brown (1984) describe Q methodology as a bridge between qualitative and quantitative research rather than as a mixed method, as suggested by Ramlo and Newman (2011). Widely recognised (and more modern) ways of articulating and conducting mixed method research tend to be sequential or stand-alone pieces of work. Instead, quantitative and qualitative aspects are essentially intermingled at almost every point in a Q study under one porous methodological umbrella (Stenner, 2011; Ellingsen et al., 2010; Robbins and Kruegar, 2000). This is achieved through an unusual and novel combination of statistics and an interest in subjectivity and interpretive approaches.

As such, Q methodology breaks down the barriers of 'sameness' and 'difference' traditionally associated with a quantitative-qualitative dichotomy resulting in less

methodological conflict (Lazard et al., 2011). Thus, using Q methodology as an example, Lazard et al (2011) argue for the permeability of boundaries between research methods, suggesting that methods need to be able to 'talk' to one another. They describe this as an 'osmotic' and 'transmethodological' process. A deeper examination of the role of mixed methods in this study (and in wider research) is provided in Chapter 3 and Chapter 10, the discussion to this thesis.

Q methodology may allow 'unexpected' accounts to emerge. The term 'abduction' represents a 'leap into the unknown' and is used in Q methodology to signify findings that are not immediately identified from raw data in a traditional sense but rather as 'inferences' from that which is observed (Richardson and Kramer, 2006; Brown and Robyn, 2004). This can happen at any point in the research process. In Q methodology, this could arise from choosing to rotate the data in a certain way based on a participant's post sort interview comments or items placed in startlingly different positions than what may be expected.

Some techniques used to generate qualitative data (such as interviews and focus groups) can be quite static and assume relatively good verbal skills on the part of the respondent (Ellingsen et al., 2010). Q methodology is an active, lively and participatory process (Akhtar-Danesh et al., 2008). Although this remains important when carrying out research with adults and the general population, it is of particular merit when working with very young people, the elderly or those with learning or communication difficulties (Ellingsen, 2011; Ellingsen et al., 2010; Yeun, 2005; Combes et al., 2004; Forrest, 2000).

Further, in presenting respondents with a set of statements to 'choose' from, it can be a useful research tool with participants who have never considered or articulated their view on a particular topic before. As such, comparisons can be drawn here to the use of vignettes in social and nursing research, which consist of text, images or other forms of stimuli presented to research participants in order to understand attitudes, perceptions and beliefs (Hughes and Huby, 2001; Barter and Renold, 2000; Finch, 1987; Liker, 1982). Indeed, Hughes and Huby suggest that "this feature of the research tool [selection] can be harnessed and used as an advantage" (2001:383).

Q methodology can be described as 'policy relevant' (Eden et al., 2005). Steelman and Maguire (1999) argue that Q methodology is a useful tool in policy consultation because it renders viewpoints more explicit enabling policymakers to see 'real' differences in viewpoints and focus debate accordingly. Finally, Q methodology is a technique to explore how people think and to look for patterns in their thinking. As such, it can reveal new categories that have not been previously identified. Survey methods take advantage of such categories to measure prevalence in a population or causal associations among categories. Thus, Q methodology can help to inform survey research (Webler et al., 2009). It can also provide a 'launch pad for an investigation' or an 'entrée into a phenomenon' (Brown, 1980) and be used as a first step in conjunction with follow up in-depth interviews with selected participants (Shinebourne, 2009).

## **8.7. Criticisms of Q Methodology**

Criticisms of Q methodology predominantly relate to the use of a pre-designed Q set and a 'forced' quasi-normal distribution sorting grid. In other words, the *a priori* selection of statements is considered to be restrictive. The pre-designed Q set is derived by the researcher and always contains a finite number of items. As such, Shinebourne argues that "the initial activity of selecting the statements for the Q set privileges the researcher... participants are constrained to engaging with the selected statements, in contrast to some qualitative approaches in which participants' accounts in their own words are at the heart of the enquiry" (2009:95-96).

However, this particular criticism misinterprets two core ideas which underpin the Q sort. First, as highlighted earlier in this chapter, that statements contain 'excess meaning'. Different statements may mean different things to different individuals and can be interpreted differently by the same respondent in different situations or contexts. Indeed, opinions are merely a 'snapshot in time' and are subject to change across space and time (Watts and Stenner, 2005). In one way or another, each participant has some cognisance of every statement. As such, all statements of a

concourse are considered to be 'equipotential' and 'equipossible' a priori (Stephenson, 1978:24). All are of equal value at the outset (Stephenson, 1980).

Second, it is the overall configuration of statements that is of interest to the Q methodologist. In fact, there are an innumerate amount of configurations available to participants. It is difficult to see how this might be construed as restrictive (Watts and Stenner, 2005:78). Brown contends that Q methodology leaves more than "sufficient room for individuality [to be expressed]" (1980:267). Further, the exact wording of statements wherever possible comes from the concourse, with only slight editing for grammar and readability, assuring face validity of the statements (Valenta and Wigger, 1997). Q sets are also commonly tested in one or more pilot studies. Yet, as Eden et al acknowledge , "some ambiguities in Q statements will be inevitable, given the complexities of language" and "it is perhaps a merit of Q methodology that, because viewpoints are accepted as complex and multiple, ambiguous or two-headed statements are still usable" (2005:417).

However, it is important to acknowledge whether a Q set can ever be quite 'complete'. Watts and Stenner (2005) identify that there is always 'something else' that could potentially be said. Thus, even the long list of statements gathered is arguably only a sample of the concourse, with Stephenson (1986) suggesting that, in reality, the universe of statements is far bigger. Yet, importantly, Stephenson (1986; 1980) also saw the concourse as context-driven. As such, Watts and Stenner contend that "a Q set only needs to contain a representative condensation of information... the main concern... is not the Q set itself... but the relative likes and dislikes, meanings, interpretations and overall understandings which inform the participants' engagement with the Q set... the qualitative detail of a Q methodological study actually gets filled out as the study proceeds... with the subjective viewpoints of the participant group being central to this process." (2005:75-76). Further, Q methodology has another test of factor veracity upon which to rely, a post-sort interview, where respondents articulate their reasoning for how they have placed items in the Q sort.

Participants may see the Q sorting grid as restrictive and refuse to follow the pattern requested (Eden et al., 2005). Critics suggest that a 'forced' distribution of items

violates operant subjectivity by constraining participants' sorting. It is quite possible to employ different forms of distribution in the context of a Q methodology study, including completely 'free distributions'. As the name suggests, free distributions allow participants to assign any number of items to any of the available ranking positions. However, concerns about the format of the Q grid are largely misplaced. Both Brown (1971) and Cottle & McKeown (1981) have demonstrated that the shape of the Q sort distribution is statistically and methodologically inconsequential.

In particular, Brown (1980) has presented an array of statistical comparisons in order to demonstrate that distribution effects are virtually nil. The chosen distribution has no noticeable effect on the factors which emerge from a particular study. This is also the main reason why a complete rank ordering of the items is unnecessary. Thus the range and distribution of the Q sorting grid are arbitrary and can be altered for the convenience of the Q-sorter (Akhtar-Danesh et al., 2008). Furthermore, Eden et al (2005) contend that a participant refusing to adhere to the shape of the Q sort is no different from respondents refusing to complete a questionnaire or to answer certain questions within it. However, Watts and Stenner (2005) acknowledge that such arguments will not persuade those who consider *any* type of ranking procedure to be overly restrictive.

Critics have suggested that Q methodology illustrates a contentious view of human subjectivity. We must assume that subjectivity can be made operant no matter how complexly constituted it may be. An individual's subjectivity may not be fully describable; multiple qualities may be conditional and contextual. Robbins and Krueger (2000) argue that this is a simplistic and essentialist view of subjectivity, ignoring the prospect of pluralism. Again, the use of vignettes in social and nursing research is open to the same critique. Thus, Hughes and Huby contend that "it is important to consider the extent to which vignettes can simulate reality and what part of reality is reproduced in participants' responses" (2001:383).

The interpretation of subsequent factors also rests with the researcher who may impose their own 'theory-laden' understanding on the data. This point is counter-argued by both Brown (1980) and McKeown (1990) who maintain that participants

decide what is meaningful and significant from their own perspective. There is no external criterion for evaluating an individual's response to a particular statement; thus each individual's set of rank-ordered statements is deemed a valid expression of his or her opinion (Akhtar-Danesh et al., 2008; Brown, 1993). Further, no claim is made in Q methodology that the factor solution arrived at by the researcher is the only correct interpretation of the data.

As such, what is required in a study of subjectivity is critical reflexivity (Eden et al., 2005). In other words, it is important to acknowledge that the interpretation of factors is always arrived at by the researcher who can never be fully removed from the data. Only this will result in the loss of exclusive researcher privilege. Robbins and Krueger also illustrate a number of ways to verify the data including taking factor solutions back to respondents for shared evaluation or having the researcher take part in the Q sort. In this way, "the line between experts and respondents is blurred and Q embraces the limits of researcher objectivity, folding it into the research process" (2000:645-646).

Some commentators suggest Q methodology's mixed method approach can also be seen as a limitation. Lazard et al illustrate that "Q's outward appearance as a more conventional quantitative method has rendered it as a marginalised methodology in qualitative approaches" (2011:142-143). Indeed, most proponents argue that it bears more similarities to qualitative traditions, in use of small numbers and interpretation (de Graaf, 2001). Fairweather and Swaffield (2001) suggest that Q can be used in a quantitative style but it is better to exploit its qualitative aspects whereas Dryzek and Berejikian (1993) favour Q because it provides a 'middle ground' between freedom and determinism in ethnographic interpretation.

## **8.8. Why use Q?**

One of the objectives of this doctoral work is to explore young people's own accounts of the consumer choices they make about alcohol. In this context, Q methodology is a suitable approach. The primary research interest was the everyday, micro-level choices



that young people make about drinking alcohol and the rationale given for these decisions. There are a number of things that may impact on young people's drinking behaviour, including how a product tastes, how it is marketed and how much it costs. Of interest was exploring the relative importance of such behaviour 'triggers' to young people. The stories young people tell us about their alcohol choices can help to illustrate what is of more or less importance to them in their lives. They are also indicative of wider attitudes towards health, lifestyle and leisure choices. Finally, how young people interpret and interact with the world (commercial and social) around them may reflect how receptive they are to proposed alcohol policy initiatives, such as minimum pricing legislation or marketing bans and restrictions.

There is also a need to try and get behind 'defended' accounts by young people of the impact of alcohol marketing on their behaviour. Denying impact is inevitable, so it is necessary to try to 'get behind' their volunteered comments in some way. Further, accounts provided by young people about alcohol in a novel or unusual way were of interest in this study. As suggested earlier in this chapter, young people may never have considered or articulated their view on the topic in question before. Q methodology can be particularly suitable in this context. As such, Ellingsen (2011) suggests that Q methodology provides the flexibility that is necessary when including children in research; and that it offers a valid and concise way for children to express their perspectives. Further, as Eden et al (2005) suggest, the game-like effect of sorting cards may make Q methodology a particularly engaging task, especially for young people, in comparison to traditional research techniques such as surveys, interviews or control trials.

## **8.9. Chapter Summary**

This chapter has described Q methodology and the techniques associated with it. Each stage in the research process has been explored in some detail and the strengths and limitations of the approach have been considered. In particular, the epistemological and ontological assumptions of Q methodology have been discussed; debates regarding modes of factor analysis, rotation and extraction have been highlighted and

several parallels to a mixed methods approach have been introduced. These parallels will be explored in further depth over the course of the discussion section later in this thesis. The next chapter presents an application of Q methodology in this piece of doctoral work.

## **Chapter 9: The Q Study**

### **9.1. Overview of the Chapter**

This chapter presents an application of Q methodology, detailing the method and findings of the Q study carried out in this piece of doctoral work. The chapter begins by outlining the research question for the study, the Q set and person sample (described in Q methodology as the 'P set'), and a description of the analysis techniques employed. A detailed, narrative account of each factor is then presented and illustrated using prominent (salient) statements and comments from post sort interviews. The chapter continues with an exploration of the methodological and interpretation issues which came to light in the conduct of this Q study; and concludes with a short summary.

### **9.2. Research Question**

The research questions underpinning the Q study are based on the original aims, objectives and research questions for the PhD study, which are outlined in Chapter 1. The research question for this Q study is 'what are the views that exist on what does and does not influence young people's choices about what type of alcohol product to drink'. The research question dictated the nature and structure of the Q set to be generated; and also informed the condition of instruction given to participants.

### **9.3. The Q set**

The statements for the Q set were derived from the qualitative interviews with young people aged 14-17. The qualitative interviews are a source of '*concourse*' around how young people in this study interact with alcohol and the issues that impact on their drinking behaviour. As well as providing the *concourse* for a Q study, the same set of qualitative interviews were analysed thematically and presented in Chapter 6 and Chapter 7.

To develop the Q set, all 31 qualitative interview transcripts were reviewed and subjective statements were extracted. Subjective statements were those which represented a personal opinion, attitude, preference or point of view about alcohol. This process resulted in approximately 700 statements which were then compiled and categorised into a matrix using themes from qualitative interviews as a guide. Duplicates and statements which were unrelated to the research question were then removed. During this process comparable statements were merged together and those representing the 'opposite' point of view about the same aspect of drinking behaviour were removed. For example, agreeing with the statement 'I drink alcopops because I like the taste' should determine that a participant will *disagree* with a statement such as 'I don't drink alcopops because I don't like the taste'.

In the final selection of statements, regular meetings were held with a PhD supervisor to refine the set of statements into a manageable Q set which was broadly representative of the range of subjective opinions of those interviewed about what does and does not influence their choices about what type of alcohol product to drink. Despite using a matrix to thematically categorize statements from the concourse, this Q set was not structured around a single theoretical or analytical framework. Instead, categories emerged from the data, rather than imposed from external theories. Further, as statements are subject to multiple interpretations, this matrix acted only as a starting point.

A Q set of 38 statements was piloted with a small convenience sample of four young people aged 14-17, drawn from the children of colleagues, neighbours and their acquaintances. These Q sorts were not factor analysed and included in the results. Instead, the Q set was piloted to achieve a workable number of statements and to identify how they performed (Akhtar-Danesh et al., 2008). Respondents were asked to perform the Q sort and take part in a post Q sort interview in the same way as a study participant. They were also asked to reflect on whether there were any opinions missing from the Q sort; on the wording of both the Q set and study documentation; and on how straightforward they found the process of completing a Q sort.

As a result of piloting, one statement was added to the final Q set (*I don't drink alcopops because I don't like the taste* – statement 39) as participants felt that this opinion was missing from the Q set. As statements were taken directly from interview transcripts they reflected respondents' own common language. However, minor alterations were made to the wording of a small number of items to remove specific words or phrases that some respondents may not have understood. Thus, 39 statements were used in the final Q sort. Statements were assigned a number and typed onto cards; laminated and scaled to fit onto a large laminated board printed with the sorting grid.

#### **9.4. The person sample**

As outlined in Chapter 5, a two stage consent form was used in this PhD study. At the end of the in-depth interview, participants agreed to be re-contacted about taking part in the Q study. Eight respondents who took part in in-depth interviews during the first phase of the research agreed to complete the Q sort. From those eight participants, six completed Q sorts were collected and included in data analysis. Two Q sorts did not take place with original respondents, and were not included in the analysis, as both participants had turned eighteen. The key objective of this thesis is to explore *underage* drinking practices. It was not a primary research objective to compare and contrast what individual participants said during exploratory interviews to the Q sorts they completed at a later date. Although two in-depth interviews were conducted with young people outside of the study age range of 14-17, this was not intentional (see chapter 5). Instead, appointments had been set up via a gatekeeper and a pragmatic decision was made to continue with both interviews. In the case of the Q study, the researcher knew that both participants had turned 18 prior to the Q sort, thus an active decision was made not to collect data.

The remaining 23 original interview participants did not wish to take part or could not be re-contacted for a number of reasons, such as no longer attending targeted youth groups; moving away to university; being too busy with schoolwork and exams; or becoming too old to take part in the Q study. Therefore, a further 23 young people

were recruited to take part in the Q study. It was expected that different young people would have different views and behaviours and that those views and behaviours might differ according to gender, age and where respondents were sampled from. A representative mix of age and gender was maintained in this study, which was very similar to that of the qualitative interviews conducted previously. Young people were recruited from the same (or similar) locations from those who took part in qualitative interviews, such as vocational college centres; youth centres across Tyne and Wear; youth offending teams; and inter-generational youth groups. All interviewees were white British, reflecting the predominant population of NE England.

Towards the final stages of recruitment, it became apparent that male 14 year-olds were under-sampled in the Q study. Therefore, by employing a purposive sampling technique, the researcher chose to actively seek out this demographic, who might have held a distinct point of view or occupied a particular 'niche' in subsequent analysis. To target this group, a professional contact (a teacher) acted as a 'gatekeeper' in order to carry out two Q sorts in a secondary school. Recruiting via a secondary school during the Q study constituted a pragmatic solution to a problem, but represented a different sampling technique to that which was described in chapter 5.

One further Q sort was discarded prior to data analysis resulting in a person sample of 28 respondents. This Q sort was omitted as the participant incorrectly transferred statement numbers from the sorting grid to the data sheet. This young person was recruited via a youth group but was not a regular attender of the group and so could not be re-contacted for clarification. All other young people who took part managed the task without problems, successfully completing their Q sort. A breakdown of the Q study participants by age and gender is shown below in Table 9.1.

Gender	Age				Total
	14	15	16	17	
Male	2	2	3	4	11
Female	5	4	2	6	17
<b>Total</b>	7	6	5	10	28

*Table 9.1: Age and Gender Breakdown of Q Study Participants*

Participants completed a brief questionnaire during the post-sort interview. Information was collected from respondents on where they live; whether they attend school / college or are working/ unemployed; approximately how much money they have to spend on a weekly basis and their preferred alcoholic drink. As suggested in Chapter 8, the objective in Q methodology is to be able to describe typical representations of different shared viewpoints rather than to find the proportion of individuals with specific viewpoints (Akhtar-Danesh et al., 2008). Thus, although this data forms part of the context for respondents' subjectivities, factors cannot be generalised to demographic characteristics. For example, a factor cannot be interpreted as a 'male' or 'lower SES' type and so on. Thus, individual-level data relating to SES was not collected from respondents and data was not analysed specifically according to SES.

A summary of the characteristics of Q study participants is given in Table 9.2 below. Table 9.3 follows which provides further information about the sample, listed by individual respondent.

		N (28)	%*
Age	14	7	25
	15	6	21
	16	5	18
	17	10	36
Gender	Female	17	61
	Male	11	39
Location	Newcastle-Upon-Tyne (city)	9	32
	Morpeth and neighbouring villages	4	14
	Gateshead	3	11
	Sunderland (city)	6	21
	South Shields	6	21
School level / Employment Status	At school	18	64
	College / Sixth Form	8	29
	Training	2	7
Average amount of spending money per week	Not known	2	7
	< £10	5	18
	>£10 ≤ £20	8	29
	>£20 ≤ £50	9	32
	>£50	4	14
Preferred type of alcohol**	Not known	1	4
	Lager / Beer	9	32
	Cocktails	1	4
	Cider	5	18
	Alcopops	4	14
	Wine	4	14
	Shots	4	14
	Vodka	7	25
	Whisky	1	4
	Southern Comfort	1	4

\*As calculated percentages have been rounded up or down, some figures may not total 100 per cent

\*\*More than one type of alcohol could be selected

*Table 9.2: Summary of characteristics of Q study participants*



*Table 9.3: Q study characteristics by individual participants*

<b>Participant ID</b>	<b>Age</b>	<b>Gender</b>	<b>Location</b>	<b>School Level / Employment Status</b>	<b>Average amount of spending money per week</b>	<b>Preferred type of alcohol</b>
P003	16	Male	Gateshead	College	£20	Whisky; Vodka
P006	17	Female	Gateshead	Sixth Form	£30-35	Wine; Vodka
P019	17	Female	Morpeth	Sixth Form	£10	Budweiser (Beer)
P028	17	Male	Morpeth	School	£5-10	Cocktails
P029	17	Male	Morpeth	School	£10	Beer
P031	17	Female	Morpeth	School	£10	Cider and Blackcurrant
P032	17	Male	Newcastle	Training	£12	Fosters (lager)
P034	17	Female	Newcastle	Training	£80-90	Apple Sours (shots); Echo Falls (wine); Vodka
P035	17	Female	Newcastle	College	Not known	Sweet Alcohol
P036	17	Female	Newcastle	College	Not known	Vodka; shots; Southern Comfort
P037	16	Female	Newcastle	College	£60	Alcopops
P038	15	Female	Newcastle	School	Not known	Cider
P039	14	Female	Newcastle	School	£4	WKD (Alcopops)

P040	14	Female	Newcastle	School	£20	Ironbru alcopops
P041	17	Male	Sunderland	College	£30	Lager
P042	14	Female	Newcastle	School	£20	Alcopops; Echo Falls (wine)
P043	16	Female	Gateshead	School	£15	Wine
P044	16	Male	Sunderland	School	£6	Lager
P045	15	Male	South Shields	School	£110	Stella (lager)
P046	16	Male	Sunderland	College	£30	Fosters / Carling (lager)
P047	15	Female	Jarrow	School	£15	Shots
P048	15	Female	Jarrow	School	£20	Vodka; Cider
P049	15	Female	Sunderland	School	£10	Cider; Vodka
P050	14	Female	South Shields	School	£50	Vodka and coke
P051	14	Female	South Shields	School	£30-35	Apple Sours (shots)
P052	15	Male	South Shields	School	£45	Fosters (lager)
P054	14	Male	Sunderland	School	£4-8	Cider
P055	14	Male	Sunderland	School	£15	Budweiser (Beer)

## 9.5. Administering the Q sort

All of the Q sorts in this study were researcher-administered. Like qualitative interviews conducted earlier in this piece of research, most Q sorts were completed on a one-to-one basis and several were conducted in dyads. Q sorts conducted in dyads remained individual Q sorts and were not agreed between two respondents. Participants were provided with an information leaflet about the Q study and given the opportunity to ask questions. The aims and objectives of the Q study were explained and it was stressed that all information would remain anonymous and confidential. Written informed consent was obtained from participants prior to taking part in a Q sort, and the consent form acted as an 'agreement' between researcher and participant, with both parties signing and dating the document. Each young person was offered a copy of their completed consent form for their records.

Next, young people were given verbal instructions about the Q sort which was completed as described in chapter 8 (see section 8.4.4). A basic script was used by the researcher and is included in Appendix L of the thesis. This script was not given to participants and was used only to guide the process. Young people were asked to sort the cards according to those that were most like what influences their choices about what type of alcohol product to drink. This was the condition of instruction for the Q study.

On several occasions respondents did not follow sorting instructions precisely, choosing not to place the extremes first or work their way to a neutral middle point. Instead they placed statement cards into grid columns unsystematically. Completing the Q sort in this way is acceptable as long as respondents are engaged, can comprehend the meaning of the Q grid and are happy that their own Q sort represented their views. All participants ended up with one card in each space on the grid. When participants chose to sort in this way, it was noted in a research diary and young people were reminded of the sorting process that had been described to them. Young people were asked whether they were sure that they wanted to sort the cards in this way. Extra time was spent making sure that they were happy with their final Q sort and that they could articulate the reasons for where they had placed cards on the

grid. There were no participants who appeared to have misunderstood the process or haphazardly placed cards in the grid.

Finally, participants took part in a brief semi-structured post sort interview. As indicated in chapter 8, this interview is used to explore participants' understanding of the sorting process and to probe the explanations that they give for how cards are placed in the grid, particularly those ranked in the 'poles' of the grid (+4 and -4 columns). Young people were also asked how they had found the sorting process; to sum up their views; if there were any cards that did not make any sense or did not mean anything to them; and if there was anything missing from the Q set which impacts on the choices they make about alcohol.

Before the end of the interview respondents were asked to indicate their 'point of neutrality' on the sorting grid. This was the point at which the participant felt that they switched from agreeing to disagreeing with a statement. Finally, respondents filled in a brief questionnaire, noting their age; gender; where they live; school/employment level; average amount of money they have available to spend on a weekly basis; and preferred type of alcohol. This information is shown in Table 9.2 and Table 9.3.

## **9.6. Analysis**

Data collected from the Q sorts were transferred from data sheets and entered into a dedicated Q analysis computer software program for analysis, PQMethod (Schmolck, 2002). Following Watts and Stenner (2005) centroid factor extraction was combined with varimax rotation. This approach to factor extraction and rotation resulted in a factor structure which provided a comprehensive, explanatory and reliable mathematical solution to the data, whilst simultaneously allowing the judgement and interpretation of the researcher a significant role in selecting how many factors to include in the final rotated solution. In other words, centroid factor extraction offered a potentially infinite number of rotated factor solutions, whilst the varimax rotation technique identified the greatest amount of explained variance in the data, thus revealing the widest range of opinions in this particular participant group.

A number of different factor solutions were examined and considered. Each factor solution was considered in conjunction with post Q sort interview recordings and transcripts. Importantly, qualitative interviews carried out earlier in this piece of research were not used to help interpret the factors. There was a gap of at least six months between conducting the final qualitative interview and the first Q sort. As recognised previously, opinions are a 'snapshot in time' and are subject to change across space and time (Watts and Stenner, 2005). Further, the same sample of respondents was not used for both the qualitative interview and Q study. However, the findings of this Q study were considered in conjunction with themes identified from qualitative interviews (and findings from the systematic literature review) in the discussion and conclusion of this thesis (see chapter 10).

A three factor solution to the data is presented here. It is important to recognise that this was not the only possible solution, but was considered by the researcher to be the most meaningful after examination of the factor arrays and comments from post sort interviews. Drawing parallels with qualitative analysis, this decision rested on the judgement of the researcher. Nevertheless, the correlations between the Q sorts remain unchanged by different factor solutions and different rotations. The analyst is looking for a line of best fit. In other words, factors that best explain the shared meanings and accounts that exist between people.

The rest of this chapter focuses exclusively on the findings of this Q study. First, an overview of how each individual Q sort 'loads' onto the three factors is provided (i.e. the correlation between each individual Q sort and each factor). Then, the 'story' of each factor is illustrated narratively using salient statements and comments from post sort interviews to document the observations made. Finally, this is followed by a consideration of the methodological and interpretation issues which came to light in the conduct of this study, particularly, negatively correlating Q sorts and the impact which they had on the interpretation of a factor solution.

## 9.7. Findings: The Factors

The statistical output report from PQ Method for this Q study is included in Appendix M of this thesis. Large parts of this report will be used in the sections which follow in order to present the findings of the Q study. Specifically, the report illustrates the correlation matrix; the factor loadings for each Q sort and the factor scores for each statement in the Q set. Importantly, this output report also documents the factor arrays for all three of the factors identified; as well as the distinguishing and consensus statements associated with each factor.

Factor loadings for all 28 Q sorts are illustrated in Table 9.4 below. Of 28 Q sorts, six do not load significantly on to any of the three factors: participants 37, 40, 42, 46, 50 and 51. These Q sorts are described as 'null' cases. Each of the remaining respondents' Q sorts load significantly on to at least one of the three factors. As stated in the previous chapter, the significance level for factor loadings is taken as 2 to 2.5 (SE). SE represents Standard Error which is defined as  $1/\sqrt{N}$  where N is the number of statements in the Q set. In this case, 2 to 2.5 (SE) =  $2.5(1/\sqrt{39})$  and falls in or above the range 0.32- 0.40.

Defining Q sorts (flagged with an X in the table) are used to create the factor array. The factor array is an exemplary Q sort which is constructed from the flagged factors' scores to produce a composite Q sort. 21 cases were flagged as defining Q sorts using the automatic flagging facility which is a feature of PQMethod. The algorithm flags if  $a^2 > h^2/2$  (where  $h^2$  is the sum of the squared loadings coefficients, i.e. the proportion of a sort's variance explained by the factors) and  $a > 1.96/\sqrt{n}$  items (loading significant at  $p < 0.005$ ). One case (participant 28) is a 'confounding' Q sort i.e. loading significantly on to more than one factor; and two Q sorts load negatively and significantly onto factor three (participants 32 and 39).

Participant ID				h
	F1	F2	F3	
P003	<b>0.57x</b>	0.25	-0.11	0.40
P006	<b>0.73x</b>	0.03	0.18	0.57
P019	<b>0.57x</b>	0.09	-0.13	0.35
P028	<b>0.48</b>	<b>0.48</b>	-0.08	0.47
P029	<b>0.56x</b>	-0.18	0.17	0.37
P031	0.02	<b>0.40x</b>	-0.06	0.16
P032	<-0.01	-0.06	<b>-0.39x</b>	0.16
P034	<b>0.43</b>	0.27	<b>0.62x</b>	0.64
P035	0.16	0.02	<b>0.60x</b>	0.39
P036	-0.21	<b>0.56x</b>	<b>0.34</b>	0.47
P037	0.24	-0.01	0.08	0.06
P038	<b>0.45x</b>	-0.18	-0.26	0.30
P039	0.31	-0.04	<b>-0.40x</b>	0.26
P040	-0.01	-0.14	0.06	0.02
P041	0.15	<b>0.57x</b>	0.18	0.38
P042	0.29	0.07	0.02	0.09
P043	<b>0.51x</b>	0.13	-0.04	0.28
P044	0.17	0.10	<b>0.43x</b>	0.22
P045	0.24	-0.04	<b>0.50x</b>	0.31
P046	0.10	-0.09	-0.15	0.04
P047	<b>0.52x</b>	-0.06	0.23	0.33
P048	-0.19	-0.10	<b>0.52x</b>	0.32
P049	0.03	<b>0.59x</b>	0.25	0.41
P050	-0.03	0.04	0.10	0.01
P051	0.01	-0.13	0.31	0.11
P052	-0.01	<b>0.41x</b>	<0.01	0.17
P054	0.20	-0.15	<b>0.37x</b>	0.20
P055	<b>0.51</b>	<b>0.68x</b>	-0.03	0.72
<b>Eigenvalue</b>	3.41	2.34	2.47	<b>8.22</b>
<b>% expl. Var.</b>	12	8	9	<b>29</b>

*Note: Significant loadings are shown in bold type. Defining sorts are identified by x. h is the sum of squares of factor loadings by rows, eigenvalues are sum of square factor loadings by columns.*

*Table 9.4: Factor matrix with an X indicating a defining sort*

As Watts and Stenner (2005) explain, it is perfectly possible for a single factor to have both positive and negative significant loadings. This results in what is described as a ‘bipolar’ factor. Bipolarity implies that two diametrically opposed viewpoints are being expressed by participants who load on to the factor. In other words, the factor can be represented by two different item configurations which although negatively correlated

are not mirror opposites. The positive loaders will agree with the item rankings and overall item configuration for that factor whereas the negative loaders are agreeing with an almost reversed configuration (and hence they are advocating an opposed viewpoint). In such cases, Watts and Stenner (2005) suggest that two distinct factor interpretations are required; the first interpreting the dominant factor array, which will reveal the positive viewpoint; and the second interpreting the same configuration with all the item rankings reversed, which will reveal the negative or diametrically opposed viewpoint. Bipolarity is explored further in the context of this study later in this chapter (see section 9.7.2).

All three factor arrays (including the factor scores for each statement) are illustrated in Table 9.5 below. Consensus statements (those which do not distinguish between any of the factors) are shaded in grey. These factor scores (where each statement was placed in the composite factor array for each factor) will be referred to extensively throughout the narrative accounts of each factor which follow.



#	Statement	Factors		
		F1	F2	F3
1	I might develop a taste for more sophisticated drinks when I'm older and I earn more money.	1	-2	-1
2	I trust my mum/ dad's judgement -if s/he says a drink is rubbish I won't try it.	0	-3	-4
3	You wouldn't really drink alcopops with your mates because otherwise they would label you a lightweight and take the mickey – alcopops are for wimps.	-3	-2	-3
4	I love alcopops because it's like pop and you can drink it loads. It's just like a social drink - to drink at parties and things like that.	-2	1	-2
5	I like alcopops but they're too weak. They're not drinks that get you drunk, it's just a soft drink really. You don't get the same effect as you do with other drinks.	-1	1	0
6	I don't drink alcopops. I think it's because of their reputation and the sort of people that they're associated with, like chavas. They just don't appeal to me.	0	-2	-1
7	Certain drinks are appealing because they are a cheap and quick way to get drunk if you drink loads of it. If I'm just going to drink for drinking sake I wouldn't buy anything that's half decent I'd just buy something rubbish to get tipsy off.	-3	0	1
8	Sometimes I try things with alcohol that I've seen on TV shows (like the pub in Coronation Street or drinking cosmopolitans in Sex and the City).	0	-1	1
9	I drink bottles because they are easier to carry. You can shut it and save it for later, you can stash it easier. Carrying alcohol around in a bottle is no big deal.	1	-1	1
10	I don't like straight alcohol because when people drink like that they're just drinking to get drunk and that's not really what I want to do.	3	1	-3
11	I choose certain drinks depending on whether I want to relax or get hyper.	3	1	3
12	There are some drinks that I wouldn't buy myself but if somebody else had it I would drink it. Then it's a freebie. I wouldn't waste my money on it though.	1	3	3
13	I have a preferred brand but to be honest I'm not really bothered, I'll just drink whatever's there.	2	2	2
14	If a drink tastes strong, it will put me off drinking it regularly. I like drinks with a subtle taste.	0	2	-2
15	I only drink shots because they have the highest alcohol content to catch up with everyone else.	-3	-3	0
16	When I choose a drink, I want it to be obvious that I'm drinking alcohol.	-4	-3	-2
17	Sometimes I've picked certain drinks just out of ease really, like not needing a mixer or anything.	2	0	2
18	The only reason I try different drinks is just to experiment mixing stuff and buying different bottles of stuff, to see what tastes nicer; or what gets you more drunk while having to drink less of it. I'll try anything but if it didn't taste nice I wouldn't have it again.	1	2	1
19	I wouldn't drink spirits in the house because when you do your own it's always stronger, it's not that bad when you're out because they only put a little bit in.	-2	-2	-3
20	I drink what everyone else is drinking or what's cheapest.	0	4	0
21	I'm not really into like the real alcohol scene like knowing all the brands and sophisticated stuff.	1	0	0
22	I'd drink shots in clubs because you can't really take a beer out onto the dancefloor, it's to make it easier, more convenient.	1	2	3

23	When you get a bit drunk it feels a bit more adventurous to drink shots, it's a bit of a laugh with your mates.	-1	3	4
24	If something doesn't get you pissed I just think I've wasted my money on something that's not going to get me pissed.	-4	0	2
25	At a party we all just drink together, like pass a bottle round. We all put money in and club together or bring bottles along that older friends or relatives have bought us. We all get a say in what alcohol is being bought in our group. We'll agree on something to share.	2	-1	2
26	It doesn't matter to me what my parents or family drink. My family only affect what I choose to drink when I'm with them, it wouldn't make me think I better get used to a particular type of drink.	-1	3	-1
27	It matters to me that I keep up with my friends when we drink alcohol. If they are drinking something strong it influences what I drink.	-2	-4	-1
28	Advertisements don't make me think differently about alcohol. If you like the type of alcohol being advertised, advertisements may tempt you but otherwise no. I tend to make my own opinions about a drink.	4	2	1
29	I do take notice of advertisements but it's mostly the ones from supermarkets advertising special offers not the ones for different brands.	-2	1	-2
30	Internet pop ups advertising drinks don't affect me because I don't really pay attention to them.	4	0	-4
31	I've tried alcohol based on advertisements before. They never live up to it. I tried it to see if it's true what they say in the advert.	-1	-1	0
32	I would say if people are first starting to drink then advertising would have more of an effect because they won't really know what's out there so they just see like a poster then they're going oh maybe I'll have one of those to see what it tastes like.	3	-1	0
33	If I went into a shop and there was four different brands of lager and one was on offer I would buy the one that's on offer because it is going to be cheaper.	-1	4	-1
34	Putting up the price of drink would totally put me off – you want to get the most for your money.	-2	1	-2
35	I don't really pay attention to the price to be honest, I just always have enough money, it's not an issue – the cost doesn't come into it.	2	-4	2
36	If the price went up it would change how often I drank a type of drink. I'd probably still get it from time to time but I wouldn't get it every time I went out.	0	-1	1
37	If it got more expensive I might drink less but that would have to be quite a big increase for it to really stop me.	2	0	0
38	It's always the same routine as soon as we get to town, what drink I buy depends on which bar I'm in and what time of the night it is. Whichever drink I'm picking is whatever's on offer in that bar.	0	0	4
39	I don't drink alcopops because I don't like the taste.	-1	-2	-1

*Table 9.5: Factor arrays, factor scores listed by statement*

In what follows, each of the three factors are described as a detailed, holistic narrative and illustrated using salient statements and comments from post sort interviews with respondents. Salient statements include statements which participants placed in the 'poles' of the factor array (representing those that find the most collective agreement

or disagreement) and statements which significantly distinguish the factor from the remaining two factors.

### **9.7.1. Factor One: Autonomous, Mature and Active Choosers.**

*'...I've never really paid attention to any adverts really...'*

Young people whose Q sorts significantly correlated with factor one positioned themselves as unaffected by the advertising and wider marketing of alcohol. In this account decisions about types or brands of alcohol are made based largely on personal experiences. Choices are defined as free and autonomous; and as both an expression and extension of individuality and identity. This factor is represented by 10 significantly loading Q sorts, 7 of which are defining Q sorts (see Table 9.4). Of the 10 respondents whose Q sorts load significantly onto this factor, 6 are female. Statements ranked as *'Most Like Me'* (columns +4 and +3 in the grid) and *'Most Unlike Me'* (columns -4 and -3 in the grid) in the factor array for factor one are presented in Figure 9.1 below.

Both statements placed at + 4 in the factor array (statement numbers 28 and 30) represent the opinion that advertising and wider marketing (statement 30 refers specifically to internet pop ups) do not consciously impact upon personal decisions about alcohol. However, like in the qualitative interviews conducted earlier in this doctoral work, quotes from participants appear to indicate that it remains overt forms of marketing that young people associated with factor one are referring to, and additional forms of marketing (such as sponsorship, product placement, social networking) are not highlighted as alcohol marketing, suggesting that young people may not be as aware and 'savvy' as they position themselves to be. This is illustrated by the following comments made by one respondent during their post-sort interview.

*'You see adverts for alcohol but you don't really think about them you just dismiss them as another advert, say if it was for washing powder or a burger or something. Just because it's about alcohol you don't think 'Oh I'll try that'... I don't think advertising has much to do with it... 'cos you know what you like and the stuff I choose it's something I*

choose regularly so it's kind of like a habit as well...' (Participant 6, Female, Aged 16, in response to statement 28)

<b>F1</b> "Autonomous, Mature and Active Choosers"	15*	I only drink shots because they have the highest alcohol content to catch up with everyone else.	Centre of factor array omitted	11	I choose certain drinks depending on whether I want to relax or get hyper.
	24**	7**		32**	28**
	If something doesn't get you pissed I just think I've wasted my money on something that's not going to get me pissed.	Certain drinks are appealing because they are a cheap and quick way to get drunk if you drink loads of it. If I'm just going to drink for drinking sake I wouldn't buy anything that's half decent I'd just buy something rubbish to get tipsy off.		I would say if people are first starting to drink then advertising would have more of an effect because they won't really know what's out there so they just see a poster then going 'oh maybe I'll have one of those' to see what it tastes like.	Advertisements don't make me think differently about alcohol. If you like the type of alcohol being advertised, advertisements may tempt you but otherwise no. I tend to make my own opinions about a drink.
16*	3	When I choose a drink, I want it to be obvious that I'm drinking alcohol.		10**	30**
		You wouldn't really drink alcopops with your mates because otherwise they would label you a lightweight and take the mickey – alcopops are for wimps.			
-4	-3			3	4

Note: Consensus statements are shaded; \* denotes those statements which distinguish factor 1 from factors 2 and 3 (at a significance level of  $p < 0.05$ ) and \*\* denotes those statements which distinguish factor one from factors 2 and 3 (at a significance level of  $p < 0.01$ ).

Figure 9.1: Factor array for Factor One

Although the story told by factor one stresses that choices are not led by overt alcohol advertisements or wider marketing, this does not necessarily mean that young people whose Q sorts load on to this factor are unaware of them. Instead they appear to be quite cynical about the impact of alcohol advertising and marketing practices. Part of the account illustrated by factor one suggests a 'third person' approach to influences, decision-making and choice. In other words, in this narrative it is felt that 'others' (but not themselves) could be influenced by marketing and recommendations by parents, peers or acquaintances, particularly when the person is younger than themselves.

Participant 43: *'...I'm more critical of adverts...I'm just quite a cynical person...'*

Interviewer: *'So what do you think about the adverts that you see...if they're on TV, the radio or...magazines...'*

Participant 43: *'...they're all just daft really...'*

Interviewer: *'Do you think they would appeal to anybody? Do you think they would make anybody think it's a good idea to drink that particular type of drink or to drink in general?'*

Participant 43: *'I think it depends more what influences you or how easily influenced you are...'* (Participant 43, Female, Aged 15, in response to statement 28)

Personal autonomy is extended well beyond industry-driven formal and informal alcohol marketing. Young people associated with this factor are also unlikely to rely on 'word of mouth' advertising from parents, peers and acquaintances when making decisions about alcohol. Three out of five of the bottom ranked statements in the factor array (statements 3, 15 and 16) relate to the rejection of the influence of others. Statement 27 (*It matters to me that I keep up with my friends when we drink alcohol. If they are drinking something strong it influences what I drink*) is also ranked negatively in column -2 of the grid. This point of view is more than simply a rejection of external influences upon alcohol choices. More specifically, these statements relate to the rejection of drunkenness and alcohol induced bravado, where autonomy is defined by the influence of others.

*'If your mates are very drunk it doesn't mean you have to be.'* (Participant 29, Male, Aged 17, in response to statement 15)

Ultimately, the story presented by factor one is of a sensible and sophisticated approach to alcohol. Young people associated with this factor are not interested in drinking strong, undiluted alcoholic drinks or 'straight' alcohol; drinking particular types of alcohol just to get drunk; or purchasing products that are cheap or 'rubbish'. Further, they do not want to purchase products that they felt were stereotypically associated with young people. Instead they describe drinking to relax, socialise, have fun, or to relieve stress and take their mind off things. The positive ranking of

statement 11 (*I choose certain drinks depending on whether I want to relax or get hyper*) indicates a practical and pragmatic outcomes-based approach to choice.

Young people associated with factor one demonstrate a self-defined 'rational' approach to drinking alcohol. For these young people a rational approach is akin to one of maturity. This is at odds with dominant portrayals of young people as 'out of control binge drinkers'. This is illustrated by the following comments made by two respondents during their post-sort interview.

*'I think it's because [statements 15 and 27 are] both about drinking to get drunk...it's just a stupid thing, I can't understand why you'd want to be paralytic and just well at that point where you just... I like having some control of myself...'* (Participant 43, Female, Aged 16, in response to statements 15 and 27)

*'I tend not to drink to get drunk though I do drink to feel more relaxed and I think straight alcohol is just not great and would just send you wild straight away...'* (Participant 19, Female, Aged 17, in response to statement 10)

The placing of statements in the factor array that specifically relate to alcopops is particularly interesting. In this account drinking alcopops does not make somebody a 'lightweight' or a 'wimp'. Yet respondents with high factor loadings on factor one do not seem to drink alcopops regularly. This point of view is not a defence of personal drinking choices. Rather, it is a disagreement with labelling and stereotyping of others; and with those who are overtly concerned with what others think of them.

*'I don't really sort of factor in whether my mates think I'm a wimp or not 'cos I tend to only drink with people I actually know and they'll know I'm not a wimp.'* (Participant 19, Female, Aged 17, in response to statement 3)

Participant 43: *'...I don't know why people are so concerned about what other people think about what they're drinking...'*

Interviewer: *'...Why do you think people are so concerned about that?'*

Participant 43: *'I dunno I think they're just concerned about what other people think about everything to do with them...I think it's just another one of those things where people really need to just get a grip and realise it doesn't matter what other people are thinking of them...'* (Participant 43, Female, Aged 16)

The price of alcohol (and changes to the price of alcohol) is not of great importance in the account depicted by factor one. Statements relating to price do not feature in the poles of the factor array. For example, statements 35 (*I don't really pay attention to the price to be honest, I just always have enough money, it's not an issue – the cost doesn't come into it*) and 37 (*If it got more expensive I might drink less but that would have to be quite a big increase for it to really stop me*) are placed at position +2. Statement 36 (*If the price went up it would change how often I drank a type of drink. I'd probably still get it from time to time but I wouldn't get it every time I went out*) is ranked at 0 and statement 34 (*Putting up the price of drink would totally put me off – you want to get the most for your money*) at -2.

In this account, price does not play a central role in decision-making. The importance of price is attributed to purchasing large amounts of alcohol and heavy, regular drinking. Such frequent and intensive drinking is at odds with the mature, responsible and sophisticated approach to drinking alcohol that factor one portrays. It appears that only a substantial price increase would impact on drinking choices. More pragmatically, this could partly reflect higher levels of disposable income amongst those who load significantly onto factor one.

*'Changing the price. It wouldn't really bother us too much...it's not like I'm buying ridiculous amounts it wouldn't impact us that much...if you are going to be drinking quite regularly it can be massively expensive...'* (Participant 6, Female, Aged 16)

*'...price does come into it but not that much for me, but if it was a big price increase it probably would stop me yes...'* (Participant 29, Male, Aged 17, in response to statement 37)

### *Summary of Factor One*

The story illustrated by this factor is of free and rational choice in relation to drinking alcohol. The notion of free and rational choice is multi-faceted. Young people associated with factor one seem relatively unconstrained by both the price and availability of alcohol and are not influenced by the views of others. Personal autonomy is stressed and the influence of marketing (and others) is completely rejected. However, it appears that only overt, traditional marketing is considered to be a potential influence by those associated with factor one whereas additional, more nuanced forms of marketing are not recognised as marketing techniques. A mature, sophisticated and responsible approach to alcohol is presented in this account. Respondents with high loadings on factor one appear uninterested in 'drinking just to get drunk'. Choices about alcohol are seen as an expression of respondents' self-defined level of autonomy, maturity and sophistication; and thus as an extension of individuality. Overt concern with what others might think or the stereotyping of others is rejected in this factor. Respondents with high factor loadings on factor one felt that pricing does not affect *them* but does affect *others*. In the same way, the importance of price is related by young people associated with this factor to the purchase (by others) of large amounts of alcohol and heavy, regular drinking.

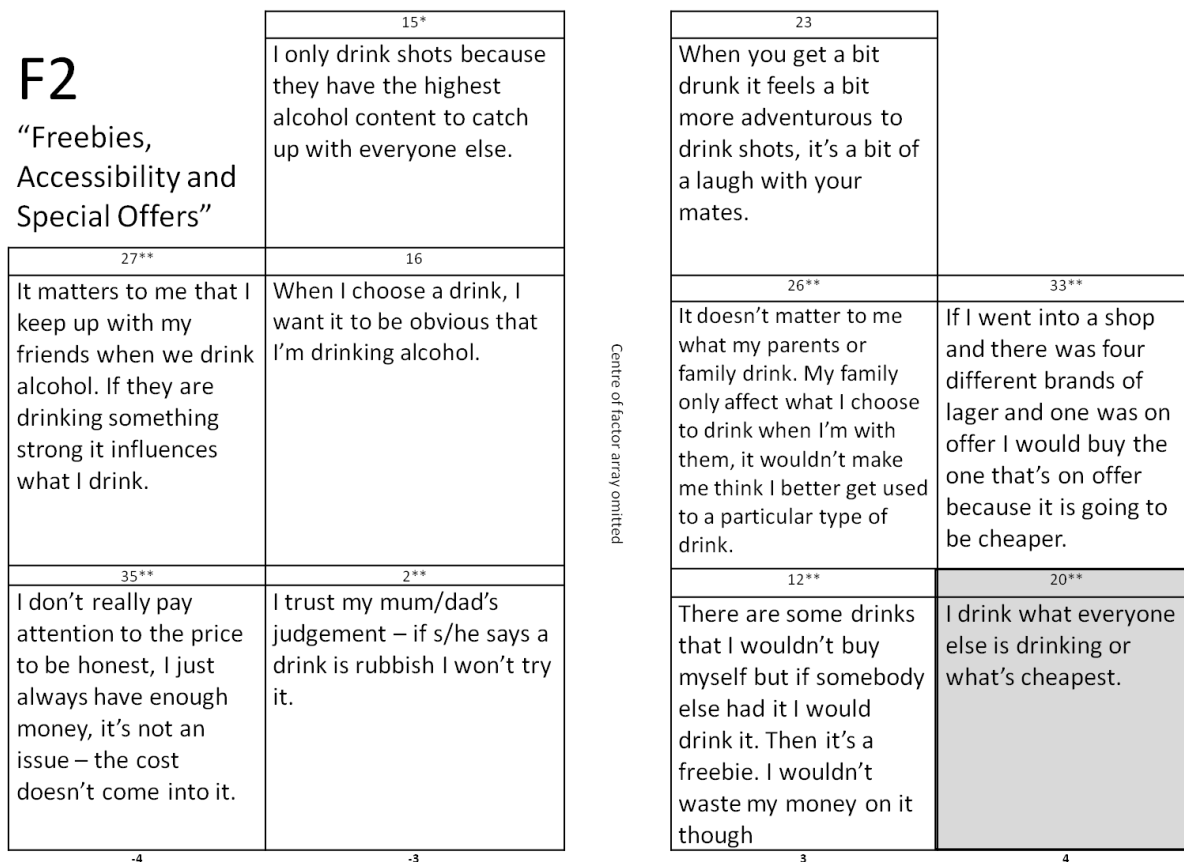
#### **9.7.2. Factor Two: Freebies, Accessibility and Special Offers**

*'I generally pick something that's cheaper...or something on offer...'*

In the account depicted by factor two, the price of alcohol appeared to be extremely important. It is the central explanation put forward by young people who are significantly correlated with this factor for their alcohol choices. Respondents associated with factor two are happy to drink alcohol which is easily accessible or cheapest, taking advantage of freebies or special offers. Items in the Q set relating to the price and availability of alcohol dominate the extremes of the factor array. This is presented in Figure 9.2 below, listing the statements ranked 'Most Like Me' (columns +4 and +3 in the grid) and 'Most Unlike Me' (columns -4 and -3 in the grid) in the factor



array. Factor two is represented by 7 significantly loading Q sorts, 6 of which are defining Q sorts.



*Note: Consensus statements are shaded; \* denotes those statements which distinguish factor 2 from factors 1 and 3 (at a significance level of  $p < 0.05$ ) and \*\* denotes those statements which distinguish factor 2 from factors 1 and 3 (at a significance level of  $p < 0.01$ ).*

*Figure 9.2: Factor Array for Factor Two*

As shown in Figure 9.2 above, statement 20 and statement 33 are both ranked positively at +4 in the pole of the factor array. Consistent with this point of view, statement 35 is ranked negatively in the opposite pole of the factor array at -4. The significance of price to the story presented by factor two is illustrated by the following comments made by a respondent during their post-sort interview.

Participant 49: *'...whatever's cheapest, like it's all going to get you drunk at the end of the day...if I went out I'd want like money for me tabs, money for me drink, then like money for something to eat and then like metro fare as well ...'* (Participant 49, Female, Aged 15, in response to statements 35 and 20)

In this account, alcohol choices are influenced by discounts and 'special offers'. As discussed above, statement 33 (*If I went into a shop and there was four different brands of lager and one was on offer I would buy the one that's on offer because it is going to be cheaper*) is ranked positively in the pole of the factor array at +4. However, at times, this factor appears almost indiscriminate about what type of alcohol they consume. In other words, certain brands or types of alcohol become an acceptable product to drink if they are a free and convenient source of alcohol.

*'...whatever's there I just drink it... I like some drinks but if somebody's got something else I just drink it, I'm not bothered.'* (Participant 55, Male, Aged 14, in response to statements 20 and 12)

Further, choices about what to drink only become more nuanced, and of greater importance, when young people associated with this factor are spending their own money as opposed to other peoples.

*'The cost really does come into it for me, I'm always a bit tight on money so I generally pick something that's cheaper...or something on offer...'* (Participant 28, Male, Aged 17, in response to statement 35)

Having fun with friends is central to the relationship with alcohol illustrated by factor two. Young people whose Q sorts significantly correlate with this factor derive a sense of adventure from the types of alcohol that they try; and, to a large extent, such experimentation and 'trying new things' typifies what is known about adolescence. Respondents who are associated with factor two drink alcohol to be sociable rather than popular. Statement 23 (*When you get a bit drunk it feels a bit more adventurous to drink shots, it's a bit of a laugh with your mates*) is ranked at +3 in the resultant factor array and, although not placed in the poles of the grid, statement 18 (*The only*

*reason I try different drinks is just to experiment mixing stuff and buying different bottles of stuff, to see what tastes nicer; or what gets you more drunk while having to drink less of it. I'll try anything but if it didn't taste nice I wouldn't have it again)* is ranked positively at position +2. This is illustrated by the following comments made by respondents during their post-sort interview.

*'Well I only drink them to try them...if I don't like them I'll not drink them again...'*  
(Participant 41, Male, Aged 17, in response to statement 23)

*'I don't really care if someone sees me drinking it, I don't do it to be popular or anything, I just do it to be with my friends.'* (Participant 31, Female, Aged 17, in response to statement 16)

Statements at the poles of the factor array for factor one and factor two are highly distinguishing. Despite this, there are some notable similarities in the accounts presented by both factors. Firstly, the story illustrated by factor two contends that drinks with the highest or most obvious alcohol content are not simply chosen above others based on this criterion alone. Statement 15 (*I only drink shots because they have the highest alcohol content to catch up with everyone else*) and statement 16 (*When I choose a drink, I want it to be obvious that I'm drinking alcohol*) were both placed in column -3 of the factor array. Factor one ranked both cards in a similar way. Statement 15 was placed in column -3 of the grid and statement 16 at -4. Intoxication seems to be a pleasurable side effect rather than the sole aim of drinking alcohol.

*'I'm not really bothered if I get drunk or anything I just like want to have fun and just mess about.'* (Participant 55, Male, Aged 14, in response to statement 15)

Secondly, like the point of view expressed in factor one, respondents whose Q sorts significantly correlate with factor two are critical of those who stereotype alcopops drinkers as 'lightweights' or 'wimps'. However, unlike the story articulated by factor one, young people associated with factor two (such as participant 31) do drink alcopops and appear to do so out of convenience rather than preference.

*'I just don't agree, full stop...it's just a nice drink, really...if it's there then I would drink it and I wouldn't have any opinion of it if someone else wants to drink it, if a guy wants to drink it, a girl drinking it, it doesn't make a difference.'* (Participant 31, Female, Aged 17, in response to statement 3)

The account illustrated by factor two continues to maintain a perceived level of autonomy and individuality over alcohol choices. This differs in meaning and lacks the importance expressed in factor one. Respondents with a high factor loading on factor two do not immediately associate potential influences on drinking behaviour with their perception of what constitutes alcohol marketing (which focuses on overt promotional activity such as advertising). Thus, it is predominantly only price-related promotional activity which draws attention to special offers that is considered to be a potential influence on drinking behaviour. As discussed earlier in this section, statement 33 is ranked positively in the pole of the factor array at +4, and it is the price of an alcohol product which appears to be influential in the story articulated by factor two.

Despite price being an integral part of the alcohol marketing mix, this association is not made or fully understood by young people associated with Factor Two and statements relating to alcohol advertising are largely placed in quite neutral positions. For example, statement 30 (*Internet pop ups advertising drinks don't affect me because I don't really pay attention to them*) is ranked at 0; and statement 8 (*Sometimes I try things with alcohol that I've seen on TV shows (like the pub in Coronation Street or drinking cosmopolitans in Sex and the City)*) and statement 31 (*I've tried alcohol based on advertisements before. They never live up to it. I tried it to see if it's true what they say in the advert*) are ranked at -1 respectively. Consistent with this point of view, statement 28 (*Advertisements don't make me think differently about alcohol. If you like the type of alcohol being advertised, advertisements may tempt you but otherwise no. I tend to make my own opinions about a drink*) is ranked at position +2 in the grid.

*'...I provide my own judgement, not someone else's...'* (Participant 49, Female, Aged 15)

Although largely oblivious to the potential impact of the full array of alcohol marketing activity, respondents whose Q sorts significantly correlate with factor two recognise

that peers, parents or wider family members could potentially exert an influence on *general* drinking behaviour. However, this group of young people contend that parents or wider family members do not impact on their own *personal* alcohol choices and that keeping up with their friends or acquaintances is not important. Whilst statement 20 (*I drink what everyone else is drinking or what's cheapest*) is placed in column +4, drinking 'what everyone else is drinking' is attributed more to cost, convenience or fitting in with what is already being purchased, possibly for a group of friends or family.

*'...mostly I drink with family, I drink what they're drinking 'cos they don't get strong things all of the time...it's normally cheap stuff so I don't get hammered... they normally buy things that I like as well... if I'm drinking with family or friends we normally get the same category of stuff...I would just get what everyone else was getting...'* (Participant 41, Male, Aged 17 in response to statement 20)

### *Summary of Factor Two*

Price is central to the choices young people make about alcohol in the account illustrated by factor two. Young people associated with this factor are happy to drink whatever alcohol is easily accessible or cheapest, and will take advantage of special offers or 'freebies'. To a degree, the account presented by factor two illustrates some aspects of instrumental, economic rationality in their approach to drinking alcohol. Respondents with a high factor loading on factor two want to get the most out of the money that they spend. However, this does not necessarily equate to purchasing alcohol just to become as drunk as possible. Young people associated with this factor report being relatively uninfluenced by alcohol advertising, only taking note when it involves a promotion or special offer. In this account, advertising is not considered a strong influence on behaviour but the fact that point of sale offers are not recognised as promotional activity (along with a lack of understanding that price is a component of marketing) indicates that a relatively large proportion of industry-driven marketing penetrates young peoples' lives without them being fully conscious of it. Instead, it is peers, parents and family members that are regarded to be potential influences, and ultimately rejected. The story articulated by this factor retains a degree of autonomy

and individuality in that drinking what everyone else is drinking is more of a matter of cost and convenience than peer pressure or fitting in with a crowd.

### **9.7.3. Factor Three: Pragmatic Hedonism...**

*'It depends on the situation, if I'm just tired and I want to relax I'm not gonna drink loads so I go mental or anything...'*

The story illustrated by factor three is arguably one of adventure, pleasure and hedonism. Respondents associated with this factor derive a sense of fun and enjoyment from drinking alcohol. However, the site of consumption impacts on choices and decisions and emphasis is placed on the routines and rituals associated with drinking alcohol. Aspects of this factor reflect changing patterns of alcohol consumption and the onset of drinking in a different setting. Such change is not always age-related. For some, this is in pubs and clubs. For others, this is a transition from public open space, such as streets or parks, to private homes and parties.

Factor three is represented by 9 significantly loading Q sorts, 8 of which are defining Q sorts (see Table 9.4). Two Q sorts are significantly negatively correlated with factor three which is bipolar. Bipolarity is explored further later in this chapter (see section 9.8.2). For now, this interpretation is concerned with the dominant shared view expressed in factor three. Of the respondents whose Q sorts load significantly onto this factor, 5 are female. Statements that respondents indicated were 'Most Like Me' (columns +4 and +3 in the grid) and 'Most Unlike Me' (columns -4 and -3 in the grid) are presented in Figure 9.3 below.

<p><b>F3</b> “Pragmatic Hedonism”</p>	19	11		
	30**	3	12	38**
	Internet pop ups advertising drinks don't affect me because I don't really pay attention to them.	You wouldn't really drink alcopops with your mates because otherwise they would label you a lightweight and take the mickey – alcopops are for wimps.	There are some things that I wouldn't buy myself but if somebody else had it I would drink it. Then it's a freebie. I wouldn't waste my money on it though.	It's always the same routine as soon as we get to town, what drink I buy depends on which bar I'm in and what time of the night it is. Whichever drink I'm picking is whatever's on offer in that bar.
	2**	10**	22**	23
I trust my mum/dad's judgement – if s/he says a drink is rubbish I won't try it.	I don't like straight alcohol because when people drink like that they're just drinking to get drunk and that's not really what I want to do.	I'd drink shots in clubs because you can't really take a beer out onto the dancefloor, it's to make it easier, more convenient.	When you get a bit drunk it feels a bit more adventurous to drink shots, it's a bit of a laugh with your mates.	
-4	-3	3	4	

Centre of factor array omitted

*Note: Consensus statements are shaded; \* denotes those statements which distinguish factor 3 from factors 1 and 2 (at a significance level of  $p < 0.05$ ) and \*\* denotes those statements which distinguish factor 3 from factors 1 and 2 (at a significance level of  $p < 0.01$ ).*

*Figure 9.3: Factor Array for Factor Three*

Young respondents whose Q sorts significantly correlate with factor three are keen to stress the experimentation, sense of adventure and pleasure involved in drinking alcohol. The grouping together of particular words or phrases in the positive pole of the factor array indicates a lively, social and energetic group of young people. This is highlighted in Table 9.6 below.

#	Statement	Factor score
23	When you get a bit drunk it feels a bit more <b>adventurous</b> to drink shots, it's a bit of a <b>laugh with your mates</b> .	+4
38	It's always the same routine as soon as we get to <b>town</b> , what drink I buy depends on <b>which bar</b> I'm in and <b>what time of the night it is</b> . Whichever drink I'm picking is whatever's on offer in that bar.	+4
22	I'd drink shots in clubs because you can't really take a beer out onto the <b>dancefloor</b> , it's to make it easier, more convenient.	+3
12	There are some drinks that I wouldn't buy myself but if somebody else had it I would drink it. Then it's a freebie. I wouldn't waste my money on it though.	+3
11	I choose certain drinks depending on whether I want to relax or get <b>hyper</b> .	+3

*Table 9.6: Factor Three and Hedonism: words and phrases grouped together in the positive pole of the factor array.*

However, this sense of adventure is moderated by concerns about remaining safe and 'pacing' alcohol consumption. This approach to drinking fits neatly into what Measham and Brain (2005) have termed 'bounded hedonism'. Here, hedonism is mechanical and ritualised. Respondents associated with factor three do drink to get drunk whilst remaining within personally derived 'drinking limits'.

*'...I know when I'm drunk and gotta stop drinking and then I can get home safe...'*  
(Participant 34, Female, Aged 17)

This group of young people disagree with statement 10 (*I don't like straight alcohol because when people drink like that they're just drinking to get drunk and that's not really what I want to do*) and statement 19 (*I wouldn't drink spirits in the house because when you do your own it's always stronger, it's not that bad when you're out because they only put a little bit in*) and both were placed in the negative pole of the factor array in the -3 column of the grid. There also appears to be certain rules or routines linked to drinking behaviour during a typical night out, with statement 38 (*It's always the same routine as soon as we get to town, what drink I buy depends on which bar I'm in and what time of the night it is. Whichever drink I'm picking is whatever's on*



*offer in that bar*) placed in column +4 of the grid. This is illustrated by the following comments from one respondent during their post-sort interview.

Participant 35: *'...you want to stay in the first bar for a bit long but not too long...'*

Interviewer: *'...why would you do that?'*

Participant 35: *'Just cos it's the first bar and like you don't want to go too crazy with your drink...'* (Participant 35, Female, Aged 17, in response to statement 38)

Further, the same collection of statements in the positive pole of the factor array can also be interpreted as a concern with drinks that serve a purpose or function. This is illustrated in Table 9.7 below.

#	Statement	Factor score
23	When you get a bit drunk it feels a bit more adventurous to drink shots, it's a bit of <u>a laugh with your mates</u> .	+4
38	It's always the same routine as soon as we get to town, what drink I buy depends on which bar I'm in and what time of the night it is. Whichever drink I'm picking is <u>whatever's on offer in that bar</u> .	+4
22	I'd drink shots in clubs because you can't really take a beer out onto the dancefloor, it's <u>to make it easier, more convenient</u> .	+3
12	There are some drinks that I wouldn't buy myself but if somebody else had it I would drink it. Then <u>it's a freebie</u> . I wouldn't waste my money on it though.	+3
11	I choose certain drinks <u>depending on whether I want to relax or get hyper</u> .	+3

*Table 9.7: Factor Three and Purpose: words and phrases grouped together in the positive pole of the factor array.*

Aspects of such purpose-driven choice are underpinned by convenience in the account represented by factor three. This is different to the importance attributed to the accessibility of alcohol in factor two. Convenience is associated with not purchasing drinks that you cannot carry around easily. Statement 22 is ranked at +3 in the pole of the factor array) as shown in Figure 9.3. Choosing drinks that do not need a mixer or those that are bottled are also ranked relatively positively in the factor array and

indicate a concern with convenience. Statement 17 (*Sometimes I've picked certain drinks just out of ease really, like not needing a mixer or anything*) was placed in column +2 of the grid and statement 9 (*I drink bottles because they are easier to carry. You can shut it and save it for later, you can stash it easier. Carrying alcohol around in a bottle is no big deal*) at +1. Statement 13 (*I have a preferred brand but to be honest I'm not really bothered, I'll just drink whatever's there*) is also placed in column +2 of the grid by factor three. This is a consensus statement and ranked in the same position by all three factors.

Statement 12 (*There are some drinks that I wouldn't buy myself but if somebody else had it I would drink it. Then it's a freebie. I wouldn't waste my money on it though*) is ranked positively at +3 in the grid. It is the only statement associated with price to feature in the poles of the factor array for factor three. In factor two, this statement is ranked in the same position of the grid. It appears that, to young people associated with factor two, more meaning is attributed to not spending money and taking advantage of an offer or an available source of alcohol. To those who significantly correlate with factor three, 'freebies' are more a matter of convenience. They are not led foremost by price and suggest that putting the price up would not affect drinking practices. This is illustrated by the following comments from one respondent during their post-sort interview.

*'...you wanna have fun and you wanna drink it's never too expensive it's always under like if you're drinking once it's always under like six quid or something which I can always get no bother...if it was more expensive I'd still drink...putting up with the price wouldn't put me off'* (Participant 54, Male, Aged 14)

Despite not being overtly concerned about price, statement 24 (*If something doesn't get you pissed I just think I've wasted my money on something that's not going to get me pissed*) is still ranked relatively positively at +2 in the grid. In the story articulated by factor three alcohol which does not have an intoxicating effect is equated to a waste of money. Again, this can be interpreted as bounded or pragmatic hedonism. These young people consider the purpose of drinking to be, at least in part,

intoxication, albeit controlled intoxication. Not doing so seems to defeat the objective and is thus a waste of money.

The impact of price was the most significant distinguishing theme between all three factors. Respondents associated with factor one placed many of the statements relating to price in the middle of the factor array. Such a level of neutrality may indicate that appearing to be price-led would mean their individuality, expressivity and maturity would be displaced. Alternatively, this could also indicate that respondents associated with factor one have plenty of money and do not even think about price. Young people whose Q sorts significantly correlate with factor two choose the cheapest or easily accessible alcohol products, taking advantage of special offers and freebies. Finally, although participants with a high factor loading on factor three state that a change in price would not affect their drinking practices, products which do not achieve a desired outcome (whether this be relaxation or intoxication) are deemed a waste of money.

Young people whose Q sorts significantly correlate with factor three choose types (and sometimes quantity) of alcohol depending on whether they want to relax or get hyper. Often this appears to be linked to the site or setting of consumption. Again, such pragmatic decision-making suggests that those associated with this factor equate the alcohol they choose, in part, with a function or purpose.

*'cos if I drink apple sours then that gets us hyper...but sometimes if I have like a glass of wine with my mam when we're watching telly and that's just relaxing...'* (Participant 34, Female, Aged 17, in response to statement 11)

*'cos like when I choose certain drinks...I just wanna chill or like depends what mood I'm in really...cos I'll buy quite a few drinks if I'm in a good mood but if I just want to sit and chill I'll just get a few cans...'* (Participant 44, Male, Aged 16, in response to statement 11)

Young people whose Q sorts significantly correlate with factor three do not trust the judgement of their parents when it comes to making a decision about what to drink.

Statement 2 (*I trust my mum/dad's judgement – if s/he says a drink is rubbish I won't try it*) is ranked -4 in the factor array. Although this is a defining statement for factor three, it is also placed in the negative pole of the factor array at -3 by factor two. It appears that, to those respondents with a high factor loading on factor two, this relates to retaining a degree of autonomy whereas young people associated with factor three stress they have different tastes to their parents, as illustrated by the comments from one respondent below.

Participant 34: *'...if my mam buys some new wine or something she'll be like 'ah I don't like the taste of this you have a taste' and I'll be like 'give it here' and I'll be like 'well I like it'...we have different tastes so...'*

Interviewer: *'...is there any times where your mam and dad's or your friends' judgement is important?'*

Participant 34: *'if it's alcohol then no, but other things sometimes...'* (Participant 34, Female, Aged 17, in response to statement 2)

Relative to other influences, keeping up with friends does not appear to be of central importance in the account represented by factor three. Statement 27 (*It matters to me that I keep up with friends when we drink alcohol. If they are drinking something strong it influences what I drink*) is ranked almost neutrally at -1 in the factor array. Instead, young people associated with this factor stay within personally derived drinking limits, articulating a sense of 'controlled loss of control'.

*'cos like it doesn't matter to us between what me and me mates drink...other people could drink more than me but I'm not really bothered I drink to me own limit really...'* (Participant 44, Male, Aged 16, in response to statement 27)

Statement 30 (*Internet pop ups advertising drinks don't affect me because I don't really pay attention to them*) was ranked in the negative pole of the factor array at -4. However, this was the exception and the majority of statements relating to alcohol advertisements and wider marketing were placed in the middle of the factor array. Respondents who significantly correlate with factor three appear largely neutral about alcohol marketing and choices serve a pragmatic purpose or function rather than

acting to reflect personality or autonomy. However, as well as the above, the quote below could also indicate that recognised brands are perceived by some young people as 'proper' alcohol whereas cheap, 'no label' brands are seen as 'accessible' and 'sanctioned' alcohol.

*'...I don't really drink different types of brands...say like I have vodka I don't like drink proper Sm...stuff...'* (Participant 35, Female, Aged 17, in response to statement 28)

### *Summary of Factor Three*

At first glance the story articulated by factor three is one of adventure, pleasure and hedonism. Choices about alcohol suggest that young people whose Q sorts significantly correlate with this factor are lively, social and energetic. However, this hedonism is bounded and mitigated with concerns both about remaining safe and about choosing products which serve a purpose. Purpose-driven choices predominantly reflect convenience (such as whatever is on offer in a bar or a drink which you do not need to carry onto the dancefloor) but also reflect wider functions of alcohol such as having a laugh with friends or choosing drinks in order to relax or get hyper. In this way, alcohol as a social construct reflects a sense of pleasure, excitement and fun yet micro product or brand choices are rather more pragmatic. A level of 'controlled loss of control' extends to the indication that there are particular rules or rituals associated with a typical night out, such as not drinking too much in the first bar. The context or site of consumption is important to factor three. Aspects of this factor reflect changing patterns of alcohol consumption and the onset of drinking in a different setting. For some, this is in pubs and clubs. For others, this is a transition from public open space, such as streets or parks, to private homes and parties.

## **9.8. Discussion and Chapter Summary**

The final section of this chapter will begin with an exploration of statements from the Q set which drew study participants together. These are statements that do not

distinguish between any pair of factors and are described as items of consensus. So far this chapter has predominantly considered items which distinguish the three factors and characterise distinct viewpoints. However, investigating issues of consensus between factors can also yield useful information. Agreement about the importance of particular Q statements can be nuanced and be for very different reasons and this is given attention in the following section (consensus statements are shaded in Figures 9.1, 9.2 and 9.3 and the distinguishing and consensus statements for each factor are tabulated in the PQ Method output report included in Appendix 15 of this thesis). As outlined earlier in the chapter, two significantly loading Q sorts for factor three are negatively correlated. This sections which follow will discuss the impact that such bipolarity has on factor analysis and interpretation. Finally, this chapter concludes by highlighting a number of methodological reflections taken from carrying out the Q study; and with a short chapter summary.

### ***9.8.1. Items of consensus***

Statements about alcopops drew participants together in this Q study. Three (of nine) flagged consensus statements specifically relate to alcopops. As shown in Table 9.8 below, all three of these statements are similarly placed across all three factor arrays. In particular, all three factors were ambivalent about statements 5 and 39. This could demonstrate young people's ambivalence to alcopops as a product choice more generally. Qualitative interviews indicated that such products were stereotypically associated with a particularly category of people (identified in part by lower socio-economic status) described colloquially in NE England as 'charvas'. Comments from post sort interviews added to this observation, where it was suggested that, though most young people who completed the Q sort would not choose to drink alcopops, doing so was nothing to be ashamed of and that groups of people should not be categorised according to the drinks that they consume.

The role that alcopops may play in young people's drinking practices was not anticipated to be a major theme in this PhD study. Although it has previously been suggested that young people consume alcopops because they represent a palatable

form of alcohol, recent literature has indicated that, as alcopops are more expensive per unit than other alcohol products, this may no longer be the case (Bellis et al., 2009). However, young people in this study did discuss alcopops in qualitative interviews accounts, demonstrating that opinions about alcopops remain part of this group of young people’s discourse about alcohol product choice. Thus, statements relating to alcopops were included in the final Q set.

#	Statement	Factors		
		1 Rank Score	2 Rank Score	3 Rank Score
3	You wouldn’t really drink alcopops with your mates because otherwise they would label you a lightweight and take the mickey – alcopops are for wimps.	-3	-2	-3
5	I like alcopops but they’re too weak. They’re not drinks that get you drunk, it’s just a soft drink really. You don’t get the same effect as you do with other drinks.	-1	1	0
39	I don’t drink alcopops because I don’t like the taste.	-1	-2	-1

*Table 9.8: Consensus statements which specifically relate to alcopops.*

Although items in the Q set relating to the impact of parents on drinking behaviour were not flagged as consensus statements, all three factors dismissed the judgement of their parents when making decisions about alcohol. Statement 2 (*I trust my mum/dad’s judgement -if s/he says a drink is rubbish I won’t try it*) was ranked at 0, -3 and -4 in each of the respective factor arrays. None of the factors ranked this statement positively. Statement 26 (*It doesn’t matter to me what my parents or family drink. My family only affect what I choose to drink when I’m with them, it wouldn’t make me think I better get used to a particular type of drink*) was also placed in the relatively neutral -1 column of the grid by factor one and factor three. Consistent with the placing of statement 2 by all three factors, factor two largely agreed with statement 26, placing it in column +3 of the sorting grid.

Finally, statement 11 (*I choose certain drinks depending on whether I want to relax or get hyper*) is flagged as a consensus statement and ranked relatively positively in all three factors (+3, +1, +3). However, this statement is interpreted in different ways and ranked positively for different reasons. To factor one, making such nuanced choices is an extension of expression and autonomy. To factor three, statement 11 relates to the importance of context or the site of consumption. The relatively positive ranking of this statement by all three factors was quite surprising. At the beginning of this doctoral work, the importance of choosing drinks to serve a specific purpose or function was not considered in any depth. It may be important to explore further why certain types (or brands) of alcohol are associated with relaxing and ‘winding down’ whereas others are used in a more hedonistic or ‘carnivalistic’ manner. Social norms, historical stereotypes and alcohol marketing practices could be several of many possible reasons for this particular point of view.

Other statements relating to the use of different types of alcohol for particular functions or for convenience (in some cases simply drinking whatever is readily available) were ranked in similar positions across all three factors. Statement 12 (*There are some drinks that I wouldn't buy myself but if somebody else had it I would drink it. Then it's a freebie. I wouldn't waste my money on it though*) was ranked in the same position of the factor array for both factor two and factor three (+3). Factor one placed this in a rather more neutral position in column -1 of the grid. Statement 13 (*I have a preferred brand but to be honest I'm not really bothered, I'll just drink whatever's there*) was again placed in the same position of the factor array by both factor two and factor three (+2). This was placed in a different position by factor one in column -2 of the grid.

Consistent with this point of view, statement 21 (*I'm not really into like the real alcohol scene like knowing all the brands and sophisticated stuff*) was flagged as a consensus statement and placed neutrally at +1, 0 and 0 across all three respective factor arrays. In other words, all three factors appeared to be ambivalent about alcohol branding. This point was also reflected in qualitative interview findings (see chapter 6 and chapter 7) and will be explored further in chapter 10, the discussion and conclusion to this thesis.



### ***9.8.2. Bipolarity***

Two Q sorts negatively correlate with factor three (participant 32 and participant 39). In Q methodology this is described as a bipolar factor. As suggested earlier in this chapter, bipolarity implies that two diametrically opposed viewpoints are being expressed by participants who load on to the factor. In other words, the positive loaders will agree with the item rankings and overall item configuration for that factor whereas the negative loaders are agreeing with an almost reversed configuration (and hence they are advocating an opposed viewpoint). If a factor is bipolar in this way, there are two dominant methods that can be used to aid the interpretation of the factor. Using PQ Method, it is possible to divide the factor, effectively treating it as two separate factors in the interpretation. When this is done, two factor arrays result that are highly negatively correlated, but not totally mirror opposites. This method is useful if the factor is strongly bipolar with many positive and negatively correlated Q sorts.

However, if a bipolar factor is defined by several positive Q sorts and only one negatively correlated Q sort, it is also possible to simply examine the individual Q sort in question and explore why this respondent did not agree with the dominant point of view expressed. In other words, this single array can be turned upside down when discussing the negative pole of the factor as it can be assumed that the person at the negative end of the factor holds a view approximately the reverse of those at the positive end. This serves to preserve the factor as an expression of commonality. It is possible that individuals inadvertently arranged their Q sort in reverse by placing cards they agree with to the left (-4) and ones they disagree with to the right of the grid (+4).

In this study, the post sort interview was first used to check that an individual held the oppositional view that was recorded on the score sheet. PQ Method was then used to split factor three into two factor arrays. The subsequent output report is included in the appendix of this thesis. As only two participants are negatively correlated with the factor, both of these individual Q sorts were also examined by hand in order to explore their stories in relation to both factor arrays for factor three. Replicas of both sorting grids are included below in Figure 9.4 and Figure 9.5.

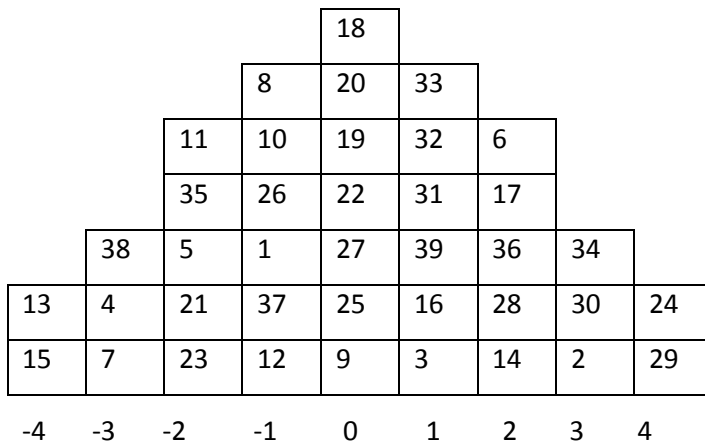


Figure 9.4: Individual Q Sort for Participant 32

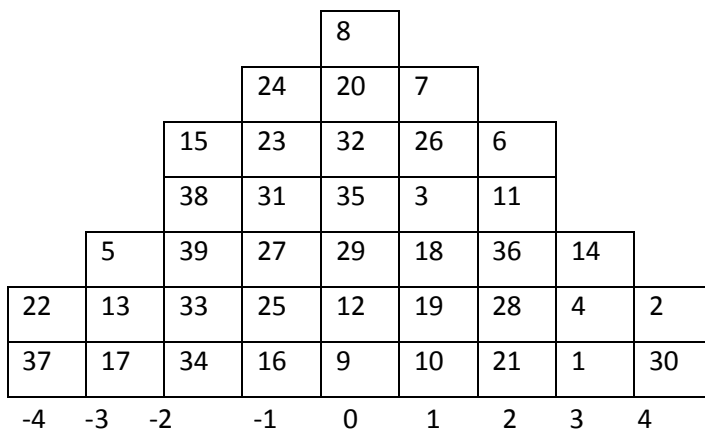


Figure 9.5: Individual Q Sort for Participant 39

To an extent, what a fourth factor array should represent is an amalgamation of the Q sorts completed by participant 32 and participant 39. To explore this further, each participant's post-sort interview was listened to in tandem with their individual Q sort and both factor arrays. There appeared to be several departures from the shared point of view expressed in factor three. Both participants trust the judgement of their parents. Statement number 2 (*I trust my mum/dad's judgement – if s/he says a drink is*

*rubbish I won't try it*) was placed in column +3 of the grid by participant 32 and in column +4 by participant 39. In the resultant factor array it is ranked at +4. This is illustrated by interview comments from participant 39 below.

Participant 39: *'...my mam drinks but my dad doesn't...she's not really bad, just casual, and if she says something is not nice I just wouldn't bother with it.'*

Interviewer: *'So you would listen to her advice?'*

Participant 39: *'Yeah'*

(Participant 39, Female, Aged 14, in response to statement 2)

Both participants are unconcerned with the routines and rituals involved with drinking alcohol and stress that they do not drink shots. Statement 38 (*It's always the same routine as soon as we get to town, what drink I buy depends on which bar I'm in and what time of the night it is. Whichever drink I'm picking is whatever's on offer in that bar*) is ranked at -3 in the fourth factor array (participant 32 placed this statement in the -3 column of their Q sort; participant 39 ranked the statement at -2). Statement 22 was also ranked negatively at position -4 (*I'd drink shots in clubs because you can't really take a beer out onto the dancefloor, it's to make it easier, more convenient*) by participant 39. Participant 32 placed this statement more neutrally at 0 on the grid yet still stressed in the course of their post-sort interview that they did not consume shots.

In part at least, the negative ranking of this statement, and the placing of other statements in general, could be a reflection of participant 39's age. She was fourteen and yet to drink in pubs and clubs. Participant 39 was concerned about how strong certain types of alcohol are and does not consume large quantities of alcohol. This meant that there were a lot of statements that she did not have an opinion on. Despite being older (aged seventeen), participant 32 also does not drink in pubs and clubs, preferring to drink at home. He is also anxious about the strength of alcohol and this is the reason he does not drink shots.

*'Because they're just strong in alcohol and they can make you ill and stuff...'*

(Participant 39, Female, Aged 14, in response to statement 22)

*'Aye, I just don't like them, just horrible, too strong...'* (Participant 32, Male, Aged 17)

However, this concern with alcohol strength introduces a notable link to bounded consumption and to the shared view expressed in factor three. A similar hedonistic reason for drinking is expressed, particularly by participant 32.

*'...just to liven my night up really...for the weekend, you know what I mean...'*  
(Participant 32, Male, Aged 17)

Rather than choosing alcohol which is convenient or serves a higher purpose, participant 39 chooses drinks for how they taste. Unlike the vast majority of young people in this Q study, she does drink alcopops. Participant 32 chooses drinks based on personal experience, sticking to drinks that he knows and avoiding the unknown. He disagrees strongly with statement 13 (*I have a preferred brand but to be honest I'm not really bothered, I'll just drink whatever's there*) and placed it in the negative pole of the Q sort at -4, with participant 39 placing the same statement in a similar position at -3.

Interviewer: *'What about this one cos this one says I've got a preferred brand but to be honest I'm not really bothered I'll just drink whatever's there. And you completely disagree with that, is that because you were telling me that you stick to Fosters and Carling?'*

Participant 32: *'Aye cos I just don't like cheap stuff. I just don't like it, I like to stick to the drink that I like.'*

In other words, both participants seem to be brand loyal. This is a departure from factor three where statement 13 was placed in a relatively neutral position at column 2 in the grid. In fact, as discussed earlier in this chapter, this statement was a consensus statement and was placed in column 2 of the grid by all three factors.

Finally, although participant 39 is neutral about the impact of price, participant 32 appears price sensitive, again, in a departure from factor three. Statements 24 (*If something doesn't get you pissed I just think I've wasted my money on something that's not going to get me pissed*) and 29 (*I do take notice of advertisements but it's*

*mostly the ones from supermarkets advertising special offers not the ones for different brands)* were both placed in the pole of participant 32's sorting grid at column +4. Statement 34 (*Putting up the price of drink would totally put me off – you want to get the most for your money*) was also placed at +3 in participant 32's Q sort.

*'Cos you need to make the most of your money and buy what you want...proper...not like junk...mostly I like to stick to my own drink but if it's another lager...Carling or something I'll get that instead cos I like that as well...buy something that's gonna get you drunk than just buy something and then not get drunk cos you've just wasted your money practically. I just don't like that. I like to get drunk.'* (Participant 32, Male, Aged 17, in response to statements 24 and 29)

### **9.8.3. Deciding on a final number of factors**

A one, two, four and five factor solution to the data were also considered in this Q study. A one and two factor solution were ruled out during early stages of factor analysis. Neither solution provided coherence with the qualitative post sort interviews. More specifically, a 'polarised' factor solution appeared to emerge. Much of the subtle and subjective differences between opinions were hidden, resulting in a compromised 'middle of the road' point of view. A five factor solution was also ruled out. Again, this solution did not fit the accounts provided by young people in their post sort interviews. Ultimately, the final factor solution became a choice between three and four factors. Issues with the wording of one statement (number 33: *If I went into a shop and there was four different brands of lager and one was on offer I would buy the one that's on offer because it is going to be cheaper*) indicates why a four factor solution did not seem best.

In their individual Q sort, participant 35 placed this statement in the pole of the grid at -4. A four factor solution would have hinged on this participant's Q sort, who would have been a defining positive loader; and this statement would also have been ranked at -4 in the factor array for factor four. Further sampling may have firmed up this factor into a shared account. However, in order to decide if this was necessary, this

participant's Q sort and post sort interview was explored in depth. One of the key reasons for conducting a post sort interview is to explore and unpick respondents' understandings of the statements presented to them, understandings which may, for the same statement, be different in different factors. Over the course of their post-sort interview, the participant revealed that they may have placed statement 33 in a different place had it included a different alcohol product to lager or had it been 'neutralized' and did not mention a specific alcohol type at all.

Participant 35: *'I don't really like do that, I've never done that...and I don't like lager so...'*

Interviewer: *'...what if it wasn't lager, what if it was something else?'*

Participant 35: *'...then I'd probably buy it...but I don't like lager so...'*

Interviewer: *'...other than lager if something was on promotion would that matter to you?'*

Participant 35: *'...yeah probably yeah...'*

Interviewer: *'...have you ever bought things that have been just on promotion?'*

Participant 35: *'Aha yeah'* (Participant 35, Female, Aged 17, in response to statement 33 – defining sort for factor three)

Because of this, participant 35's point of view was more comparable with factor three of a three factor solution. As this was the only positive defining Q sort for factor four, the interview narrative did not warrant the statement being placed at -4 in the poles of the factor array for a four factor solution. Instead, listening to the participant's 'story' allowed the researcher to decide on three strong factors.

## 9.9. Chapter Summary

In this chapter findings from a Q methodology analysis exploring the influences on adolescent drinking choices have been outlined and discussed. A three factor solution appeared to provide the most meaningful interpretation of the data after considering both the factor arrays and the post Q sort interviews provided by participants. To sum up, Factor one illustrates a sense of individuality, autonomy, and maturity in alcohol choices. Factor Two is price-orientated, focussing on convenience and 'special offers'. Finally, Factor Three is concerned with the routines and rituals of drinking behaviour suggesting that it is often the site of consumption which affects alcohol choices. Each of the three factors presents a partial account of themes illustrated in qualitative interview accounts, representing an element of 'validation' or 'triangulation' in the data. In the following (and final) chapter, the theoretical and practical implications of the Q study findings are examined and discussed in synthesis with findings from the systematic literature review (chapter 4) and qualitative interviews (chapters 6 and 7). The purpose of the final chapter is to interpret the findings from this doctoral body of work in light of the strengths and limitations of the methods employed, and highlight the implications for theory, policy, practice and further research.

## **Chapter 10: Discussion and Conclusions**

### **10.1. Overview of the Chapter**

The final chapter of this thesis begins with a discussion of the key findings identified from this doctoral work, demonstrating the extent to which the study objectives have been met. This is followed by an appraisal of the methods employed, reflecting on the extent to which they can be used to build on this work or transferred to other contexts. In drawing findings together, the researcher reflects on the mixed method 'journey' of the research, both methodologically and philosophically. Findings from this doctoral work then form the basis of a theoretically and policy driven discussion about the influence of industry-driven price and wider marketing processes on young people's alcohol consumption, demonstrating how this work provides an original contribution to knowledge. The chapter ends by highlighting areas for future research and by offering some concluding remarks.

### **10.2. Summary and Interpretation of Key Findings**

#### ***10.2.1. Price***

It is argued in this thesis that there is a paucity of work specifically exploring the impact of price on young people's drinking behaviour. The systematic review conducted as part of this doctoral work identified only four papers eligible for inclusion (Kearns et al., 2011; Bellis et al., 2009; Saffer and Dave, 2006; Brain et al., 2000). Although three out of four studies suggested that price may impact on young people's drinking patterns, the papers identified were diverse and explored different outcome and exposure measures, making synthesis of findings difficult. Unlike the other three papers, Kearns et al (2011) found that young people in Ireland, even those accessing alcohol treatment services, were brand loyal and continued to choose leading brands of alcohol, which were more expensive per unit. However, this finding resulted from only a one-page questionnaire, a very small sample size and descriptive statistics only.



In contrast, Saffer and Dave (2006) demonstrated that young people's alcohol consumption was moderately price elastic, meaning that changes in price could have small effects on changes in demand. More specifically, combining results from two datasets, they suggested that a 10% increase in price could reduce annual drinking by 1.9%; monthly drinking by between 2.6 and 4.2%; and binge drinking by between 1.8 and 7.3%. Bellis et al (2009) found that as the price of alcohol decreased, the proportion of young people reporting experiencing negative outcomes increased. Consumption of large value cider bottles was associated with the largest percentage of young people experiencing alcohol-related harm. Further, not only were large value bottles of cider cheaper (per unit) than other products, they were high in strength and volume.

Whether cheaper products lead to negative alcohol-related outcomes was not explored specifically in qualitative interviews or the Q study. However, a number of similar themes should be acknowledged. First, participants expressed that they imbued specific alcohol products with subsequent harms or negative experiences (such as hangovers and feeling ill) rather than drinking *per se*, an idea also reflected in a recent study conducted by Russell et al (2011), who found that, amongst young people aged 11-18 in County Durham, if something did go wrong or young people did cause trouble when they were drunk, some were happy to attribute blame to a particular drink (such as Jack Daniels) rather than to drinking alcohol generally.

Second, young people interviewed illustrated a preference for products high in strength and volume in order to get the most out of their money. It was argued by some young people that drinking and not getting drunk represented a waste of money, and most young people discussed purchasing significant volumes of alcohol for a very low price. The idea that spending money on alcohol and not getting drunk can be a waste of money was a key finding in the work conducted by Brain et al (2000). In this study, the 'utility' of a product was reflected in its psychoactive properties i.e. how drunk it can get you, and it was these products which delivered 'value for money'. Brain et al (2000) also found that the more frequently young people drank, the more important price and strength became (and the less importance taste assumed) when choosing an alcoholic drink. However, taste remained the most important criteria to

participants in Brain et al (2000). Similarly, young people interviewed in this doctoral work were not exclusively price-led and choices were made in conjunction with other criteria (e.g. taste, availability, strength and image).

Nevertheless, price still appeared to play a substantial role in practical decisions about alcohol to participants in both the qualitative and Q study. In particular, price was central to the choices young people made in the account illustrated by Factor Two (in the Q study). Young people associated with this factor were happy to drink whatever alcohol was easily accessible, or cheapest, and take advantage of special offers and 'freebies'. 'Because it's cheap' was the default response, until probed further, for a large number of participants when questioned about what matters to them when they choose alcoholic drinks. Further, although young people had a spending cut off point, this did not correspond to not drinking per se, but rather to a response of switching to a cheaper product. Several other papers have previously acknowledged that price increases may lead to a quality / volume trade off, especially in young drinkers. In other words, consumption level may decrease slightly but that drinkers might also switch to low cost brands to maintain their alcohol use (Doran and Digiusto, 2011; Muller et al., 2010; Dhaval and Saffer, 2008; Institute of Alcohol Studies, 2008; Gruenewald et al., 2006).

However, price was not always considered in the ways it was expected to be. For example, the practice of preloading was not simply a strategy used to save money for older participants in this study. Instead, it was described as a way to extend the night, became part of the enjoyed ritual and served the specific purpose of cementing the friendship group. Further, young people were often constrained in their choices about alcohol by criteria beyond their immediate control. Access routes to alcohol were limited and they could not always simply 'choose' exactly what they wanted to drink. For example, young people discussed 'subbing' which was used to describe friends paying for their drinks or vice versa when short of money, representing an interesting 'mini economy'. There were also alcohol products which groups of young people stated they did not enjoy and would never drink. Often, this decision was linked to cultural stereotypes about certain alcohol brands or products. Yet, when there was no (or very low) economic cost attached and the product became a 'freebie',

considerations such as taste and image seemed to matter far less to many of the young people in this study. In this way, young people displayed product and brand preferences but only to a certain extent. After this, they would accept a ready alternative in order to be able to drink.

### ***10.2.2.Engagement with Wider Marketing Techniques***

Papers included in the systematic review were heavily skewed towards literature exploring the impact of alcohol promotion (23 out of 32 papers), rather than the other three key areas of marketing. Ten of these papers appeared to demonstrate, to varying degrees, that higher levels of advertising exposure resulted in changes to adolescent drinking patterns, with some highlighting a dose-response relationship (Lin et al., 2012; Jones and Magee, 2011; Tanski et al., 2011; Gordon et al., 2010a; Gordon et al., 2010c; Grenard, 2008; Saffer and Dave, 2006; Snyder et al., 2006; Ellickson et al., 2005; Zogg, 2004). A further five papers identified that ownership of (and exposure to) alcohol-related merchandise and promotional items appeared to increase alcohol use among adolescents and alter subsequent drinking patterns (Stoolmiller et al., 2012; McClure et al., 2009; Fisher et al., 2007; McClure et al., 2006; Workman, 2003). No studies were identified which examined the impact of alcohol packaging on young people's drinking behaviour. However, two studies identified that alcohol branding appeared to influence young people's drinking behaviour (Kearns et al., 2011; Tanski et al., 2011). Tanski et al (2011) found that two-thirds of underage drinkers in the US (aged 16-20) report a favourite brand of alcohol. In addition, higher rates of binge drinking among adolescents who named a favourite brand appeared to show that alcohol advertising campaigns can influence the likelihood that alcohol will be consumed at levels which pose a risk to health. Brand loyalty was also evident amongst Irish adolescents (aged 14-18) accessing alcohol treatment services, an interesting finding in light of the fact that there were cheaper alternatives available (Kearns et al., 2011).

Further, in papers separate to those included in this systematic review, Alcohol Concern (2012) found that alcohol brand recognition was common amongst young people as young as 10-11 years old. More specifically, 79% of young people aged 10-11

were aware that Carlsberg is an alcoholic drink, logos for Fosters and Stella were identified by 95% of those studied, and an image of the characters Brad and Dan from the Fosters television advertisement was correctly associated with alcohol by 75% of the sample. Although product packaging and brand loyalty was not specifically explored in the qualitative or Q study, several participants named favourite brands or articulated some level of product loyalty (*'Heineken is my preferred brand ...'* (Participant 12, Male, Aged 16).

Studies in the systematic review focused almost exclusively on traditional, 'obvious' marketing techniques and media channels. Only four papers (reporting data from three studies) were identified which examined the impact of electronic marketing (Lin et al., 2012; Jones and Magee, 2011; Gordon et al., 2010a; Gordon et al., 2010c), and all three studies appeared to demonstrate significant relationships, albeit cross-sectionally, between both awareness and engagement with web-based alcohol marketing and young people's drinking behaviour. A lack of research in this area is particularly surprising given the heavy investment in 'new' and digital media by alcohol industry described in the introduction to this thesis (see chapter section 1.1.3). In qualitative interviews and in the Q study, participants held quite a one-dimensional view of what alcohol marketing is and predominantly discussed only 'traditional' overt advertising techniques. They appeared not to recognise less visible aspects of promotion (e.g. sponsorship, viral and digital marketing) as marketing techniques. Nevertheless, certain types of alcohol were readily associated with different sports, such as beer with football and rugby.

Participants also presented themselves as autonomous and unaffected by alcohol marketing, unless advertisements were price-related, such as supermarket promotions, showing a lack of awareness that price and point of sale information is also a marketing activity. It is possible that young people in this study who presented themselves as autonomous consumers did not know that they were being subjected to many forms of active industry-driven marketing. This was especially pronounced in the story illustrated by Factor 1 (in the Q study). Here, personal autonomy was stressed and a mature, sophisticated and responsible approach to alcohol was presented, with respondents uninterested in 'drinking just to get drunk'. Choices about alcohol were

seen as an expression of respondents' individuality, a self-defined level of autonomy, maturity and sophistication. However, the majority of participants interviewed were able to recount brands and slogans easily and internet pop ups via social network sites mentioned. Therefore, although advertising was not overtly linked to purchasing, it appeared to play a distinctive role in building recognisable imagery linked to alcohol products, as well as associations (gendered or otherwise) and expectancies related to drinking, such as a sense of belonging, escape, fun, hedonism, carnival, that alcohol use is 'owed' after a hard week of working and a 'rite of passage' into adulthood. Further, results from several studies included in the systematic review demonstrate that identification with desirable images in alcohol advertising was apparent in those as young as 8-9 years old (Austin et al., 2006; Austin and Knaus, 2000; Austin et al., 2000).

### ***10.2.3.Choosing to Drink and the Wider Alcohol 'Habitus'***

Although participants represented themselves as making critical and measured micro-level choices about drinking (e.g. between products and brands), the more substantive decision about whether to engage in alcohol consumption appeared far less free and autonomous. 'Because it's fun', 'Because it's normal' or 'Because everybody does it' were common responses when young people were questioned about why they drink. Findings from this study suggest that the structuring of leisure / pleasure spaces by the alcohol industry, reinforced through a range of media, leads to the sense that drinking is ubiquitous and the only thing to do for enjoyment, but much of the population (including many parents of young people) also play along (and a role) too. Using this framework, to not drink becomes the harder choice for young people to make, and young people's choices about drinking appeared to be funnelled or constrained into specific, seemingly free directions, endorsed (and aided) by others, including parents and peers. Drawing on Bourdieu, this framework can be described as a 'habitus' of alcohol use where young people's choices about alcohol are subject to deeply embedded structural predispositions (including industry processes and alcohol marketing), which can limit the options that are available to them, but where 'taste',

social norms and inter-personal relationships (recognised as agency) can also play a role in reinforcing, normalising and driving behaviour.

A habitus of alcohol use is produced and reinforced by imitation, heavily routinised, continuously reproduced through practice (what people do), and works to generate behaviours which are sanctioned as 'logical' or consistent with societal expectations (Crawshaw and Bunton, 2009). This habitus validates and normalises drinking whilst simultaneously punishing those who make the 'wrong' choices and misuse alcohol. Thus, in order to maintain what is essentially a system of social control, an individualist worldview must be reinforced and the structural and cultural factors which can constrain drinking choices are minimised. The alcohol habitus also ordains that young people abide by certain implicit, almost unconscious, rules, rituals and patterns in relation to alcohol use. In this study, although a sense of carnival and hedonism was articulated in their drinking experiences, young people's alcohol consumption also seemed structurally embedded, bounded and governed by group functions. Many participants appeared to navigate around the boundary or 'edge' of consumption so as to not become 'too drunk', become an embarrassment or miss out on enjoying their evening. Such a sense of risk reduction or 'bounded' hedonism reflects a sense of being constrained by what is structurally possible or acceptable within the habitus.

This is also evident in the point of view articulated by Factor Three (in the Q study). At first glance this story appears to illustrate adventure, pleasure and hedonism. The choices made about alcohol suggest that young people whose Q sorts significantly correlate with factor three are lively, social and energetic. However, this hedonism also seems to be bounded and mitigated with concerns both about remaining safe and about choosing products which serve a purpose (e.g. convenience or wider functions of alcohol such as having a laugh with friends or choosing drinks in order to relax or get hyper). In this way, alcohol as a social construct reflects a sense of pleasure, excitement and fun yet micro product or brand choices are rather more pragmatic. Such 'controlled loss of control' extends to the idea that there are particular rules or rituals associated with a typical night out (e.g. drinking certain products in certain bars, dancing, taking photographs, getting ready together, looking after friends).

Personal relationships encompass a substantial part of the habitus of alcohol use. Four out of six papers in the systematic review examining the association between outlet density and young people's drinking behaviour demonstrate that social influences and supply were more important to young people than formal sources of alcohol, and that formal and informal influences on young people's drinking behaviour are mutually reinforcing (Huckle et al., 2008; Kuntsche et al., 2008; Treno et al., 2008; Paschall et al., 2007). Further, personal relationships, particularly with parents, are described in this doctoral body of work as the 'Fifth P' in the alcohol marketing mix. Most of the young people in this study had their first experiences of alcohol with parents, and some participants continued to drink with their parents throughout adolescence. Parents were also the traditional initial source of alcohol for young people in this study, either via direct purchasing or by being the main source of pocket money. In existing literature, the role of parents is traditionally referred to as one of 'teacher' or 'transmitter' of cultural attitudes and social norms (Gilligan et al., 2012; Hayes and et al., 2004; Taylor and Carroll, 2001).

Instead, findings from this study suggest an additional role for parents as a 'gatekeeper' or an 'access route' to alcohol for young people. It is suggested that access to alcohol was negotiated rather than simply controlled with implicit 'contracts' in place between adults and young people (*'...if I ask for eight cans of Fosters my mam and dad would be like well is that not a bit too much, and so then I'd ask for four...'* (Participant 2, Female, Aged 17). According to young people interviewed, many parents appeared to advocate moderate drinking (rather than non drinking) and preferred to know *where* young people were drinking rather than *whether* they are drinking. Thus, in comparison to illicit drugs, young people described alcohol use as being largely policed informally. Although no data was collected directly from parents to indicate why they were prepared to be relatively tolerant, participants stated that parents saw drinking as the 'lesser evil' and preferred to see young people engaged in what they consider to be a 'normal' drinking culture rather than a deviant drug culture. Further, young people's 'harder' illicit drug use or anti-social behaviour would be negatively sanctioned as it is incompatible with the 'logic' of the alcohol habitus.

Finally, the habitus of young people's alcohol use can be mapped over time, and by age. Young people's trajectories of drinking can be seen to shift from behaviour which is contained and regulated by informal and local sanctions of social control, such as parents, family members or street-based community support or police officers (*'...depends what time I had to go home to me mum and dad's'* – Participant 6, Female, Aged 16), to behaviour which is hedonistic, seemingly less restrained and policed by more formal measures of social control in the night-time economy, demonstrated in the quotes below.

*'...The influence that has and the atmosphere as well like in town you've got music and dark and you can go to the bar and there's loads of different people there...'* (Participant 2, Female, Aged 17)

*'It's different down the town though because you're surrounded by people drinking, that just sends you looped anyway...'* (Participant 27, Male, Aged 16)

*'I guess it's just the environment I would say. Environment in a club is like more full on, more contact...'* (Participant 28, Male, Aged 17)

### **10.3. Limitations of the Study**

In this chapter section, the limitations of the study are addressed, focusing explicitly on each of the individual methods employed. The limitations of this study are interrogated openly, critically and transparently, acknowledging that it is important for researchers to engage in a dialogue about what we choose to study and how we choose to do so. This constitutes the reflexive approach commonly employed by qualitative researchers to validate their practices (Lambert et al., 2010; Pillow, 2003). Although every effort was made to minimise publication bias in the systematic review, only papers published (or available in a public domain) and written in English were included. Use of an extensive number of review search terms also meant that a large volume of papers were retrieved and sifted by the researcher. The number of records retrieved in a systematic review is always a balance between sensitivity and specificity.



In this review, the researcher took the decision to err on the side of caution and sift a large number of records in order to ensure that relevant records were not missed.

Results from studies included in this systematic review were not pooled using a statistical meta-analysis, meaning that a 'higher order' interpretation of the data was not possible. However, it is argued here that the purpose of this systematic review was to explore and critically appraise what is known from the evidence base about the impact of price and wider marketing techniques on young people's drinking behaviour and that this objective was met to a high standard. Further, data collected was not homogeneous enough to be able to perform statistical pooling, with papers reporting on a variety of populations, study designs, exposure measures and outcome measures. The researcher felt that combining homogeneous data from only a small number of heterogeneous papers or variables would result in a misleading summary result, masking important differences between studies, and diminishing overall effect size. This summary result would not be meaningful to the review question and would be conditional on its contingent parts.

Findings from the qualitative study are based on one-off interviews with individuals and dyads that could not be tracked longitudinally. Experiences and opinions can shift across time and space meaning that findings from this research may constitute a 'snapshot in time'. Themes identified from qualitative interviews were also interpreted solely by an individual researcher, and are based on self-report data from young people. Further, no data was not collected which examined affluence or educational experience. Data relating to SES is notoriously difficult to collect for young people with indicators of parental SES often used as a proxy measure, despite many such indices being deemed inappropriate for use in research with adolescents (Currie et al., 1997). Further, it is also suggested that young people do not readily associate their health behaviours on markers of SES such as affluence or educational experience.

It is particularly important to be reflexive in relation to the role of parents. The researcher did not speak to parents directly, and observations were based on the words of young people only. As discussed in Chapter 5, respondents may withhold important information about themselves and their experiences or disclose what they

believe the researcher is expecting to hear. Young people may also provide socially desirable responses or try to impress the researcher. Nevertheless, underpinned by critical realism, interviews conducted as part of this research, recognise that people interpret reality in different ways. The intention was to explore young people's subjective accounts not search for a single truth. Further, themes identified were interpreted solely by an individual researcher. For those respondents closer in age to the researcher, the identity of a 'peer researcher' could at times be adopted, allowing the researcher to play on communalities which were not present with younger participants. Presenting a natural front is one of the '10 commandments of interview preparation' put forward by Berg (2001) and it was important that young people saw the researcher as an ordinary person from NE England. However, upon reflection, this may have unintentionally introduced bias into the interview situation.

On some occasions it was also necessary for agency staff, such as those working in youth offending teams, to set up an official appointment with an interviewee on the researcher's behalf. Yet, this opened up the possibility of staff members selecting young people based on their own interpretation as to the 'type' of young person required. A level of control as to which participants take part in the research study can then be lost. From the beginning of participant recruitment, the researcher forged good working relationships with gatekeepers and members of staff, engaging in open dialogue as to what the anticipated aims and outcomes of the research project would be. Part of this process was to provide regular and firm direction on both the age range and inclusion criteria, as well as stressing that particularly troubled young people were not preferential. Thus, when appointments were pre-arranged, extra care was taken to ensure that participants did not feel coerced and that they were fully aware that taking part was completely voluntary. Despite this, two participants recruited into the study by gatekeepers (and one potential participant who was subsequently excluded) fell outside of the age range of 14-17 (further details about this issue are presented in chapter section 5.3.2).

The use of dyads may have had both a positive and negative impact on the data collected and upon how it was subsequently analysed. It is impossible to say whether choosing to interview participants individually would have altered the data collected.

Accounts collected from research dyads may allow a 'public' account to emerge, especially when participants know each other well. In other words, when young people were interviewed together in this study, a largely interactive narrative was built, with participants 'playing off' each other's words. On the other hand, when interviewed alone, more personal accounts from young people emerged which explored individual opinions and even vulnerabilities. On one occasion, a youth worker was also present when an interview took place as the only available space was a small, windowless room. It is important to reflect on whether this impacted on what young people chose to disclose in the interview. Further, at several points during data collection, the researcher became concerned about the exploitation of young people's stories for personal (research) gain. Two participants disclosed sensitive information (self harm, gay experiences) which was unexpected and took the researcher by surprise. Although the researcher felt slightly out of depth, it was also seen as a positive that participants trusted the researcher enough to share personal stories. In relation to the young person who disclosed experiences of self harm, other researchers may have considered the ethical thing to do to walk away. Continuing with the interview revealed that this was not the first time the young person had disclosed this information. Further, it may have been more detrimental to the young person (and perhaps unethical) to terminate the interview. For example, Mishler (1983) suggests that for some participants, taking part in research and telling their story is a way of making sense of their own experiences. A one-off interview may have been akin to a cathartic experience for the young person in question, providing a research 'black box' with an interviewer that they never again have to have any contact with (see chapter section 5.4.1).

The limitations of Q Methodology have been discussed in some detail in Chapter 8 (see chapter section 8.7). Here, only limitations which are specific to this Q study (as opposed to critiques of Q methodology more generally) are considered. Although the age range of participants in this study was quite narrow, attitudes and behaviour can change markedly from those aged 14 to those aged 17. In this study, the same Q set was used with all participants. Consequently, several younger participants commented during post-sort interviews that they felt that a small number of statements 'did not apply to them' and that they did not know where to place them in the Q grid.

However, it is recognised in Q methodology that statements which participants do not feel strongly about will be placed in the most neutral positions, closest to the middle of the grid ('0'). This is exactly what happened in this study. Young people who felt this way were still able to articulate their point of view about those statements placed in other positions of the grid, especially those placed towards the poles. Therefore they were still able to express their own opinion about what influences their choice of alcohol which could then be factor analysed in order to explore shared opinions. No participant felt that they could not express a point of view about alcohol using the statements provided to them. Nevertheless, it is worthwhile exploring in future methodological work whether the 'concourse' for 14-17 year olds about alcohol choices differs with age and whether different Q sets (and thus multiple, smaller Q studies) should be devised, which are broken down into smaller age sub-sets.

There was a tension when designing this Q set between being specific (and mentioning actual drinks or brands) or designing a more unwieldy Q set, which repeated the same statement but with different drinks each time. Use of the former technique means that some young people might engage with statements more critically, but also means that those statements could lack relevance to young people who choose other drinks. In this study, the researcher chose not to repeat the same statement, but with different drinks each time, as it was felt that the Q set would become repetitive, meaning that young people would tire of the process and disengage. A Q set could also have been devised in which items were simply pictures of drinks or brands with prices or promotions included. However, although this would have provided some understanding as to the rank order of explicit brand or product *preferences* of young people, it would not have allowed for any examination of influences (marketing or otherwise) which appear to work alongside of overt price and product promotions, such as product placement in film or TV shows, the attitudes or parents or peers or drinking locations.

As much as possible, statements were also taken directly from interview transcripts. Minor alterations were made to the wording of a small number of items to 'neutralise' certain aspects and remove colloquial language that other respondents may not have understood. However, the wording of one particular statement (33 - *If I went into a*

*shop and there was four different brands of lager and one was on offer I would buy the one that's on offer because it is going to be cheaper*) may have caused confusion to some participants and subsequently affected where it was placed in the grid. For example, over the course of their post-sort interview, Participant 35 revealed that they might have ranked this statement differently had it included a different alcohol product to lager or had it been 'neutralized' so that it did not mention a specific alcohol type at all (this point is also discussed in chapter section 9.8.3). Thus, if this Q set was designed again, the researcher would amend this statement from 'lager' to simply 'alcohol'.

#### **10.4. Contributions of the Study**

##### *Theoretical Contributions*

The mixed-methods work presented in this thesis demonstrates an attempt to position young people's choices and behaviours in relation to alcohol use within long-standing theoretical debates about the influence of structure and agency on decision-making. First, although the focus of this research is exclusively on alcohol use, it is suggested that a co-ordinated exploration of young people's health behaviours is necessary. For example, Mirowsky and Ross (2003) use the term 'structural amplification' to refer to situations where well-educated individuals accumulate advantages and poorly educated persons amass disadvantages that cumulate over time into 'cascading sequences' impacting either positively or negatively on health. Bourdieu's notion of the 'habitus' has been used in this thesis to illustrate that young people's choices about alcohol are subject to structural predispositions (including industry processes and alcohol marketing), which can limit the options that are available to them, but that 'taste', social norms and inter-personal relationships (recognised as agency) can also play a role in reinforcing, normalising and driving behaviour. In other words, the concept of habitus removes the dualism between structure and agency. Habitus implies that structures are internalised and formulated as 'taste' and social norms, but this is not deterministic. Instead, people do have individual agency, but they have a

disposition to act in certain ways because of these buried but profound currents that have been internalised from a very young age.

Although Bourdieu's 'habitus' model has been applied to models of illicit drug use (Crawshaw and Bunton, 2009), it has not previously been used to examine young people's choices about alcohol. Further, Bourdieu's model has not been explored in conjunction with a political economy view of health, and this doctoral work adds to a small number of pre-existing studies which have applied a political economy view of health to alcohol (Singer 1986; Saggars and Grey., 1997). The exploration of young people's alcohol use as a 'political economy of health' can also be seen as an expansion of McCreanor et al's (2008) concept of 'intoxicogenic' environments in which (a) young people trust and value industry-given knowledge and the messages presented in important domains of youth culture; and (b) alcohol marketing is so all pervasive, and the world is built in such a way, that it is hard for young people to consciously or unconsciously avoid alcohol marketing.

### *Methodological Contributions*

At time of writing, the systematic review conducted as part of this thesis represents the first systematic review which examines the impact of the entire industry-driven marketing mix on only young people's drinking behaviour, extending existing systematic reviews such as that conducted by Meier et al (2008), which used two pre-existing meta-analyses combined with a further 15 relevant studies to explore the wider impact of price (including taxation), promotion (which includes advertising) and alcohol availability (such as through the density of outlets in a particular area that sell alcohol) on alcohol consumption on adults and young people (aged 10 and upwards), and which was accompanied by statistical modelling of the effects of various alcohol pricing and promotion policy options (Purshouse et al., 2010).

It is also the first Q study (carried out to completion) conducted with young people primarily exploring alcohol use, although Q studies have been completed which mention alcohol but where the primary focus is smoking, being popular, and HIV

prevention (Anthony, 2011; Duncan, 2004; Collins et al., 2002). Critical realism is increasingly used in health and social research as both a philosophical framework in which to 'view' the world and as a rationale for a mixed methods approach (Angus, 2011). However, critical realism has not previously been used to underpin a study exploring young people's alcohol use. Thus, this study builds on current use of critical realism as a research philosophy and extends this body of work. The philosophical approach taken also builds on the theoretical model identified above underpinned by structure and agency. Critical realism recognises that "effects arise due to the interaction between social structures, mechanism and human agency" (McEvoy and Richards, 2006:70).

Thus, it was explicitly recognised in this study that different methods can be used to research different aspects of the phenomena in question. In other words, methods were specifically chosen in order to examine the objective 'reality' of the current evidence base (a systematic literature review) but also to explore young people's subjective opinions about alcohol (qualitative interviews and Q methodology). Further, this demonstrated a dialectic approach to knowledge production (or a challenging conversation between three methodologies). Drawing on Hammersley (2001) and Nind (2006), it presents a 'mosaic' idea of how research evidence can knit together. This recognises that pieces may overlap, fit together, not fit at all, clash, challenge and complement each other.

### *Practice and Policy Level Contribution*

This doctoral body of work has four key implications for alcohol policy and practice, which are outlined below.

1. The current alcohol strategy for England and Wales includes a commitment from the Coalition government to implementing an alcohol MUP by 2015. An alcohol MUP has been demonstrated to have a positive impact on population-level drinking. Although it is argued here that an alcohol MUP represents a step in the right direction for UK alcohol policy, findings from the systematic review

conducted as part of this doctoral work suggested that there is a paucity of evidence which specifically examined the impact of price on young people's drinking behaviour. Thus, it is important not to overemphasise the effect that price changes alone may have on young people's drinking choices and behaviour.

2. An association between alcohol marketing and young people's drinking behaviour has now been demonstrated in a growing body of studies, and this doctoral piece of work indicated that the majority of participants were able to recount brands and slogans, did not recognise less visible aspects of promotion (e.g. sponsorship, viral and digital marketing) and did not associate the pricing of alcohol as a form of marketing. Further, advertising and other promotional activity seemed to play a role in building recognisable imagery linked to alcohol products, as well as associations and expectancies related to drinking. Public Responsibility Deals and voluntary self-regulation of alcohol marketing may be inadequate to counter this. Instead, it needs to be identified that young people are being subtly bombarded and further work is required to 'unravel' this impact. Nevertheless, tighter restrictions on the marketing of alcohol, such as a policy resembling France's Loi Evin should be given consideration.
3. Although tighter legislative sanctions for alcohol marketing are warranted, they will not automatically address deeply embedded societal norms and traditions about alcohol. It is suggested that a 'two-tier' society where the responses of adults and young people to industry processes are segregated is not an appropriate policy response. Instead, it is important to recognise that the normalisation and ubiquity of alcohol use is not a problem of youth alone or a 'them and us' issue. Further, young people's alcohol use should not be considered in isolation. Instead, strategies which explore young people's cumulative health behaviours are required, which aim to address root causes and understand why 'unhealthy behaviours' are so embedded in young people's lives.
4. Finally, qualitative interviews and Q factors contained messages that young people did not recognise the influence of advertising, relationships with parents or price. Young people articulated different views, beliefs and rationales for their behaviour. It is entirely feasible that no single policy would



be effective or that only certain groups of young people 'need' a policy response (i.e. those disproportionately affected by negative alcohol-related outcomes). Instead, lessons need to be learnt from tobacco control and a multifaceted, coordinated and strategic response to drinking is needed.

## **10.5. Areas of Future Research**

Participants in this study were aged 14-17, all of whom had tried alcohol, and who had first consumed alcohol at an earlier age. Future research should explore the impact of alcohol price and wider marketing on different age ranges, particularly those under the age of 14. By age 11, 10% of young people have tried alcohol (Fuller, 2011) and 47% of Year 9 students (aged 13-14) report that they drink monthly (Bremner et al., 2011). Further, Alcohol Concern (2012) found that alcohol brand recognition was common amongst young people as young as 10-11 years old. More specifically, 79% of young people aged 10-11 were aware that Carlsberg is an alcoholic drink, logos for Fosters and Stella were identified by 95% of those studied, and an image of the characters Brad and Dan from the Fosters television advertisement was correctly associated with alcohol by 75% of the sample. Results from several studies included in the systematic review demonstrated that identification with desirable images in alcohol advertising was apparent in those as young as 8-9 years old (Austin et al., 2006; Austin and Knaus, 2000; Austin et al., 2000).

Second, future work could encompass a more detailed exploration of the gendered nature of young people's engagement with alcohol marketing. Only a small amount of work has focused on gendered alcohol use in those under the legal drinking age, and even less focuses on how marketing techniques may contribute to reinforcing or subverting gendered drinking roles. Those that do suggest that alcohol marketing includes highly sexualised and stereotypical content (Sumnall et al., 2011; Brooks, 2010; Hastings, 2010; Seaman and Ikegwuonu, 2010; Daykin et al., 2009). In this study, gendered stereotypes were assigned to certain types of alcohol or brands, such as alcopops, beer or fruity drinks like 'Apple Sourz'. Findings from the systematic review conducted as part of this doctoral work also demonstrated that work exploring alcohol

promotion continues to focus predominantly on traditional media. Only three studies were identified which examined the impact of electronic marketing. This is particularly surprising given the heavy investment in 'new' and digital media by alcohol industry. Future research should focus on young people's engagement with alcohol marketing (industry-led or otherwise) in social or digital media.

Further, empirical methods employed in this study could be adapted and used with larger samples to explore the association between points of view and other characteristics like age, gender, and SES. For example, findings from the Q study demonstrated that certain factors exist in relation to young people's choices about alcohol. 'Q block' surveys could expand this work by exploring the prevalence of these Q factors in a representative sample of young people (Baker et al., 2010). Future research questions should examine the interaction between structure and agency longitudinally and across young people's health behaviours, building on what Mirowsky and Ross (2003) describe as 'cascading sequences'. Findings relating to the role of parents in young people's health behaviours should also be expanded. Parents are, in a sense, introducing young people into a drinking milieu which is very different from the one that they experienced themselves. Parent or family interviews could explore this dynamic further. Finally, a paucity of literature demonstrating the impact of alcohol price on young people's drinking behaviour was found in the systematic literature review conducted as part of this thesis. Findings from empirical work suggested that young people consider price when making choices about alcohol in conjunction with a number of other influences including access, taste and strength. In light of the new alcohol strategy for England and Wales (and Scotland), future research should also investigate the specific impact of price on young people's drinking behaviour pre and post legislative change.

## **10.6. Concluding Remarks**

The purpose of this thesis was to investigate the influence of marketing processes (price, promotion, product branding and placing) on young people's drinking choices and behaviour. To do so, a mixed method approach (systematic review, qualitative

interviews and q methodology) underpinned by critical realism was adopted. This philosophical approach recognises the existence of one reality which can be interpreted in different ways by using the most appropriate methods of data collection, be they quantitative or qualitative techniques. Further, critical realism identifies the need for a dialogue between structure and agency in social and public health research, an argument which also underpins the theoretical approach to this thesis.

This doctoral body of work presents a number of key findings. First, price is just one element of the alcohol 'marketing mix' described above, and a small part of the external world in which young people are developing and becoming acculturated. Young people did not position themselves as exclusively price-led, were not homogeneous in their expression of preferences, and choices about alcohol were made in conjunction with numerous other factors such as taste, availability, strength and image. The current alcohol strategy for England and Wales includes a commitment from the Coalition government to implementing an alcohol MUP by 2015. An alcohol MUP has been demonstrated to have a positive impact on population-level drinking. Although it is argued here that an alcohol MUP represents a step in the right direction for UK alcohol policy, findings from the systematic review conducted as part of this doctoral work suggest that there is a paucity of evidence which specifically examines the impact of price on young people's drinking behaviour. Thus, it is important not to overemphasise the effect that price changes alone may have on young people's drinking choices and behaviour.

Second, the external world in which young people are developing and becoming acculturated validates and normalises drinking whilst simultaneously punishing those who make the 'wrong' choices and misuse alcohol. Alcohol marketing (in conjunction with social norms and inter-personal relationships) contributes to this and, in this study, played a distinctive role in building up associations and expectancies related to drinking, such as a sense of belonging, escape, fun, hedonism, carnival, that alcohol use is 'owed' after a hard week of working and a 'rite of passage' into adulthood. Further, the majority of participants were able to recount brands and slogans, did not recognise less visible aspects of promotion (e.g. sponsorship, viral and digital

marketing) and did not associate the pricing of alcohol as a form of marketing. Nevertheless, alcohol marketing is just one aspect of a much larger structural framework or, drawing on the work of Bourdieu, part of a 'habitus' of alcohol use, which combines deeply embedded ideologies or social norms about alcohol and structural predispositions with individual agency, and is governed by the logic of advanced capitalism, arguably the biggest 'structuring structure' of all. Therefore, it is argued in this work that the assumption that young people are responsible rational agents, and can be empowered to make, the 'correct' choices in relation to alcohol use minimises the important role of structural and cultural factors that constrain health choices and behaviours, of which capitalist industry is an influential part of. Thus, alcohol health promotion tactics which emphasise individual choice and responsibility alone will inevitably not succeed.

Third, this researcher suggests that the influence of industry processes (including alcohol marketing) culminate in 'political economies of health' (or intoxicogenic environments) which highlight that (a) young people's health behaviours (including alcohol consumption) follow the logic of a consumer market economy; (b) the essence of capitalist endeavour is to make a profit; (c) this logic is almost unconscious, part of deeply embedded ideologies and sociocultural norms, and serves to funnel or constrain young people's choices about alcohol into seemingly free, 'naturalised' directions which are endorsed (and aided) by others, including parents and peers; and (d) in order to maintain what is essentially a system of social control, an individualist worldview must be reinforced. Therefore, in this study, young people appeared to make micro-level choices about alcohol (largely between products and brands), positioning themselves as autonomous agents and unaffected by alcohol marketing. However, drinking *per se* was not questioned by participants. Instead, drinking alcohol was considered to be an acceptable and normal practice and various forms of marketing were not understood or recognised as such by young people in this study.

The product of this study is the development of a theoretical model (interrogated using multiple methods of data collection) in which to explore young people's choices and behaviour relating to alcohol use. Bourdieu's notion of the 'habitus' is used to illustrate that young people's choices about alcohol are subject to structural

predispositions (including industry processes and alcohol marketing), which can limit the options that are available to them, but that 'taste', social norms and inter-personal relationships (recognised as agency) can also play a role in reinforcing, normalising and driving behaviour. In other words, the concept of habitus removes the dualism between structure and agency. Habitus implies that structures are internalised and formulated as 'taste' and social norms, but this is not deterministic. Instead, people do have individual agency, but they have a disposition to act in certain ways because of these buried but profound currents that have been internalised from a very young age. Although Bourdieu's 'habitus' model has been applied to illicit drug use (Crawshaw and Bunton, 2009), it has not been used to examine young people's choices about alcohol. Further, Bourdieu's model has not previously been explored in conjunction with a political economy view of health.

This doctoral body of work has important implications for alcohol policy and practice. First, it is stressed here that, although tighter legislative sanctions for alcohol marketing should be considered (such as a policy resembling France's Loi Evin), they will not automatically address deeply embedded societal norms and traditions about alcohol, which continues to be our 'drug of choice, due to a complex evidence base and confusion as to what constitutes safe and moderate use. Industry-led alcohol Responsibility Deals and health promotion tactics which emphasise individual choice and responsibility may be inadequate to counter this. Second, it needs to be identified that young people are being subtly bombarded with positive messages about alcohol (from industry-driven marketing and wider society) and that further work is required to 'unravel' this impact. Third, it is suggested that lessons can be learnt from tobacco control, and a multifaceted, coordinated and strategic response to drinking is needed, in which the alcohol industry is clearly defined as 'the competition'. Finally, this doctoral work represents a cross-sectional (albeit mixed methods) interrogation of this data. Future research questions should examine the interaction between structure and agency longitudinally and across young people's health behaviours, building on what Mirowsky and Ross (2003) describe as 'cascading sequences'. Further, this doctoral work could be adapted methodologically to explore the prevalence of Q factors in a representative sample of young people (Q block surveys). Finally, in light of the new alcohol strategy for England and Wales (and Scotland), future research should also

investigate the specific impact of price on young people's drinking behaviour pre and post legislative change.

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## **Appendices**

Appendix A: Electronic Database Search Terms

Appendix B: In/Out Checklist Form for Included Systematic Review Studies

Appendix C: Systematic Review Quality Appraisal Tool

Appendix D: Systematic Review Data Extraction Tool

Appendix E: List of Full Papers Included in the Systematic Review

Appendix F: Interview Topic Guide

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Appendix H: Study Consent Form (Interviews)

Appendix I: Study Consent Form (Q Methodology)

Appendix J: Drinking Timeline Document

Appendix K: Glossary of Q Methodology Terms

Appendix L: Q methodology 'script' used by the researcher

Appendix M: Full PQ Method output report

## APPENDIX A: ELECTRONIC DATABASE SEARCH TERMS

Core Concept	MEDLINE*	CSA Illumina	Web of Knowledge	Scopus and other databases (EMBASE, PsycINFO, CINAHL)**
Alcohol	<p><u>Alcohol Drinking / Alcohol-related Disorders / Alcoholism / Alcohol Intoxication / Alcohol-Induced Disorders / Alcoholic Beverages / Absinthe / Beer / Wine / Ethanol / pois</u></p> <p><b>Keywords:</b> Alcohol consumption OR (consum\$ adj3 alcohol) OR alcohol use OR alcohol misuse OR alcohol abuse OR alcohol intoxication OR alcohol drinking OR alcohol disorder OR alcohol depend\$ OR alcoholi\$ OR binge drink\$ OR (binge adj3 alcohol) OR social drink\$ OR underage drinking OR under-age drinking OR adolescent drinking OR youth drink\$ OR (adolescent adj3 drinking) OR (youth adj3 drinking) OR (risk\$ adj3 drinking) OR (occasion\$ adj3 drinking) OR acute intoxication OR alcohol poisoning OR (alcohol adj3 injury) OR (alcohol adj3 accident) OR (alcohol adj3 violence) OR (alcohol adj3 crime) OR drunk\$ OR drink\$ OR booze OR alcohol\$ beverage OR wrecked OR pissed OR liquor OR beer OR wine OR spirits</p>	<p><b>Keywords:</b> ((alcohol*) OR (alcohol* adj (drink*)) OR (alcohol-related disorder*) OR (alcohol-induced disorder*) OR (alcohol adj (disorder*)) OR (alcohol adj (depend*)) OR (alcohol adj (consum*)) OR (alcohol adj (use)) OR (alcohol adj (misuse)) OR (alcohol adj (abuse)) OR (alcohol adj (intoxication)) OR (intoxicat*) OR (acute adj (intoxication)) OR (alcohol adj (poisoning)) OR (alcohol* adj (beverage*)) OR (absinthe) OR (beer) OR (wine) OR (ethanol) OR (spirit*) OR (liquor*) OR (binge adj (drink*)) OR (binge*) OR (social adj (drink*)) OR (underage adj (drink*)) OR (adolescent adj (drink*)) OR (youth adj (drink*)) OR (risk* adj (drink*)) OR (occasion* adj (drink*)) OR (alcohol adj (injur*)) OR (alcohol adj (accident*)) OR (alcohol adj (violence)) OR (alcohol adj (crime*)) OR (anti adj (social)) OR (anti-social) OR (drunk*) OR (drink*) OR (booze) OR (wrecked) OR (pissed))</p>	<p><b>Keywords:</b> TS=(alcohol*) OR (alcohol* adj (drink*)) OR (alcohol-related disorder*) OR (alcohol-induced disorder*) OR (alcohol adj (disorder*)) OR (alcohol adj (depend*)) OR (alcohol adj (consum*)) OR (alcohol adj (use)) OR (alcohol adj (misuse)) OR (alcohol adj (abuse)) OR (alcohol adj (intoxication)) OR (intoxicat*) OR (acute adj (intoxication)) OR (alcohol adj (poisoning)) OR (alcohol* adj (beverage*)) OR (absinthe) OR (beer) OR (wine) OR (ethanol) OR (spirit*) OR (liquor*) OR (binge adj (drink*)) OR (binge*) OR (social adj (drink*)) OR (underage adj (drink*)) OR (adolescent adj (drink*)) OR (youth adj (drink*)) OR (risk* adj (drink*)) OR (occasion* adj (drink*)) OR (alcohol adj (injur*)) OR (alcohol adj (accident*)) OR (alcohol adj (violence)) OR (alcohol adj (crime*)) OR (anti adj (social)) OR (anti-social) OR (drunk*) OR (drink*) OR (booze) OR (wrecked) OR (pissed)</p>	<p><b>Keywords:</b> TITLE-ABS-KEY (alcohol* w/3 (drink*)) OR (alcohol-related disorder*) OR (alcohol-induced disorder*) OR (alcohol disorder*) OR (alcohol w/3 (depend*)) OR (alcohol w/3 (consum*)) OR (alcohol w/3 (use)) OR (alcohol w/3 (misuse)) OR (alcohol w/3 (abuse)) OR (alcohol w/3 (intoxication)) OR (intoxicat*) OR (acute intoxication) OR (alcohol w/3 (poisoning)) OR (alcohol* w/3 (beverage*)) OR (absinthe) OR (beer) OR (wine) OR (ethanol) OR (spirit*) OR (liquor*) OR (binge w/3 (drink*)) OR (binge*) OR (social w/3 (drink*)) OR (underage w/3 (drink*)) OR (adolescent w/3 (drink*)) OR (youth w/3 (drink*)) OR (risk* w/3 (drink*)) OR (occasion* w/3 (drink*)) OR (alcohol w/3 (injur*)) OR (alcohol w/3 (accident*)) OR (alcohol w/3 (violence)) OR (alcohol w/3 (crime*)) OR (anti social) OR (anti-social) OR (drunk*) OR (drink*) OR (booze) OR (wrecked) OR (pissed)</p>
Young People	<p><u>Child (6-12) / Adolescent (13-18)</u></p> <p><b>Keywords:</b> Young people OR young person\$ OR kid\$ OR adolescent\$ OR teenage\$ OR youth\$ OR child\$ OR under-age\$ OR underage\$ OR student\$ OR pupil\$ OR school\$ OR delinquent\$ OR offender\$ OR criminal\$</p>	<p><b>Keywords:</b> ((child*) OR (adolescent*) OR (young people*) OR (young person*) OR (young adult*) OR (kid*) OR (teenage*) OR (under-age) OR (underage) OR (under age) OR (student*) OR (pupil*) OR (school*) OR (delinquent*) OR (offender*) OR (criminal*))</p>	<p><b>Keywords:</b> TS=(child*) OR (adolescent*) OR (young people*) OR (young person*) OR (young adult*) OR (kid*) OR (teenage*) OR (under-age) OR (underage) OR (under age) OR (student*) OR (pupil*) OR (school*) OR (delinquent*) OR (offender*) OR (criminal*)</p>	<p><b>Keywords:</b> TITLE-ABS-KEY (child*) OR (adolescen*) OR (young people*) OR (young person*) OR (young adult*) OR (kid*) OR (teenage*) OR (under-age) OR (underage) OR (under age) OR (student*) OR (pupil*) OR (school*) OR (delinquen*) OR (offender*) OR (criminal*)</p>
Marketing	<p><u>Commerce / Marketing / Advertising (as a topic) / Social Marketing / Communications Media / Mass Media / Motion Pictures (as a topic) / Radio /</u></p>	<p><b>Keywords:</b> ((market*) OR (market* adj (social or viral)) OR (advert*) OR (media) OR (media adj (mass or communication*)) OR (promo*) OR</p>	<p><b>Keywords:</b> TS=(market*) OR (market* adj (social or viral)) OR (advert*) OR (media) OR (media adj (mass or communication*)) OR (promo*) OR</p>	<p><b>Keywords:</b> (TITLE-ABS-KEY(alcohol w/3 (commerc*)) OR (alcohol w/3 (market*)) OR (market* w/3 (social)) OR (market w/3 (viral)) OR (alcohol w/3</p>

## APPENDIX A: ELECTRONIC DATABASE SEARCH TERMS

	<p><u>Television / Newspapers / Taxes</u></p> <p><b>Key words:</b> (Promotion\$ adj3 alcohol) OR advert\$ OR viral marketing OR word of mouth OR snowballing OR social marketing OR marketing OR sponsor\$ OR mass media OR media OR film\$ OR motion pictures OR television OR TV OR radio OR billboard\$ OR print OR newspaper\$ OR magazine\$ OR internet\$ OR web OR world wide web OR worldwide web OR world-wide web OR www. OR www OR online OR email OR e-mail OR text message\$ OR text messaging OR (product\$ adj3 alcohol) OR (product\$ adj3 choice) OR (choice\$ adj3 alcohol) OR (product adj3 type) OR (drink adj3 type) OR beverage\$ OR brand\$ OR (brand adj3 alcohol) OR brand awareness OR (beverage adj3 alcohol) OR (place\$ adj3 alcohol) OR (location\$ adj3 alcohol) OR ontrade OR on-trade OR offtrade OR off-trade OR happy hour OR happy-hour OR (price\$ adj3 alcohol) OR (cost\$ adj3 alcohol) OR cheap OR income OR purchase\$ OR (purchase adj3 alcohol) OR purchasing OR (access adj3 alcohol) OR (behaviour adj3 alcohol) OR (practice\$ adj3 alcohol) OR pattern\$ OR habit\$ OR routine\$ OR social network\$ OR image OR (tax\$ adj3 alcohol) OR (availability adj3 alcohol) OR outlet\$ OR outlet density OR sale\$ OR sell\$ OR (distribut\$ adj3 alcohol) OR (label\$ adj3 alcohol)</p>	<p>(sponsor*) OR (film*) OR (radio) OR (television) OR (newspaper*) OR (print) OR (magazine*) OR (internet) OR (web) OR (online) OR (email) OR (billboard*) OR (alcohol adj (product* or choice or brand* or cheap or buy* or purchas* or access* or availab* or outlet* or sale* or sell* or distribut*)) OR (alcohol* adj (place* OR location*)) OR (alcohol adj (on-trade or off-trade)) OR (alcohol adj (pric* or tax* or cost*)) OR (alcohol adj (consum*)) OR (social adj (network*)) OR (outlet adj (densit*))</p>	<p>(sponsor*) OR (film*) OR (radio) OR (television) OR (newspaper*) OR (print) OR (magazine*) OR (internet) OR (web) OR (online) OR (email) OR (billboard*) OR (alcohol adj (product* or choice or brand* or cheap or buy* or purchas* or access* or availab* or outlet* or sale* or sell* or distribut*)) OR (place*) OR (location*) OR (trade adj (on or off)) OR (on-trade) OR (off-trade) OR (pric*) OR (tax*) OR (cost*) OR (consum*) OR (social adj (network*)) OR (outlet adj (densit*))</p>	<p>(advert**) OR (alcohol w/3 (media)) OR (media w/3 (mass)) OR (media w/3 (communication*)) OR (alcohol w/3 (promo*)) OR (word of mouth) OR (snowball*) OR (alcohol w/3 (sponsor*)) OR (film*) OR (motion picture*) OR (radio) OR (television) OR (TV) OR (newspaper*) OR (print) OR (magazine*) OR (internet*) OR (web) OR (world wide web) OR (worldwide web) OR (world-wide web) OR (www.) OR (www) OR (online) OR (on-line) OR (email) OR (e-mail) OR (text messag*) OR (billboard*) OR (alcohol w/3 (product*)) OR (alcohol w/3 (choice)) OR (alcohol w/3 (brand*)) OR (alcohol w/3 (cheap)) OR (alcohol w/3 (buy*)) OR (alcohol w/3 (purchas*)) OR (alcohol w/3 (access*)) OR (alcohol w/3 (availab*)) OR (alcohol w/3 (outlet*)) OR (alcohol w/3 (sale*)) OR (alcohol w/3 (sell*)) OR (alcohol w/3 (distribut*)) OR (place*) OR (llocation*) OR (trade w/2 (on)) OR (trade w/2 (off)) OR (on-trade) OR (off-trade) OR (happy hour) OR (happy-hour) OR (alcohol w/3 (pric*)) OR (alcohol w/3 (tax*)) OR (alcohol w/3 (cost*)) OR (social network*) OR (alcohol w/3 (imag*)) OR (outlet w/2 (densit*)) OR (alcohol w/3(label*)) OR (alcohol w/3(packag*))</p>
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\* MeSH terms underlined

\*\* Minor changes made to search terms according to the requirements of individual databases.<sup>1</sup>

<sup>1</sup> ETOH was also searched. Due to the limited nature of this database, small searches using one or two keywords were employed.

**APPENDIX B: IN/OUT CHECKLIST FORM FOR INCLUDED SYSTEMATIC  
REVIEW STUDIES**

**FULL PAPER SIFT**

**TITLE:** **KEEP: YES**   
**NO**

<b>FOCUS ON INDUSTRY DRIVEN PRICE / MARKETING:</b>	<b>YES</b>	<input type="checkbox"/>	<b>NO</b>	<input type="checkbox"/>
<b>AGE-SPECIFIC:</b>	<b>YES</b>	<input type="checkbox"/>	<b>NO</b>	<input type="checkbox"/>
<b>PRIMARY RESEARCH:</b>	<b>YES</b>	<input type="checkbox"/>	<b>NO</b>	<input type="checkbox"/>
<b>PUBLISHED AFTER 1999:</b>	<b>YES</b>	<input type="checkbox"/>	<b>NO</b>	<input type="checkbox"/>
<b>DEVELOPED COUNTRIES:</b>	<b>YES</b>	<input type="checkbox"/>	<b>NO</b>	<input type="checkbox"/>

**REVIEWER NOTES:**

## APPENDIX C: SYSTEMATIC REVIEW QUALITY APPRAISAL TOOL

### Quality Appraisal Tool

Full Study Reference:

#### Screening Questions

*Are the results of the study valid?*

- 
1. Did the study address a clearly focused research question(s) or issue?  Yes  Can't tell  No
  
  2. Was there a clear statement of the aims / objectives of the research?  Yes  Can't tell  No
  
  3. Did the authors use an appropriate method to answer their research question(s)?  Yes  Can't tell  No
-

## APPENDIX C: SYSTEMATIC REVIEW QUALITY APPRAISAL TOOL

Is it worth continuing?

---

### Detailed Questions

#### *Appropriate research design*

4. Was the research design appropriate to address the aims / objectives of the research?

Yes  Can't tell  No

*Comments:*

5. Was the research design appropriate to address the research question(s)?

Yes  Can't tell  No

*Comments:*

#### *Recruitment and Data Collection*

6. Was the recruitment strategy appropriate to the aims / objectives of the research?

Yes  Can't tell  No

*Comments:*

## APPENDIX C: SYSTEMATIC REVIEW QUALITY APPRAISAL TOOL

7. Was the recruitment strategy appropriate for the research question?

Yes  Can't tell  No

*Comments:*

8. Is there a clear description of the sample?

Yes  Can't tell  No

*Comments:*

9. Is the method(s) of data collection appropriate to yield the level of analysis and inference required to answer the research question(s)?

Yes  Can't tell  No

*Comments:*

10. Have ethical issues been addressed adequately?

Yes  Can't tell  No

*Comments:*



## APPENDIX C: SYSTEMATIC REVIEW QUALITY APPRAISAL TOOL

11. Are the roles of the researchers clearly described?

Yes  Can't tell  No

*Comments:*

12. Is the socio-economic / cultural context in which the research was carried out adequately described?

Yes  Can't tell  No

*Comments:*

*Data analysis*

13. Is the method of data analysis described clearly?

Yes  Can't tell  No

*Comments:*

14. Is the method of data analysis sufficiently

Yes  Can't tell  No

## APPENDIX C: SYSTEMATIC REVIEW QUALITY APPRAISAL TOOL

rigorous?

*Comments:*

*Findings*

15. Is there a clear statement of findings?

Yes  Can't tell  No

*Comments:*

16. Are the findings properly evidenced by data?

Yes  Can't tell  No

*Comments:*

17. Are the findings valid i.e. internally coherent / credible?

Yes  Can't tell  No

*Comments:*

## APPENDIX C: SYSTEMATIC REVIEW QUALITY APPRAISAL TOOL

18. Are the findings relevant?

Yes     Can't tell     No

*Comments:*

*Value and implications of the research*

19. How valuable is the research?

Yes     Can't tell     No

*Comments:*

20. Are the implications of the study clearly reported?

Yes     Can't tell     No

*Comments:*

## APPENDIX C: SYSTEMATIC REVIEW QUALITY APPRAISAL TOOL

21. Is there adequate discussion of the study limitations?

Yes

Can't tell

No

*Comments:*

---

*Overall quality assessment of the study*

High (4)

Moderate (3)

Low (2)

Very Low (1)

Proceed to data extraction?

Yes

No

Reviewer:

Date:

## APPENDIX C: SYSTEMATIC REVIEW QUALITY APPRAISAL TOOL

Adapted from the GRADE system of rating evidence quality and the CASP (Critical Appraisal Skills Programme) tool, methodological checklists which provide key criteria relevant to specific study designs (such as randomised control trials, cohort studies and qualitative methods). See <http://www.unisa.edu.au/cahe/Resources/CAT/default.asp> for further information and references.

## APPENDIX D: SYSTEMATIC REVIEW DATA EXTRACTION TOOL

### Data Extraction Tool

Full Study Reference:

### Screening Questions

*Are the results of the study valid?*

- 
1. Did the study address a clearly focused research question(s) or issue?  Yes  Can't tell  No
  
  2. Was there a clear statement of the aims / objectives of the research?  Yes  Can't tell  No
  
  3. Did the authors use an appropriate method to answer their research question(s)?  Yes  Can't tell  No

## APPENDIX D: SYSTEMATIC REVIEW DATA EXTRACTION TOOL

---

Is it worth continuing?

---

### Detailed Questions

#### *Appropriate research design*

4. Was the research design appropriate to address the aims / objectives of the research

Yes  Can't tell  No

*Comments:*

5. Was the research design appropriate to address the research question(s)?

Yes  Can't tell  No

*Comments:*

#### *Recruitment and Data Collection*

6. Was the recruitment strategy appropriate

Yes  Can't tell  No

## APPENDIX D: SYSTEMATIC REVIEW DATA EXTRACTION TOOL

to the aims / objectives of the research?

*Comments:*

7. Was the recruitment strategy appropriate for the research question?

Yes  Can't tell  No

*Comments:*

8. Is there a clear description of the sample?

Yes  Can't tell  No

*Comments:*

9. Is the method(s) of data collection appropriate to yield the level of analysis and inference

Yes  Can't tell  No



## APPENDIX D: SYSTEMATIC REVIEW DATA EXTRACTION TOOL

required to answer the research question(s)?

*Comments:*

**10. Have ethical issues been addressed adequately?**

Yes  Can't tell  No

*Comments:*

**11. Are the roles of the researchers clearly described?**

Yes  Can't tell  No

*Comments:*

**12. Is the socio-economic / cultural context in which the research was carried out adequately described?**

Yes  Can't tell  No

## APPENDIX D: SYSTEMATIC REVIEW DATA EXTRACTION TOOL

*Comments:*

### *Data analysis*

**13. Is the method of data analysis described clearly?**

Yes  Can't tell  No

*Comments:*

**14. Is the method of data analysis sufficiently rigorous?**

Yes  Can't tell  No

*Comments:*

### *Findings*

**15. Is there a clear statement of findings?**

Yes  Can't tell  No

*Comments:*

## APPENDIX D: SYSTEMATIC REVIEW DATA EXTRACTION TOOL

16. Are the findings properly evidenced by data?

Yes  Can't tell  No

*Comments:*

17. Are the findings valid i.e. internally coherent / credible?

Yes  Can't tell  No

*Comments:*

18. Are the findings relevant?

Yes  Can't tell  No

*Comments:*

*Value and implications of the research*

19. How valuable is the research?

Yes  Can't tell  No

## APPENDIX D: SYSTEMATIC REVIEW DATA EXTRACTION TOOL

*Comments:*

**20. Are the implications of the study clearly reported?**

Yes

Can't tell

No

*Comments:*

**21. Is there adequate discussion of the study limitations?**

Yes

Can't tell

No

*Comments:*

## APPENDIX D: SYSTEMATIC REVIEW DATA EXTRACTION TOOL

---

*Overall quality assessment of the study*

**High (4)**     **Moderate (3)**     **Low (2)**     **Very Low (1)**

**Proceed to data extraction?**

**Yes**

**No**

**Reviewer:**

**Date:**

Adapted from the GRADE system of rating evidence quality and the CASP (Critical Appraisal Skills Programme) tool, methodological checklists which provide key criteria relevant to specific study designs (such as randomised control trials, cohort studies and qualitative methods). See <http://www.unisa.edu.au/cahe/Resources/CAT/default.asp> for further information and references.

## APPENDIX E: LIST OF FULL PAPERS INCLUDED IN THE SYSTEMATIC REVIEW

- *Alcohol Concern (2011) One on every corner. The relationship between off-licence density and alcohol harms in young people.*
- *Austin, E.W. and Knaus, C. (2000). Predicting the potential for risky behaviour among those “too young” to drink as the result of appealing advertising. Journal of Health Communication. 5. 13-27*
- *Austin, E.W. et al (2000). The role of interpretation processes and parental discussion in the media’s effects on adolescents’ use of alcohol. Paediatrics. 105. 343-349.*
- *Austin, E.W. et al. (2006). How does alcohol advertising influence underage drinking? The role of desirability, identification and scepticism. Journal of Adolescent Health. 38: 376-384.*
- *Bellis, M.A. et al (2009). Teenage drinking, alcohol availability and pricing: a cross-sectional study of risk and protective factors for alcohol-related harm in school children. BMC Public Health. 9:380*
- *Brain, K. et al (2000) Drinking with Design: young drinkers as psychoactive consumers. Drugs: education, prevention and policy. 7(1) 5-20.*
- *Ellickson, P.L. et al. (2005) Does alcohol advertising promote adolescent drinking? Results from a longitudinal assessment. Addiction. 100:235-246.*
- *Fisher, L.B. et al (2007) Predictors of initiation of alcohol use among US adolescents: findings from a prospective cohort study. Arch Pediatr Adolesc Med. 161(10) 959-966.*

## APPENDIX E: LIST OF FULL PAPERS INCLUDED IN THE SYSTEMATIC REVIEW

- *Gordon, R. et al (2010a). Assessing the cumulative impact of alcohol marketing on young people's drinking: cross-sectional data findings. Addiction Research and Theory. Early Online 1-10.*
- *Gordon, R. et al (2010c) The Impact of Alcohol Marketing on Youth Drinking Behaviour: A Two-stage Cohort Study. Alcohol and Alcoholism 45(5) 470-480.*
- *Grenard. (2008). Exposure to alcohol advertising on television and alcohol use among younger adolescents. University of Southern California (dissertation).*
- *Huckle, T. et al (2008) Density of alcohol outlets and teenage drinking: living in an alcogenic environment is associated with higher consumption in a metropolitan setting. Addiction. 103: 1614-1621.*
- *Jones and Magee (2011). Exposure to Alcohol Advertising and Alcohol Consumption among Australian Adolescents. Alcohol and Alcoholism. 46(5) 630-637.*
- *Kearns et al. (2011) Drinking Patterns and Preferences Among Irish Substance Abusing Teenagers: A Pilot Study. Journal of Addictions Nursing. 22. 124-129.*
- *Kinard. (2006). A comparison of advertising, social and cognitive predictors of adolescent and adult risk behaviours. Mississippi State University (dissertation).*
- *Kinard and Webster. (2010). The effects of advertising, social influences and self-efficacy on adolescent tobacco use and alcohol consumption. The Journal of Consumer Affairs, 44 (1) 24-43 (journal article).*
- *Kuntsche, E. et al (2008) Alcohol outlet density, perceived availability and adolescent alcohol use: a multi-level structural equation model. J Epidemiol Community Health. 62: 811-816*

## APPENDIX E: LIST OF FULL PAPERS INCLUDED IN THE SYSTEMATIC REVIEW

- *Lin et al (2012). Engagement with alcohol marketing and early brand allegiance in relation to early years of drinking. Addiction Research and Theory. 20(4) 329-338.*
- *McClure, A.C. (2006). Ownership of alcohol-branded merchandise and initiation of teen drinking. Am J Prev Med. 30(4) 277-283.*
- *McClure, A.C. et al (2009) Alcohol-branded merchandise and its association with drinking attitudes and outcomes in US adolescents. Arch Pediatr Adolesc Med. 163(3) 211-217.*
- *Morgenstern et al. (2011) Attitudes as Mediators of the Longitudinal Association Between Alcohol Advertising and Youth Drinking. Arch Pediatr Adolesc Med, 165(7), 610-616.*
- *Paschall, M.J. et al (2007) Is Commercial Alcohol Availability Related to Adolescent Alcohol Sources and Alcohol Use? Findings from a multi-level study. Journal of Adolescent Health. 41:168-174*
- *Pinkleton et al. (2001) The Relationship of Perceived Beer Ad and PSA Quality to High School Students' Alcohol-Related Beliefs and Behaviours. Journal of Broadcasting & Electronic Media, 45 (4) 575-597*
- *Saffer, H. and Dave, D. (2006) Alcohol advertising and alcohol consumption by adolescents. Health Economics. 15:617-637.*
- *Snyder et al. (2006). Effects of Alcohol Advertising Exposure on Drinking Among Youth. Arch Pediatr Med, 160 18-24.*



## **APPENDIX E: LIST OF FULL PAPERS INCLUDED IN THE SYSTEMATIC REVIEW**

- *Stoolmiller et al (2012). Comparing media and family predictors of alcohol use: a cohort study of US adolescents. BMJ Open. 1-9.*
- *Tanski et al. (2011) Alcohol Brand Preference and Binge Drinking Among Adolescents. Arch Pediatr Adolesc Med. 165(7) 675-676.*
- *Treno, A.J. et al (2008). Alcohol Outlets, Youth Drinking and Self-Reported Ease of Access to Alcohol: A Constraints and Opportunities Approach. Alcoholism: Clinical and Experimental Research. 32 (8) 1372-1379.*
- *Truong, K.D, and Sturm, R. (2009). Alcohol Environments and Disparities in Exposure Associated with Adolescent Drinking in California. American Journal of Public Health. 99(2) 264-270.*
- *Unger, J.B. et al (2003). Alcohol advertising exposure and adolescent alcohol use: a comparison of exposure measures. Addiction Research and Theory. 11(3) 177-193*
- *Workman, J.E. (2003). Alcohol promotional clothing items and alcohol use by underage consumers. Family and Consumer Sciences Research Journal. 31(3) 331-354.*
- *Zogg. (2004). Adolescent exposure to alcohol advertising: a prospective extension of Strickland's model. University of Southern California (dissertation).*

## APPENDIX F: INTERVIEW TOPIC GUIDE

### Exploring Industry Driven Marketing Influences on Young People Who Drink Alcohol

#### Interview Topic Guide

- *Researcher introduces herself*
  - *Researcher:*
    - *Explains the aim of the interview*
    - *Reiterates confidentiality and anonymity*
    - *Explains that the interview will be tape recorded and checks that the participant is happy with this*
    - *Explains that there are no right or wrong answers*
    - *Asks if the participant has any questions or concerns.*
  - *If the participant is happy to be interviewed, the consent form is signed. Researcher explains that a copy will be provided to the participant for their own reference.*
- 

#### INTRODUCTORY QUESTIONS AND EXERCISE

- Have you tried alcohol / do you drink alcohol
  - General reasons for drinking / not drinking; feelings about alcohol; drinking context i.e. on-trade, home, outdoors, parties etc.
  - Timeline exercise to 'map out' experiences so far and 'open up' the young person to interview i.e.:
    - when first tried alcohol
    - in what circumstances i.e. where and who with
    - what did they drink and how much
    - first time 'drunk' or 'felt the effects' of drinking
    - how often they drink now
    - what they usually drink now / how much / who with
    - 'typical' drinking occasion or last drinking occasion
  - *If the young person DOESN'T drink, no timeline exercise or use only to a certain extent (i.e. if has tried alcohol in the past); straight on to appropriate interview topics.*
- 

#### ALCOHOL PRODUCTS

*Probes:*

- Product choice
- Product awareness: 'popular' types / brands of alcohol; perceptions of different alcohol products
- Social influences and networks
- Preferences and taste; impact of gender, age, general change.

## **APPENDIX F: INTERVIEW TOPIC GUIDE**

- use 'prop' of laminated photographs of various alcohol products here.
- 

### **PRICE AND ACCESS**

*Probes:*

- Spending money, income and purchase habits ('wants, likes and needs' i.e. food, sweets, games, CDs, cigarettes, travel, leisure, alcohol etc)
  - How much money is spent on alcohol
  - Importance of price ('if the price was cheaper / more expensive then....')
  - Awareness of price
  - Access and availability:
    - easy / difficult.
    - where alcohol is obtained i.e. bought, from parents, from others, stolen.
- 

### **MARKETING AND 'COMMERCIALITY'**

*Probes:*

- Advertising (awareness; influence of; feelings towards)
  - Sponsorship (awareness; influence of; feelings towards)
  - Branding (awareness; influence of; feelings towards)
  - Subliminal and viral advertising (i.e. music / sport events; internet pop ups; email; social networking sites such as MySpace and Facebook; text messages).
  - Events / media figures associated with alcohol
  - Product placement
  - Exposure
  - Counter-advertising
- 

### **DRINKING NORMS, CONVENTIONS AND 'RULES'**

*Probes:*

- Limits and boundaries
- What is 'acceptable' behaviour
- Rule breaking

## APPENDIX F: INTERVIEW TOPIC GUIDE

- Group membership and roles
  - Practical management of drinking occasions: i.e. financial transactions, sharing and credit.
- 

### RISK, VULNERABILITY AND HEALTH

*Probes:*

- 'Meaning' and interpretations of 'risk'
  - Experiences of risk (in general / while drinking alcohol)
  - Sexual risk; relationships with peers and partners
  - Drinking alone
  - Smoking and illicit drugs
  - Influence on eating habits / physical activity
  - Experience of crime and victimisation
  - Behaving 'out of character'.
  - 'The next day...': drinking stories; regret.
  
  - *'prop' could be used here to elicit narrative examples. Trigger words such as 'shame', 'sex', 'happy', 'vulnerable' could be placed on cards and young people asked to select one themselves and tell me how they feel the word 'fits' their experiences / their attitude towards alcohol.*
- 

### END OF INTERVIEW

- *Thank participant*
- *Any questions, anything not addressed that the participant would like to add*
- *Reassure confidentiality and anonymity*
- *Describe further card sort exercise and obtain initial consent to be re-contacted at a later date to take part.*

# QUID

## ‘Qualitative Understandings in Youth Drinking’

### A Participant’s Information Sheet

#### *‘Questions and Answers...’*

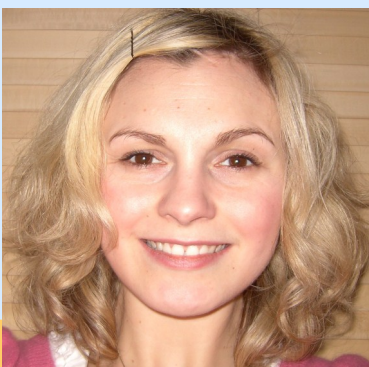
You are being invited to take part in a research study.

The study will involve talking to a researcher from Newcastle University about alcohol. You’ll then be asked to take part in an activity to help us find out a bit more about the things that you and other young people have described as important to you in relation to alcohol.

This leaflet is for you to keep. It tells you why we want to carry out this research and what taking part means for you.

Please read the leaflet carefully and take your time to decide if you want to take part or not. Talk to other people about the study if you want to, and ask us if there is anything that you don’t understand or that you would like more information on.

Thank you for reading this.



#### What is this study about?

We want to understand what you think about alcohol and what influences you. We’re interested in different factors that might affect drinking alcohol including advertising, availability and cost.

We’ll be asking about 40 young people (aged 14-17 years-old) who live in the North East of England to take part in this study.

#### Do I have to take part?

It’s up to you to decide.

We’ll describe the study, go through this information sheet with you (which you can keep) and answer your questions. If you decide to take part, you’ll be asked to sign a consent form.

You’re free to change your mind at any time; you’ll not need to give a reason. If you do decide not to take part in the study, any information you give will be destroyed.

#### What will happen to me if I take part?

Taking part will involve one informal interview with a researcher from Newcastle University called Stephanie O’Neil. Her photograph is to the left.

The interview will last about one hour, at a place that is familiar and comfortable to you e.g. a local community centre or cafe. There are no right or wrong answers.

The interview will be tape recorded so that the researcher can have a record of what was said. After the interview, the tape will be listened to, typed up, and anything that could identify you will be deleted. After the study has ended, the tape will be destroyed.

It’s possible that comments you make during the interview will be used directly in the study. **It won’t be possible for anyone to identify you in any of these comments.**

At the end of the interview you’ll be asked if it’s ok to contact you again soon to take part in a ‘card sort’ about drinking alcohol. You’ll be asked to arrange a number of cards, each with a printed statement, onto a grid. This will also last about one hour, at a place that is familiar and comfortable to you.

## APPENDIX G: STUDY INFORMATION LEAFLET

### **Will the research help me?**

We can't promise that this study will help you directly. However, the study will give you the chance to talk openly about alcohol and the information you give will be used to help understand the decisions you and other young people make.

### **Could I be at risk by taking part?**

We're confident that you will not experience any harm as a result of taking part in this study. However, if it is proven that you are harmed during the research, and this is because of the researcher's lack of care, then you may have grounds for legal action against Newcastle University. You may have to pay your legal costs.

### **What if there is a problem?**

If something goes wrong and you have a complaint about the study you should speak to the researcher, Stephanie O'Neil: Telephone: 0191 222 3811; Email: [stephanie.oneil@ncl.ac.uk](mailto:stephanie.oneil@ncl.ac.uk)

If you'd rather not speak to Stephanie you can speak to Eileen Kaner. Eileen is a Professor at the University and a member of the research team: Telephone: 0191 222 7884; Email: [e.f.s.kaner@ncl.ac.uk](mailto:e.f.s.kaner@ncl.ac.uk)

### **Who will have access to my information?**

**All information collected about you during this research will be kept confidential.** The only people who will be able to look at it will be the research team at the University. Information that is analysed within the University will be fully anonymised, so it could not be used to identify you. All information will be stored on a password protected computer.

The only information that will be kept with your first name and contact details on it is your signed consent form. This will be stored in a separate place from the rest of the data.

Anonymous data will be kept for 10 years within the University and it will be kept according to the rules of the Data Protection Act. After 10 years, the data will be destroyed securely.

Researchers work to the same rules of confidentiality as doctors and nurses. Confidentiality can only be broken, without your consent, in very exceptional circumstances **and if the researcher sees or is told something which raises serious concern for your personal safety.**

### **What happens to the results of the study?**

We're happy to send you a copy of the report at the end of the project if you're interested. The study will be printed in academic journals and presented at conferences. You'll not be identified in any of the information written about the study.

### **Who is funding and organising the study?**

The study is funded by The Economic and Social Research Council (ESRC) and sponsored by Newcastle University.

### **Who can I contact for further information?**

If you're interested in the study and would like to take part, you can contact Stephanie O'Neil on the following details:

Stephanie O'Neil, Institute of Health and Society, Newcastle University, NE2 4AA  
Telephone: 0191 222 3811                      Email: [stephanie.oneil@ncl.ac.uk](mailto:stephanie.oneil@ncl.ac.uk)

Stephanie will discuss the study with you, answer any questions you have and provide you with a consent form to fill in and sign.

***Thank you very much for taking the time to read this leaflet***

# QUID

## **‘Qualitative Understandings in Youth Drinking’**

### **Consent Form**

**Participant Identification Number**

**for this study:** \_\_\_\_\_

- |   | <b>Please<br/>Tick<br/>Box</b> |
|---|--------------------------------|
| 1. I confirm that I've read and understand the information sheet dated 01/04/2009 (version 4) for the above study. I've had the opportunity to think about the information; ask questions and have had these questions answered satisfactorily.                     | <input type="checkbox"/>       |
| 2. I understand that taking part is voluntary and that I'm free to change my mind at any time without giving any reason and without my legal rights being affected.   | <input type="checkbox"/>       |
| 3. I understand that my interview will be tape recorded and then typed out, with all information that could identify me or anyone else removed. Only the research team at the University will have access to this information.                                      | <input type="checkbox"/>       |
| 4. I understand that the only information kept that identifies me will be my first name and agreed contact details. This will be stored in a locked filing cabinet away from the other study information and only the research team will have access to it.         | <input type="checkbox"/>       |
| 5. I understand that direct quotations may be taken from what I say and used in publications. I understand that neither I nor anyone else will be identifiable from these quotes. I give my permission for direct quotes to be used in publications.                | <input type="checkbox"/>       |
| 6. <b>I understand that anything I say in the interview will be confidential.</b> The only time the researcher (Stephanie O'Neil) would need to break this confidentiality is if she sees or is told something which raises serious concern for my personal safety. | <input type="checkbox"/>       |
| 7. <b>I agree to take part in the above study. I am aware that a copy of this consent form will be provided to me for my records.</b>   | <input type="checkbox"/>       |

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

**(To be completed after the interview)**

**I'm happy to be contacted again soon to take part in a card sort exercise about drinking alcohol:**

Name: ..... Age: .....

Signed: ..... Date: .....

Contact Details:

Mobile: .....

Email: .....

Other: .....



# QUID

## ‘Qualitative Understandings in Youth Drinking’ Consent Form (Q Study)

**Participant Identification Number**

**for this study:** \_\_\_\_\_

- |   | <b>Please<br/>Tick<br/>Box</b> |
|---|--------------------------------|
| 1. I confirm that the researcher has explained and taken me through the information sheet for the above study. I've had the opportunity to think about the information; ask questions and have had these questions answered satisfactorily.                         | <input type="checkbox"/>       |
| 2. I understand that taking part is voluntary and that I'm free to change my mind at any time without giving any reason and without my legal rights being affected.   | <input type="checkbox"/>       |
| 3. I understand that my interview will be tape recorded and then typed out, with all information that could identify me or anyone else removed. Only the research team at the University will have access to this information.                                      | <input type="checkbox"/>       |
| 4. I understand that the only information kept that identifies me will be my first name and agreed contact details. This will be stored in a locked filing cabinet away from the other study information and only the research team will have access to it.         | <input type="checkbox"/>       |
| 5. I understand that direct quotations may be taken from what I say and used in publications. I understand that neither I nor anyone else will be identifiable from these quotes. I give my permission for direct quotes to be used in publications.                | <input type="checkbox"/>       |
| 6. <b>I understand that anything I say in the interview will be confidential.</b> The only time the researcher (Stephanie O'Neil) would need to break this confidentiality is if she sees or is told something which raises serious concern for my personal safety. | <input type="checkbox"/>       |
| 7. <b>I agree to take part in the above study. I am aware that a copy of this consent form will be provided to me for my records.</b>   | <input type="checkbox"/>       |

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature



**APPENDIX J: DRINKING TIMELINE TEMPLATE**



Participant Identification No for this study:

## APPENDIX K: GLOSSARY OF Q METHODOLOGY TERMS

<b>Bipolar Factor</b>	<i>Contains both positive and negative significant loadings.</i>
<b>Concourse</b>	<i>The subjective viewpoints, perspectives, opinions and beliefs (rather than statements of fact) around any given phenomenon under investigation, it is from here that the Q set is drawn.</i>
<b>Condition of Instruction</b>	<i>A guide for sorting items in the Q set based upon the research question of the study.</i>
<b>Confounded Q sort</b>	<i>Q sorts which load significantly on more than one factor.</i>
<b>Consensus Statement</b>	<i>Statement that does not distinguish between any of the identified factors.</i>
<b>Correlation Matrix</b>	<i>Represents the level of (dis)agreement between individual Q sorts.</i>
<b>Defining Q sort</b>	<i>Q sorts which correlate significantly and purely with one factor.</i>
<b>Difference Score</b>	<i>The magnitude of difference between a statement's score on any two factors that is required for it to be statistically significant.</i>
<b>Distinguishing Statement</b>	<i>Statement which distinguishes between any of the identified factors; if a difference score is deemed statistically significant, it is described as a distinguishing statement.</i>
<b>Explained Variance</b>	<i>The percentage of the variance in the correlation matrix explained by the factor.</i>
<b>Factor</b>	<i>Cluster of similar Q sorts that correlate significantly with each other.</i>
<b>Factor Analysis</b>	<i>Correlational technique used to determine meaningful clusters of shared variance.</i>
<b>Factor Array</b>	<i>Set of responses to statements held by a person who typifies a particular standpoint; calculated using the weighted averages of factor scores from defining Q sorts; also referred to as a 'synthetic' or 'composite' Q sort.</i>
<b>Factor Loading</b>	<i>Extent to which each Q sort is correlated with each factor.</i>
<b>Factor Score</b>	<i>The placing of statements in the factor array; represents the score for a statement by all of the Q sorts associated with the factor.</i>
<b>Null Loader</b>	<i>Q sorts which do not load significantly on any factor.</i>
<b>P Set</b>	<i>Participants in a Q Methodology study</i>
<b>Q Set</b>	<i>A representative set of statements presented to participants for card sorting.</i>

## APPENDIX K: GLOSSARY OF Q METHODOLOGY TERMS

<b>Q Sort</b>	<i>A card sorting procedure where individuals are asked to model their point of view by rank ordering items presented to them (the Q set) according to their own subjective opinion and according to a 'condition of instruction'.</i>
<b>Subjectivity</b>	<i>A person's presentation of their point of view on any matter of personal and / or social importance</i>

# APPENDIX L: Q METHODOLOGY SCRIPT USED BY THE RESEARCHER

## Q STUDY TOPIC GUIDE

### Introduction / Welcome

- Brief Background to study / re-familiarise respondents with study
- *All of the information you give me today will be anonymous, so you won't be identified in any of the results from my research, I'm the only one who knows you have taken part in this study and can match your results to what is written up. I am going to be taping some parts of your discussion but you won't be identified from that either. You are free to choose not to take part at any point if you wish – is that all ok? [SIGN CONSENT FORM HERE]*

### The Q Sort

- *I am interested in what matters to you the most when you make decisions about drinking alcohol and the products you choose. To look at this we are going to do a card sort. In front of you is a large grid, a smaller printed grid and a pack of cards. These cards are printed with statements made by teenagers about alcohol and their choice of drink. You will agree with some of the statements and disagree with others. When you read them I want you to think about which ones are most like you and which ones are most unlike you. There are no right or wrong answers, I'm just interested in what you think. Each card is numbered but there is nothing important about the numbers, they are just to help me make a note of where you have placed each card on the grid.*
- *Q sorting is a process of laying out all of these cards according to what is most like you and what is most unlike you – I'm going to take you through it step-by-step. At the end when you have all of the cards lain out, we're going to transfer the numbers which relate to the cards onto this smaller grid. Feel free to ask questions at any time – I will be here to help you.*
- *Start by reading each statement carefully and place them into three piles: a pile for statements that are most like you, , a pile for statements that are most unlike you, and a pile for the rest (in the middle). You can move these cards later it's just to get you familiar with what is on them. Once you have done this, give me a shout.*
- *Next, take the cards you've placed in your 'most like me' pile and pick out the two statements that are most like you. Place those two cards above the +4.*

## APPENDIX L: Q METHODOLOGY SCRIPT USED BY THE RESEARCHER

- *Pick up your 'most unlike me' pile. Which two statements are most unlike you? Place those under the -4.*
- *Go back to your 'most like me' pile. Out of the statements that are left, which two statements are now most like you? Place these two cards above the +3. Pick up your 'most unlike me' pile and do the same for the two remaining statements that are now most unlike you placing them above the -3.*
- *ETC - Work your way into the middle of the grid (0) switching between placing statements that are most like you and least like you.*
- *There is no time limit to place all of the cards, usually it will take you about half an hour. Once all cards have been placed, take time to look over where you've placed the cards. Is there any that you want to change?*

### Post Q Sort Interview

[once respondent is satisfied with placing of cards, begin recording]

- *Can you sum up in a few sentences what your views are about drinking alcohol? How do you choose what you drink?*
- *Why did you place these two cards in the most agree column? What were you thinking about? (SAME FOR DISAGREE)*
- *Were there any cards that didn't mean anything to you?*
- *Were there any cards you didn't understand?*
- *Where did you switch from agree to disagree? What is the 'point of neutrality'? [Mark this point on the response sheet] [Transfer numbers onto smaller grid response sheet]*

## APPENDIX L: Q METHODOLOGY SCRIPT USED BY THE RESEARCHER

### Demographics

- *We have come to the end of the questions now [ask respondents to fill in the section 'All about me' themselves]. All answers will be treated in the strictest confidence. We only use them for research purposes to make sure as wide a range of people as possible are interviewed. Once you have filled this in, could you put your initials and the date on the top of the small grid sheet.*
- *Thank you for coming along today.*

[Reiterate to respondents that any information published can be made available to them at the end of the study]





## **APPENDIX L: Q METHODOLOGY SCRIPT USED BY THE RESEARCHER**

Initials \_\_\_\_\_

Date \_\_\_\_\_

Please comment below on why you placed the cards you did in the +4 position.

Please comment below on why you placed the cards you did in the -4 position.

## **APPENDIX L: Q METHODOLOGY SCRIPT USED BY THE RESEARCHER**

Please use this space to add any further comments you wish to make.

### **All about me:**

Age:

Gender:

Where do you live:

Are you:

a. Still at school \_\_\_\_\_

b. College / university \_\_\_\_\_

c. Working \_\_\_\_\_

## **APPENDIX L: Q METHODOLOGY SCRIPT USED BY THE RESEARCHER**

d. Unemployed \_\_\_\_\_

On average, how much money do you have to spend on a weekly basis?

Preferred type of alcoholic drink:

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11

Influences on young people's choice of alcoholic drinks

PAGE 1

Path and Project Name: h:\Qanalysis/phdalcoh

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### Correlation Matrix Between Sorts

SORTS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1 P032	100	-2	-14	-28	13	-21	-3	-5	-16	-11	1	10	20	-14	4	-28	11	-12	-13	36	-12	-20	-14	-8	-8	11	-11	-5
2 P019	-2	100	24	18	26	4	43	23	45	-7	10	16	16	2	13	16	66	-4	10	-1	25	-21	-11	14	-18	-5	-9	38
3 P034	-14	24	100	55	31	6	24	7	27	31	20	5	-10	-18	19	22	41	37	46	-8	38	24	30	8	27	22	14	25
4 P035	-28	18	55	100	5	1	15	2	6	12	28	-19	-25	14	15	11	24	29	32	-17	9	31	14	9	16	-4	15	11
5 P028	13	26	31	5	100	18	24	32	31	28	10	29	11	-5	29	14	32	13	-9	-2	32	-9	30	-11	-16	31	12	57
6 P031	-21	4	6	1	18	100	-24	21	-2	8	16	4	-1	-4	35	19	-11	-19	-2	-4	-19	12	32	-11	0	9	-24	42
7 P029	-3	43	24	15	24	-24	100	24	56	3	15	37	-11	9	-5	15	29	2	29	17	39	-9	1	19	1	-8	19	17
8 P003	-5	23	7	2	32	21	24	100	45	-9	29	8	18	-8	26	14	19	28	0	14	24	-4	10	-25	2	31	25	54
9 P006	-16	45	27	6	31	-2	56	45	100	-6	7	43	12	-5	18	12	47	16	21	3	34	-4	9	11	16	-6	35	37
10 P036	-11	-7	31	12	28	8	3	-9	-6	100	-9	-26	-33	-11	46	-19	4	29	8	-8	-2	16	37	11	-4	20	16	25
11 P037	1	10	20	28	10	16	15	29	7	-9	100	1	25	8	28	11	5	6	11	20	8	-7	21	14	-8	-25	21	20
12 P038	10	16	5	-19	29	4	37	8	43	-26	1	100	27	-20	-23	14	21	-11	18	23	34	2	-5	1	-19	-35	-8	12
13 P039	20	16	-10	-25	11	-1	-11	18	12	-33	25	27	100	4	2	20	20	-15	-17	-9	11	-39	-23	-6	-5	-12	0	6
14 P040	-14	2	-18	14	-5	-4	9	-8	-5	-11	8	-20	4	100	-6	6	-8	3	-29	-20	8	7	-18	2	15	-18	17	-2

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

15 P041	4	13	19	15	29	35	-5	26	18	46	28	-23	2	-6	100	-5	30	24	10	-8	-3	-2	22	13	8	22	21	48
16 P042	-28	16	22	11	14	19	15	14	12	-19	11	14	20	6	-5	100	-1	16	4	-17	32	-12	9	-3	3	12	-22	28
17 P043	11	66	41	24	32	-11	29	19	47	4	5	21	20	-8	30	-1	100	-2	2	5	12	-14	-10	3	4	10	8	32
18 P044	-12	-4	37	29	13	-19	2	28	16	29	6	-11	-15	3	24	16	-2	100	15	-8	35	17	18	-12	6	12	44	18
19 P045	-13	10	46	32	-9	-2	29	0	21	8	11	18	-17	-29	10	4	2	15	100	-3	25	43	-3	22	19	-13	17	0
20 P046	36	-1	-8	-17	-2	-4	17	14	3	-8	20	23	-9	-20	-8	-17	5	-8	-3	100	-10	8	1	-25	1	-12	4	-18
21 P047	-12	25	38	9	32	-19	39	24	34	-2	8	34	11	8	-3	32	12	35	25	-10	100	-8	8	-8	7	25	18	14
22 P048	-20	-21	24	31	-9	12	-9	-4	-4	16	-7	2	-39	7	-2	-12	-14	17	43	8	-8	100	6	1	23	-21	14	-14
23 P049	-14	-11	30	14	30	32	1	10	9	37	21	-5	-23	-18	22	9	-10	18	-3	1	8	6	100	12	9	26	17	35
24 P050	-8	14	8	9	-11	-11	19	-25	11	11	14	1	-6	2	13	-3	3	-12	22	-25	-8	1	12	100	-14	-21	-21	4
25 P051	-8	-18	27	16	-16	0	1	2	16	-4	-8	-19	-5	15	8	3	4	6	19	1	7	23	9	-14	100	26	37	-12
26 P052	11	-5	22	-4	31	9	-8	31	-6	20	-25	-35	-12	-18	22	12	10	12	-13	-12	25	-21	26	-21	26	100	0	22
27 P054	-11	-9	14	15	12	-24	19	25	35	16	21	-8	0	17	21	-22	8	44	17	4	18	14	17	-21	37	0	100	1
28 P055	-5	38	25	11	57	42	17	54	37	25	20	12	6	-2	48	28	32	18	0	-18	14	-14	35	4	-12	22	1	100

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11

Influences on young people's choice of alcoholic drinks

PAGE 2

Path and Project Name: h:\Qanalysis/phdalcoh

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### Unrotated Factor Matrix

	Factors						
	1	2	3	4	5	6	7
SORTS							
1 P032	-0.2558	-0.0076	0.3007	0.1826	-0.1479	0.2148	0.1570
2 P019	0.3491	0.1683	0.4403	-0.3083	-0.3144	0.1980	-0.1778
3 P034	0.7759	0.0653	-0.2039	-0.0064	-0.1596	-0.0758	0.1136
4 P035	0.4622	0.1498	-0.3931	-0.3463	-0.0338	0.1541	0.0767
5 P028	0.5006	-0.1980	0.4257	0.1618	-0.0065	0.0234	-0.0534
6 P031	0.1659	-0.3409	0.1293	-0.1846	0.1556	-0.1875	0.2847
7 P029	0.4162	0.3924	0.1641	0.1278	-0.2907	0.1293	-0.2882
8 P003	0.4329	0.0350	0.4550	0.1710	0.3759	0.1843	0.0924
9 P006	0.6052	0.3425	0.2794	0.1186	-0.0491	0.0289	-0.0196
10 P036	0.3178	-0.5300	-0.2948	0.1612	-0.1549	0.2011	-0.1278
11 P037	0.2009	0.1300	0.0735	-0.2300	0.1213	0.0147	0.3954
12 P038	0.0677	0.3302	0.4342	0.1844	-0.3181	-0.4273	0.0787
13 P039	-0.0470	0.1226	0.4930	-0.2198	0.1986	-0.0687	0.1519
14 P040	-0.0344	0.1228	-0.0768	-0.2149	0.2396	0.1655	-0.2148

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

15 P041	0.4688	-0.4002	0.0428	-0.0729	0.0665	0.3391	0.1638
16 P042	0.2418	0.0816	0.1598	-0.2037	0.2689	-0.3552	-0.1931
17 P043	0.3807	0.1283	0.3476	-0.1295	-0.3460	0.4156	0.0174
18 P044	0.4089	0.0572	-0.2313	0.1791	0.2386	0.0997	-0.0580
19 P045	0.4322	0.2234	-0.2713	0.0394	-0.2724	-0.2800	0.2181
20 P046	-0.0597	0.1020	0.1690	0.3751	-0.1764	0.0948	0.4187
21 P047	0.4527	0.3278	0.1022	0.1998	0.1238	-0.1068	-0.3318
22 P048	0.1243	0.0750	-0.5488	0.1088	-0.1321	-0.0369	0.2627
23 P049	0.4395	-0.4577	-0.0867	0.1606	0.0907	-0.1093	0.0456
24 P050	0.0571	-0.0322	-0.0928	-0.2559	-0.2893	-0.0565	-0.1107
25 P051	0.1250	0.1701	-0.2622	0.0879	0.2240	0.0435	0.1853
26 P052	0.1837	-0.3592	0.0622	0.2334	0.2452	0.0833	-0.0760
27 P054	0.2761	0.2762	-0.2089	0.3550	0.2988	0.4751	0.1143
28 P055	0.6427	-0.3543	0.4346	-0.1219	0.1106	0.0395	-0.0474
Eigenvalues	3.8938	1.8502	2.4570	1.1596	1.3318	1.2327	1.0385
% expl.var.	14	7	9	4	5	4	4



## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11

Influences on young people's choice of alcoholic drinks

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### Cumulative Communalities Matrix

Factors 1 Thru ....

	1	2	3	4	5	6	7
SORTS							
1 P032	0.0654	0.0655	0.1559	0.1893	0.2111	0.2572	0.2819
2 P019	0.1219	0.1502	0.3441	0.4391	0.5380	0.5772	0.6088
3 P034	0.6021	0.6063	0.6479	0.6479	0.6734	0.6792	0.6921
4 P035	0.2137	0.2361	0.3906	0.5106	0.5117	0.5355	0.5413
5 P028	0.2506	0.2898	0.4711	0.4973	0.4973	0.4979	0.5007
6 P031	0.0275	0.1437	0.1604	0.1945	0.2187	0.2539	0.3349
7 P029	0.1732	0.3272	0.3541	0.3705	0.4550	0.4717	0.5548
8 P003	0.1874	0.1886	0.3957	0.4250	0.5663	0.6003	0.6088
9 P006	0.3663	0.4836	0.5616	0.5757	0.5781	0.5790	0.5793
10 P036	0.1010	0.3819	0.4688	0.4947	0.5187	0.5592	0.5755
11 P037	0.0404	0.0573	0.0627	0.1156	0.1303	0.1305	0.2869
12 P038	0.0046	0.1136	0.3022	0.3362	0.4373	0.6199	0.6261
13 P039	0.0022	0.0172	0.2603	0.3086	0.3481	0.3528	0.3759
14 P040	0.0012	0.0163	0.0222	0.0683	0.1257	0.1531	0.1993

### APPENDIX M: FULL PQ METHOD OUTPUT REPORT

15 P041	0.2198	0.3800	0.3818	0.3872	0.3916	0.5066	0.5334
16 P042	0.0585	0.0652	0.0907	0.1322	0.2045	0.3307	0.3680
17 P043	0.1449	0.1614	0.2822	0.2990	0.4187	0.5914	0.5917
18 P044	0.1672	0.1705	0.2240	0.2560	0.3130	0.3229	0.3263
19 P045	0.1868	0.2367	0.3103	0.3118	0.3861	0.4644	0.5120
20 P046	0.0036	0.0140	0.0426	0.1833	0.2144	0.2234	0.3987
21 P047	0.2049	0.3124	0.3228	0.3627	0.3781	0.3895	0.4995
22 P048	0.0155	0.0211	0.3223	0.3342	0.3516	0.3530	0.4220
23 P049	0.1932	0.4026	0.4102	0.4359	0.4442	0.4561	0.4582
24 P050	0.0033	0.0043	0.0129	0.0784	0.1621	0.1653	0.1775
25 P051	0.0156	0.0445	0.1133	0.1210	0.1712	0.1731	0.2074
26 P052	0.0337	0.1628	0.1666	0.2211	0.2812	0.2882	0.2939
27 P054	0.0762	0.1526	0.1962	0.3222	0.4115	0.6372	0.6502
28 P055	0.4131	0.5387	0.7275	0.7424	0.7546	0.7562	0.7584
cum% expl.Var.	14	21	29	33	38	43	46

QANGLES File Not Found - Apparently VARIMAX was Used

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11 Influences on young people's choice of alcoholic drinks  
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Factor Matrix with an X Indicating a Defining Sort

	Loadings		
QSORT	1	2	3
1 P032	-0.0035	-0.0610	-0.3901X
2 P019	0.5651X	0.0931	-0.1268
3 P034	0.4347	0.2706	0.6210X
4 P035	0.1565	0.0182	0.6048X
5 P028	0.4845	0.4790	-0.0830
6 P031	0.0232	0.3954X	-0.0596
7 P029	0.5588X	-0.1176	0.1675
8 P003	0.5664X	0.2503	-0.1104
9 P006	0.7276X	0.0339	0.1764
10 P036	-0.2067	0.5572X	0.3399
11 P037	0.2383	-0.0062	0.0765
12 P038	0.4499X	-0.1798	-0.2597

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

13 P039	0.3080	-0.0433	-0.4045X
14 P040	-0.0086	-0.1358	0.0603
15 P041	0.1487	0.5735X	0.1756
16 P042	0.2920	0.0697	0.0235
17 P043	0.5144X	0.1266	-0.0402
18 P044	0.1692	0.1015	0.4301X
19 P045	0.2409	-0.0386	0.5008X
20 P046	0.1049	-0.0872	-0.1548
21 P047	0.5173X	-0.0552	0.2285
22 P048	-0.1943	-0.1016	0.5237X
23 P049	0.0279	0.5873X	0.2540
24 P050	-0.0300	0.0385	0.1025
25 P051	0.0149	-0.1343	0.3083
26 P052	-0.0118	0.4080X	0.0017
27 P054	0.1969	-0.1466	0.3687X
28 P055	0.5106	0.6825X	-0.0318
% expl.var.	12	8	9

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

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### Free Distribution Data Results

QSORT	MEAN	ST.DEV.
1 P032	0.000	2.115
2 P019	0.000	2.115
3 P034	0.000	2.115
4 P035	0.000	2.115
5 P028	0.000	2.115
6 P031	0.000	2.115
7 P029	0.000	2.115
8 P003	0.000	2.115
9 P006	0.000	2.115
10 P036	0.000	2.115
11 P037	0.000	2.115
12 P038	0.000	2.115
13 P039	0.000	2.115
14 P040	0.000	2.115

**APPENDIX M: FULL PQ METHOD OUTPUT REPORT**

15 P041	0.000	2.115
16 P042	0.000	2.115
17 P043	0.000	2.115
18 P044	0.000	2.115
19 P045	0.000	2.115
20 P046	0.000	2.115
21 P047	0.000	2.115
22 P048	0.000	2.115
23 P049	0.000	2.115
24 P050	0.000	2.115
25 P051	0.000	2.115
26 P052	0.000	2.115
27 P054	0.000	2.115
28 P055	0.000	2.115

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11 Influences on young people's choice of alcoholic drinks

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### Rank Statement Totals with Each Factor

No.	Statement	No.	Factors					
			1	2	3			
1	I might develop a taste for more sophisticated drinks	1	0.55	13	-0.64	30	-0.19	24
2	I trust my mum/dad's judgement - if s/he says a drink	2	0.16	20	-1.56	37	-2.44	39
3	You wouldn't really drink alcopops with your mates bec	3	-1.41	35	-1.17	34	-1.48	36
4	I love alcopops because it's like pop and you can drin	4	-0.70	31	0.27	15	-0.72	30
5	I like alcopops but they're too weak. They're not drin	5	-0.25	25	0.32	14	0.27	17
6	I don't drink alcopops. I think it's because of their	6	0.18	19	-1.08	33	-0.24	25
7	Certain drinks are appealing because they are a cheap	7	-1.61	36	0.08	19	0.33	15
8	Sometimes I try things with alcohol that I've seen on	8	-0.01	22	-0.40	25	0.54	13
9	I drink bottles because they are easier to carry. You	9	0.52	14	-0.49	28	0.89	11
10	I don't like straight alcohol because when people drin	10	1.18	4	0.34	13	-1.54	37
11	I choose certain drinks depending on whether I want to	11	1.09	5	0.56	11	1.16	5
12	There are some drinks that I wouldn't buy myself but i	12	0.68	12	1.14	5	1.17	4
13	I have a preferred brand but to be honest I'm not real	13	1.02	8	1.11	6	0.99	10
14	If a drink tastes strong, it will put me off drinking	14	0.05	21	0.57	10	-0.86	32

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

15	I only drink shots because they have the highest alcohol	15	-1.83	37	-1.21	36	0.15	19
16	When I choose a drink, I want it to be obvious that I'	16	-1.90	38	-1.21	35	-0.87	33
17	Sometimes I've picked certain drinks just out of ease	17	0.71	10	-0.07	21	1.05	8
18	The only reason I try different drinks is to experimen	18	0.71	11	1.11	7	0.69	12
19	I wouldn't drink spirits in the house because when you	19	-0.70	32	-0.86	31	-1.32	35
20	I drink what everyone else is drinking or what's cheap	20	-0.07	23	2.39	1	-0.15	23
21	I'm not really into like the real alcohol scene like k	21	0.34	15	-0.18	23	0.21	18
22	I'd drink shots in clubs because you can't really take	22	0.28	16	0.70	9	1.32	3
23	When you get a bit drunk it feels a bit more adventuro	23	-0.17	24	1.48	3	1.65	1
24	If something doesn't get you pissed I just think I've	24	-2.22	39	0.08	18	1.15	6
25	At a party we all drink together, pass a bottle round.	25	1.06	6	-0.27	24	1.04	9
26	It doesn't matter to me what my parents or family drin	26	-0.32	26	1.28	4	-0.57	27
27	It matters to me that I keep up with my friends when w	27	-0.80	33	-1.83	38	-0.46	26
28	Advertisements don't make me think differently about a	28	1.87	1	1.01	8	0.38	14
29	I do take notice of advertisements but it's mostly the	29	-0.69	30	0.38	12	-0.77	31
30	Internet pop ups advertising drinks don't affect me be	30	1.47	2	0.00	20	-1.78	38
31	I've tried alcohol based on advertisements before. The	31	-0.62	29	-0.41	26	0.06	20
32	I would say if people are first starting to drink then	32	1.37	3	-0.46	27	-0.02	21
33	If I went into a shop and there was four different bra	33	-0.52	27	2.01	2	-0.69	29
34	Putting up the price of drink would totally put me off	34	-1.27	34	0.22	16	-1.12	34
35	I don't really pay attention to the price to be honest	35	1.03	7	-1.92	39	1.12	7



**APPENDIX M: FULL PQ METHOD OUTPUT REPORT**

36	If the price went up it would change how often I drank	36	0.26	17	-0.50	29	0.33	16
37	If it got more expensive I might drink less but that w	37	0.94	9	0.19	17	-0.11	22
38	It's always the same routine as soon as we get to town	38	0.19	18	-0.10	22	1.45	2
39	I don't drink alcopops because I don't like the taste.	39	-0.56	28	-0.87	32	-0.65	28

**APPENDIX M: FULL PQ METHOD OUTPUT REPORT**

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Correlations Between Factor Scores

	1	2	3
1	1.0000	0.2057	0.2116
2	0.2057	1.0000	0.2464
3	0.2116	0.2464	1.0000

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11 Influences on young people's choice of alcoholic drinks  
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Normalized Factor Scores -- For Factor 1

No.	Statement	No.	Z-SCORES
28	Advertisements don't make me think differently about alcohol	28	1.873
30	Internet pop ups advertising drinks don't affect me because	30	1.469
32	I would say if people are first starting to drink then adver	32	1.367
10	I don't like straight alcohol because when people drink like	10	1.181
11	I choose certain drinks depending on whether I want to relax	11	1.094
25	At a party we all drink together, pass a bottle round. we pu	25	1.060
35	I don't really pay attention to the price to be honest, I ju	35	1.035
13	I have a preferred brand but to be honest I'm not really bot	13	1.019
37	If it got more expensive I might drink less but that would h	37	0.941
17	Sometimes I've picked certain drinks just out of ease really	17	0.707
18	The only reason I try different drinks is to experiment mixi	18	0.706
12	There are some drinks that I wouldn't buy myself but if some	12	0.681
1	I might develop a taste for more sophisticated drinks when I	1	0.545
9	I drink bottles because they are easier to carry. You can sh	9	0.516

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

21	I'm not really into like the real alcohol scene like knowing	21	0.341
22	I'd drink shots in clubs because you can't really take a bee	22	0.283
36	If the price went up it would change how often I drank a typ	36	0.256
38	It's always the same routine as soon as we get to town, what	38	0.192
6	I don't drink alcopops. I think it's because of their reputa	6	0.182
2	I trust my mum/dad's judgement - if s/he says a drink is rub	2	0.160
14	If a drink tastes strong, it will put me off drinking it reg	14	0.052
8	Sometimes I try things with alcohol that I've seen on TV sho	8	-0.011
20	I drink what everyone else is drinking or what's cheapest.	20	-0.071
23	when you get a bit drunk it feels a bit more adventurous to	23	-0.173
5	I like alcopops but they're too weak. They're not drinks tha	5	-0.247
26	It doesn't matter to me what my parents or family drink. My	26	-0.322
33	If I went into a shop and there was four different brands of	33	-0.516
39	I don't drink alcopops because I don't like the taste.	39	-0.564
31	I've tried alcohol based on advertisements before. They neve	31	-0.621
29	I do take notice of advertisements but it's mostly the ones	29	-0.690
4	I love alcopops because it's like pop and you can drink it l	4	-0.697
19	I wouldn't drink spirits in the house because when you do yo	19	-0.699
27	It matters to me that I keep up with my friends when we drin	27	-0.804
34	Putting up the price of drink would totally put me off - you	34	-1.275
3	You wouldn't really drink alcopops with your mates because o	3	-1.406

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

7	Certain drinks are appealing because they are a cheap and qu	7	-1.610
15	I only drink shots because they have the highest alcohol con	15	-1.829
16	When I choose a drink, I want it to be obvious that I'm drin	16	-1.904
24	If something doesn't get you pissed I just think I've wasted	24	-2.222

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

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Normalized Factor Scores -- For Factor 2

No.	Statement	No.	Z-SCORES
20	I drink what everyone else is drinking or what's cheapest.	20	2.386
33	If I went into a shop and there was four different brands of	33	2.007
23	when you get a bit drunk it feels a bit more adventurous to	23	1.476
26	It doesn't matter to me what my parents or family drink. My	26	1.277
12	There are some drinks that I wouldn't buy myself but if some	12	1.143
13	I have a preferred brand but to be honest I'm not really bot	13	1.111
18	The only reason I try different drinks is to experiment mixi	18	1.109
28	Advertisements don't make me think differently about alcoh	28	1.012
22	I'd drink shots in clubs because you can't really take a bee	22	0.701
14	If a drink tastes strong, it will put me off drinking it reg	14	0.566
11	I choose certain drinks depending on whether I want to relax	11	0.564
29	I do take notice of advertisements but it's mostly the ones	29	0.382
10	I don't like straight alcohol because when people drink like	10	0.344
5	I like alcopops but they're too weak. They're not drinks tha	5	0.321

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

4	I love alcopops because it's like pop and you can drink it l	4	0.273
34	Putting up the price of drink would totally put me off - you	34	0.225
37	If it got more expensive I might drink less but that would h	37	0.193
24	If something doesn't get you pissed I just think I've wasted	24	0.079
7	Certain drinks are appealing because they are a cheap and qu	7	0.079
30	Internet pop ups advertising drinks don't affect me because	30	-0.001
17	Sometimes I've picked certain drinks just out of ease really	17	-0.071
38	It's always the same routine as soon as we get to town, what	38	-0.102
21	I'm not really into like the real alcohol scene like knowing	21	-0.184
25	At a party we all drink together, pass a bottle round. We pu	25	-0.266
8	Sometimes I try things with alcohol that I've seen on TV sho	8	-0.398
31	I've tried alcohol based on advertisements before. They neve	31	-0.414
32	I would say if people are first starting to drink then adver	32	-0.461
9	I drink bottles because they are easier to carry. You can sh	9	-0.489
36	If the price went up it would change how often I drank a typ	36	-0.504
1	I might develop a taste for more sophisticated drinks when I	1	-0.641
19	I wouldn't drink spirits in the house because when you do yo	19	-0.862
39	I don't drink alcopops because I don't like the taste.	39	-0.873
6	I don't drink alcopops. I think it's because of their reputa	6	-1.084
3	You wouldn't really drink alcopops with your mates because o	3	-1.169
16	When I choose a drink, I want it to be obvious that I'm drin	16	-1.213

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

15	I only drink shots because they have the highest alcohol con	15	-1.214
2	I trust my mum/dad's judgement - if s/he says a drink is rub	2	-1.555
27	It matters to me that I keep up with my friends when we drin	27	-1.826
35	I don't really pay attention to the price to be honest, I ju	35	-1.922



## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11 Influences on young people's choice of alcoholic drinks  
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Normalized Factor Scores -- For Factor 3

No.	Statement	No.	Z-SCORES
23	When you get a bit drunk it feels a bit more adventurous to	23	1.654
38	It's always the same routine as soon as we get to town, what	38	1.453
22	I'd drink shots in clubs because you can't really take a bee	22	1.325
12	There are some drinks that I wouldn't buy myself but if some	12	1.169
11	I choose certain drinks depending on whether I want to relax	11	1.165
24	If something doesn't get you pissed I just think I've wasted	24	1.154
35	I don't really pay attention to the price to be honest, I ju	35	1.121
17	Sometimes I've picked certain drinks just out of ease really	17	1.047
25	At a party we all drink together, pass a bottle round. We pu	25	1.039
13	I have a preferred brand but to be honest I'm not really bot	13	0.990
9	I drink bottles because they are easier to carry. You can sh	9	0.891
18	The only reason I try different drinks is to experiment mixi	18	0.689
8	Sometimes I try things with alcohol that I've seen on TV sho	8	0.544
28	Advertisements don't make me think differently about alcohol	28	0.382

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

7	Certain drinks are appealing because they are a cheap and qu	7	0.335
36	If the price went up it would change how often I drank a typ	36	0.330
5	I like alcopops but they're too weak. They're not drinks tha	5	0.265
21	I'm not really into like the real alcohol scene like knowing	21	0.214
15	I only drink shots because they have the highest alcohol con	15	0.147
31	I've tried alcohol based on advertisements before. They neve	31	0.064
32	I would say if people are first starting to drink then adver	32	-0.020
37	If it got more expensive I might drink less but that would h	37	-0.112
20	I drink what everyone else is drinking or what's cheapest.	20	-0.147
1	I might develop a taste for more sophisticated drinks when I	1	-0.192
6	I don't drink alcopops. I think it's because of their reputa	6	-0.237
27	It matters to me that I keep up with my friends when we drin	27	-0.461
26	It doesn't matter to me what my parents or family drink. My	26	-0.568
39	I don't drink alcopops because I don't like the taste.	39	-0.647
33	If I went into a shop and there was four different brands of	33	-0.692
4	I love alcopops because it's like pop and you can drink it l	4	-0.723
29	I do take notice of advertisements but it's mostly the ones	29	-0.767
14	If a drink tastes strong, it will put me off drinking it reg	14	-0.861
16	When I choose a drink, I want it to be obvious that I'm drin	16	-0.866
34	Putting up the price of drink would totally put me off - you	34	-1.124
19	I wouldn't drink spirits in the house because when you do yo	19	-1.318

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

3	You wouldn't really drink alcopops with your mates because o	3	-1.485
10	I don't like straight alcohol because when people drink like	10	-1.543
30	Internet pop ups advertising drinks don't affect me because	30	-1.782
2	I trust my mum/dad's judgement - if s/he says a drink is rub	2	-2.435

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

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Descending Array of Differences Between Factors 1 and 2

No.	Statement	No.	Type 1	Type 2	Difference
35	I don't really pay attention to the price to be honest, I ju	35	1.035	-1.922	2.956
32	I would say if people are first starting to drink then adver	32	1.367	-0.461	1.828
2	I trust my mum/dad's judgement - if s/he says a drink is rub	2	0.160	-1.555	1.715
30	Internet pop ups advertising drinks don't affect me because	30	1.469	-0.001	1.470
25	At a party we all drink together, pass a bottle round. we pu	25	1.060	-0.266	1.326
6	I don't drink alcopops. I think it's because of their reputa	6	0.182	-1.084	1.266
1	I might develop a taste for more sophisticated drinks when I	1	0.545	-0.641	1.186
27	It matters to me that I keep up with my friends when we drin	27	-0.804	-1.826	1.022
9	I drink bottles because they are easier to carry. You can sh	9	0.516	-0.489	1.005
28	Advertisements don't make me think differently about alcohol	28	1.873	1.012	0.862
10	I don't like straight alcohol because when people drink like	10	1.181	0.344	0.836
17	Sometimes I've picked certain drinks just out of ease really	17	0.707	-0.071	0.778
36	If the price went up it would change how often I drank a typ	36	0.256	-0.504	0.759

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

37	If it got more expensive I might drink less but that would h	37	0.941	0.193	0.748
11	I choose certain drinks depending on whether I want to relax	11	1.094	0.564	0.531
21	I'm not really into like the real alcohol scene like knowing	21	0.341	-0.184	0.525
8	Sometimes I try things with alcohol that I've seen on TV sho	8	-0.011	-0.398	0.387
39	I don't drink alcopops because I don't like the taste.	39	-0.564	-0.873	0.309
38	It's always the same routine as soon as we get to town, what	38	0.192	-0.102	0.294
19	I wouldn't drink spirits in the house because when you do yo	19	-0.699	-0.862	0.163
13	I have a preferred brand but to be honest I'm not really bot	13	1.019	1.111	-0.092
31	I've tried alcohol based on advertisements before. They neve	31	-0.621	-0.414	-0.207
3	You wouldn't really drink alcopops with your mates because o	3	-1.406	-1.169	-0.237
18	The only reason I try different drinks is to experiment mixi	18	0.706	1.109	-0.403
22	I'd drink shots in clubs because you can't really take a bee	22	0.283	0.701	-0.418
12	There are some drinks that I wouldn't buy myself but if some	12	0.681	1.143	-0.463
14	If a drink tastes strong, it will put me off drinking it reg	14	0.052	0.566	-0.514
5	I like alcopops but they're too weak. They're not drinks tha	5	-0.247	0.321	-0.568
15	I only drink shots because they have the highest alcohol con	15	-1.829	-1.214	-0.616
16	When I choose a drink, I want it to be obvious that I'm drin	16	-1.904	-1.213	-0.691
4	I love alcopops because it's like pop and you can drink it l	4	-0.697	0.273	-0.969
29	I do take notice of advertisements but it's mostly the ones	29	-0.690	0.382	-1.072
34	Putting up the price of drink would totally put me off - you	34	-1.275	0.225	-1.499
26	It doesn't matter to me what my parents or family drink. My	26	-0.322	1.277	-1.599

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

23	When you get a bit drunk it feels a bit more adventurous to	23	-0.173	1.476	-1.649
7	Certain drinks are appealing because they are a cheap and qu	7	-1.610	0.079	-1.689
24	If something doesn't get you pissed I just think I've wasted	24	-2.222	0.079	-2.301
20	I drink what everyone else is drinking or what's cheapest.	20	-0.071	2.386	-2.458
33	If I went into a shop and there was four different brands of	33	-0.516	2.007	-2.523

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11 Influences on young people's choice of alcoholic drinks  
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Descending Array of Differences Between Factors 1 and 3

No.	Statement	No.	Type 1	Type 3	Difference
30	Internet pop ups advertising drinks don't affect me because	30	1.469	-1.782	3.252
10	I don't like straight alcohol because when people drink like	10	1.181	-1.543	2.724
2	I trust my mum/dad's judgement - if s/he says a drink is rub	2	0.160	-2.435	2.595
28	Advertisements don't make me think differently about alcohol	28	1.873	0.382	1.491
32	I would say if people are first starting to drink then adver	32	1.367	-0.020	1.387
37	If it got more expensive I might drink less but that would h	37	0.941	-0.112	1.053
14	If a drink tastes strong, it will put me off drinking it reg	14	0.052	-0.861	0.913
1	I might develop a taste for more sophisticated drinks when I	1	0.545	-0.192	0.737
19	I wouldn't drink spirits in the house because when you do yo	19	-0.699	-1.318	0.619
6	I don't drink alcopops. I think it's because of their reputa	6	0.182	-0.237	0.419
26	It doesn't matter to me what my parents or family drink. My	26	-0.322	-0.568	0.246
33	If I went into a shop and there was four different brands of	33	-0.516	-0.692	0.176
21	I'm not really into like the real alcohol scene like knowing	21	0.341	0.214	0.127
39	I don't drink alcopops because I don't like the taste.	39	-0.564	-0.647	0.083

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

3	You wouldn't really drink alcopops with your mates because o	3	-1.406	-1.485	0.079
29	I do take notice of advertisements but it's mostly the ones	29	-0.690	-0.767	0.077
20	I drink what everyone else is drinking or what's cheapest.	20	-0.071	-0.147	0.076
13	I have a preferred brand but to be honest I'm not really bot	13	1.019	0.990	0.029
4	I love alcopops because it's like pop and you can drink it l	4	-0.697	-0.723	0.026
25	At a party we all drink together, pass a bottle round. we pu	25	1.060	1.039	0.022
18	The only reason I try different drinks is to experiment mixi	18	0.706	0.689	0.017
11	I choose certain drinks depending on whether I want to relax	11	1.094	1.165	-0.070
36	If the price went up it would change how often I drank a typ	36	0.256	0.330	-0.075
35	I don't really pay attention to the price to be honest, I ju	35	1.035	1.121	-0.086
34	Putting up the price of drink would totally put me off - you	34	-1.275	-1.124	-0.151
17	Sometimes I've picked certain drinks just out of ease really	17	0.707	1.047	-0.340
27	It matters to me that I keep up with my friends when we drin	27	-0.804	-0.461	-0.342
9	I drink bottles because they are easier to carry. You can sh	9	0.516	0.891	-0.375
12	There are some drinks that I wouldn't buy myself but if some	12	0.681	1.169	-0.489
5	I like alcopops but they're too weak. They're not drinks tha	5	-0.247	0.265	-0.512
8	Sometimes I try things with alcohol that I've seen on TV sho	8	-0.011	0.544	-0.555
31	I've tried alcohol based on advertisements before. They neve	31	-0.621	0.064	-0.685
16	When I choose a drink, I want it to be obvious that I'm drin	16	-1.904	-0.866	-1.039
22	I'd drink shots in clubs because you can't really take a bee	22	0.283	1.325	-1.042
38	It's always the same routine as soon as we get to town, what	38	0.192	1.453	-1.261



## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

23	When you get a bit drunk it feels a bit more adventurous to	23	-0.173	1.654	-1.828
7	Certain drinks are appealing because they are a cheap and qu	7	-1.610	0.335	-1.945
15	I only drink shots because they have the highest alcohol con	15	-1.829	0.147	-1.976
24	If something doesn't get you pissed I just think I've wasted	24	-2.222	1.154	-3.376

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11 Influences on young people's choice of alcoholic drinks  
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Descending Array of Differences Between Factors 2 and 3

No.	Statement	No.	Type 2	Type 3	Difference
33	If I went into a shop and there was four different brands of	33	2.007	-0.692	2.699
20	I drink what everyone else is drinking or what's cheapest.	20	2.386	-0.147	2.534
10	I don't like straight alcohol because when people drink like	10	0.344	-1.543	1.887
26	It doesn't matter to me what my parents or family drink. My	26	1.277	-0.568	1.845
30	Internet pop ups advertising drinks don't affect me because	30	-0.001	-1.782	1.782
14	If a drink tastes strong, it will put me off drinking it reg	14	0.566	-0.861	1.427
34	Putting up the price of drink would totally put me off - you	34	0.225	-1.124	1.348
29	I do take notice of advertisements but it's mostly the ones	29	0.382	-0.767	1.149
4	I love alcopops because it's like pop and you can drink it l	4	0.273	-0.723	0.995
2	I trust my mum/dad's judgement - if s/he says a drink is rub	2	-1.555	-2.435	0.880
28	Advertisements don't make me think differently about alcohol	28	1.012	0.382	0.629
19	I wouldn't drink spirits in the house because when you do yo	19	-0.862	-1.318	0.456
18	The only reason I try different drinks is to experiment mixi	18	1.109	0.689	0.420
3	You wouldn't really drink alcopops with your mates because o	3	-1.169	-1.485	0.316

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

37	If it got more expensive I might drink less but that would h	37	0.193	-0.112	0.305
13	I have a preferred brand but to be honest I'm not really bot	13	1.111	0.990	0.121
5	I like alcopops but they're too weak. They're not drinks tha	5	0.321	0.265	0.056
12	There are some drinks that I wouldn't buy myself but if some	12	1.143	1.169	-0.026
23	When you get a bit drunk it feels a bit more adventurous to	23	1.476	1.654	-0.179
39	I don't drink alcopops because I don't like the taste.	39	-0.873	-0.647	-0.225
7	Certain drinks are appealing because they are a cheap and qu	7	0.079	0.335	-0.256
16	When I choose a drink, I want it to be obvious that I'm drin	16	-1.213	-0.866	-0.348
21	I'm not really into like the real alcohol scene like knowing	21	-0.184	0.214	-0.397
32	I would say if people are first starting to drink then adver	32	-0.461	-0.020	-0.441
1	I might develop a taste for more sophisticated drinks when I	1	-0.641	-0.192	-0.449
31	I've tried alcohol based on advertisements before. They neve	31	-0.414	0.064	-0.478
11	I choose certain drinks depending on whether I want to relax	11	0.564	1.165	-0.601
22	I'd drink shots in clubs because you can't really take a bee	22	0.701	1.325	-0.624
36	If the price went up it would change how often I drank a typ	36	-0.504	0.330	-0.834
6	I don't drink alcopops. I think it's because of their reputa	6	-1.084	-0.237	-0.847
8	Sometimes I try things with alcohol that I've seen on TV sho	8	-0.398	0.544	-0.942
24	If something doesn't get you pissed I just think I've wasted	24	0.079	1.154	-1.075
17	Sometimes I've picked certain drinks just out of ease really	17	-0.071	1.047	-1.118
25	At a party we all drink together, pass a bottle round. we pu	25	-0.266	1.039	-1.304
15	I only drink shots because they have the highest alcohol con	15	-1.214	0.147	-1.361

**APPENDIX M: FULL PQ METHOD OUTPUT REPORT**

27	It matters to me that I keep up with my friends when we drin	27	-1.826	-0.461	-1.364
9	I drink bottles because they are easier to carry. You can sh	9	-0.489	0.891	-1.380
38	It's always the same routine as soon as we get to town, what	38	-0.102	1.453	-1.555
35	I don't really pay attention to the price to be honest, I ju	35	-1.922	1.121	-3.043

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11 Influences on young people's choice of alcoholic drinks  
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### Factor Q-Sort Values for Each Statement

		Factor Arrays			
No.	Statement	No.	1	2	3
1	I might develop a taste for more sophisticated drinks when I	1	1	-2	-1
2	I trust my mum/dad's judgement - if s/he says a drink is rub	2	0	-3	-4
3	You wouldn't really drink alcopops with your mates because o	3	-3	-2	-3
4	I love alcopops because it's like pop and you can drink it l	4	-2	1	-2
5	I like alcopops but they're too weak. They're not drinks tha	5	-1	1	0
6	I don't drink alcopops. I think it's because of their reputa	6	0	-2	-1
7	Certain drinks are appealing because they are a cheap and qu	7	-3	0	1
8	Sometimes I try things with alcohol that I've seen on TV sho	8	0	-1	1
9	I drink bottles because they are easier to carry. You can sh	9	1	-1	1
10	I don't like straight alcohol because when people drink like	10	3	1	-3
11	I choose certain drinks depending on whether I want to relax	11	3	1	3
12	There are some drinks that I wouldn't buy myself but if some	12	1	3	3
13	I have a preferred brand but to be honest I'm not really bot	13	2	2	2

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

14	If a drink tastes strong, it will put me off drinking it reg	14	0	2	-2
15	I only drink shots because they have the highest alcohol con	15	-3	-3	0
16	when I choose a drink, I want it to be obvious that I'm drin	16	-4	-3	-2
17	Sometimes I've picked certain drinks just out of ease really	17	2	0	2
18	The only reason I try different drinks is to experiment mixi	18	1	2	1
19	I wouldn't drink spirits in the house because when you do yo	19	-2	-2	-3
20	I drink what everyone else is drinking or what's cheapest.	20	0	4	0
21	I'm not really into like the real alcohol scene like knowing	21	1	0	0
22	I'd drink shots in clubs because you can't really take a bee	22	1	2	3
23	when you get a bit drunk it feels a bit more adventurous to	23	-1	3	4
24	If something doesn't get you pissed I just think I've wasted	24	-4	0	2
25	At a party we all drink together, pass a bottle round. We pu	25	2	-1	2
26	It doesn't matter to me what my parents or family drink. My	26	-1	3	-1
27	It matters to me that I keep up with my friends when we drin	27	-2	-4	-1
28	Advertisements don't make me think differently about alcohol	28	4	2	1
29	I do take notice of advertisements but it's mostly the ones	29	-2	1	-2
30	Internet pop ups advertising drinks don't affect me because	30	4	0	-4
31	I've tried alcohol based on advertisements before. They neve	31	-1	-1	0
32	I would say if people are first starting to drink then adver	32	3	-1	0
33	If I went into a shop and there was four different brands of	33	-1	4	-1
34	Putting up the price of drink would totally put me off - you	34	-2	1	-2

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

35	I don't really pay attention to the price to be honest, I ju	35	2	-4	2
36	If the price went up it would change how often I drank a typ	36	0	-1	1
37	If it got more expensive I might drink less but that would h	37	2	0	0
38	It's always the same routine as soon as we get to town, what	38	0	0	4
39	I don't drink alcopops because I don't like the taste.	39	-1	-2	-1

Variance = 4.359 St. Dev. = 2.088

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11 Influences on young people's choice of alcoholic drinks

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Factor Q-Sort Values for Statements sorted by Consensus vs. Disagreement (Variance across normalized Factor Scores)

		Factor Arrays			
No.	Statement	No.	1	2	3
13	I have a preferred brand but to be honest I'm not really bot	13	2	2	2
39	I don't drink alcopops because I don't like the taste.	39	-1	-2	-1
3	You wouldn't really drink alcopops with your mates because o	3	-3	-2	-3
18	The only reason I try different drinks is to experiment mixi	18	1	2	1
21	I'm not really into like the real alcohol scene like knowing	21	1	0	0
12	There are some drinks that I wouldn't buy myself but if some	12	1	3	3
5	I like alcopops but they're too weak. They're not drinks tha	5	-1	1	0
19	I wouldn't drink spirits in the house because when you do yo	19	-2	-2	-3
11	I choose certain drinks depending on whether I want to relax	11	3	1	3
31	I've tried alcohol based on advertisements before. They neve	31	-1	-1	0
36	If the price went up it would change how often I drank a typ	36	0	-1	1
8	Sometimes I try things with alcohol that I've seen on TV sho	8	0	-1	1



## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

22	I'd drink shots in clubs because you can't really take a bee	22	1	2	3
16	When I choose a drink, I want it to be obvious that I'm drin	16	-4	-3	-2
37	If it got more expensive I might drink less but that would h	37	2	0	0
4	I love alcopops because it's like pop and you can drink it l	4	-2	1	-2
17	Sometimes I've picked certain drinks just out of ease really	17	2	0	2
1	I might develop a taste for more sophisticated drinks when I	1	1	-2	-1
29	I do take notice of advertisements but it's mostly the ones	29	-2	1	-2
6	I don't drink alcopops. I think it's because of their reputa	6	0	-2	-1
27	It matters to me that I keep up with my friends when we drin	27	-2	-4	-1
9	I drink bottles because they are easier to carry. You can sh	9	1	-1	1
14	If a drink tastes strong, it will put me off drinking it reg	14	0	2	-2
28	Advertisements don't make me think differently about alcohol	28	4	2	1
25	At a party we all drink together, pass a bottle round. we pu	25	2	-1	2
34	Putting up the price of drink would totally put me off - you	34	-2	1	-2
38	It's always the same routine as soon as we get to town, what	38	0	0	4
32	I would say if people are first starting to drink then adver	32	3	-1	0
26	It doesn't matter to me what my parents or family drink. My	26	-1	3	-1
23	When you get a bit drunk it feels a bit more adventurous to	23	-1	3	4
15	I only drink shots because they have the highest alcohol con	15	-3	-3	0
7	Certain drinks are appealing because they are a cheap and qu	7	-3	0	1
2	I trust my mum/dad's judgement - if s/he says a drink is rub	2	0	-3	-4

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

10	I don't like straight alcohol because when people drink like	10	3	1	-3
20	I drink what everyone else is drinking or what's cheapest.	20	0	4	0
33	If I went into a shop and there was four different brands of	33	-1	4	-1
30	Internet pop ups advertising drinks don't affect me because	30	4	0	-4
24	If something doesn't get you pissed I just think I've wasted	24	-4	0	2
35	I don't really pay attention to the price to be honest, I ju	35	2	-4	2

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11 Influences on young people's choice of alcoholic drinks  
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### Factor Characteristics

	Factors		
	1	2	3
No. of Defining Variables	7	6	8
Average Rel. Coef.	0.800	0.800	0.800
Composite Reliability	0.966	0.960	0.970
S.E. of Factor Scores	0.186	0.200	0.174

Standard Errors for Differences in Normalized Factor Scores

(Diagonal Entries Are S.E. Within Factors)

**APPENDIX M: FULL PQ METHOD OUTPUT REPORT**

Factors	1	2	3
1	0.263	0.273	0.255
2	0.273	0.283	0.265
3	0.255	0.265	0.246

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

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Distinguishing Statements for Factor 1

(P < .05 ; Asterisk (\*) Indicates Significance at P < .01)

Both the Factor Q-Sort Value and the Normalized Score are Shown.

No. Statement	No.	Factors					
		1		2		3	
		RNK	SCORE	RNK	SCORE	RNK	SCORE
28 Advertisements don't make me think differently about alcohol	28	4	1.87*	2	1.01	1	0.38
30 Internet pop ups advertising drinks don't affect me because	30	4	1.47*	0	0.00	-4	-1.78
32 I would say if people are first starting to drink then adver	32	3	1.37*	-1	-0.46	0	-0.02
10 I don't like straight alcohol because when people drink like	10	3	1.18*	1	0.34	-3	-1.54
37 If it got more expensive I might drink less but that would h	37	2	0.94*	0	0.19	0	-0.11
1 I might develop a taste for more sophisticated drinks when I	1	1	0.55*	-2	-0.64	-1	-0.19
2 I trust my mum/dad's judgement - if s/he says a drink is rub	2	0	0.16*	-3	-1.56	-4	-2.44

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

23	When you get a bit drunk it feels a bit more adventurous to	23	-1	-0.17*	3	1.48	4	1.65
5	I like alcopops but they're too weak. They're not drinks tha	5	-1	-0.25	1	0.32	0	0.27
7	Certain drinks are appealing because they are a cheap and qu	7	-3	-1.61*	0	0.08	1	0.33
15	I only drink shots because they have the highest alcohol con	15	-3	-1.83	-3	-1.21	0	0.15
16	When I choose a drink, I want it to be obvious that I'm drin	16	-4	-1.90	-3	-1.21	-2	-0.87
24	If something doesn't get you pissed I just think I've wasted	24	-4	-2.22*	0	0.08	2	1.15

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11 Influences on young people's choice of alcoholic drinks  
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Distinguishing Statements for Factor 2

(P < .05 ; Asterisk (\*) Indicates Significance at P < .01)

Both the Factor Q-Sort Value and the Normalized Score are Shown.

No. Statement	No.	Factors					
		1		2		3	
		RNK	SCORE	RNK	SCORE	RNK	SCORE
20 I drink what everyone else is drinking or what's cheapest.	20	0	-0.07	4	2.39*	0	-0.15
33 If I went into a shop and there was four different brands of	33	-1	-0.52	4	2.01*	-1	-0.69
26 It doesn't matter to me what my parents or family drink. My	26	-1	-0.32	3	1.28*	-1	-0.57
28 Advertisements don't make me think differently about alcohol	28	4	1.87	2	1.01	1	0.38
29 I do take notice of advertisements but it's mostly the ones	29	-2	-0.69	1	0.38*	-2	-0.77
10 I don't like straight alcohol because when people drink like	10	3	1.18	1	0.34*	-3	-1.54
4 I love alcopops because it's like pop and you can drink it	4	-2	-0.70	1	0.27*	-2	-0.72

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

34	Putting up the price of drink would totally put me off - you	34	-2	-1.27	1	0.22*	-2	-1.12
24	If something doesn't get you pissed I just think I've wasted	24	-4	-2.22	0	0.08*	2	1.15
30	Internet pop ups advertising drinks don't affect me because	30	4	1.47	0	0.00*	-4	-1.78
17	Sometimes I've picked certain drinks just out of ease really	17	2	0.71	0	-0.07*	2	1.05
25	At a party we all drink together, pass a bottle round. We pu	25	2	1.06	-1	-0.27*	2	1.04
9	I drink bottles because they are easier to carry. You can sh	9	1	0.52	-1	-0.49*	1	0.89
36	If the price went up it would change how often I drank a typ	36	0	0.26	-1	-0.50*	1	0.33
6	I don't drink alcopops. I think it's because of their reputa	6	0	0.18	-2	-1.08*	-1	-0.24
15	I only drink shots because they have the highest alcohol con	15	-3	-1.83	-3	-1.21	0	0.15
2	I trust my mum/dad's judgement - if s/he says a drink is rub	2	0	0.16	-3	-1.56*	-4	-2.44
27	It matters to me that I keep up with my friends when we drin	27	-2	-0.80	-4	-1.83*	-1	-0.46
35	I don't really pay attention to the price to be honest, I ju	35	2	1.03	-4	-1.92*	2	1.12



## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11 Influences on young people's choice of alcoholic drinks  
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Distinguishing Statements for Factor 3

(P < .05 ; Asterisk (\*) Indicates Significance at P < .01)

Both the Factor Q-Sort Value and the Normalized Score are Shown.

No. Statement	No.	Factors					
		1		2		3	
		RNK	SCORE	RNK	SCORE	RNK	SCORE
38 It's always the same routine as soon as we get to town, what	38	0	0.19	0	-0.10	4	1.45*
22 I'd drink shots in clubs because you can't really take a bee	22	1	0.28	2	0.70	3	1.32
24 If something doesn't get you pissed I just think I've wasted	24	-4	-2.22	0	0.08	2	1.15*
8 Sometimes I try things with alcohol that I've seen on TV sho	8	0	-0.01	-1	-0.40	1	0.54
28 Advertisements don't make me think differently about alcohol	28	4	1.87	2	1.01	1	0.38
15 I only drink shots because they have the highest alcohol con	15	-3	-1.83	-3	-1.21	0	0.15*
14 If a drink tastes strong, it will put me off drinking it reg	14	0	0.05	2	0.57	-2	-0.86*

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

10 I don't like straight alcohol because when people drink like 10	3	1.18	1	0.34	-3	-1.54*
30 Internet pop ups advertising drinks don't affect me because 30	4	1.47	0	0.00	-4	-1.78*
2 I trust my mum/dad's judgement - if s/he says a drink is rub 2	0	0.16	-3	-1.56	-4	-2.44*

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

PQMethod2.11 Influences on young people's choice of alcoholic drinks  
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Consensus Statements -- Those That Do Not Distinguish Between ANY Pair of Factors.

All Listed Statements are Non-Significant at  $P > .01$ , and Those Flagged with an \* are also Non-Significant at  $P > .05$ .

No.	Statement	No.	Factors		
			1 RNK SCORE	2 RNK SCORE	3 RNK SCORE
3*	You wouldn't really drink alcopops with your mates because o	3	-3 -1.41	-2 -1.17	-3 -1.48
5	I like alcopops but they're too weak. They're not drinks tha	5	-1 -0.25	1 0.32	0 0.27
11	I choose certain drinks depending on whether I want to relax	11	3 1.09	1 0.56	3 1.16
12*	There are some drinks that I wouldn't buy myself but if some	12	1 0.68	3 1.14	3 1.17
13*	I have a preferred brand but to be honest I'm not really bot	13	2 1.02	2 1.11	2 0.99
18*	The only reason I try different drinks is to experiment mixi	18	1 0.71	2 1.11	1 0.69
19	I wouldn't drink spirits in the house because when you do yo	19	-2 -0.70	-2 -0.86	-3 -1.32
21*	I'm not really into like the real alcohol scene like knowing	21	1 0.34	0 -0.18	0 0.21
39*	I don't drink alcopops because I don't like the taste.	39	-1 -0.56	-2 -0.87	-1 -0.65

## APPENDIX M: FULL PQ METHOD OUTPUT REPORT

QANALYZE was completet at 09:33:57