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# **Examining the Effects of Alcohol-related Sports Sponsorship on Teen Attitudes and Intentions**

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**A Thesis Submitted in Fulfilment of the Requirements for the Degree of  
Doctor of Philosophy**

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## **ABSTRACT**

In the light of public concern about underage alcohol consumption, and increasing use of sport sponsorship to promote alcohol brands, this research investigates interrelationships between teenagers' drinking intentions, involvement in sport, and responses to sponsorship. A Theory of Reasoned Action – based model is proposed, which predicts alcohol use intentions from attitudes toward alcohol, subjective norms, sporting involvement, and awareness of, knowledge of, and response to sponsorship. Data was gathered from 14-15 year olds in five Cardiff schools.

Results showed significant gender differences, with boys more involved in sport and more knowledgeable about sponsorship. As expected, positive attitudes toward alcohol consumption, and more favourable subjective norms, predicted higher likelihoods of alcohol use. Boys heavily involved in sport were significantly more likely to drink than those less involved, and believed that at age 18 they would drink more, and get drunk more often. Involvement in sport strengthened the influence of positive attitudes toward alcohol. Girls' results were less significant, but suggested that involvement in sport was linked to lower alcohol consumption.

Additional sponsorship-related effects were comparatively small. For boys, awareness and knowledge of sponsorship tended to enhance the effect of sporting involvement, while decreasing the influence of parents and teachers. For girls, there was little evidence of any consistent sponsorship-related effect.

Previous studies have shown normalisation of involvement with alcohol to occur in the mid-teens. This work suggests that for boys, sporting involvement encourages this normalisation, with attention to sponsorship playing a significant but lesser part. Thus legislation restricting sport sponsorship by alcohol brands would have little effect, unless part of a coordinated effort to weaken traditional links between sport and alcohol. Such cultural change would require not only commitment from many parties, but also recognition among the wider community of its desirability.

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Fiona Davies  
Cardiff Business School

22<sup>nd</sup> March 2007

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Background to the thesis**

##### **1.1.1 UK alcohol consumption**

One of the major problems in UK society nowadays is the misuse of alcohol. In most UK cities, weekend nights see young men and women in varying stages of drunkenness spilling out of pubs and clubs and making their raucous, unsteady way through the streets. The consequences of excess alcohol consumption are well documented – for the individual, they may range from hangovers and vomiting, to a disease picked up from a risky sexual encounter that would not have been considered when sober, to liver damage caused by persistent heavy drinking. For society, alcohol-fuelled violence is the major factor filling accident and emergency departments, and alcohol plays a role in 60-70% of cases of domestic violence (Jacobs, 1998). Risky sexual behaviour while alcohol has suspended reasonable judgment leads to increased transmission of diseases, more unplanned pregnancies, and more relationship breakdown. City centres are fast becoming no-go areas at night for those who prefer a more sober lifestyle.

Yet there is little sign of real concern among the majority of the UK population about increased use and abuse of alcohol. The consumption of alcohol is so engrained in the British culture that we seem to turn a blind eye. We consider teenage drunkenness as a rite of passage, we expect Freshers' Week at universities to involve pub crawls, and

student functions or weekend trips to include the consumption of copious amounts of alcohol. We routinely drink to excess on our birthdays, at Christmas parties, weddings and other celebrations, and then spend the next day (after recovering from the hangover) laughing over our own or others' drunken antics. We may use drunkenness as an excuse to mitigate bad behaviour such as harassment or even violence. There appears to be a sense that alcohol itself is not a problem, that we are in control, even when it's clear that we're not. As the Brewers and Licensed Retailers Association (1999) puts it, "The majority of adults consume alcohol in a responsible and adult manner."

Of course this is the view that such organisations would put forward. And society, in general, seems to believe it. Because we don't really believe alcohol is that dangerous, we allow its production to flourish. In fact, due to its high level of taxation, alcohol is a very valuable sector of the economy. The Government treads a fine line between responding to the demands of those pressure groups and medical experts who, from their position on the front line of alcohol-related problems, would like to see more control of the industry, and keeping the alcohol manufacturers and drinkers happy. While publicising "safe" drinking guidelines and running campaigns against drink-driving, they extend the hours during which alcohol may be sold. While making education about alcohol part of the school curriculum, they leave the regulation of its advertising to a voluntary code, and allow unrestricted sponsorship by alcohol companies. And in few places is alcohol sponsorship more prevalent than in the sporting field, where alcohol manufacturers are the third largest contributor (after financial and sports goods companies) to the £4.4 million annual spending on sport sponsorship (Mintel, 2002).

### **1.1.2 Alcohol and sport in the UK**

The relationship between alcohol and sport is longstanding in the UK. It is only relatively recently that alcohol has been recognised as being detrimental to achieving peak performance in most sports, while at amateur levels it is frequently the case that sportspeople will adjourn to the nearest bar for a pint (or several) after competing. Team managers want their teams to bond socially, and in the UK there is nowhere more natural to do this than over a few drinks at the pub. Due to a rise in football hooliganism in the latter part of the 20<sup>th</sup> century, spectators are now banned from taking alcohol to most live sporting events, but the many pubs which offer big screen showings of top football and rugby matches, and other major sporting events, ensure that the spectator drinking culture remains strong.

Alcohol manufacturers, therefore, see sport as a very suitable sponsorship partner. They do not have to labour to make a connection between their product and the sponsored activity – in the minds of the British public, sport and alcohol go together. All they have to do is to select the sport which best fits with their product image and demographic target market – so major beer companies sponsor football, the traditional working man's game; more upmarket beers may go for tennis sponsorship; the spirits companies may look to horseracing, while the new blended spirit based drinks, aimed at the young, sponsor something less mainstream such as surfing or snowboarding.

The money put into sport by alcohol companies, and of course the many other sponsors, has produced several desirable consequences. While sponsorship of major football teams is the most public face, much sponsorship is aimed at grass roots levels of the sport, encouraging participation among young people and amateurs. And in a country

which is increasingly worrying about high levels of obesity and lack of physical activity among its young people, surely any money which enables young people to play more sport is a good thing?

Sponsorship of sport by alcohol companies, therefore, raises some thorny questions. On one hand sport is grateful for the money, and realises that if alcohol sponsorship was restricted or banned, it would probably not be an easy job to replace it (witness the difficulties that sports such as snooker have had in seeking new sponsors to replace the banned tobacco companies (O'Connor, 2003)). On the other hand, when sports coaches wish to promote the benefits of a healthy lifestyle including little or no alcohol, the fact that young people's sporting heroes are competing with the names of alcohol brands emblazoned on their shirts certainly sends a mixed message. The World Health Organisation has called on all Member States of the European Union to "strengthen measures to protect children and adolescents from exposure to alcohol promotion and sponsorship" (World Health Organisation/Europe, 2001); but the UK government, while professing concern over increasing levels of drinking and abuse of alcohol, appears reluctant to antagonise a major source of tax revenue - £8.5 billion in 2004/05 (HM Revenue and Customs, 2005) - certainly not without proof that sponsorship actually contributes to the problems. This thesis seeks to investigate these complex connections between sport, alcohol and sponsorship, and the nature of any contribution that sponsorship may make to alcohol-related problems; the next section sets out the rationale and specific objectives for the work.

## **1.2 Rationale for undertaking this thesis**

### **1.2.1 Extending academic research in the field of sponsorship**

The rapid increase in the use of sponsorship as a method of marketing communications is a relatively recent phenomenon; between 1970 and 2002, UK spending on sponsorship increased twohundred-fold from £4 million to £800 million (Meenaghan, 1991; Mintel, 2002). The first academic articles researching into sponsorship only appeared in the early 1980s. The systematic reviews of the literature carried out by Cornwell and Maignan (1998) and Walliser (2003) revealed a total of 233 studies on sponsorship (up to 2001), of which 102 dealt in some way with sponsorship effects – however Walliser, in summarizing his findings, states that although there is evidence that sponsorship can change the image of a company or brand, the process by which this happens is still unclear. Therefore, there are still gaps in our understanding of sponsorship.

There are two facets distinguishing this study from much previous sponsorship research. Sponsorship is normally undertaken in order to promote a specific brand or company, and thus investigation into its effects has so far taken place at the brand or company level. In the current context, sponsorship is being considered at the product category level, so findings will cast some light on the presence of generic effects (if any) of heavy use of sponsorship in a particular industry. Secondly, there is an increasing recognition that sponsorship should be seen as a part of an integrated marketing communications strategy. However, increasing regulation of alcohol advertising and promotion means that alcohol marketers rely disproportionately on the (currently



unregulated) sponsorship part of their communications package. Industries such as the (junk) food industry are currently facing restrictions on advertising; the findings of this study could throw light on whether sponsorship should be embraced more fully by such industries – or alternatively, whether the government should be considering restricting their sponsorship also.

### **1.2.2 Public policy**

The introductory section has set out the social and cultural background, and has noted the unwillingness by the UK government to act as the World Health Organisation recommend. Neither those who wish to restrict alcohol sponsorship, nor those who are reluctant to do so, have a body of research to back up their position. It is imperative, therefore, that such research is undertaken, and that answers are found to some questions about sport sponsorship by alcohol companies: how does it impact on young people? how does it influence their attitudes and behaviour toward alcohol? how do young people view the alcohol/sport links? are those who are highly involved in sport receiving “healthy living” messages which counteract the influence of alcohol sponsors? If such questions are not investigated, then the government does not have the information to make a reasoned decision regarding alcohol sponsorship of sport. As the UK prepares to host the 2012 Olympic Games, much money is being put into sport in order that our sportspeople will perform at their optimum, and the public will be motivated and inspired by them toward a more healthy lifestyle; if the prevalence of alcohol sponsorship is influencing some young sportspeople and potential medal winners to drink amounts of alcohol that are not compatible with top performance, then the UK will not give its best,

and by not addressing the problems, the government would be lessening its own chances of achieving its ambitions. In the wider context, if it is found that exposure to sport sponsorship is a significant factor affecting drinking behaviour, then the government can carry out an economic comparison between the contribution made by alcohol companies to sport and the cost to society of alcohol-related problems, thus providing a more rational argument for any course of action they undertake.

On the other hand, a future government could decide to ban sport sponsorship by alcohol companies, in response to concern from the medical profession or the World Health Organisation – if alcohol sponsorship actually has little effect on youth drinking, this could leave many sporting teams struggling to find sponsors, without having any effect on teen drinking figures. But if unbiased information is not available regarding external influences on young people's drinking, decisions may be made depending on the relative influences of different pressure groups looking after their own economic interests or preferred public agendas. While there are other areas, most notably music, where alcohol companies can interact with young people through sponsorship, sport is the one area in which encouragement to drink alcohol seems most vividly at odds with the benefits of the sponsored activity, giving mixed messages to young people. Until policy-makers have some insight into how such messages are processed and absorbed into young people's lifestyles, they cannot make reasoned decisions on measures to reduce teenage drinking and drunkenness.

### **1.2.3 Personal factors**

The author of this thesis has spent most of her life taking part in sporting activities at a competitive level. At university, she participated unthinkingly in the sport and alcohol culture which was the norm; from the age of 15, weekend travel to competitions involved heavy drinking on the Saturday night, even prior to Sunday competition – as well as frequent drinking after both training and competition. She is now amazed that she managed to compete at the level she did, and can only attribute it to the fact that most of her rivals were acting in a similar way! She also believes that she has been fortunate in having no long-term effects from the excesses of her youth; some of her contemporaries have not been so fortunate.

It is the author's belief that, in the light of increased knowledge about the effects of alcohol and the benefits of a healthy and active lifestyle, we as a society should strive more diligently to teach and model ways of living a full life which do not involve excessive use of alcohol. We need to challenge outdated thinking which links activities beneficial to our health with others which are detrimental, in order to give young people the chance to achieve their full potential. The tragic ruin of the footballing legend George Best through alcohol abuse is well-known, but he was only one of many talented sportspeople whose careers have been devastated by the "demon drink." The author does not want to see any of the young athletes she knows going the same way, and believes that this research can go some way toward informing public policies that will aid in ensuring this.

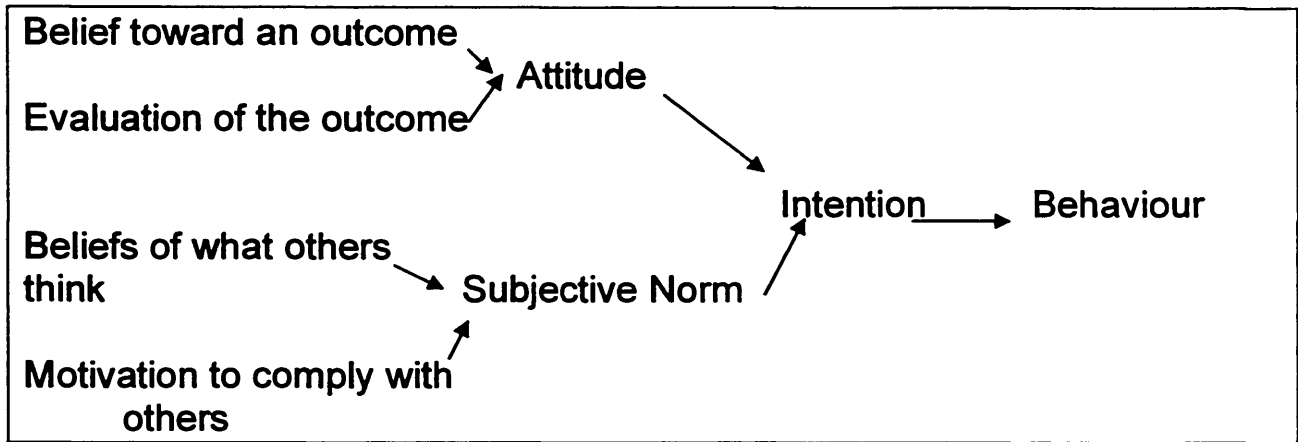
### **1.3 Research objectives**

This thesis, therefore, intends to undertake an initial investigation of the problem, in order to produce answers which can be used as justification to recommend appropriate courses of action to the Government. More formally, the objectives can be stated as:

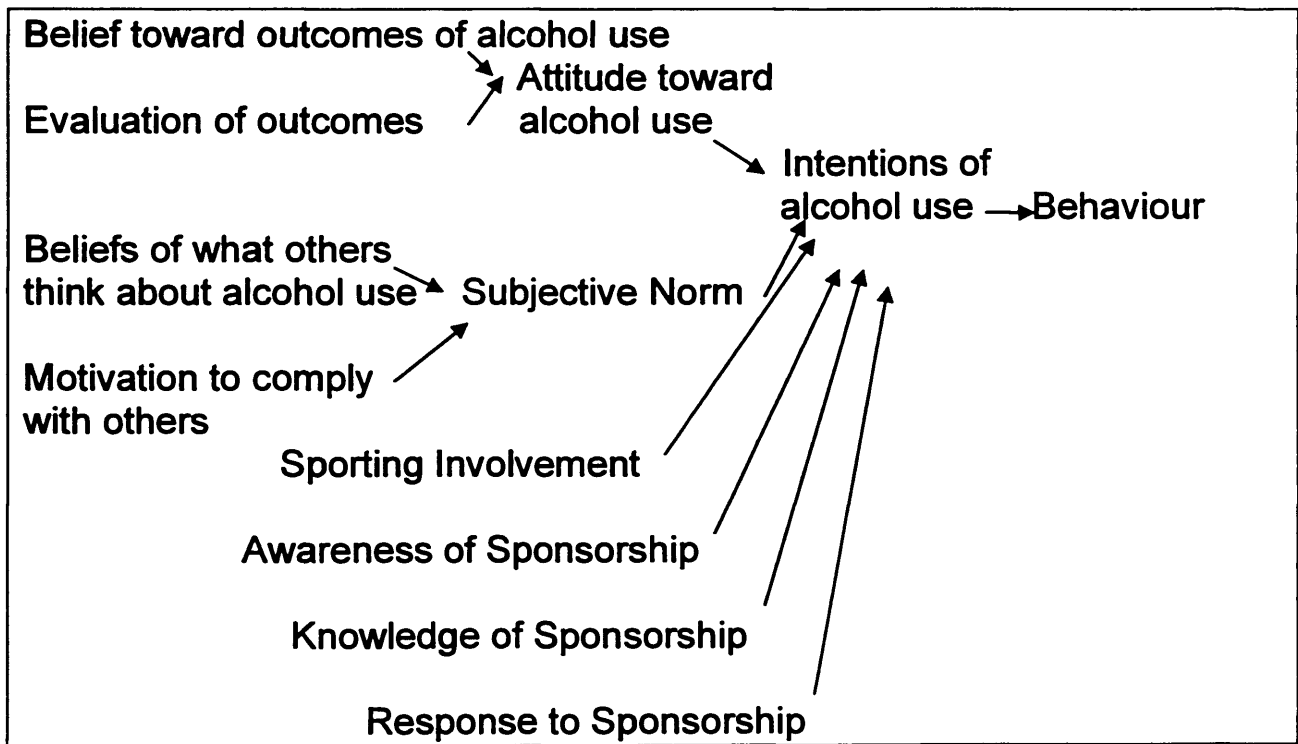
- 1) To explore the issues of alcohol consumption in the UK, with particular reference to young people and links with sport.
- 2) To investigate the rationale for sponsorship of sport by alcohol companies
- 3) To examine the ethical issues related to alcohol marketing through sport
- 4) To investigate empirically the effects of alcohol sponsorship of sport on young people
- 5) To determine whether involvement in sport, and sponsorship awareness, knowledge and responses, play any part in predicting young people's intentions with regard to alcohol consumption; and if so, to examine implications for the Theory of Reasoned Action, which states that intentions can be predicted from attitudes and social norms (*see Figs. 1.1a and 1.1b*).
- 6) To make alcohol policy recommendations consistent with the study findings.

Figure 1.1a shows the basic Theory of Reasoned Action model (Ajzen and Fishbein, 1980) which will form the starting point for analysis. Objective 5 of the thesis is to test an enhanced model (Figure 1.1b) which proposes that involvement in sport and interaction with sponsorship are also instrumental in predicting young people's alcohol-related intentions.

**Fig.1.1a: Theory of Reasoned Action model (Ajzen and Fishbein, 1980)**



**Fig.1.1b: Theory of Reasoned Action model with enhancements**



*Note: interactive effects between predictors of intention will also be tested. Showing all interactive possibilities on the diagram would make it indecipherable.*

#### **1.4 Outline of the thesis**

The thesis thus proceeds, firstly, to examine current UK alcohol legislation and the extent of youth alcohol consumption, followed by a review of research on the reasons for, and consequences of, young people's use of alcohol. It then examines the deep cultural links between alcohol and sport in the UK. The following chapter explains the theories of how sponsorship works, applying them to the sporting field, after which it takes a brief look at some ethical aspects of the problem to ask whether it is the responsibility of alcohol marketers to be concerned about the effects of their activities on young people. A chapter on Ajzen and Fishbein's Theory of Reasoned Action is then included, as this forms the basis for the methodology of the study. After discussing the methodologies employed, the thesis then reports on the study which forms the empirical focus of the work; following initial focus group interviews with students, focus groups were carried out in two Cardiff schools, followed by a questionnaire survey administered in a further six Cardiff schools. Implications are then discussed related to the Theory of Reasoned Action, and a consistent strategy is proposed to address the problems identified. Finally, recommendations are made for further research which could highlight particular problem areas with regard to young people, sport and alcohol.

## **CHAPTER 2**

### **ALCOHOL AND YOUNG PEOPLE**

#### **2.1 Underage drinking in the UK**

##### **2.1.1 The law**

In the UK, the legal minimum age for purchasing alcohol is 18, with the exception that at 16 a young person may buy beer, porter, cider or perry for consumption with a meal. It is also illegal to purchase alcohol in a bar for someone under 18, but in registered clubs, or licensed restaurants where a meal is being consumed, children from the age of 5 upwards may be supplied with alcohol by adults accompanying them. The Licensing Act prohibits an alcohol licence being issued to an establishment whose clientele consists mainly of people under 18 unaccompanied by adults. The introduction in 1995 of “Children’s Certificates” allows licensed premises with such a certificate to admit children to the bar, when accompanied by an adult. If young people are behaving in a disorderly manner in a public place, the Confiscation of Alcohol (Young Persons) Act, 1997, allows police to confiscate alcohol from them (Institute of Alcohol Studies (IAS), 1998).

The message sent by these regulations appears to be in line with the “sensible drinking” policies promoted by the Government (promoting reasonable consumption, increasing awareness of recommended “safe” drinking limits). The sale of alcohol directly to under 18s is strictly controlled, because young people may not be mature enough to drink in a responsible manner. However, there is no suggestion that alcohol is

in itself bad or inappropriate for young people – in clubs and restaurants the decision as to whether a child may drink is up to the parent or guardian. The introduction of Children’s Certificates, and the massive rise in recent years of “family-friendly” pub/restaurant chains such as Brewers’ Fayre, Brewsters, etc., create the impression that alcohol is a normal part of everyday family life.

However, the information given to children in school is less encouraging of alcohol. The National Curriculum (Science) specifies that children between 7 and 11 “must be informed on factors contributing to good health (particularly avoidance of substances such as alcohol)” (Eurocare, 1999). Children between 11 and 14 “must be aware of the risks of alcohol abuse and the effects of alcohol on the organism” (ibid.). Furthermore, a series of Governmental poster and television advertising campaigns have warned of the dangers of driving under the influence of drink, and, more recently, of excess alcohol consumption per se. However, a report on increased drink driving figures over the Christmas/New Year period 2001/02 (Hopkins, 2002) describes the worries of road safety groups that many young motorists nowadays still “have no comprehension of the dangers of alcohol”.

### **2.1.2 Extent of underage drinking**

27% of 11-15 year olds in England, interviewed in a 1996 survey by the Office for National Statistics, had drunk alcohol in the previous week – a rise from 20% in 1992 (Department of Health, 1999). In 1998, however, the survey showed a drop to 22% of boys and 18% of girls – but the mean number of units of alcohol consumed in that week had increased from 9.7 to 11.3 for boys, and from 7.0 to 8.4 for girls. 74% of UK 11-12



year olds have tried alcohol, with the figure rising to 96% for 15 year olds, while it was estimated in 1994 that there were around 90,000 UK schoolchildren whose consumption exceeded recommended adult levels (European Alcohol and Tobacco Seminar, 1997). Balding (1994) found that over 25% of children as young as 7 had consumed alcohol during the 7 days prior to the survey, and by the age of 10 over 60% had done so.

### **2.1.3 Attitudes to underage drinking**

Underage drinking is generally taken, in the UK, to mean drinking before the age of 18, when purchase of alcohol is legally permitted. It is important to remember that alcohol consumption by young people off licensed premises, e.g. in the home, is not a crime. Two broad strands of thinking may be identified regarding attitudes to such consumption – one which regards parental sanctioning of alcohol as wrong, or at best misguided, and likely to increase the chances of the young person developing problems with alcohol in the future, and one which would encourage supervised alcohol consumption in order that the young person can learn sensible drinking habits within a safe environment, which it is hoped will minimise his/her propensity to irresponsible drinking behaviour when older. Literature from the USA tends to take the former stance, while that from Australia tends toward the latter.

In the USA, where a young person has to be 21 before it is legal for them to purchase alcohol in licensed premises, national public health objectives include both to “decrease alcohol use” and “increase age of first use” (Johnson, Myers, Webber, Hunter *et al*, 1995). Studies such as those by Gonzalez (1989), Chou and Pickering (1992) and Grant and Dawson (1997) provide evidence for a positive association between early use

of alcohol and alcohol-related problems in later life. A further justification for attempting to delay first use of alcohol is the “gateway theory” that use of alcohol increases the likelihood of progression to other drugs (see, e.g. Welte and Barnes, 1985; Kandel, Yamaguchi and Chen, 1992). Golub and Johnson (2001) found that young people who had tried alcohol, tobacco or marijuana before age 15 were much more likely to have progressed to marijuana or hard drugs than those who did not try any of these substances until they were at least 17. However, they note different rates of progression when comparing different birth cohorts, who would be growing up with different cultural norms. Thus they caution that a strategy of simply further restricting access to “gateway” substances may be ineffective, unless attempts are made also to understand and influence young people’s cultural norms.

Lynskey, White, Hill, Letcher and Hall (1999), in carrying out analysis of the Australian school students’ (age 12-17) alcohol and drugs survey, also recorded that regular users of cannabis or other illicit drugs were more likely to consume alcohol regularly, or to consume large quantities of alcohol. However, they question the validity of “gateway” theory, in view of the fact that the majority of users of alcohol, tobacco or cannabis do not progress to other drugs, and cite the findings of Lynskey, Fergusson and Horwood (1998), that correlations between alcohol, tobacco and drug use arise from the presence of risk factors which predispose young people to these behaviours. The study by Jonas, Dobson and Brown (2000) on young Australian women identified socio-demographic characteristics (non-married, economically active, and born in an English speaking country) which were correlated with regular or binge-drinking. As the study was a snapshot in time, it is impossible to assess the direction (if any) of causality. A

further Australian study on 11-12 year olds (McBride, Farrington and Midford, 2000) found that even at this age, two thirds of young people consumed alcohol under adult supervision, while 40% of boys and 34% of girls consumed it unsupervised. Quotes from the survey indicated a perception by some young people that moderate consumption was acceptable, as long as one remained within safe limits. However, young people's inexperience and the lack of guidelines for them meant that unplanned over- consumption often occurred. Findings from unpublished focus group research, carried out by two of these authors, indicate the value which young people place on parental guidance, if this is available: "I started drinking with my parents when I was quite young and I know how to drink now and I can control myself" (Farrington and McBride, 1999: quoted in McBride *et al* (2000)). These authors are firmly in favour of alcohol education which focuses on realistic goals of harm minimization and moderate consumption, rather than attempting to prevent any alcohol use by young people.

Two major UK studies have concentrated on the relationship of the family environment to alcohol use among young people. Foxcroft and Lowe (1995) used Maccoby and Martin's (1983) classification of parent-child behaviour in terms of support and control. Families were characterized as warm-directive (high support, high control – regarded as optimal), authoritarian (low support, high control), indulgent (high support, low control) or neglecting (low support, low control), based on young people's own perceptions of behaviour within their family. Young women from families which were not warm-directive were more likely to report drinking more than once a week, and both genders of young people from such families were significantly more likely to say that they usually drank to get "merry" or drunk, than those from warm-directive families.

Young people who drank over the recommended limits for adults were significantly more likely to come from neglecting family environments, or, for females, authoritarian ones. A similar study in Scotland (Shucksmith, Glendinning and Hendry, 1997) allowed for continuous measures of support and control rather than the binary division into high and low, and found that an unsupportive environment along with extremes of control, whether high (authoritarian) or low (neglecting), was associated with greater alcohol use in adolescence. Furthermore, such factors were more important than either family structure or socio-economic status. A Canadian study (Feldman, Harvey, Holowaty and Shortt, 1999) found that parents' own drinking behaviour influenced that of adolescents in the same direction, while Barnes and Welte (1986) showed parental approval to be a significant predictor of alcohol consumption. These studies point to the important role that parental behaviour can play in promoting sensible drinking: they also suggest that drinking is a response to adverse circumstances. Foxcroft and Lowe's (1995) finding that girls, from all family types, were more likely to smoke when they had a problem, rather than drink, indicates the link with cultural aspects of drinking behaviour – certainly at the time of their study, excess drinking was more acceptable in the UK for males than for females.

The most recent study, and the only UK longitudinal one on youth alcohol consumption, is that of Boys, Marsden, Stillwell, Hutchings, Griffiths, and Farrell (2003). They found that at age 15/16, 59% of their sample were drinking once a week, with 33% admitting to drinking 10 units or more during a typical weekend session. When contacted 18 months later, 98% were drinking weekly, but only 18% were drinking as much as 10 units in a weekend session. However, the percentage drinking 5-6 units in

such sessions had increased from 16% to 28%. The number who reported getting into trouble with parents due to drinking decreased from 34% to 9% in the same period, though it was unclear whether this was due to increased parental acceptance of drinking, drinking more moderately or “holding their drink better”. The authors concluded that *“The normalization of involvement with alcohol ... appears to occur rapidly between 15 and 17 years . By 17 years, a fairly adult pattern of behaviour is easily established with easy access to alcohol ... in public situations and acceptance (or reduction of conflict) among many parents of the adolescents’ drinking behaviour. A substantial sub-group reported high levels of alcohol consumption, high levels of intoxication and negative consequences.”* The most commonly mentioned of these were feeling sick or unwell, drinking more than intended, saying something which was later regretted, and having difficulty getting up in the morning. As with many adults, though, such consequences have little effect on these young people’s drinking behaviour. Even the worst of negative consequences may only have a temporary impact: Denscombe (2001) noted that for critical incidents in young people’s lives involving alcohol, in particular, the impact tended to be short-term. A few months after these incidents (such as a friend being in a coma for some weeks due to an accident when drunk), young people were ready to consider taking risks with alcohol again. In Boys *et al*’s study (2003), those few who did not drink (10% at first interview, 6% at final interview) gave their reasons for not doing so as health concerns, unpleasant after effects and expense. These studies give persuasive evidence that by the time young people reach a legal age to buy alcohol, the vast majority are already socialized into the UK’s alcohol culture.

The UK's "alcohol culture" is certainly one of the main barriers for those organisations, such as Alcohol Concern, who wish to promote a hard-line policy on alcohol. Such organisations call for the government to introduce a National Alcohol Strategy, with measures such as increased education, regulation of sponsorship, and a strictly controlled policy on the showing of alcohol use on television, e.g. in soap operas (Curtis, 2000). They point to the amount of money lost to industry due to alcohol-related absences, unemployment and premature death, the impact on the National Health Service of alcohol misuse, and the increase in consumption among women and young people in particular (Alcohol Concern, 2000).

In countering this position, the Brewers and Licensed Retailers Association (BLRA) cite the contribution of the alcohol industry to employment and to tax revenues (£10.3 billion in 1997/98), as well as the industry's part in sponsorship of sport and the arts. They point to studies such as Roche (1997) which question whether the "whole population" approach of trying to reduce per capita alcohol consumption is an effective way to solve the problem of alcohol misuse (BLRA, 1999). As would be expected, they favour educating young people to become sensible drinkers, rather than promoting a message of prevention, though they do not openly endorse underage drinking. Indeed, they have set up the Portman group to encourage sensible drinking and prevent misuse – this group has been instrumental in introducing the "Proof-of-Age" card for young people, and policing the sale of alcopops (e.g. Jardine, 1999). They also support alcohol research and education, and for a long time had a voluntary advertising Code of Practice, which said that advertisements should not:

- Encourage excessive drinking
- Exploit the young or immature
- Be directed at under 18s by use of media, content, style or characters likely to appeal to them
- Show drinking by under 25s
- Show irresponsible drinking
- Suggest that alcohol can enhance mental, physical or sexual capabilities, masculinity, femininity or sporting achievement

*(summarized from IAS, 2000a).*

These regulations were formalized and tightened up in 2004, with the introduction of a National Alcohol Strategy, and are now under the jurisdiction of the Advertising Standards Authority. The main points are as follows (Ofcom, 2004):

- “Advertisements for alcoholic drinks on television must not be likely to appeal strongly to people under 18, in particular by reflecting or being associated with youth culture;
- Advertisements must not link alcohol with sexual activity or success or imply that alcohol can enhance attractiveness;
- Television advertising for alcoholic drinks must not show, imply, or refer to daring, toughness, aggression or unruly, irresponsible or anti-social behaviour;
- Alcoholic drinks must be handled and served responsibly in television advertising.”

However sponsorship remains unregulated.

Dorsett and Dickerson (2004), in a paper commissioned by the drink company Diageo Great Britain, set out to examine links between alcohol advertising and alcohol consumption. Through building detailed econometric models of alcohol consumption and its correlates for the 18-24 and over 25 age groups, they conclude that the greatest impacts on overall consumption for the 18-24 age group are economic confidence and the trend toward in-home drinking, while for the over 25s seasonality, pricing issues and economic confidence have greatest impact. In neither age group was alcohol advertising, measured either by advertising spend or number of TV impacts, statistically correlated with alcohol consumption. This backs up their literature review, which contends that alcohol advertising acts at the brand or product level, and its presence, absence or extent does not affect total consumption. A similar argument was put forward by tobacco manufacturers some years ago.

Reference back to Boys *et al* (2003), though, prompts criticism of these conclusions. Boys *et al* contend that by the time young people have reached the age of 18, they are already socialized into an adult pattern of drinking. Therefore, it is unsurprising that no effects were found by Dorsett and Dickerson in the age groups they studied. While there are many factors which influence under 18s to start drinking, the mere presence of alcohol advertising, whether appealing or not, reinforces the idea that alcohol is a normal part of UK life – as indeed it is. So we now move on to consider the UK's "alcohol culture".



## **2.2 Alcohol and the UK culture**

There is no doubt that alcohol is a major part of UK culture, as it has been of many cultures from ancient times. The consumption of alcohol (and the tendency to consume it, on occasion, in large quantities) has been recorded from the earliest civilisations (Morris, 1998). The Egyptians brewed wine, while beer dates from the earliest days of cereal agriculture. In the Bible, Genesis 9, 21 speaks of Noah becoming drunk on the fruits of his vineyard (International Bible Society, 1998). Early drinking, in all cultures, was associated with celebrations and festivities, with social gatherings, and its consumption was surrounded by ritual – and such traditions of drinking have survived, in some form, in most societies. In almost every culture, solitary drinking is frowned upon, and places designated for drinking alcohol have, in the main, a sociable and egalitarian environment (Social Issues Research Centre, 2000).

Edwards (2000: 20) quotes the Reverend Sydney Smith as asking, in the 18<sup>th</sup> century, “What two ideas are more inseparable than Beer and Britannia?” The British pub is a symbol of our national culture and traditionally a centre of the community, though through the ages it has been portrayed at both of two extremes: a place of hospitality, relaxation and social interaction, or a place of corruption and debauchery (Edwards, 2000: 27). The viewpoint taken is likely to depend to a great extent on the speaker’s or writer’s attitude toward alcohol itself. On the one hand, consumption of small amounts of alcohol will change the mood of the drinker, in most cases producing pleasurable effects (Edwards, 2000: 8) and enabling them to relax and become more sociable. On the other hand, excess consumption produces less welcome and more unpredictable effects, which may be influenced by cultural expectations, the drinker’s

personality, and the setting and company in which drinking is taking place (Edwards, 2000: 56). Edwards (p47) quotes Thomas Nashe (1567-1601), who identifies several animals whom a drunkard may resemble: the riotous Ape, the violent Lion and the lecherous Goat are easily recognised stereotypes of drunken behaviour. The excuse of excess consumption is often used to absolve oneself or another of responsibility for unacceptable behaviour, or as mitigation – and our culture has traditionally been such that this excuse is often accepted. Drunkenness in the young is often not regarded as a serious misdemeanour, but as a symptom of a “rite of passage”; the prevailing attitude to the Prime Minister’s son being arrested in London for drunkenness was one of indulgence, “boys will be boys” (Toynbee, 2000; Guardian letters, 2000). Young people go out specifically to get drunk, a practice that is not common in most European countries. However, disapproval of drunkenness, particularly from religious authorities, has also been voiced heavily throughout the ages (Edwards, 2000: 30-31).

However, small changes can be observed in recent years in the drinking culture. In particular, increased awareness of the great danger in drinking and driving has led to this practice becoming generally socially unacceptable, at least after more than one or two drinks. Increased medical knowledge of the effect of alcohol on the body has also led to a decrease in its use amongst sportspeople, and it is to this interesting cultural link between alcohol and sport that we now turn.

## **2.3 Alcohol and sport**

### **2.3.1 The historical background**

Collins and Vamplew (2002) have researched in detail the cultural history of the links between sport and alcohol in the UK. They point to the centrality of the pub in sporting life – before the Industrial Revolution, the pub and its grounds were a major setting for sports events of all types, attracting crowds who swelled the landlord's or landlady's profits. The greater work discipline required in an industrial society, together with more restrictive laws passed in the 19<sup>th</sup> century such as those outlawing pub gambling and cockfighting, and the rise of other sports unconnected to pubs, combined to change the sport/pub relationship to a rather more complex one. Landlords saw opportunities to cash in on the rising popularity of football by renting out their fields as football pitches, offering changing and meeting rooms, and even employing footballers to attract custom. Other sports such as bowling, angling, pigeon shooting and quoits were also particularly associated with the pub, with organised pub teams and competitions for which landlords would put up prizes.

Even aside from links with actual sporting teams and activities, the pub and sport share a tradition of masculine culture (Collins and Vamplew, 2002: 24-25). Until the latter years of the twentieth century, the pub was primarily a male domain, with women, if they were there at all, being segregated in a particular area. Men went to the pub to enjoy male company and get away from their womenfolk; attendance at sporting events, too, was primarily male, with women again often being segregated. Talk about sport, which crossed social divides, formed a major part of pub conversation. Participation in a “manly” sport and the drinking of alcohol (beer in particular) were seen as proof of

masculinity and toughness, and a father taking his son to the pub for his first drink was a “rite of initiation” into manhood.

Turning to the brewers of alcohol, their traditional connections with rural sports are evident in such symbols as the red-coated huntsman logo of Joshua Tetley and Son, or the Courage cockerel (Collins and Vamplew, 2002: 40). Members of many brewing families were active sportsmen, and brewers saw the support of sport in their community as part of their social responsibility. The growth in football in the late 19<sup>th</sup> century was heavily financed by brewers who built facilities, provided land, loaned money, and even on occasion founded clubs: Liverpool, for instance, was founded by the brewer John Houlding who owned their Anfield ground (Collins and Vamplew, 2002: 46).

Due to the fact that early sporting activities were almost always centred on a pub, watching sport was inextricably linked with drinking alcohol: this was both a source of attraction for many spectators, and a source of concern for the authorities. The early temperance movement was hostile to sport due to its associations with alcohol. But Collins and Vamplew (2002: 69) point out that there is a natural synergy: both sport and alcohol are associated with release from work, with relaxation and letting go of inhibitions. In the early days of professional sport, alcohol was also much recommended for sportsmen themselves, as an aid to performance. The training regime of Captain Barclay, the famed ultra-distance athlete of the early 19<sup>th</sup> century, included up to three pints of beer a day, though spirits were banned, and even a century later endurance runners and cyclists were still using various types of alcohol as an aid to training and racing (Collins and Vamplew, 2002: 91-92). By the late 19<sup>th</sup> century, brewers had begun to take advantage of these sporting links by connecting their advertising to sport, and this

continued even after the use of alcohol by sportspersons began to decline. One of the most memorable and long-running campaigns was the very successful “Guinness is Good for You”, and the author, in her youth a keen orienteer, can still remember the limerick used in the 1970s to promote it to that particular sport (in Holloway, 1979):

*“You’re well set for orienteering*

*With leg guards and compass for steering*

*So strive for the finish*

*By thinking of Guinness*

*And down one before they’ve stopped cheering!”*

The foregoing discussion, therefore, shows that present day linking of alcohol to sport, through sport sponsorship activities, is nothing new. Since medieval times, alcohol and sport have had a close relationship in the minds and the lives of the majority of people in the UK. Despite the disapproval of the temperance movement and concern regarding excess consumption by sports fans, which has necessitated governmental bans against bringing alcohol into football stadia, there appears to be little questioning of the relationship by the general public. Alcohol manufacturers have not cynically established new links with sport to sell their products, but have capitalised on, and attempted to strengthen, a centuries-old relationship. However, in the light of increased knowledge about the detrimental effects of alcohol, a case could be made for pressure to weaken the sport/alcohol links, in the way that has already happened with tobacco. Thus this thesis now turns to examine present-day thinking regarding alcohol use by sportspersons and spectators.

### 2.3.2 The present

It is now known that alcohol, even in small quantities, has several negative effects which are likely to impair sporting performance. Physically, these include its capacity to impair coordination and motor ability, to induce dehydration, to impair the body's natural temperature regulation, to act as a sedative, to lower the blood sugar level and to reduce endurance. Psychologically, it may act as a depressant, impair judgement, and cause mood swings (Edwards, 2000: 10; Stainback, 1997: 49-63). Were a new drug with such effects to become available today, surely few serious sportspersons would regard it as a useful discovery for them. Most medical coaching advice is that serious athletes should abstain from alcohol, or at least consume only minimal amounts (see e.g. Berning, 1996).

However, the perceived benefits of alcohol and its cultural associations mean that it is still widely consumed by professional sportspeople. Again, there are both physical and psychological reasons. Participants in sports such as darts and snooker, where a steady and careful aim is important, may drink regular small amounts of alcohol during competition for its effect of reducing heart rate (Collins and Vamplew, 2002: 97). Alcohol may be used by individual athletes to aid relaxation and relieve stress – and for many top professional sportspeople whose reputation and livelihood depends on sporting success, stress and anxiety regarding levels of fitness, competitive performance, renewal of contracts, etc. may well be ever-present. In a team situation, alcohol may be used as an aid to bonding a collection of individuals into a team who work together, and thus its use may even be encouraged by team management, at appropriate times. Collins and Vamplew (2002: 96) provide examples from both football and cricket.

Moderate drinking, however, may in time lead to excess. The reasons why some people appear to be able to control their drinking and keep within reasonable levels, while others frequently drink to excess and even slide into alcoholism, are many and interlinked – physical, psychological, situational and cultural factors are all frequently involved. There are many high-profile cases of sportspeople, footballers in particular, who have had problems with alcohol – from the saga of George Best, who died at 59 after a lifelong battle with drink, to Arsenal and England’s Tony Adams, who has admitted and tackled his alcoholism (Ridley, 1998). Collins and Vamplew (2002: 104) cite many lesser known examples from other sports, and state that “few sports seem to have been immune from the abuse of alcohol by participants”. The tabloid press, too, often report on drunken behaviour by well-known sportspersons, usually young and male – often behaviour which is no more than what is culturally expected from that age group, but made noteworthy and disapproved of because of their status. Williams (2000) describes some of the more infamous cases, and the difficulties faced by coaches and others involved with youth football in trying to change the culture.

The sportsperson who participates mainly as a social pursuit has less reason to worry about the detrimental effects of small amounts of alcohol. Thus local football teams may still have their base at the pub, returning after their match to change and drink beer together. Golf and rugby clubs have a thriving alcohol trade. Several road running events start and finish at local pubs, and may offer alcohol as prizes. The evening after a Lake District fell race will find many of the competitors drinking together in a nearby hostelry. Reilly (1996) cites rugby, squash and water polo in particular as sports where the social norm is drinking after training and matches. In television coverage of the

British Universities Snowboarding Championships (2005), some interviews gave the impression that the event was as much about a weekend of drinking and socializing as about the actual competition.

As has been discussed, alcohol has throughout British sporting history been seen as a fitting accompaniment to watching sporting activity. Although concerns regarding the behaviour of drunken fans have been noted on occasion, it was only in the latter half of the 20<sup>th</sup> century that serious debate began about the influence of alcohol on spectators and their behaviour. A major reason for this concern was the increase in violence and hooliganism in British society, which was often associated with football. It should be noted, however, that the connection made in the UK between football violence and alcohol is not common to all cultures. Marsh and Fox (1992) surveyed young people in UK, the Netherlands, Italy, Spain and France and found that, while the Dutch culture showed marked similarities to the UK, the others did not. In Italy, both drinking and football violence were commonplace – but interviewees perceived no link between them. One informant, regularly involved in football disorder and fights with rival supporters, stated, “When we go to fight we do not drink – we want a clear mind”. Indeed, the Department of the Environment (1984) investigation into football spectator violence found evidence of the same attitude among some of the organised fighting groups of UK supporters. Marsh, Fox, Carnibella, McCann and Marsh (1999) also cite the example of the Danish “Roligans” – fanatical football supporters who consume vast amounts of alcohol but only become more companionable and cheerful with it. Collins and Vamplew (2002) suggest that alcohol may have been seen as a “convenient scapegoat” for the rising problems of violence, one against which it was relatively easy to legislate.



In 1980, it was made illegal in Scotland to sell or possess alcohol at a football ground or on a public vehicle going to or from a match, or to be drunk while attending a match, and in 1985 the rest of the UK followed suit with similar legislation. Clubs were, however, allowed to sell alcohol during a game if they had obtained a magistrate's order. Collins and Vamplew (2002) point out the hypocrisy involved in these measures: no restrictions were imposed on any other sports, even those such as darts where very high levels of spectator drinking (but no violence) are common, and the growth of corporate hospitality, leading to increased drinking at sporting events by the middle and upper classes, went unchecked. These authors suggest that, along with other restrictive measure imposed by the Conservative Government of that time, this Act was deliberately targeted at sections of the working class identified as "the enemy within". But, despite such restrictions on drinking associated with live football, alcohol is still drunk by many spectators attending other sports, and bars and hospitality tents are common at most major events.

A further consideration is the massive rise in televised sport. Pubs and clubs have not been slow to seize the opportunities offered here, by installing a big screen television and providing a sociable atmosphere in which supporters can watch their team, along with like-minded others (Eastman and Land, 1997). During events such as the 2002 World Cup in Japan and Korea, many pubs open early in the morning to allow fans to watch the first match of the day, which was around 8am UK time for the World Cup. It can be seen, therefore, that alcohol is still seen as a highly appropriate accompaniment to the viewing of sport, by large numbers of fans.

### **2.3.3 Industry changes**

One other factor which should be mentioned is the massive restructuring of the alcohol industry in the 20<sup>th</sup> century. In the 1960s a series of mergers and acquisitions throughout the brewing industry led to the situation in 1967 that the top five brewers (Whitbread, Bass, Allied Breweries, Carlsberg, Courage) owned 63% of the industry's assets (Gourvish and Wilson, 1994: 448). The process continued in the 1970s as brewers merged with other food and leisure businesses to form massive conglomerates, which led to the rebranding of many pubs as leisure facilities offering meals and entertainment as well as drink. With the rise of feminism, increasing numbers of women began to visit the pub, and pubs which were "traditionally" targeted at a predominantly male clientele were seen as restricting the target market. Some pub chains were designed to appeal to families also, providing children's play facilities and special meals and events.

This consolidation of the industry meant that no longer was the support of sport by major brewers something that was done on a local scale, as a show of solidarity with the community, but a more hard-nosed corporate marketing decision, with selection of sport for sponsorship being based on the opportunities offered to increase awareness of company and brand, and to associate them with the desired image. New regulations on advertising content prohibited the attribution of health-giving properties to alcohol, but sport could be used to provide a link to health and fitness. But it was not only the brewers who undertook sport sponsorship; while they were sponsoring mainly the mass spectator sports such as football, rugby and darts, wine and spirit companies also sponsored sports such as golf, cricket and motor racing. Not only was the health and fitness image desired; manufacturers also wished to promote an image appropriate to the

positioning of their brand in terms of target markets (Collins and Vamplew, 2002: 59). Thus, for instance, the Scottish brewer Tennents sponsored Scotland's national football team, promoting both a masculine, sporting image and a patriotic one, while Martini positioned itself further upmarket with its sponsorship of golf tournaments and Formula 1 teams.

Sponsorship activity in general has been a major growth area from the 1960s to the present day, and the alcohol industry has been one of the largest investors in sponsorship, while sport is, in the UK, the most heavily sponsored area. In the UK, the sponsorship market grew from £4 million in 1970, to £35 million in 1980, £281 million in 1990, and an estimated £800 million in 2002 (Meenaghan, 1991; Mintel, 2002). In 1997, Sponsorship Research International estimated that 61% of sponsorship expenditure was invested in sport, and in 2000 and 2001 sponsorship expenditure on sport topped £400 million (Mintel, 2002). The alcohol industry is currently the third largest user of sports sponsorship, behind financial services and sports goods, with 66 alcohol brands associated with sport (Mintel, 2002). Football/beer links have the highest profile: Carling, who sponsored the FA Premiership until 2001, proudly claim that "Carling and football are becoming increasingly synonymous", with 39% spontaneous awareness of the sponsorship (<http://www.bass-brewers.com/brands/carling.asp>), while Carlsberg, sponsors of Liverpool FC and Hibernian FC, and various competitions including EURO2000, refer to Carlsberg and football as "a natural partnership: two global brands with a mass appeal that bring pleasure to millions" (<http://www.carlsberg.com/info/company/news/companynews/20000609.html>). In Scotland, Tennents continues its sponsorship of the Scottish Cup, consolidating its

desired image in the minds of its major target market: “Recent research showed that 91% of 18-34-year-old men agreed that Tennent’s Lager is “a brand in touch with Scottish football supporters”” (<http://www-bass-brewers.com/brands/tennants.asp>). Other sports benefiting from alcohol sponsorship in the UK include rugby (Worthington Cup, Tetley – sponsors of Rugby SuperLeague), tennis (Stella Artois, Heineken), motor racing, cricket, golf, darts, horse racing (Martell Cognac) – in fact it is hard to find any mainstream sport where alcohol sponsorship is not present at some level.

#### **2.3.4 Implications for young people**

In conclusion, therefore, it can be seen that the association between sport and alcohol has been prominent in the UK throughout much of recorded history. Increased knowledge about alcohol’s negative effects has been seen to have some impact on professional sportspersons, but relatively little on spectators and those who participate in sport as a social activity. The alcohol industry has capitalized on the sport-alcohol link as a way of both associating its products with health and fitness, which it cannot do directly, and promoting a desirable brand image appropriate to the brand. Meenaghan and Shipley (1999) state of sport sponsorship in general that the values transferred to the sponsoring brand are “healthy, young, energetic, fast, vibrant, (and) masculine”. The alcohol industry is a major investor in sport sponsorship and there are few sports where an alcohol link is not present. What implications, then, does this have for young people, i.e. those below 18, the legal age for unsupervised consumption of alcohol?

According to Mintel (2002), the 5 most popular spectator sports for young people aged 15-24 are football, motor racing, athletics, boxing and snooker. Of these, football,

with a well developed system of leagues covering all areas of the UK, and televised football shown all year round, offers the greatest number of opportunities to spectate, and therefore it is not surprising that it is the most heavily sponsored sport. As previously mentioned, it also attracts mainly beer and lager sponsorship, rather than sponsorship from wine and spirit brands; and most underage male drinkers choose beer or lager (Boys *et al*, 2003), with spirits, possibly for cost reasons, being much less popular. Although football is watched by all ages, and by an increasing number of women, it is 18-34 year old males who comprise the largest adult demographic segment of football spectators. This is also a vital market sector for the beer industry, and one which has traditionally been hard to reach with direct advertising (Meerabeau, Gillett, Kennedy, Adeoba, Byass and Tabi, 1991; Cowlett, 2000) – so football sponsorship by beer and lager brands will be very successful in reaching key target markets. However, it will also reach the large numbers of 15-18 year olds, and even younger people, who make up a large part of the football audience, whether live or on television.

Consideration of some other football sponsors and ex-sponsors such as Sega, Walkers' Crisps, and Chupa Chups (lollipops) indicates that football sponsorship is certainly seen as a route to reach teenagers and even younger children. Even though under age supporters cannot legally buy alcohol, they will see the sponsoring brand name on shirts, perimeter advertising, programmes, etc, and may even buy replica team shirts emblazoned with the name of an alcohol brand. Liverpool FC even sell a babysuit in team colours, bearing the Carlsberg name. In addition, while the websites of some beer companies, such as Bass, are purely factual and informative, others link in with sporting sponsorships. The Carlsberg website, for instance, has a page called "Football Factory",

where Carlsberg's sponsorships at international, national and grass roots levels (Carlsberg Pub Cup) are described. Monthly promotions are run, with prizes such as signed football shirts, and there is a "football manager" game and a link to the online shop. Other brands heavily involved with football are Carling (Coors) and Budweiser. In football, then, there are certainly many opportunities for young people to become familiar with alcohol brand names through sponsorship.

The next most popular sport for the 15-24 age-group, motor racing, attracts many sponsors for each team, and among them are Budweiser, which in 2004 signed a 5-year deal with the BMW Williams team, and Grant's Scotch Whisky, a sponsor of the Jaguar team. As alcohol and driving do not mix, these sponsorships may seem rather incongruous. It will be interesting to note the level of awareness gained by Budweiser, due to the difficulty of differentiating one particular brand among the many whose logos are emblazoned on a Formula 1 car. Track and field athletics is free from alcohol sponsorship, but one alcohol company has seen an opportunity in the increasing concern about diet and combating obesity – the low carbohydrate beer, Michelob Ultra, is now official beer for the Flora London Marathon, and sponsors the two top British triathletes Michelle Dillon and Stuart Hayes.

Two other sports in which 15-24 year olds have relatively high levels of interest are rugby (union and league) and tennis. The latter is the only sport where women register as high a level of interest as men, and has an alcohol sponsor in Stella Artois (Interbrew), which lends its name to an annual high profile tournament. Rugby, a game long associated with hard drinking men, unsurprisingly has several associations with beer brands such as Heineken, Carlsberg-Tetley, Bass, Guinness (Diageo) – and even an

**official champagne (Bollinger) of the English Rugby Union.**

**In order to investigate the likely effects of exposure to alcohol brand names, in association with sport, we must now examine the communication process relating to sponsorship, and the psychological processes at work in the brain when dealing with associations between sport and sponsor. This is the topic of the next chapter.**

## **CHAPTER 3**

### **HOW SPONSORSHIP WORKS**

#### **3.1 Introduction**

The previous chapter has examined the regulatory and social climate in the UK surrounding the use of alcohol by young people, and the history of alcohol/sport relationships in UK, where a recent phenomenon is the rapidly increasing involvement of alcohol manufacturers in the sponsorship of sport. This chapter goes on to examine the possible implications of this corporate involvement on young people's attitudes to alcohol, by considering the objectives of sponsorship and the processes which need to take place in the consumer's mind for such objectives to be achieved.

#### **3.2 Sponsorship**

##### **3.2.1 Definition and objectives**

Sponsorship has long been understood to refer to an arrangement whereby an individual, company or organisation provides resources (money, equipment, people) to an event, individual, or organisation (team, charity, etc). Sponsorship may on occasion be purely philanthropic, but in today's commercial world the vast majority of sponsoring arrangements are undertaken with a view to leveraging the sponsorship in order to provide benefits for the sponsor as well as for the sponsee. Certainly this is the case in the alcohol industry/sport sponsorship relationships that are the focus of this work, and so an appropriate definition to use of sponsorship is that developed by Lee, Sandler and Shani (1997):



*“The provision of resources (e.g. money, people, equipment) by an organization directly to an event, cause or activity in exchange for a direct association (link) to the event, cause or activity. The providing organization can then engage in sponsorship-linked marketing to achieve either their corporate, marketing or media objectives”.*

Pope (1998), in considering these three categories of objectives, observed that the third, media objectives, was now “largely discounted by both theoreticians and practitioners”. This echoed the findings of Lee, Sandler and Shani (1997), who looked at several empirical studies (Gardner and Schuman, 1987; Witcher, Craigen, Culligan and Harvey, 1991; Shanklin and Kuzma, 1992; Scott and Suchard, 1992). Cornwall and Maignan (1998) divide sponsorship objectives into the broad categories of enhancing image, increasing awareness and increasing sales. Pope (1998), however, also pointed to the difficulties of measuring any direct impact of sponsorship activity on sales, and therefore both academic research and marketers’ assessment of sponsorship effectiveness, now tends to focus on the two objectives of enhancing corporate or brand image, and increasing brand awareness. In order to discover how sponsorship aids in achieving these objectives, it is necessary to examine how sponsorship works in the mind of the consumer.

### **3.2.2 How sponsorship works**

To enhance brand or corporate image, sponsorship relies on the association of the brand being promoted with an activity, individual, team or event toward which the target market already has a favourable attitude, in an expectation that this favourable attitude will be extended to the associated brand. Keller (1993) explained consumer processing of brand-related information by stating that for each brand we have a

“brand-node” in memory, with a raft of associations which enable us to recall that brand in specific situations. Primary associations would relate directly to the brand, e.g. its product category, name, brand logo, etc., while secondary associations are those that are derived from the brand’s association with other related entities. For instance, these may arise from the brand’s relationship with the company, the country of origin, distribution channels, celebrity spokespersons or endorsers, or events; it is the last two categories which are most relevant to sponsorship. Quester and Farrelly (1998), for example, suggest that sponsorship attempts to link the brand image and usage situation to favourable memories of a particular event. The characteristics transferred to the brand from these associations may be global, e.g. reliability, attractiveness, or more specific to the product category (Keller, 1993), e.g. the association of a contemporary girl band such as Sugababes with a fashion range would signal its positioning as a range for the trendy young girl and teenager.

Different explanations have been put forward for the exact mechanisms by which such associations are transferred through sponsorship (Cornwell, Weeks and Roy, 2005). Evidence has been found for mere exposure effects (Zajonc, 1968, 1980), where the repeated exposure to the sponsor’s name or logo produces a preference for the brand without consumers being consciously aware of forming such a preference. It is known (Atkinson, Atkinson, Smith, Bem and Nolen-Hoeksema, 2000) that our perceptual system partially processes stimuli to which we are exposed but to which we are not attending, whether these are visual or auditory, but the nature of this partial processing is not yet fully understood. However, Shapiro, Macinnis and Heckler (1997) found support for an incidental exposure effect, where brands featured in an advertisement which individuals had seen but could not recollect, were nevertheless more likely to feature in the subjects’ consideration sets for that

particular product category. Bennett (1999) found that football fans leaving a ground, when asked to name brands in a particular category, were significantly more likely to mention sponsoring brands whose signage they had been exposed to, even when they did not consciously recall having seen the signage. Both these studies covered only a short time frame, thus it is not clear for how long such effects would last; however they could be reinforced by regular exposure to the brand stimuli, either in the sponsorship situation (e.g. football fans who attend their team's games every week) or through other forms of advertising and promotion.

Petty, Cacioppo and Schumann (1983) distinguished between central route and peripheral route processing of information. The former is used in high-involvement situations where in-depth consideration is given to brand choice, and relies on rational argument as the basis for development or change of attitudes toward a brand.

Peripheral processing, on the other hand, refers to low-involvement situations where little deliberation takes place before a choice is made; this would typically relate to situations where making a sub-optimal brand choice would not have major negative consequences in terms of financial cost, inconvenience, loss of status, or other considerations. Petty *et al* found that in such situations, consumers were more likely to be influenced by peripheral cues such as celebrity endorsement. Sponsorship does not provide any factual information about the brand, thus cannot contribute to any rational argument about its qualities or superiority; it is a peripheral association similar to celebrity endorsement. This study would indicate therefore that sponsorship information is processed in a limited fashion when making low-involvement decisions, and so is more effective when used by products and services for which the purchase decision would be of this type (e.g. food and drink rather than cars and holidays). This theory is supported by the findings of Davies (2002), some

of whose focus group participants reported that they would not use sponsorship associations as a major decision-making factor, but that these might be relevant in deciding between brands which they perceived as being of similar quality or appropriateness.

Other authors (e.g. Shimp, 1991; Speed and Thompson, 2000) propose that sponsorship effects occur through the psychological phenomenon known as classical conditioning, which implies that the attitudinal response to the sponsor becomes automatic. Classical conditioning is defined in Atkinson *et al* (2000: 236) as “*a learning process in which a previously neutral stimulus becomes associated with another stimulus through repeated pairing with that stimulus*”. The earliest experiments in this field were carried out by the Russian physiologist Ivan Pavlov. He placed a dog, attached to a device which measured its flow of saliva, in front of a pan to which food could be delivered automatically. A researcher would then either shine a light, or ring a bell, and a few seconds later the food would arrive. The dog, being hungry, would salivate when it saw the food. However, after repeated trials, the dog began to salivate as soon as it saw the light, or heard the bell, having learned to associate this with the approach of food. Here, the food is known as the *unconditioned stimulus*, and salivation at the approach of food as the *unconditioned response* – an automatic response where no learning is involved. Salivation at the sight of the light or sound of the bell, however, is a *conditioned response* to a *conditioned stimulus*: the dog has learned to associate these particular stimuli with food (Atkinson *et al*, 2000, 236).

In the use of classical conditioning in evoking favourable attitudes toward a brand, that brand becomes the conditioned stimulus, and the conditioned response that is desired is a positive attitude toward, or evaluation of, the brand. The unconditioned

stimulus is another entity to which the consumer already has a positive attitude (unconditioned response). The link of this entity to the brand is used to produce “secondary associations” for the brand: it is hoped that consumers will infer that the brand shares characteristics of that entity. As Grossman and Till (1998) found evidence that classically conditioned brand attitudes are long-lasting, effective conditioning should result in a strong and enduring brand image in the consumer’s mind.

Another view is put forward by Dean (1999), who believed that Balance Theory (Heider 1958) would lead consumers to seek consistency in the images they had of sponsor and sponsee, so that if a sponsor to which they were negative or indifferent supported a team or cause they felt positively about, their image of the sponsor would become more positive. In turn, this would generate the perception that the sponsor’s products or services were superior; an instance of the “Halo Effect” (Dion and Berscheid, 1972). Dean tested the validity of his theory through research on Olympic sponsors, and found that sponsorship had a positive effect on perceptions of corporate citizenship, but none on product variables. This, he believed, may have been due to non-interpretation of links between the sponsored event and the product, and therefore he stressed the importance of advertising in making such links. It is, of course, also possible that this can work in reverse – consumers who particularly dislike a sponsoring company may seek balance by changing their attitude to the sponsored property, and thinking less of it for being involved in the sponsorship deal.

Whichever theory is accepted, though, the desired effect is to create, through association, a more positive image of the sponsor or sponsoring brand. The next section considers the factors which influence how effectively such an image is created.

### **3.3 Effects of sponsorship**

#### **3.3.1 Consumer response**

Speed and Thompson (2000) extended classical conditioning research in advertising into the field of event sponsorship. Drawing on work by Mitchell and Olsen (1981), Shimp (1981, 1991), Stuart, Shimp and Engle (1987) and Mitchell, Kahn and Knasko (1995), they observed that the size of the conditioned response was likely to depend on consumers' attitudes to the unconditioned stimulus (sponsored event), consumers' prior attitudes to the conditioned stimulus (the sponsoring brand or company), and their perception of congruence or synergy between event and sponsor. Their experiment, where participants were asked their opinions on sporting events, companies, and potential sponsorships of the events by these companies, confirmed that there was a more positive response to sponsorship where a fit was observed between event and sponsor, and that this response was even more positive when consumers were favourably disposed toward the event. A perception of sponsor sincerity, and a liking for the sponsor, also contributed to a more positive response to potential sponsorship. However, there was a negative relationship between perceived ubiquity and response: i.e. a company taking on too many sponsorships, or trying to pair the conditioned stimulus with too many unconditioned stimuli, risks reducing effectiveness of each sponsorship.

Gwinner and Eaton (1999) also found that a similarity between the brand and the sponsored event strengthened the transferral of the sponsored event's image to that of the brand – such similarity could either be functional (e.g. a sports equipment manufacturer sponsoring a sporting event) or image-based (e.g. Stella Artois – “reassuringly expensive” – and the Queen's Club tennis tournament). Kinney and

McDaniel (1996), in contrasting the effectiveness of sponsorship by a fast food company and a credit card company at the Winter Olympics, pointed to the importance of image-based congruency in achieving more favourable affective responses to sponsorship and its associated leveraging activities. This was confirmed in the study carried out by Koo, Quarterman and Flynn (2006) on sponsorship of the College Bowl Championship. Sponsors whose brand was perceived to have a high level of fit with the event were rated as having a better corporate image, and respondents had a more positive attitude toward their brand.

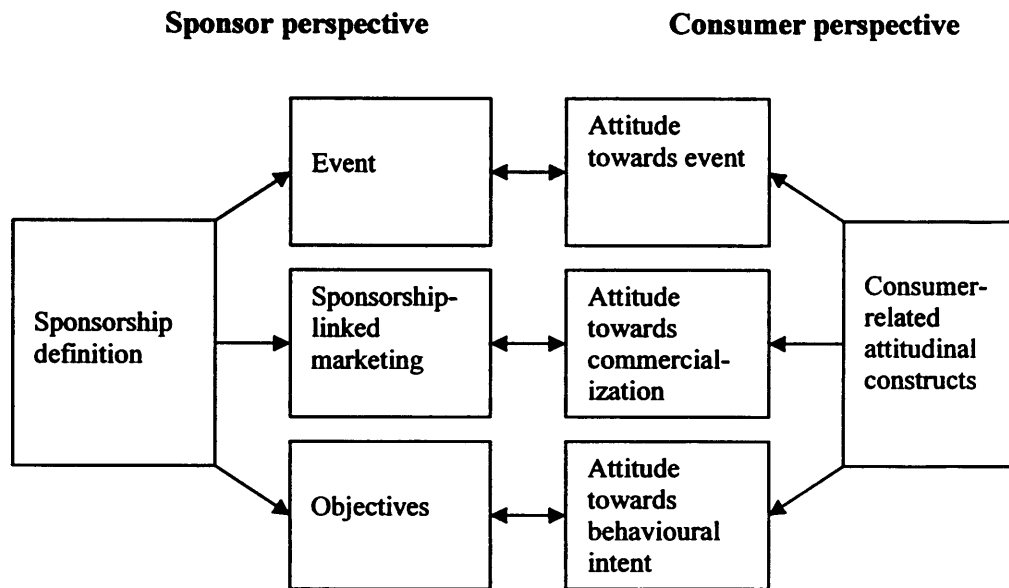
Meenaghan and Shipley (1999) also referred to the concept of “goodwill” toward the sponsor, the extent of which they found to be related both to the type of sponsored activity and consumer perceptions of exploitation by the sponsor. Community-minded individuals were found by Close, Finney, Lacey and Sneath (2006) to be more positively disposed toward an event sponsor. In one of the very few models (Fig. 3.1) put forward in the literature so far, Lee, Sandler and Shani (1997) hypothesised that the effect of event sponsorship on an individual will depend upon:

*their attitude to the sponsored event;*

*their attitude toward commercialisation;*

*and their attitude toward behavioural intent (i.e. does knowing about the sponsorship influence behaviour?).*

**Fig 3.1 Conceptual relationship between sponsorship definition and consumer-related attitudinal constructs (Source: Lee, Sandler and Shani, 1997)**



They successfully tested this model with reference to three global events, though did not discount the possibility that other constructs, e.g. involvement, might also be relevant.

### 3.3.2 Effects of consumer involvement

Other authors have indeed gone beyond attitudinal factors to consider emotional involvement with the sponsored sport or event. Quester and Farrelly (1998), discussing event sponsorship, suggested that sponsorship attempts to link the brand image and usage situation to favourable memories of a particular event, and that sponsorship effects will be more long-lasting if a strong emotional response is generated. While they found that lack of emotional involvement with a sponsored event decreased recall and recognition of sponsors to very low levels, they also questioned whether there might not be a U-shaped relationship – up to a certain level,



emotional involvement with the event or sport would positively affect recall and recognition, but too much involvement could be detrimental to recall. This would accord with the results of Newell, Henderson and Wu (2001) on recall of advertising – their study of viewers of the 2000 Super Bowl suggested that strong emotional reactions actually inhibited recall of advertisers and brands. These studies, however, related to one specific event, rather than emotional involvement with a team. Tapp and Clowes (2002) point out that a large segment of football supporters have an exceedingly high level of involvement with the sport, and Bennett (1999) found sponsor awareness to be higher among committed football supporters, which could be due to greater emotional involvement or continual exposure to the sponsors' name and promotions (or a mixture of both). Roy and Cornwell (2005) found that “experts” – those consumers who had high levels of knowledge about the sponsored sport, the sponsor's product category, or both – had more thoughts about the sponsorship pairing than those who had no such knowledge, which would indicate deeper processing of the links and thus a greater likelihood of the relationship being committed to long-term memory

Lardinoit and Derbaix (2001) investigated the effect of a construct they called “enduring involvement” on sponsor recall and recognition. They defined this as “*a kind of genuine enthusiasm, a strong and solid interest that comes from the relevance of an object or subject for the individual*”. Where this involvement related to a sport, it would lead the individual both to watch more frequently (increasing exposure to the sponsor name) and to be motivated to seek out more information on the sport or their preferred team, leading to deeper processing in memory of such information. Their experimental study, where subjects watched a televised basketball game, confirmed that more involved viewers scored more highly on sponsor recognition, but that the

extent of this was not affected by the type of sponsorship stimulus. They concluded that enduring involvement was a minor factor in terms of sponsorship effectiveness, with its main importance being that it motivated individuals to spend more time watching sports, with consequently more opportunities for exposure to sponsorship activities.

Ferrand (1999), in his study of the sponsorship of the ATP Lyon Tennis Grand Prix event by Perrier, considered consumers' brand buying intentions as well as their involvement with the sport or event. He found that for television viewers, Perrier's brand image was modified post-event whether or not they intended to buy Perrier, but for spectators of the event, the brand image was modified only for those with an intention to purchase. Meenaghan and Shipley(1999) considered particularly the type of brand image transferred by different sponsorships, pointing out that the effect need not be positive. While he found that sport sponsorship in general was associated with the values "healthy, young, energetic, fast, vibrant, (and) masculine", he suggested that snooker or boxing might be associated with "raffishness" or even with "dubious ethics".

### **3.3.3 Awareness of sponsorship**

The foregoing discussion has focused primarily on the sponsorship objective of enhancing brand and/or company image, but has also discussed the other major objective, awareness, in relation to involvement. Awareness would appear to be a necessary precursor to image enhancement – a consumer cannot have an enhanced image of a brand they have never heard of, or, as Cornwell and Maignan (1998) phrase it, using Keller's (1993) terms, a "brand node" needs to be established in the memory before sponsorship effects can be associated with it. Furthermore, Allen and

Janiszewski (1989) pointed to the role of contingency awareness in promoting such associations; in experimental situations, they found no evidence that conditioning occurred without awareness of a correlation between unconditioned stimulus and conditioned stimulus. That implies, in the sponsorship situation, that repeated pairing of the unconditioned and conditioned stimuli (sponsored property and sponsoring brand) may be insufficient if consumers do not explicitly make the connection between them. Keller (1993) stated that the strength of association between the brand and the product category is an important determinant of brand awareness, and that non product related attributes such as price, packaging, user and usage imagery and brand personality, also play a part in increasing brand awareness. In general, congruence between such attributes and the product category would make for better recall and easier linking of additional associations – but sometimes, an unexpected, very inconsistent association could lead the consumer to think more deeply about the brand, thus establishing it and its associations more firmly in memory. The implications for sponsorship would be that, generally, it would be best to sponsor events, teams or individuals with which/whom the sponsoring brand has some natural congruence – but there may be some situations where a very incongruent sponsorship would make consumers think harder, or puzzle over why that sponsorship has been established, leading to greater awareness. It would be important, however, that the link reflected positively on the brand, in order that the ensuing image effects would be positive.

An interesting further question relates to the situation where a “sponsor image node” is established in memory without a product association. Cornwell and Maignan (1998) made the point that sponsorship is “not particularly helpful in building a strong association between the product category and the brand”, and Davies (2002) found

evidence in student focus groups that participants were aware of some sponsor names, such as that of the Welsh rugby team's sponsor Redstone, with no knowledge of what the company did or what product category the brand fell into. Particularly relevant to the alcohol/sport connection, one student stated that when she was younger she knew of Carlsberg as a football sponsor, but did not connect the name with beer. This situation has not yet received attention in the academic literature.

Awareness, in sponsorship terms, may be interpreted either as awareness of the brand in itself, or as awareness of the brand as a sponsor of the chosen sponsored property. A new or lesser-known brand may engage in sponsorship purely to bring its name before members of its target market who have not heard of it before, while an already well-known brand, in seeking to establish awareness of its sponsoring role, will hope to gain the image enhancement effects already discussed. Even the new or lesser-known brand, however, would hope that the creation of its new brand node in consumers' minds would include some positive associations from the chosen sponsorship. Thus awareness and image cannot be seen as totally separate objectives, although one or other may be the major one for any particular sponsorship.

Due to the multi-faceted promotional mix that marketers are likely to employ when launching a new brand, there are obvious difficulties in measuring the contribution of sponsorship in itself to brand awareness. Research has therefore focused on the concept of awareness of the brand or company as a sponsor of its sponsored property. Much academic discussion (e.g. Pope, 1998; Quester and Farrelly, 1998; Johar and Pham, 1999) has taken place on whether the appropriate measure of awareness is recall (can a respondent name the sponsor(s) of a particular event, team, etc.), or recognition (can the respondent recognise the sponsor's name when it is presented to them, e.g. from a list of similar companies or brands?). Pope

(1998) suggested that recognition was more appropriate for low involvement brands, as it mirrored more closely the purchase situation where the product would be chosen from a display of competing brands, while recall was more appropriate for high involvement products where a brand decision, or at least a consideration set, was likely to be formed away from the point of purchase. He concluded that, overall, recall was more suitable as it had been proven to be a better predictor of attitudes.

Johar and Pham (1999) noted that “recognition” by respondents who did not recognise the correct sponsor immediately could involve a degree of strategic thinking, considering both the prominence of the company and the “fit” of the brand to the event. Rossiter and Percy (1997) suggested that the opposite procedure, of giving the company name as a prompt and asking with what event it is associated, would provide a better measure, enhancing the company’s image if respondents could correctly name the event. Quester and Farrelly (1998), however, pointed out that this failed to account for cases where the association was correctly made but thought inappropriate or undesirable, where brand image would not be enhanced. These authors advocated using both recall and recognition measures, as did Lardinoit and Derbaix (2001), who, finding very low levels of unaided recall in an experiment featuring a televised basketball game, concluded that sponsorship was better suited to recognition-related objectives and thus to low involvement products.

A further question arises as to whether sponsorship can have any effect when consumers have been exposed to sponsor names but can neither recall nor recognise them as sponsors. The study by Bennett (1999) indicated that mere exposure effects resulted in sponsoring brand names being the first to be mentioned in their product categories as fans left a football game, even when fans did not recall or recognise these brands as sponsors. In the context of alcohol, this could mean that fans leaving

a sporting event and going directly to the pub or off-licence might be more likely to buy a sponsoring brand (or at least consider buying it), whether or not they recalled the sponsorship – but it is less clear what effect such incidental exposure could have on longer-term purchase behaviour. Due to the multiplicity of situations in which consumers (including young people) are exposed to alcohol brand names, direct measurement of long term effects would be fraught with problems.

### **3.3.4 Sponsorship and sales**

As previously mentioned, it is also difficult for any company to directly measure the effects of sponsorship on sales. Best estimates may be achieved when sponsorship is of a specific event, and when industry data as well as company data is available. Easton and Mackie (1998) quote EURO96 figures which show a 55% increase in supermarket lager sales over the period of the tournament, while Carlsberg-Tetley, EURO96 sponsors, achieved a 56% increase over average sales figures in Week 1 and a 69% increase in Week 2 of the tournament. This would indicate an increased benefit from being the sponsor. During EURO2000, Carlsberg achieved a massive 307% increase in sales (Smith, 2000a).

Tapp (2004) points out that, for many football supporters, loyalty to the club they follow, through thick and thin, becomes part of their social self-image, i.e. the image that they wish others to have of them. Buying club merchandise, branded with the sponsor name, would be one way of strongly projecting this image. This is confirmed by the work of Madrigal (2001), who found that consumers who identified themselves highly with a particular team were significantly more likely to purchase a sponsor's products.

Other studies have looked at intention to purchase – McCarville, Flood and Froats (1998) found that the opportunity to try the sponsor’s product at an event was more effective than other promotions at enhancing perceptions and generating buying intentions, while Nicholls, Roslow and Laskey (1994) also recommended on-site promotion. These studies are of course only relevant where the target audience actually attend a sponsored event, rather than watching on television, and where the product is suitable for sale, and legally allowed to be sold, at the event. Finally, especially relevant to the current study which focuses on teenagers, Miloch and Lambrecht (2006) found that of all age groups attending a regional grassroots sporting event, those under 18 were most likely to buy a sponsor’s products.

#### **3.4 Integrated marketing communications - leveraging of sponsorships**

As the use of sponsorship has increased, so has the realisation by companies that, in order for their sponsorships to be effective, they need to do more than just give their name to an event, or show it on team apparel. Coca-Cola has been credited with the greatest awareness among Olympic sponsors due to its success in running an integrated marketing campaign around its sponsorship (Smith, 2000b), and in recent years sponsorship has become acknowledged as just one part of a company’s integrated marketing communications package. Amis, Slack and Berrett (1999) found a link between sponsorship and overall corporate strategy as being crucial to sponsorship success, the supporting marketing and communication mix being a key factor in establishing long-term advantages of increased brand equity and a non-imitable differential advantage through the strong linkage of sponsor and sponsored property. Miloch and Lambrecht (2006) highlighted the efficacy of tangibles as a part of the promotion package; a sponsor of a grassroots event who provided a special

souvenir and the opportunity to try their product, achieved twice the level of recognition of sponsors who did not carry out additional activities. A recent UK example is Cadbury's sponsorship of the 2002 Manchester Commonwealth Games, where branded light batons in the distinctive Cadbury's purple were given to attendees at the opening ceremony. Even after the batteries had run out and the batons no longer flashed, these could have served as a decorative reminder of an exciting event, while also evoking associations with the sponsor. Companies have many options in choosing how to support their sponsorship; Thwaites, Aguilar-Manjarrez and Kidd (1998) listed a multiplicity of activities which may be used, such as signs and banners, PR, advertising the sponsorship or the event, mainstream advertising, hospitality, point of sale promotion, competitions and direct mail. Copeland, Frisby and McCarville (1996) found sponsorship to be supported most heavily by advertising and PR, then by consumer, trade and sales force promotions. Erdogan and Kitchen (1998) and Crimmins and Horn (1996) pointed to the role of advertising in linking sponsor and sponsored event. Carling, who paid £36m for their 4 year sponsorship of the English FA Premiership, supported this with several football themed TV ads, a football oriented website, and various promotions and competitions (*www.bass-brewers.com/brands/carling.asp*), and Easton and Mackie (1996) noted that all sponsors of the EURO96 football tournament developed extensive marketing programmes in support of their sponsorships, including joint marketing activity. This is an increasing trend as large events become multi-sponsored, e.g. joint promotions around the UK Commonwealth Games (2002) involving the retailer Asda and the products of other sponsoring companies (e.g. Cadbury's chocolate, Cussons' Imperial Leather bath and shower products). Vignali (1997) has proposed a framework (the



MIXMAP-model) for companies to use in determining the optimum tactics for “leveraging” or “activating” sponsorship.

With regard to spending on sponsorship support, Meenaghan (1998) cited an “industry norm” of at least matching the spending on the sponsorship contract with spending on associated activities, though many companies spent a lot more. Carlsberg sets aside 5 to 10 times the sponsorship amount, and their coordinated approach pays dividends in terms of both awareness and sales (Mintel, 2000). Thwaites *et al* (1998) referred to reports of up to 3 times the value of the sponsorship being spent on leveraging; Farrelly, Quester and Burton (1997) quote an estimate from Eisenhart (1988) of a 1: 5 ratio and Gilbert’s (1988) recommendation of a 1:2 ratio. Empirical work, however, by Thwaites (1998) on English rugby club sponsors, and Thwaites and Carruthers (1998) on Canadian sport sponsors, found lower levels of expenditure, with few sponsors spending more than 50% of the cost of their sponsorship. Farrelly *et al* (1997), comparing North American and Australian sport sponsorships, found the North American companies spending an additional 100% - 200% of their sponsorship cost on leveraging, while Australian companies spent 50% - 100%. Anderson and Channon (2001) found widely varying levels of spending among financial services sponsors, though all acknowledged the importance of leveraging.

Farrelly *et al* (1997) believed that the difference in amounts spent could be accounted for by the greater experience of North American companies in sponsorship, and all the above research supports a forecast of increased activity in this area, as sponsoring companies realise its necessity in achieving sponsorship effectiveness. The increased proliferation of sponsorship (Meenaghan 1998; Beattie 2002) will lead companies to strive to differentiate themselves more strongly. In the area under

investigation, it is essential to take account of leveraging activity as well as sponsorships themselves, especially as such activity is often geared to “explaining” the link between sponsor and product and increasing the likelihood of contingency awareness. Thus, while the name of a beer on a team’s football strip, or attached to the name of a tournament, may not in itself mean much to a young person with little knowledge of alcohol, any supporting activity they see may vastly increase their knowledge of the product and assist them in developing the manufacturer’s desired image of it. Masterson (2004) found that television viewers in their late teens / early twenties were more knowledgeable than older adults about sponsorship of television programmes, and paid more attention to the sponsors. She suggests that this is because programme sponsorship is a relatively new phenomenon, and thus it would be reasonable to expect that younger teens would also be knowledgeable and attentive, and take note of sporting broadcasts sponsored by alcohol companies. But even if the media regulations discussed in the previous chapter were totally effective in preventing young people viewing advertising which promoted a favourable image of alcohol products, they cannot be prevented from seeing outdoor advertising, point of sale promotions in supermarkets and pub windows, websites, and alcohol products being consumed by adults in their families or communities. Furthermore, these supporting activities reinforce the cultural links, previously discussed, between sport and alcohol and make it doubly hard for any individual or regulatory body to weaken such links – whether this be a concerned parent, a sports coach, or a governmental department.

### **3.5 Conclusion**

This chapter has described the processes used by sponsors, in particular alcohol companies, and how they impact upon consumers. It is evident that even if alcohol is not promoted directly to those too young to buy it, sponsorship and its associated activities guarantee that few young people can be unaware of alcohol brands. The empirical work to be described in this thesis investigates further the impact upon young people of these activities. But it is also relevant to ask why this situation might give cause for concern. Are there any ethical reasons why alcohol marketers should be concerned that they are promoting a product, directly or indirectly, to young people who cannot legally buy it? Or should they be concerned about the ethics of promoting alcohol at all, considering that it is a product which can be detrimental to health and has a great cost to society? On the other hand, alcohol marketers could be applauded for using sponsorship as a skilful strategic marketing device to sidestep advertising regulations, and get their brand names known by future consumers – it is not their fault if the “future consumers” cannot wait until they are legally old enough to try the product! Thus, before considering the framework for the empirical study, Chapter 4 makes a brief diversion to discuss the ethical viewpoints that have been put forward as regards the rights and obligations of marketers, and alcohol marketers in particular.

## **CHAPTER 4**

### **ETHICS AND ALCOHOL MARKETING**

#### **4.1 Introduction**

The fact that alcohol, when misused, can cause physical and psychological harm, both to drinkers and to those with whom they come into contact, means that issues relating to the marketing of alcohol take on an ethical dimension. This chapter, therefore, traces the emergence of ethical thought in marketing, and examines the divergent views and debates over the ethical responsibility of marketers. It goes on to discuss alcohol specifically, considering how the ethical viewpoints discussed would apply in the case of this potentially harmful product.

#### **4.2 A brief history of marketing ethics**

Looking back to the origins of marketing thinking, long before marketing came to be recognised as an academic discipline, one can see questions being raised as to the moral position that should be taken by marketers (Desmond, 1998). This is a debate which has its origins in an even wider argument, over the extent of corporate social responsibility which should be expected or demanded of companies. This covers not only the marketing of products, but also areas as diverse as manufacturing, treatment of staff, and responsibilities toward the community and the environment. Carroll (1999) gives a comprehensive review of the development of the concept of corporate social responsibility (CSR), and suggests that it covers four domains – economic, legal, ethical, and discretionary or philanthropic.

Turning specifically to marketing, Desmond (1998), accepting Jones' and Monieson's (1990) account of the development of marketing thought, describes two groups of late nineteenth century USA economists: those at Wisconsin University, who believed that

marketers should work closely with the state to regulate the marketplace in the interests of society, and those at Harvard, who believed that, if individuals were given free rein to act in their own self-interest, the mechanisms of the marketplace would ensure the best possible outcomes in terms of morality. As marketing emerged as a discipline in its own right, it was the latter position that came to be accepted in formulating the “marketing concept”, expressed nowadays as “achieving organisational goals depends on determining the needs and wants of target markets and delivering the desired satisfactions more efficiently and effectively than competitors do” (Kotler, Armstrong, Saunders and Wong, 2002: 15). This view relies also on the concept of consumer sovereignty; the consumer is the “ultimate king” in the market (Harris, 1978), able to determine the profitability (or otherwise) of companies by buying (or refusing to buy) their products.

Kotler, Armstrong, Saunders and Wong (2002: 16) go on to say that being “customer-driven” may not be enough; companies may also need to use “customer-driving” marketing, creating products and services to satisfy “latent needs”. “Customer-driving marketing” may be a recently-coined term – however, it is not a recent concept. Galbraith (1958) strongly criticised the emerging discipline of marketing for creating false wants, desires which have only been created because the means of satisfying them is available in the market. For Galbraith, such wants were not needs in the sense that they were not essential to individuals’ physical wellbeing, nor could they be urgent to one’s psychological wellbeing if the want had been “contrived” for one (Galbraith, 1958: 119). An emphasis on production to meet consumer demand, coming from wants which were being created by the marketing activities of the producers, would create an economy which he likened to a squirrel on a water wheel, which, the harder it works to keep abreast of the wheel, the harder it needs to work in the future to maintain its position. The values of such a society would be centred on production and individual ownership, rather than what was best for the community (Harris, 1978).

Such criticisms prompted varying reactions from marketing academics, and the extent to which marketing should take account of the interests of the wider society was a subject of much debate in the 1960s. Weiss (1968) noted the massive growth in US legislation to protect and empower the consumer, stemming from President J F Kennedy's 1962 proclamation of consumer rights to safety, to be informed, to choose, and to be heard. He warned that if marketers did not pay attention to the changing consumer climate, legislation would soon force them to do so. Lazer (1969) called for a recognition of a wider role of marketing - marketing not only sells goods, but influences the very culture of society. He saw the potential of marketing to improve quality of life - not purely in an economic sense, but, when individual material needs are satisfied, to stimulate development of cultural, altruistic, aesthetic and spiritual values. Critics of Lazer, e.g. Feldman (1971) took issue with his unquestioning support for encouraging acquisition of material goods, without consideration of the long term societal consequences, but ignored his belief that for each consumer there will be a "cut-off point" when material needs are satisfied and their attention turns to higher goals. This is indeed a more optimistic outlook than that of Galbraith's (1958) predictions of marketing increasing false wants, so that for most consumers material wants are never satisfied. Thirty years on, taking a global viewpoint, it is hard to believe that we can ever come to a point where more than a small minority of the population reach the fortunate state predicted by Lazer - although the proportion would be higher in more affluent Western societies. Feldman also highlighted the role of increasing medical and scientific knowledge in placing greater responsibilities upon marketers - the marketing of tobacco, for instance, has become progressively less acceptable as more is known about its effects on health.

Bell and Emory (1971) called for a revised marketing concept which placed the concerns of the consumer and society above operational issues. They also noted, however,

that these concerns might conflict - consumers do not always act in the best interest of society, nor, indeed, in their own long-term best interest. Thus, marketing is asked to engage with the types of problems faced by authorities and legislators - striking a balance between an individual's right to choose, and society's right to be protected from any undesirable consequences of that choice. Lavidge (1970) agreed that with greater power, in terms of the impact of marketing on society, comes greater responsibility, and predicted that during the 1970s much more attention would be paid to whether products should be sold at all. He also highlighted the problems of divergent cultures - educated consumers in an affluent economy may have the power and knowledge to make informed choices which are denied to the poor or uneducated.

Kotler (1972) coined the phrase "the societal marketing concept" to emphasise the extension of marketers' responsibilities from consumer satisfaction to include also long term consumer welfare. He contended that the rise of consumerism was an opportunity for business - a chance for forward-thinking companies to gain differential advantages by producing new and reformulated products which addressed consumer concerns, and by adopting a consumer-friendly culture which would create customer goodwill. He also suggested a useful classification of products into four classes, according to their contribution to immediate satisfaction and long term interests (Fig 4.1). Manufacturers should abandon deficient products and concentrate on desirable ones. Salutary products should have some pleasing qualities added, and vice versa. Thus, in the perfect world, we end up with all products being reasonably high in desirability - both satisfying and good for us. There are however problems with such an idealistic view: firstly, who defines what is "good for us" and by what criteria? If, as Kotler implies, the producers should do so (by abandoning deficient products), then this surely restricts consumer sovereignty. Much more recently, Hansen and Schrader (1997) have looked at trends in consumer behaviour over the quarter century since

these discussions took place, and noted the tendencies of consumers to favour ways of short term need satisfaction which may be in the long term detrimental to health and happiness – thus consumers may hold views about products which are “good for them” while actually buying products that they would classify as being “less good”.

Even the concept of “good for you” is problematic if we go beyond the physical properties of the product. Marsh (2001) warns of the dangers in the promotion of “lifestyle correctness” and “healthism”, by a relatively small, middle-class educated elite of scientists and health professionals. Changes suggested “for the good of society” may ignore cultural factors, psychological factors, and the evolutionary desire for a certain level of risk in life.

		Long-term interest	
		<i>High</i>	<i>Low</i>
Immediate satisfaction	<i>High</i>	Desirable products	Pleasing products
	<i>Low</i>	Salutary products	Deficient products

**Fig. 4.1: Kotler’s product classification (Kotler, 1972)**

Takas (1974) observed the lack of impact of such academic discussions upon the practitioner community, due to the overriding primacy of the traditional company and individual objectives - profit making, company survival and growth, keeping one’s job. Though recognising the myopia inherent in this stance, he contended that business could only meet the new challenges posed by the social marketing concept if government and business were to act in partnership in encouraging and developing socially responsible practices. However, by 1988, Abratt and Sacks (1988a) were able to assert that there were “numerous



examples of companies employing the social marketing concept”, many of whom had done so without government incentives.

On the other hand, there are those who follow Friedman’s (1962) functional theory of business and denigrate the whole idea of the societal marketing concept. Chief among these is Gaski (1985), who argued that “for marketers to attempt to serve the best interests of society is not only undemocratic but dangerous as well”. He contended that marketers have neither the expertise nor the mandate from society to judge what is in society’s long term interest, and therefore their duty is to make the maximum profits for their company, while adhering to the rule of law. The argument is countered effectively by Abratt and Sacks (1988b), citing both the long-run benefit to the company, and the minimum moral obligation of all individuals and corporate bodies to avoid causing harm to others - if a company produces a potentially harmful product, they are likely to have the most specialist knowledge regarding the risks, and therefore have a moral duty to inform consumers of them.

To sum up, it can be said that there is now widespread acceptance within the academic marketing community of the societal marketing concept, e.g. Kotler *et al* (2002: 69) in one of the most widely used textbooks advises that “managers must look beyond what is legal and allowable and develop standards based on personal integrity, corporate conscience and long-term consumer welfare”. In marketing practice, the movements of consumerism (“*the protection or promotion of the interests of consumers*” (*Compact Oxford English Dictionary, 2007*) and environmentalism, and increased exposure of, and concern with, unethical business practices, are forcing more and more companies to engage with the societal marketing concept to a greater or lesser extent. However, only the more forward-thinking companies have fully embraced the policy, suggested by Kotler *et al*, of “enlightened marketing” based on “consumer orientation, innovation, value creation, social mission and societal marketing” (Kotler *et al*, 2002: 69).

### 4.3 Implications for practice

So why should companies be persuaded to adopt such an enlightened marketing policy? Robin and Reidenbach (1993) suggested that the prime justification for ethical standards in any area was “protection against misuse of power by others” - this would obviously refer to protection of the consumer from misuse of power by producers and marketers, but also indicates a duty to protect the public from misuse of power by consumers of a product - e.g. the banning of bull bars on vehicles used on normal roads, because of the additional injuries they could cause in an accident with a pedestrian. These authors also suggested that the prime objective of ethics is to allow individuals “to pursue a well-structured and happy life” - “well-structured”, however, is not a concept which would be understood in the same way by every individual, and Robin and Reidenbach correctly pointed out that consideration needs to be given to the setting and to cultural norms. Lafleur, Reidenbach, Robin and Forrest (1996), looking specifically at ethics in advertising, suggested that the assumption of an “unwritten contract” between advertiser and viewer led to greater ethical sensitivity than the use of cultural norms.

Smith (1995) proposed a practical and specific framework, the Consumer Sovereignty Test, for considering ethical decisions regarding the marketing of consumer products and services: this centres around the three criteria of capability, information and choice. These are explained as follows:

*Capability:* marketers should consider whether those in their target market are capable of understanding and weighing up in a rational manner both the promotional message and the benefits and risks of product consumption. A related concept is vulnerability, defined by Ringold (1995) as a diminished capacity for understanding the promotional message, the effects of product consumption, or both. Moore, Williams and Qualls (1996) suggest that such vulnerability may be due to age (both

young and old), income, education, knowledge, or life circumstances.

*Information:* marketers have a duty to disclose all relevant information which a consumer needs (or feels he/she needs) in order to make a rational decision about whether to buy their product. Such information should be freely available.

*Choice:* marketers should not monopolise a market or otherwise unreasonably restrict consumer choice.

It is the first of these criteria that appears most problematic to apply - as Nwachukwu, Vitell, Gilbert and Barnes (1997) point out, the extent of consumer vulnerability is a continuum, and even within a specific target market, individuals may be positioned at widely differing points on the continuum. Furthermore, consumers' vulnerability will vary during their lives – as they become more educated and extend their life experiences, vulnerability is likely to decrease, but it may also increase, for instance at times of emotional crisis, or if their mental faculties deteriorate due to ageing or illness. Even the widespread acceptance of the vulnerability of children to advertising (Smith, 1995; Pollay, 1993) is now a subject for debate, with studies such as Boush, Friestad and Rose (1994) showing that young people are becoming more discerning and sceptical regarding advertising messages. Consideration of adult markets is even more problematic, with the danger that the designation of certain groups of people as vulnerable or less capable may be viewed as paternalistic.

These difficulties appear to have led some authors to adopt extreme positions, particularly on advertising: Lee (1987) believes the only morally sound advertisements to be those for non-harmful products, targeted at those who can respond appropriately, while at the other extreme Emamalizadeh (1985) believes that an advertisement can only be construed as immoral if it employs non-rational persuasion targeted at non-autonomous individuals. But even the harmful/non-harmful product distinction is open to debate; we can ask the question,

“Is the product always harmful (e.g. tobacco) or only potentially harmful - and if potentially harmful, under what circumstances, and to whom?” Cars have a high potential for harm to oneself and to others, if driven recklessly or beyond the individual’s capabilities - but there is little restriction on their marketing. Gaski (1999) asserted that, in practice, consideration of the law and/or the long term self-interest of the company would be sufficient to guide marketers in acting ethically, i.e. that Western society had arrived at a point where either the law or consumer pressure would make unethical marketing behaviour either illegal or counter-productive.

Smith (2001) has strongly challenged this position, believing in the need for marketing managers sometimes to go beyond consideration of law and self-interest. He cites the recall of the product Tylenol by Johnson and Johnson, and the non-profitable development by Merck of the drug Mectizan for river-blindness, as examples of cases where companies have gone beyond what law and self-interest would appear to dictate.

The problem with such examples, as pointed out by Gaski (2001) in his counter-reply, is that the long-term goodwill and favourable consumer attitudes generated by these actions can certainly be seen as being in the long-term interests of the companies, and it is not too far-fetched to assume that the companies could have foreseen this.

A further point made by Smith (2001), however, is the consideration of stakeholders other than customers: the sale of products (e.g. violent computer games) may be permissible by law, there may be a large market for them, and any disagreement with their marketing is likely to come from people who are not and will never be in the target market - however, it could be argued that their marketing should be restricted in the interests of society, due to their undesirable effects upon behaviour. This would be an ethical decision which had its basis neither in the law nor in self-interest. Thus, there are situations in which it is open to marketers to make ethical decisions - but, when such decisions truly go beyond the law or

self-interest, there is little guidance for marketers on the principles they should apply. Robin and Reidenbach (1987) offer: “make and market products you would feel comfortable and safe having your own family use”. But marketers are likely to come from the better educated segments of society, and thus it is likely that their families will also be better educated, both generally, and particularly in consumer matters - is it valid to apply this criterion to a product which may also be marketed to much more vulnerable segments of society?

The foregoing discussion, therefore, shows that, even when marketers accept that they have some form of social responsibility regarding the marketing of their product, the decisions they have to make may not be easy or clear cut. Their dilemmas are greater when the product they market is potentially harmful, such as alcohol. Alcohol manufacturers have no problem with the notion that they have some kind of social responsibility (BLRA, 1999); however, the nature and extent of that responsibility is the subject of heated debate between the industry on one hand and pressure groups such as Alcohol Concern on the other, with the UK Government at present sitting on the fence between them. The next section will consider the issues relevant to alcohol marketing.

#### **4.4 Alcohol marketing – the ethical issues**

##### **4.4.1 How harmful is alcohol?**

Although some studies referred to by Edwards (2000: pp 183-185) indicate that even the smallest amount of alcohol has a detrimental effect on health, most consumers would consider that drinking one glass of beer or wine (as long as one was not driving) was not harmful. The UK Government has set guidelines of sensible weekly drinking limits of 21 units for women and 28 units for men, where a unit is a glass of wine or half a pint of beer. The degree of potential harm, to self and others, rises dramatically with excess consumption,

mixing alcohol with other drugs, driving, etc. Drinking in pregnancy may harm the foetus, though there is debate about the level of drinking at which this risk becomes significant - we have not in the UK reached the stage, as in some US states, where a pregnant woman may be criminalised for drinking. The potential for harm is greater in young people, because their tolerance of alcohol is generally lower than adults' (IAS, 2000), and because drinking at a young age increases the likelihood of alcohol related problems in later life (NIAAA, 1997; quoted in IAS, 2000).

#### **4.4.2 Does alcohol have any redeeming qualities?**

The BLRA (1999) refer to scientific evidence showing that moderate drinking (1 to 3 drinks daily) provides a protective effect against cardiovascular problems. They cite other possible health benefits such as inhibition of gallstone formation and osteoporosis prevention. Duffy (1995) and Poikolainen (1996) contend that premature mortality rates are likely to be lower, and overall health better, in a population of moderate drinkers than one of total abstainers. Edwards (2000), however, sounds a note of caution; improved statistical analysis of data from cardiovascular studies by Fillmore, Golding, Graves, Kniep, Leino, Romelsio, Shoemaker, Ager, Allebeck and Ferrer (1998), taking into account the differences in other lifestyle aspects between drinkers and abstainers, casts doubt on the findings. Hart, Smith, Hole and Hawthorne (1999), in a study of 5766 Scotsmen, found no evidence of moderate drinking conferring protection from heart problems. A recent meta-analysis of studies in this area, undertaken by Fillmore, Kerr, Stockwell, Chikritzhs and Bostrom (2006), finds that in many studies former drinkers who have reduced or stopped drinking have been categorized incorrectly as abstainers, and consideration of the error-free studies only showed no significant role for alcohol use in improving either cardiac or general health. Medically, therefore, no well-founded claims can be made for alcohol use.

Alcohol is used by many people as an aid to relaxation, as a stress reliever after a hard day's work, or as a "nightcap" to aid sleeping. Socially and culturally, the drinking of alcohol has been associated with festivities, celebrations and special occasions from the days of the earliest civilizations, and has been a catalyst for vital social bonding (Morris, 1998).

#### **4.4.3 Ethical viewpoints applied to alcohol**

In recent years, medical knowledge regarding the effects of alcohol, and the power of alcohol marketers, have both increased. Certainly in the beer market, the majority of brands are marketed by a few large companies such as Anheuser Busch, Bass, Carlsberg and Guinness. Thus writers such as Feldman (1971) and Lavidge (1970) would place great responsibility on alcohol marketers. The conflicts discussed by Bell and Emory (1971) are very much in evidence: not all consumers act in their own best long term interest, nor that of society. While there are widely publicised Government guidelines on sensible drinking, a figures from the Institute of Alcohol Studies (IAS, 2006) show 27% of men and 17% of women consuming over the sensible drinking limits in 2002. A significant amount of drink-driving still occurs: around 25% of deaths in road traffic accidents are attributed to excess alcohol (IAS, 2007), and the view was recently expressed that many young drivers do not fully appreciate the dangers of driving under the influence of alcohol (Ahmed, 2002). Alcohol's propensity to induce irrational thinking is a key point here – many drinkers do not intend, when they go out, to drink as much as they subsequently do.

Under Kotler's (1972) framework, alcohol is classed as a pleasing product. The option of adding salutary qualities is limited, apart from the development of low alcohol variants: the mind-altering effect of alcohol upon the consumer is often both a primary reason for drinking and the cause of subsequent problems.

The issues regarding social responsibility, raised by Abratt and Sacks (1988a), and the role of Government (Takas, 1974) in encouraging this, are of great interest in the alcohol debate, especially if comparisons are made between UK and US. In the UK, governmental policy is to promote sensible drinking, while curbing anti-social use. The vociferous anti-alcohol lobby draws support from the medical profession, but little from politicians at any level. Alcohol marketers abide by a voluntary code of conduct on advertising, and have set up the Portman Group to ensure that the code is upheld, and to assist the Government in reducing underage drinking. Although they also collaborate with educational and health authorities in educating young people about sensible drinking, these aspects of their work are not well publicised.

In contrast, in the US, alcohol companies appear much keener to promote an image of social responsibility: for instance, before entering their websites you are reminded that you should only be entering if you are over 21 (*this practice has been taken up much more recently by many UK websites, with an age of 18*); Anheuser-Busch emphasise at the bottom of each screen that their products are to be “enjoyed responsibly by adults”; the Community section on the Coors website ([www.Coors.com](http://www.Coors.com)) details the company’s position on social and marketing issues relating to alcohol, and describes the programmes they support to reduce underage drinking and the abuse of alcohol. Given the strength of the US anti-alcohol lobby, and the stronger political support it has, this is a wise stance as well as a principled one. In Gaski’s (1999, 2001) terms, it is the course of action that would be suggested by considering the companies’ long-term interests.

Smith’s (2001) point regarding interests of other consumers is also a key one in this debate. Direct social harm is obviously caused by drink-driving and alcohol-related violence, and in the long-term the medical costs of treating those with alcohol-induced illnesses, and



the disproportionate level of social problems such as delinquency and marital breakdown found in families where there is excess drinking, are also costs to society. However, as the BLRA (1999) point out, such problems are caused by those who drink irresponsibly and “abdicate their responsibilities to consume alcohol products in a mature way”. From this, a case could be made for two very different ethical positions for alcohol marketers in their approach to young people: either alcohol should be marketed in a controlled fashion, with due publicity being also given to the risks of over-consumption, so that young people can be educated to consume responsibly; or alcohol marketers should make it clear that their products are not to be used by young people at all, in the belief that when such people reach a legal drinking age they will be mature enough to become responsible users. The former approach is the one to which the UK government and UK marketers would currently subscribe; the second is more analogous to the US situation.

#### **4.4.4 Smith’s Consumer Sovereignty Test and alcohol marketing**

In order that consumers (of any age) can consume alcohol in a responsible manner, they need to know the risks associated with it, and understand how such risks would particularly apply to themselves (e.g. alcohol is potentially more harmful if one is pregnant, or intends to drive, or is taking certain medications). Such requirements for knowledge and understanding echo the Consumer Sovereignty Test’s pillars of “capability” and “information”. Thus, this appears a suitable framework within which to discuss alcohol marketers’ responsibilities.

The second and third pillars of the test may be most easily considered. “Choice” would imply that nobody should have to drink an alcoholic beverage, or a stronger alcoholic beverage than they desired, because there was no alternative. This is normally non-problematic – both retailers and drinking places sell non-alcoholic drinks, and manufacturers

are increasingly providing low alcohol or no alcohol variants. However, cultural norms may make it difficult for individuals to choose non-alcoholic drinks when in company.

“Information” indicates that alcohol manufacturers should ensure that information on their products is freely available; however such information needs also to be understandable to the consumer, and this links with the remaining pillar of the test, that of capability – not just of understanding the effects of alcohol and evaluating promotional messages, but also of evaluating and understanding information such as percentage alcohol contents of specific drinks.

With regard to capability, Williams and Mulhern (1993) suggest that heavy drinkers, young people, ethnic minority groups and women may be “greater risk” consumers in the context of alcohol advertising. A further category would surely be those who already have or are likely to have problems with alcohol consumption – not necessarily heavy drinkers, but also recovering alcoholics, people with medical conditions where alcohol consumption is counterproductive, those who genetically or otherwise manifest extreme reactions to even small amounts of alcohol, and those with addictive personalities. It would seem that an alcohol marketer attempting to ensure that no person in any of these categories is targeted by promotional messages has only one option – to stop promotional activity altogether!

If we are not to take this hardline position, then perhaps we need to define “targeting” more carefully. A more favourable ethical position to adopt (from the point of view of alcohol companies) would be that alcohol marketers should not use perceived vulnerability as a criterion for defining a target market, a reason for marketing to a particular market, or a basis for a promotional appeal. This would outlaw campaigns aimed specifically at underage drinkers and campaigns which encouraged excess drinking, and would have implications for advertising in developing countries and to some ethnic minorities. However, there could be substantial controversy regarding groups which some authors have regarded as more

vulnerable – the women’s market, for instance, is now heavily targeted with various alcohol products, such as Archers – and whatever their views on alcohol advertising, many women would find it highly patronizing and unacceptable to be regarded as a vulnerable group.

It could also be argued that the very act of drinking alcohol increases vulnerability. In the short term, after a drinker has consumed a few alcoholic drinks, their judgment is likely to be impaired – thus they may respond to promotional appeals that they would ignore when sober. In the long term, drinkers may develop a dependency on alcohol. Thus, the more alcohol companies successfully promote their products, the more consumers become temporarily or permanently vulnerable – and the more vulnerable consumers are, the less ethical it is to target them. But it is impossible to ensure that alcohol advertising, at point of sale in a pub or club, is seen only by those who are sober enough to make rational choices, and not by those who have already drunk copious amounts – while removing such advertising totally could conflict with the “information” and “choice” aspects of the CST, as drinkers need to know what drinks are available to them. Again, this poses a dilemma.

The second pillar of the Consumer Sovereignty Test is information. Full and accurate information about the product needs to be available to the consumer; the marketer should not deliberately withhold information. In the case of alcohol, there is no suggestion (as there was with tobacco) that companies have deliberately tried to suppress studies on its harmful effects, although they have understandably been much happier to publicise those which stress alcohol’s benefits. Indeed, where harmful effects are not in question, as with drink driving, the alcohol industry has co-operated with the Government in public health campaigns. They also assist in producing educational material for use in schools, on responsible use of alcohol. More in-depth medical information is certainly available from various sources – but few alcohol purchasers are likely to seek out such information. Most alcohol purchases are low-involvement; a purchaser is unlikely to involve him/herself in extended information search

unless he/she has specific reasons, such as an allergy or medical condition, to do so.

It would be unreasonable to expect alcohol marketers to provide information on their products or in their advertising on all aspects of latest alcohol research, especially as much is inconclusive or applies only to specific consumer groups. When moderate consumption has been claimed to provide benefits to certain consumers, a simple message such as the tobacco warning “Cigarettes damage your health” could be contested. In the US, alcohol products carry warnings against drink-driving and drinking while pregnant, two situations where research is non-ambivalent. Winemakers’ calls to be allowed to put a positive message on labels have so far been resisted. A possible measure for the UK would be a warning label such as in the US, which also included a source (website and Government-produced leaflet) where consumers could access the latest research on alcohol.

The final pillar of the Consumer Sovereignty Test is choice. Here, the situation has vastly improved in the UK in recent years, with greater availability of low alcohol or alcohol-free beverages in addition to wide ranges of all types of alcohol product. As drink-driving is generally recognised as irresponsible, such products are certainly socially acceptable for drivers, though in some social strata and situations a decision of a non-driver not to consume alcohol is still seen as unsociable or worthy of remark.

Thus, alcohol companies could do more as regards making information easily available, and they need to be very careful in their targeting, as so many consumer groups are defined by one author or another to be vulnerable, and even in a broad target group there will be vulnerable individuals. This thesis deals particularly with the young, and all commentators agree on some degree of vulnerability among young people, though this is perceived to lessen with age. The furore in the 1990s regarding alcopops (Alcohol Concern, 2001) shows the negative publicity that can result for alcohol marketers if they are perceived to be taking advantage of such vulnerability.

#### **4.4.5 Reducing vulnerability**

Two ethical approaches (not totally mutually exclusive) can be taken to the question of vulnerability. On the one hand, we can accept that certain groups of people are more vulnerable, and insist that this is taken into account when marketing to them. Or, we can observe that vulnerability is in general not a desirable quality in society, as vulnerable consumers require more protection and are likely to have more problems in life than less vulnerable ones. Therefore, a reasonable goal of society would be to reduce vulnerability where possible. With regard to young people, this is often a parental role, teaching a child what to expect in the world and how to deal with it – for instance, before letting a child go to the shop by him/herself, we teach them how to cross the road, and that they should be wary of strangers who approach them. As children are exposed to advertising and promotional activity, whether relevant to them or not, from an early age, and are likely, unless they live a very sheltered life, to come into contact with alcoholic beverages at some stage, it would be sensible to start at an early age to reduce their vulnerability to these aspects of life as well. On an individual basis, this may be done in the family, when a parent explains their views on alcohol or helps a child to analyse advertising in a critical manner. Personal and social education lessons in school attempt to portray realistically the risks of alcohol consumption. Young people may also be educated by other important adults such as sports coaches, religious leaders, youth club personnel, etc.

The empirical work described later in this thesis attempts to discover how young people balance such conflicting messages: alcohol companies promoting their products in connection with healthy activities, while adult input, in the main, counsels caution with regard to alcohol. Observed adult activity, however, may well lead young people to believe that adults are sending the message “Do as I say, not as I do”, which is likely to be received in a cynical manner. It is clear from the rising levels of alcohol misuse amongst young

people that the mix of messages is not providing the desired result for society. Many young people are choosing irresponsible behaviour with regard to alcohol, and if we accept Ajzen and Fishbein's (1980) Theory of Reasoned Action, their behaviour can be predicted by their intentions toward alcohol consumption, which in turn are a function of individual attitudes and social norms. The next chapter goes on to explain this theory, which forms the basis for the empirical work.

## **CHAPTER 5**

### **THE THEORY OF REASONED ACTION**

#### **5.1 Introduction**

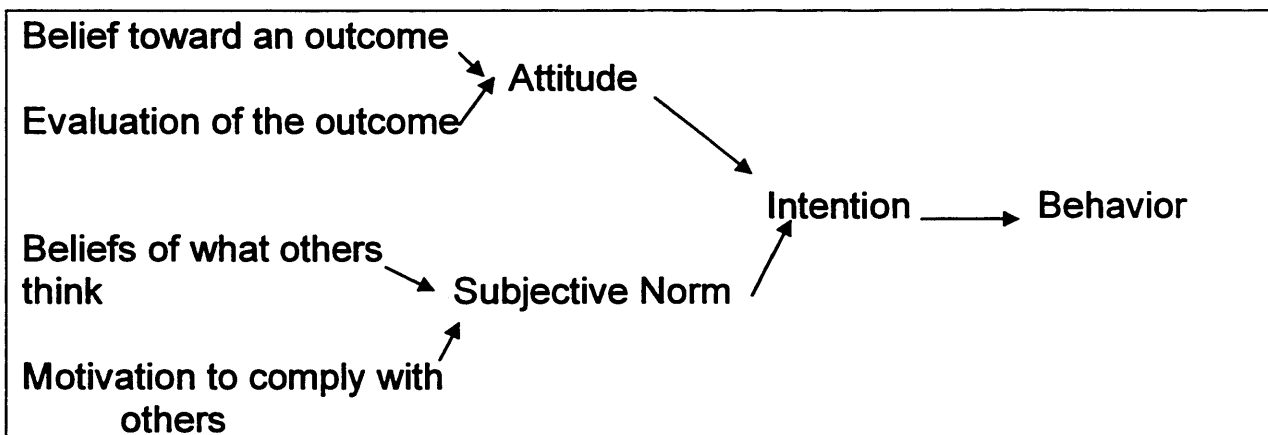
This research plans to investigate how sponsorship of sport by alcohol companies affects the drinking behaviour of young people. We have seen in Chapter 3 that sponsorship seeks to change a consumer's attitude toward the sponsoring company or brand, and one part of the primary research will focus on whether greater awareness of sponsorship is indeed associated with more favourable attitudes toward alcohol. However, even if a person has a favourable attitude toward alcohol, this does not necessarily mean that he or she will drink more of it, drink at an earlier age, or indeed drink alcohol at all. In order to make links between attitude and behaviour we need to draw on social behaviour theory.

#### **5.2 The Theory of Reasoned Action**

##### **5.2.1 Model development**

Ajzen and Fishbein (1980, Ch. 2) trace the history of attitude measurement throughout the 1960s and 1970s. While most social scientists were happy to accept that a person's behaviour toward an object was determined by his or her attitude toward that object, the few studies that were carried out on relationships between attitudes and behaviour found the correlations between the two to be inconsistent. Furthermore, Ajzen

and Fishbein (1980) noted that many studies attempted to explain a person's behaviour in terms of external variables such as demographics or personality traits. They considered such explanations unsatisfactory; relationships were often inconsistent, with a particular demographic variable influencing a behaviour in some situations but not in others, and often variables which investigators thought would be relevant to the behaviour in question were found not to be so. In order to provide a theory which would be capable of linking attitudes to behaviour in a general sense, Ajzen and Fishbein developed the "Theory of Reasoned Action" (Fig 5.1).



**Fig 5.1: Theory of Reasoned Action model (Ajzen and Fishbein, 1980)**

### 5.2.2 The variables

The Theory of Reasoned Action argues that behaviour can be predicted from attitude, if we define correctly what we are measuring. A behaviour is context-specific; that is, it is performed toward a certain target, in a certain context, and at a specific time. One's attitude to performing that behaviour may vary greatly according to the other parameters; for instance, a person who enjoys a glass of beer with friends in the pub in



the evening might have a very different attitude toward drinking a glass of beer while sitting at the computer at work, with the boss in the same room! It follows that it is not the attitude toward the object that needs to be measured, but the attitude toward the particular behaviour, defined as closely as possible.

However, it is not only our attitudes toward a behaviour which determine whether we will perform that behaviour or not. Firstly, we may be influenced by what others would think if we performed the behaviour. Ajzen and Fishbein call this the “subjective norm”, which they defined as “*a person’s belief that most of her important others think she should (or should not) perform the behaviour in question*” (ibid, p.73). Secondly, we may intend to perform a behaviour but not actually do so. Ajzen and Fishbein (1980) claim that intentions will predict behaviour providing that the intention is measured so that it matches the behaviour in all respects (action, target, context and time), and that the intention does not change between its measurement and the chance to perform the behaviour.

A further consideration, which was later addressed by Ajzen and Madden (1985) in the Theory of Planned Behaviour, is that an individual may be prevented from performing the intended behaviour by circumstances beyond his/her control; for instance, a person may intend to buy a particular house, but their mortgage application may be unexpectedly refused . In the context of drinking alcohol as an adult, this may apply occasionally, e.g. a man intends to get drunk at a party, but there is a transport strike that day which means he needs to drive home – but generally, if an adult chooses to drink alcohol or get drunk, there is little to prevent them.. As regards those under legal drinking age, the figures for underage drinking would tend to suggest that most young

people who intend to drink alcohol are able to procure it somehow (this is confirmed by the focus groups undertaken for this study). There may be constraints on behaviour, such as parental control, but young people are likely to be aware of such constraints when forming their intentions.

As it is beyond the scope of this research to observe or record actual drinking behaviour (and any attempts to do so would run into problems either of behaviour changing under observation, or possible inaccuracies in self-reporting), we shall concentrate on defining intentions as closely matched as possible to behaviours of interest, and measuring intentions only, as a predictor of behaviour. In the context of teen drinking, Shim and Maggs (2005) found that intentions did provide a good predictor of behaviour. Another point of note, in this particular context, is that the consumption of alcohol may in itself impair an individual's reasoning processes, so that they do not act in accordance with their original intentions, and drink more alcohol than they intend to. As regards excessive or binge drinking, therefore, intentions may well under-predict the extent of such behaviour.

To return, then, to the predictors of intentions, the Theory of Reasoned Action states that behavioural intentions are predicted by the individual's attitude to performing the behaviour, and his/her subjective norms. The relative weights of these may differ for different individuals and different types of behaviour. Ajzen and Fishbein (1980) state that, as creatures of reason, we favour the behaviours which will bring the results we value. If we believe a certain behaviour will produce both good and bad outcomes, our attitude to that behaviour will depend on how likely we believe each outcome to be, and how strongly we feel about it. Thus, to measure attitude toward a behaviour, we need to

know the individual's beliefs about what the outcomes of the behaviour will be, and how he/she rates those outcomes. For instance, some of the likely outcomes for a young person of drinking alcohol at a party may be that they will conquer shyness (good), that they will seem older than they are (probably good), and that they will have a hangover the next morning (bad). Pomazal and Brown's (1977) study of use of marijuana found that users and non-users differed significantly on several beliefs regarding the consequences of smoking marijuana, and also in their evaluations of some of the consequences.

In the context of alcohol, attitudes may be ambivalent, alcohol being a "pleasing" product (Kotler, 1972) which is both appealing and harmful. The balance of positive and negative factors in this ambivalence may change according to how much an individual has had to drink. The perceived relative importance of different outcomes may also change. Therefore, sampling these evaluations in a research study with sober participants may not yield the same results as if we were able to sample them in a drinking situation.

As regards subjective norms, these are concerned with the beliefs as to what people important to the individual (their "referents") think they should do, and how motivated they are to comply with these referents. Again, there may be conflict between different referents; in the above situation, the young person may believe that their parents would not wish them to drink alcohol, but that their friends think they should. Glassman and Fitzhenry (1976) suggested that in some situations it might be more useful to qualify questions on motivation to comply with referents, e.g. in the current context, we might ask, "Thinking about drinking alcohol, how motivated are you to comply with what your parents (friends, teachers, etc.) think you should do?". Pomazal and Brown's (1977)

study of use of marijuana found that intentions to smoke marijuana were predicted more strongly by attitudinal and moral norms than by subjective norms.

It is worth pointing out that the Theory of Reasoned Action relies on individuals acting as “creatures of reason” (Ajzen and Fishbein, 1980). However, in the context of drinking alcohol, it is questionable whether we do act as creatures of reason. The drinking of alcohol may be a habitual action which we do not give much thought to – if we meet friends in the pub, we do have the choice of drinking a soft drink, but may automatically choose an alcoholic one. Or, particularly with the age group under consideration in this study, drinking may be an opportunistic or impulse behaviour – for example, a bored group of teenagers decide to see if they can get someone to buy alcohol for them, or take advantage of a parent’s absence to raid the drinks cupboard. Getting drunk may be intentional, for instance for a celebration, but may often happen unintentionally through drinking more than intended. Once one has started drinking, “reasoned” action may be hard to define, as alcohol affects the reasoning process and perceptions of what is reasonable.

### **5.2.3 Extensions and modifications**

According to Ajzen and Fishbein’s earlier work (1980), attitude and subjective norm should be sufficient to predict intentions. It has been contended, however, that the Theory of Reasoned Action does not take all relevant factors into account, and several authors have proposed modifications which include other factors – some general, while others would be relevant only to the particular behaviour under investigation. Miniard and Cohen (1985) pointed out that attitude toward an act could contain both personal and

normative components, and that Ajzen and Fishbein did not distinguish between outcomes which were personally beneficial and those which were desirable in a social sense, e.g. a behaviour such as buying charity raffle tickets at a social function would enhance one's image as a generous person. Their model focused on personal and normative components as predictors.

Other authors such as Laflin, Moore-Hirschl, Weis and Hayes (1994) and Lam (1999) noted the likelihood of normative influences on attitude, but addressed it by including an interactive term (attitude x subjective norm) in the Theory of Reasoned Action. The latter study attempted to predict intention to conserve water, and in this context "perceived water right" was also a significant predictor of intention. This would have limited generalisability, its relevance being to situations where the behaviour of interest meant voluntarily abstaining from an activity one had a right to do.

Past or habitual behaviour was also proposed as an additional predictor of both intentions and behaviour. In fact, Fredericks and Dossett (1983) found that prior behaviour was the best predictor of future behaviour, to the extent that once it was included in their model, all other predictor variables were reduced to non-significance. In the current context, however, where we are investigating the influences of both personal and external factors on behaviour, it would be of little use to discover that past alcohol use was the best predictor of intentions (even though it is highly likely that young people who already drink or get drunk regularly may have the highest intentions of continuing to do so) – we would still be left with questions as to what influences led them to start drinking in the first place. Furthermore, at age 14-15, most young drinkers will be at a very early stage of their drinking "career", and thus their drinking habits may not yet be

strongly engrained. Measurement of prior behaviour would also run into the previously mentioned problem of reliance on self-reporting. However, any prior experience with alcohol is still likely to be indirectly relevant to the model, in that it is likely to affect attitudes toward alcohol consumption.

Other studies have added variables relating to prior behaviour at a later stage in the model, for instance Orbell, Blair, Sherlock and Conner (2001) found that adding “habit” to the Theory of Reasoned Action variables improved predictions for use of ecstasy, and enabled prediction of behaviour directly from intentions, without the addition of perceived behavioural control. Sheppard, Hartwick and Warshaw (1988) suggested that consideration of past behaviour could be included in the measure of intention used. They noted that several studies which purported to measure links between intentions and behaviour did not measure intention, but estimation – rather than being asked, “Do you intend to ...?”, they were asked, “How likely is it that you will ...?” Ajzen and Fishbein (1980) did not make any distinction here, regarding both

\_\_\_\_\_ *I do*  
\_\_\_\_\_ *I do not*  
*intend to vote in the forthcoming election (p.41)*

and

*I will go to the \_\_\_\_\_ polling station on Tuesday, November \_\_\_\_\_ to cast my vote in the presidential election.*

*likely \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ : \_\_\_ unlikely (p. 43)*

as being measures of intention. The second, however, apart from being context-specific, is, in Sheppard *et al*'s terminology, an estimation – in responding, an individual may well take into account not only his/her intention to vote, but also the possibility that circumstances may make it easier for him/her to go somewhere else to vote, or that,

despite having intentions to vote, the fact that he/she is frequently forced to stay late at work may prevent him/her from reaching the polling station in time. Warshaw and Davis (1985) used the term “behavioral expectation” to describe an individual’s own prediction of future behaviour, and reasoned that it would be a more accurate predictor than behavioural intention. In this study, using an estimation or expectation measure may indeed enable better prediction of drinking behaviour – for instance, based on previous experience, an individual may know that on social occasions they usually end up drinking more than they intend, and thus although they might answer “No” to “Do you intend to get drunk on a night out in the next month?”, they might estimate that it is “fairly likely” or “very likely” that they will.

Turning to subjective norms, Ajzen and Fishbein define these in terms of the views of significant others as to whether an individual should perform the behaviour in question. In social psychology, distinctions are made between descriptive norms, which measure an individuals’ belief about how common or prevalent a certain behaviour is, and injunctive norms, which measure the extent to which individuals feel social pressure from others to perform or not perform that behaviour (Rimal and Real 2005). These may be different; in terms of alcohol use, a descriptive norm such as “in Freshers’ Week, new students go out and get drunk” might be agreed upon by most students, but the injunctive norms for individual new students affiliating themselves to the University Rugby Club might be very different from those who had joined the Society of Muslim Students!

A related concept is the False Consensus Effect (FCE), where the descriptive norm is incorrectly predicted to be closer to the individual’s own belief than it actually is. Bauman and Geher (2002) found the FCE (the extent to which respondents believed

fellow students shared their beliefs) to be an independent predictor of college students' intentions to perform several peer-influenced behaviours. They pointed out that descriptive norms are hard to judge accurately, and Prentice and Miller (1993) showed how erroneous perceptions of these norms could lead to students taking part in drinking behaviour with which they were personally uncomfortable. Sheeran and Orbell (1999) found descriptive norms to be an additional predictor of intentions to play the lottery, as well as a further variable, anticipated regret (if the behaviour was not performed). This also moderated the intention-behaviour relationship.

Further moderators of the relationships within the Theory of Reasoned Action and Theory of Planned Behaviour have been found to be self-monitoring (Ajzen, Timko and White 1982; Kraus 1995) and self-esteem (Dielman, Campanelli, Shope and Butchart 1987; Sharp and Getz 1996). Self monitoring is the extent to which an individual monitors their own behaviour, considering how they appear to others. For high self-monitors, the contribution of subjective norm to intentions is greater than for low self-monitors. Findings on self-esteem have been ambivalent; while Dielman *et al* suggested that those with lower self-esteem are more susceptible to peer pressure, Sharp and Getz found that students with high self-esteem were more likely to drink in order to maintain or improve their image. Authors in the social health field such as Mashegoane, Moalusi, Ngoepe and Pektzer (2004) have also combined the Theory of Reasoned Action and Theory of Planned Behaviour with the Health Belief Model, which brings in the ideas of perceived barriers and perceived benefits to socially desirable behaviour.



#### 5.2.4 Other criticisms

Sheppard *et al* (1998) pointed out that the Theories of Reasoned Action and Planned Behaviour could only go so far as predicting behaviour and could not predict outcomes, giving the example of revision for examinations – prediction of how hard an individual will revise is not the same as predicting their success or failure in the exam they are revising for. In the current study, we are measuring both intention to drink (a behaviour) and intention to get drunk (an outcome). We have already noted that the effects of drinking alcohol upon reasoning may affect intention-behaviour correspondence for the outcome of getting drunk. A further possibility is that a person may intend to drink a moderate amount and not get drunk, but due to external factors (e.g. they did not have time to eat a meal before going out) the alcohol has a stronger effect than they expect, and they do get drunk. Here, the behaviour (moderate drinking) could be correctly predicted while the outcome is not.

Fazio (1990) points out that there are different ways in which attitudes guide behaviour – either spontaneously or through deliberation. The decision to drink alcohol is likely to be more spontaneous than deeply considered, and in this situation Fazio states that if attitudes are strong they will have a large influence on behaviour, while if they are weaker non-attitudinal factors will be more important. In the drinking context, this would indicate that for young people who have strong moral or religious objections to alcohol, these will be strong influencers against drinking. Young people who have weaker negative attitudes to alcohol are likely to be much more influenced by situational and normative factors. Behaviour is also seen to be relevant in influencing attitudes.

Foxall (2005: 56) reviews much research showing that attitudes which are formed behaviourally are more likely to be predicted accurately.

Ajzen and Fishbein (1980) place great emphasis on specifying that the Target, Action, Context and Time of the behaviour under consideration need to be consistent throughout the study – best predictions are obtained when respondents are asked about a behaviour which is clearly defined in terms of these parameters. This clearly limits the scope of the theories, but also indicates the highly important role played by situational factors. If an individual finds him/herself in a situation similar to one in which they have been previously, whether they behave in a similar fashion to before (given that they have a choice) is likely to depend very much on the results of performing that behaviour previously. If these were favourable (in behavioural terms, if the individual was “rewarded” for performing the behaviour), then it is more likely that the behaviour will be repeated. “Rewards” may come in the form of tangible rewards, intangible personal rewards such as feeling good after taking exercise, or social rewards such as approval or admiration from one’s significant others or peer group. If an individual has been in a similar situation many times, they will have built up a “learning history” of the consequences of the behaviours they have performed, which will influence their future behaviour.

From this different way of considering the predictions of intentions and behaviour comes the Behavioural Perspective Model (Foxall, 2005: 91), which predicts behaviour from knowledge of the situation and from the learning history of the individual. This model is not as easy to apply in the context of alcohol consumption as it might be in the case of consumer brand choice. The consequences of alcohol consumption may be both

positive (e.g. peer group approval, feeling more relaxed) and negative (parental disapproval, hangover), and in order to make predictions it would be necessary to know how an individual weighted these outcomes. If the behaviour is “getting drunk”, the individual may even have gaps in the learning history, if they do not remember the consequences fully. In the current study, we are likely to find that young people do not have a long learning history, and may indeed still be experimenting with different behaviours or experiencing situations for the first time. As previously stated, an approach which favours prior behaviour over examination of attitudes and norms, also has much less power to explain individual, social and external factors which lead to intentions to consume alcohol. As the ultimate goal of this research is to investigate these factors in order to discover whether alcohol consumption can be lessened by attempting to change them, the Theory of Reasoned Action is more appropriate for this study than a behavioural model.

#### **5.2.5 Use in current study**

In conclusion, the Theory of Reasoned Action has been found to be a reliable base model to predict intentions. Whether or not other predictors are found to be significant in explaining additional variance, the model has been found to explain on average 40% - 50% of variance in intentions (Sutton, 1998). Harrison, Thompson and Rodgers (1985) even found it to be a reliable predictor when extended beyond the tightly prescribed bounds of Ajzen and Fishbein (1980), using it with longitudinal data on predictions of college attendance. Thus, it will be used as the basis for this study.

Taking account of the foregoing discussion, an estimation measure will be used to measure intention, questions on motivation to comply will relate specifically to alcohol use, interactive effects will be investigated, and the goal will be to investigate any additional explanatory power that may be gained by including variables relating to sport sponsorship exposure, whether as direct predictors or modifiers of the relationships within the model. The next section of this chapter looks specifically at predictions related to alcohol use, in order to determine whether other studies have found benefit in enhancing or modifying the Theory in any way when applied to this specific field.

### **5.3 Alcohol-related behaviour and the Theory of Reasoned Action**

Focusing on the topic of this research, several studies have used the Theory of Reasoned Action and Theory of Planned Behaviour to predict intentions and behaviour related to alcohol use. In addition to those already cited, Trafimow (1996) consistently found attitudes to be better predictors of intentions than subjective norms for three drinking-related behaviours, with the strongest correlation for “drinking enough to get drunk”. Collins (2002) also found attitudes to be better than peer norms as predictors of drinking intentions.

Kuther (2002) cited various studies where the Theory of Reasoned Action was applied to drinking behaviour of young people: Schlegel, Crawford and Sanborn’s (1977) study investigated adolescent male intentions to drink different alcoholic drinks in three social settings, while a study by O’Callaghan, Chant, Callan and Baglioni (1997) involved undergraduate students drinking behaviour, and Schlegel, Crawford and Sanborn (1987) investigated intentions of young adults to get drunk. In these three

studies, R squared values were 40-53%, 40% and 34% respectively. However, Kuther went on to criticise the Theories of Reasoned Action and Planned Behaviour for their conflation of positive and negative outcomes in predicting attitude, arguing that in this particular area of decision-making young people do not make a straight trade-off between positive and negative outcomes. Perceptions of positive outcomes, i.e. high perceived benefits from drinking alcohol, are very strongly associated with drinking intentions, while the role of negative outcomes is ambivalent - they have been shown to predict both greater and lesser intentions. While it would seem rational to believe that perceptions of negative consequences would influence people away from alcohol, this does not take into account the propensity for risk-taking behaviour which is evident in many adolescents, particularly males, and UK cultural attitudes which treat many negative consequences of drunkenness, such as hangovers or making a fool of oneself, with acceptance or amusement. For comparison, this study will make predictions using the TRA, and compare them with predictions replacing the attitude component with two separate variables corresponding to perceived positive and negative outcomes.

Kuther (2002) also questions the amalgamation of subjective norms for different categories of significant others into one overall subjective norm, as in the original Theory of Reasoned Action. For alcohol use, parents and peers have been found to be the overriding influences, but the effects of their subjective norms are independent rather than cumulative, with peers having a greater influence in adolescence. A further consideration is that it is not only the views of parents and peers that are important, but their actual behaviour. Parents, for instance, may disapprove of their underage son or daughter getting drunk, but regularly return drunk themselves from a night out, thus

modelling behaviour different from what is recommended. It would have been interesting to investigate perceptions of behaviour as well as subjective norms in this study; however, the researcher's judgement was that a questionnaire which asked young people about parental behaviour would be less well received in schools. Thus, perceptions of parental and peer behaviour will not be included, but subjective norms for each category of referent will be kept separate.

The previously mentioned study by Rimal and Real (2005), published during the fieldwork period of this research, suggested difference between males and female students, with males perceiving more benefits from drinking, having a more favourable attitude toward alcohol, a greater intention to drink and perceiving themselves as more easily tempted to have a drink when they had not originally intended to. These authors focused on norms as predictors of behaviour, stressing the differences between descriptive, subjective and injunctive norms. Descriptive norms relate to beliefs which are held generally to be true; for instance, Rimal and Real found that their new student sample already had certain expectations that the student way of life involved frequent alcohol consumption. Subjective norms, as in the TRA, relate to specific significant others rather than the general population. Injunctive norms are those which will result in some type of sanctions if not adhered to, so subjective norms may in some cases be injunctive; for instance, if a student's refusal to conform with norms of alcohol consumption led to their peers excluding them from a night out. The TRA does not take descriptive norms into account at all, while Rimal and Real found them to be an additional predictor of intentions. These authors also support the inclusion of outcome

expectancies, and propose that the extent of group affiliation is also a factor affecting compliance with norms.

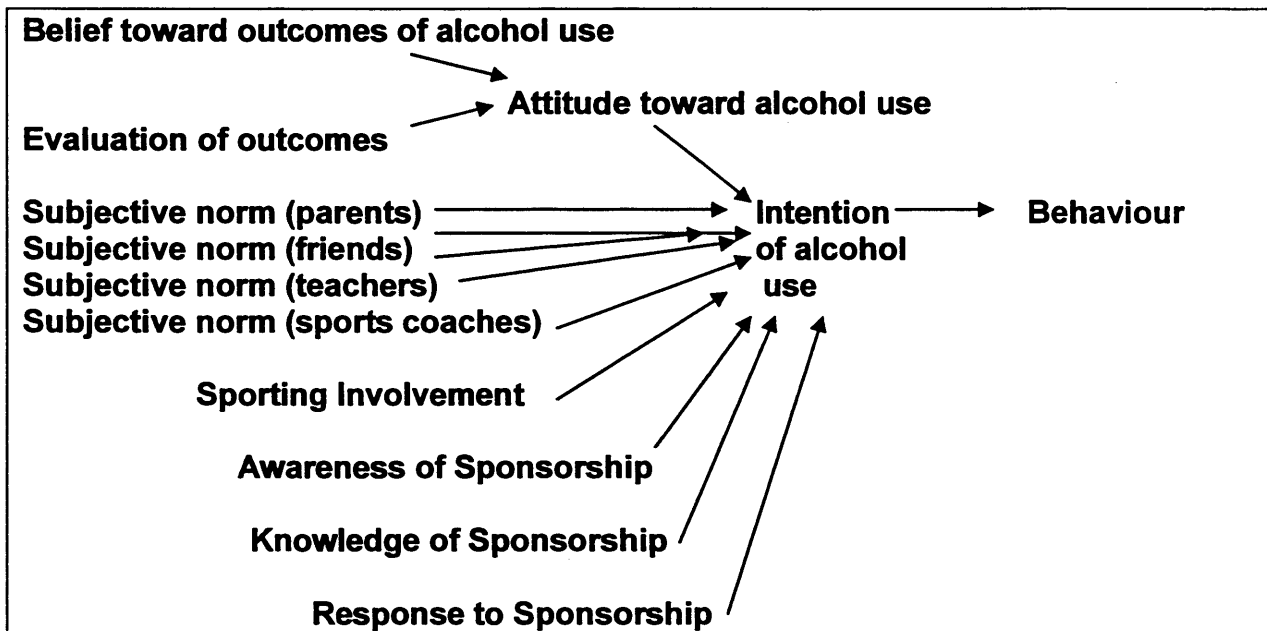
Shim and Maggs (2005) predicted intentions to drink in a student population, using attitudes but not norms. Intentions were found to be good predictors of actual behaviour. Attitudes were split into the negative physical consequences of drinking, and the positive psychological consequences. It was found that personal values predicted attitudes, and that males were likely to hold more positive attitudes to both physical and psychological outcomes.

#### **5.4 Modified model for use in current study**

The Theory of Reasoned Action was therefore confirmed as a valid framework to use in investigating the topic of this study. However, doubts were raised as to whether the Theory in its original form would give optimal predictions. Therefore, careful consideration had to be given to incorporating possibilities for testing modified versions of the theory.

In relation to subjective norms, the body of evidence suggested that subjective norms for parents and peers should be considered separately. This would be done, and by extension the same would apply to any other significant referents found to be important (see Figure 5.2). Therefore, each subjective norm (e.g. *(parental approval of drinking alcohol) x (motivation to comply with parents regarding alcohol)*) would be hypothesised to be a direct influence on intentions, rather than asking respondents for an overall subjective norm and testing the correlation between this and the aggregation of individual subjective norms.

**Fig 5.2: Modified Theory of Reasoned Action model**



*Note: interactive effects between predictors of intention will also be tested. Showing all interactive possibilities on the diagram would make it indecipherable.*

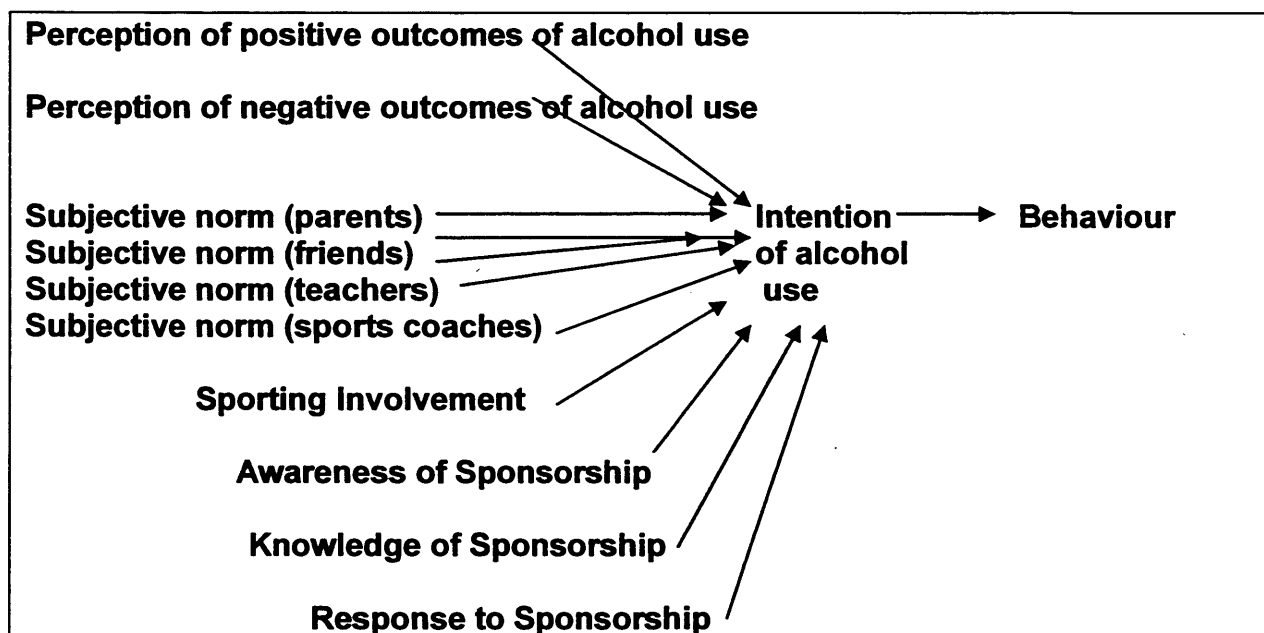
In relation to attitudes and outcomes, it is necessary to measure both in order to test the relationships in the TRA. Thus, it would be easy to test whether positive and negative outcomes, taken separately, provided better predictions of intention than attitudes do, and this would be done at the analysis stage (see Figure 5.3). If positive and negative outcomes proved better predictors, then they would be used throughout.

Consideration was also given to asking about descriptive norms relating to alcohol and sport – however, general observation at sporting events led the researcher to believe that these vary widely depending on the particular sport. Identifying the particular sports with which each respondent was involved and splitting the sample may have led to small cell sizes (or otherwise required a very large sample), and may also have led to confusion and/or a very lengthy questionnaire for respondents involved in different sports for which alcohol-related norms are very different. Thus, these would not



be investigated in the present study. Due to concerns about its appropriateness and the possibility of objections from schools or parents, questioning on parental behaviour would not be included either.

**Figure 5.3: Modified TRA model using positive and negative outcomes separately (as indicated by Kuther, 2002)**



*Note: interactive effects between predictors of intention will also be tested. Showing all interactive possibilities on the diagram would make it indecipherable.*

## 5.5 Formulating hypotheses

The foregoing discussion, along with earlier chapters of the literature review, formed the starting point for formulation of relevant hypotheses. Predictions are being investigated (with the same predictors in each case) for intentions / likelihoods of two different behaviours, drinking alcohol and getting drunk, and for brevity these are stated in the same hypothesis. Thus it should be noted that each hypothesis will require

analyses for each behaviour, and it would be possible for a hypothesis to be accepted for one behaviour but not the other.

The first three hypotheses deal with the prediction of alcohol use, prior to consideration of the sporting and sponsorship variables which were the additional predictors to be investigated in this research. As the Theory of Reasoned Action has been found to be valid in predicting intentions to drink alcohol, Hypotheses 1a and 1b are proposed. These need to be validated in order to use the Theory of Reasoned Action in this context.

*H1a: Attitude toward drinking alcohol (getting drunk) can be predicted from the outcome evaluation of drinking alcohol (getting drunk).*

*H1b: Intention to drink alcohol (get drunk) can be predicted from attitude toward drinking alcohol (getting drunk) and subjective norms for parents, friends, teachers and (if relevant) sports coaches.*

It was noted in Chapter 5 that some studies had found that considering positive and negative outcomes (benefits and risks) of alcohol use separately produced better predictions than combining them into an overall measure. Thus, it also needs to be investigated whether better predictions could be obtained in this way than those obtained by using the Theory of Reasoned Action. Hypotheses 1c, therefore, states:



*H1c: Better predictions of intention to drink alcohol/get drunk than those obtained by the Theory of Reasoned Action will be obtained by using perceived benefits and risks of drinking alcohol/getting drunk as predictors, along with subjective norms for parents, friends, teachers and (if relevant) sports coaches.*

Hypotheses 1a to 1c establish the basic framework for analysis. Subsequent hypotheses therefore move on to the additional proposed predictors of sporting involvement and sponsorship.

The tradition of alcohol's involvement with sport in the UK has been described in Chapter 2. In the context of that tradition, it could be said that more frequent and greater consumption of alcohol is the norm among many sporting communities. This could act as a subjective norm, if young people are influenced directly by friends with whom they take part in or watch sport. However, it is also likely that young people will be influenced by the general culture which they observe when they take part in or watch sporting events, irrespective of what their significant others think. They may feel the need to take on the practices of that culture in order to "fit in" and be accepted. Thus, the general sporting culture would provide descriptive norms of behaviour. Authors such as Sheeran and Orbell (1999) and Rimal and Real (2005) have found descriptive norms to have a main effect on behavioural intentions within the Theory of Reasoned Action framework.

However, it is also known (Chapter 2) that the consumption of alcohol is not conducive to optimum sporting performance. Thus sport participants who wish to perform well are both drawn toward alcohol and advised against it. Two hypotheses are

thus proposed, one as a general proposal and the other relating particularly to young people for whom it is important to perform well at sport.

*H2a: The inclusion of sporting involvement as a predictor variable will improve predictions of alcohol-related intentions over those obtained from using subjective norms and either attitude or benefits and risks, in the direction that increased sporting involvement will lead to increased intentions to drink alcohol and get drunk.*

*H2b: The inclusion of importance of sporting performance as a predictor variable will improve predictions of alcohol-related intentions over those obtained from using subjective norms and either attitude or benefits and risks, in the direction that increased importance of sporting performance will lead to decreased intentions to drink alcohol and get drunk.*

It is the contention of this study, as discussed in Chapter 3, that sponsorship by alcohol brands increases young people's intentions to drink alcohol. Greater sporting involvement means that young people are likely to have more exposure to sponsorship messages in the sporting context. Inasmuch as these messages reinforce the cultural norms of the alcohol/sport association, their effect cannot be disentangled from that of sporting involvement which has been covered in Hypothesis 2a. However, there are differences between the extent to which individuals notice sponsorship, due both to which sports they are interested in and their personal observance, and the extent to which they process sponsorship messages and remember the sponsor/brand link. It is possible,

that a sponsorship message would have a direct effect, i.e. knowing that an alcohol brand sponsored a favoured team or event directly influences a young person's intention to drink. But the sponsorship literature would suggest that it is more likely that there are indirect effects, with the image of the brand (and by extension, alcohol itself) being enhanced by association. This could enhance positive attitudes or norms toward alcohol use, and thus, awareness and knowledge of sponsorship would act as modifiers of the attitudinal and normative predictors of drinking intentions. This gives hypotheses 3a and 3b, which investigate whether sponsorship has additional effects beyond any already accounted for by sporting involvement.

*H3a: Awareness of sponsorship will modify the relationships between attitudes or risks and benefits, subjective norms and sporting involvement, and alcohol-related intentions, in the direction that increased awareness will result in greater intentions to drink alcohol/get drunk.*

*H3b: Knowledge of sponsorship will modify the relationships between attitudes or risks and benefits, subjective norms and sporting involvement, and alcohol-related intentions, in the direction that increased awareness will result in greater intentions to drink alcohol/get drunk.*

Finally, the extent to which sponsorship messages influence alcohol-related intentions and actual drinking behaviour will depend on the extent to which an individual is motivated to comply with the behaviour that the sponsor desires. This may be related to a false consensus effect (Bauman and Geher, 2002), in that young people believe that other fans of a team, for instance, buy sponsors' products, and therefore adjust their own behaviour to conform with this perception. It is thus hypothesised:

*H4a: Those who are exposed to more alcohol sponsorship, and admit that in general they are influenced by sponsorship, will have greater intentions to drink alcohol.*

*H4b: Those who are exposed to more alcohol sponsorship, and believe that sponsorship persuades others to buy, will have greater intentions to drink alcohol.*

Having formulated the hypotheses, exploratory research may be used to refine them, prior to quantitative analysis with a large sample. Thus, the following chapter now discusses the methodology for the study.

## **CHAPTER 6**

### **METHODOLOGY AND FOCUS GROUP RESEARCH**

#### **6.1 Introduction**

This chapter describes the methodology employed in undertaking the primary research for this study, goes on to present the findings of the qualitative part of the study, and finally returns to the hypotheses proposed in the previous chapter to consider whether their revision would be desirable, in the light of those findings.

#### **6.2 Methodological considerations**

During the 1980s there was much passionate debate within the academic community regarding the appropriate philosophical and methodological frameworks that should underpin consumer research (Hunt, 1991). The traditional approach in the social sciences had been the use of a positivist methodology, where the investigator starts with a theory or hypothesis and seeks to confirm it through scientific methods, relying on what can be observed and following rigorous scientific procedures. Critics of positivism have misdefined it as seeking to explain, looking for cause and effect, but this is incorrect – the goal is to confirm a hypothesis that will allow prediction of some aspect of, for instance, consumer behaviour, but a true positivist would not attribute a cause to the behaviour, as “cause” is non-observable and thus outside the bounds of scientific method (Hunt, 1991). The most commonly used method in positivist research is the survey, as this is a means of obtaining a sufficient number of responses to perform scientific testing of a hypothesis; a

positivist methodology has thus come to be equated with quantitative analysis, though this does not necessarily have to be the case.

However, many years earlier, Weber (1949) had put forward the view that social sciences required a different approach. When a researcher proposes a hypothesis for testing, this hypothesis is likely to stem from the researcher's understanding of the phenomenon, and this understanding may not be shared by the subjects under investigation (Sanders, 1987). This is especially true if a researcher is investigating a culture or subculture of which he/she is not a part. Furthermore, a survey methodology reveals attitudes and intentions, but can only reveal reported or intended behaviour, which may differ from actual behaviour.

These criticisms of a positivist methodology, and the overriding use of positivism in marketing research, led to calls for marketing researchers to consider some of the humanistic approaches used in sociology and anthropology. It was argued that researchers could not understand consumers and their behaviour by looking in from the outside; they had to "immerse" themselves within the system and understand the consumers' reality (Hirschman, 1986). Thus developed an interpretivist school of thought, which attempted to understand a phenomenon from the perspective of the subjects rather than from an external perspective. Interpretive methods include "ethnography, phenomenology, grounded theory, hermeneutics, ethnoscience, discourse analysis, conceptual description, ethnomethodology, thematic analysis and constructivism" (Goulding, 1999). The key commonality between these methods is that they do not start with an externally derived theory or view of reality, but aim to construct and interpret the "reality" experienced by the subjects through analysis of how they



interact with it or speak about it. Accordingly, the main tools of interpretivist methodologies are observation and unstructured interview. The researcher needs to ensure that any preconceptions he/she has about the situation are suspended for the duration of the research (this practice is known in phenomenology as “bracketing” (Baker, Wuest and Stern, 1992)) and may enter the environment under study and become part of what he or she is investigating (e.g. grounded theory). Table 6.1 summarises the key differences between the positivist and interpretivist methodologies.

Hunt (1994) points out that humanistic methods of inquiry may lead to relativism – the belief that any analysis is only valid in the particular culture and context in which the study has been carried out, and is not necessarily generalisable to any other setting. Indeed, constructivism holds that an individual’s or group’s reality is only constructed through their own experience and thus cannot be evaluated against others’ realities. This, Hunt believes, leads eventually to nihilism, the belief that we can never have genuine knowledge about anything. This is totally at odds with the positivist philosophy that there is a reality which exists independently of our perceptions, and that researchers can, and should try to, understand that reality through developing truths which are generalisable across different contexts. The humanist philosophy, however, would contend that the purpose of research is to provide a deep understanding of the phenomenon under investigation, i.e. idiographic knowledge (Hirschman, 1986).

**Table 6.1: A Summary of the Positivist and Interpretivist Approaches**  
**(Hudson and Ozanne, 1988; final row added by author)**

<b>ASSUMPTIONS</b>	<b>POSITIVIST</b>	<b>INTERPRETIVIST</b>
<b>Ontological</b>		
Nature of reality	Objective, tangible Single Fragmentable Divisible	Socially constructed Multiple Holistic Contextual
Nature of social beings	Deterministic Reactive	Voluntaristic Proactive
<b>Axiological</b>		
Overriding goal	“Explanation” via subsumption under general laws, prediction	“Understanding” based on Verstehen
<b>Epistemological</b>		
Knowledge generated	Nomothetic Time-free Context-independent	Idiographic Time-bound Context-dependent
View of causality	Real causes exist*	Multiple, simultaneous, shaping
Research relationship	Dualism, separation Privileged point of observation	Interactive, cooperative No privileged point of observation
<b>RESEARCH APPROACH</b>	Adhering to scientific protocols	Evolving research design

*\*Hunt (1994) could dispute the inclusion of this statement as based on a misunderstood view of positivism, as he states that causes are non-observable and therefore do not interest the positivist; however, this does not mean that they are non-existent.*

Recognising that non-positivist methodologies could, however, offer new insights and greater depths of understanding, Hunt (1994) called for marketing researchers to adopt a position of “critical pluralism” of methodologies along with “scientific realism”. No methodology should be discarded indiscriminately, but any methodology used should be evaluated and tested, checking the results of studies against the real world. The study of consumer behaviour, in particular, is very complex; consumers’ perceptions and views

of reality are coloured by their own personal experiences, personalities and social relationships, which form a unique tapestry, while behaviour may often be situation-specific or irrational. In endeavouring to understand it, therefore, it may be appropriate to use different methodologies in the same study, or to combine parts of different methodologies. Triangulation – combining data obtained by multiple methodologies – can strengthen a study by providing corroboration of findings, while divergence between results obtained by different methodologies can aid in building up a richer composite picture of the phenomenon under study (Perlesz and Lindsay, 2003). It would seem sensible, therefore, for researchers to keep an open mind methodologically; Atkinson and Hammersley (1995, quoted in Goulding (1999)) remind researchers that their first duty is *“fidelity to the phenomena under study, not to any set of methodological principles, regardless of how strongly supported by philosophical arguments”*.

### **6.3 Choice of study methodology**

#### **6.3.1 Overview**

One main purpose of this study was to provide results which could inform public policy on sponsorship regulation. Public policy is made at a national level and would be expected to provide benefits to citizens across the country, and thus a major requirement was for generalisability of findings rather than idiographic knowledge, which steered the researcher toward a positivist methodology. Any recommendations made on the basis of an interpretive study could be easily rejected as applicable only to the particular context or group investigated. Furthermore, the central research questions were formulated on

the basis of existing theories about the effects of sponsorship and the influencers of consumer behaviour, and therefore easily and naturally articulated as hypotheses to be confirmed or otherwise. If the suggestion of Hirschman (1986) that “one should do research consistent with one’s personal beliefs about the nature of reality” is accepted, this again inclined the researcher toward a positivist stance.

The fact that the study was to be conducted among young teenagers would have led to some difficulties in using primarily interpretive methodologies. Firstly, with the researcher being old enough to be the parent (or even grandparent!) of her subjects, any attempt to immerse herself within the drinking or sporting culture of the subjects would have led to changed behaviour on their part; teenagers behave differently when there is an adult around, from how they behave when solely with their peer group. In this specific context, a particular concern is ease of purchasing alcohol; if the adult researcher bought alcohol at the request of the teenagers, that would bias the study (it could not be known how easily they could have bought alcohol if the researcher was not present), but if the adult refused to buy it, she could run the risk of rejection by the group. The adult could also be put in difficult ethical situations regarding her responsibilities for the young people’s safety under influence of drink, and condoning the breaking of laws relating to underage purchasing and drinking of alcohol.

Thus, it was determined that the methodological foundation of the study would be a positivist one, with the objective of confirming (or not) hypotheses about the population, which would provide a concrete basis for public policy recommendations. This required the use of a survey, using a sample of sufficient size to be able to carry out robust statistical testing. However, due to lack of previous research addressing

involvement with both sport and alcohol, it was decided to conduct prior exploratory research in order to be more confident that the questionnaire would capture all salient aspects.

For the exploratory research, the researcher heeded the advice of Atkinson and Hammersley (1995) and kept an open mind regarding the particular methodology. She noted that interpretive methodologies which analyse what subjects say, rather than those where the researcher is required to become part of the phenomenon being studied, would not be subject to the problems previously discussed, and thus such methodologies were studied to see if they could provide any techniques which would aid in this research. In particular, the Theory of Reasoned Action model requires elicitation from the study population of perceived outcomes of behaviour and salient referents, and a primary concern for the researcher was to be able to carry out discussions to elicit these reliably. She was concerned not to bias the discussions by bringing in her own perceptions of reality, mainly gained from her own teenage experiences many years previously, and also wanted to ensure that she understood the language currently used by teenagers in this context (e.g. current slang for “drunk”). Therefore, she firstly examined the assumptions gained from her own life experience, the main ones of which were:

*Parents generally do not approve of teenage drinking, and certainly not of drunkenness*

*Teenagers rebel against their parents' wishes*

*Teenagers want to grow up as quickly as possible*

*The teenage norm is drinking alcohol well before the age of 18*

and having identified these, “bracketed” them (Baker *et al*, 1992), and resolved not to make any assumptions about these points when talking to young people.

Phenomenology also requires that in discussion with participants, dialogue emerges naturally rather than being guided by pre-specified questions. The researcher could see the benefits of this strategy in discussing the part that alcohol played in young people’s lives; however, the requirement to elicit the parameters to set up the Theory of Reasoned Action model, coupled with time constraints, meant that it was essential to ensure that certain topics were discussed during the exploratory stages and so a guideline list was required. Therefore, a compromise was sought; the researcher decided to introduce topics in a very general fashion, allowing free flow of discussion as much as possible, and not intervening immediately if the discussion appeared to veer off on a tangent. It was hoped that the required topics would then emerge naturally, but if not, researcher intervention would be necessary.

Therefore, the study comprised two stages: the exploratory research stage, using a mixed methodology, and the survey stage, using a positivist methodology. Efken (2002) recommends that those working with teenagers should gain some familiarity with teenagers’ language, interests and attitudes before commencing interviews, and the researcher, having little contact with teenagers, felt that a preliminary exploratory stage working with an intermediate age group would be useful in this respect. Young people currently at school or university have grown up in an era when sport is highly commercialised. Previous generations may remember when leading football teams did not have brand names emblazoned across their chests, and pitches were not surrounded by a proliferation of perimeter advertising boards, but today’s teenagers have grown up

with this type of commercialisation. In other sports, they may have spent a summer week at one of the Norwich Union-sponsored Star Track Athletics schemes, or returned from a basketball match with a Coca Cola branded pen. Outside of sport, they may have collected Tesco's vouchers for school computers or Walkers' crisp tokens for books for their school. It is probable, therefore, that young people have different perspectives on sponsorship and the involvement of commercial brands with sport, than their parents' generation. As the researcher belongs to the latter age-group, she decided it would be useful to carry out some discussions with students (an intermediate age group) before undertaking the main empirical work in schools. The objectives of this were to "bridge the gap" between the researcher and demographic group of interest, by selecting respondents from an intermediate group, to discuss teenage norms and perceptions regarding alcohol consumption, to test the types of questioning proposed for use in the main exploratory stage, and to aid the researcher in "talking the right language" in future interviews with younger teenagers. Thus, the exploratory stage of research was subdivided into a preliminary stage and a main stage.

In the main exploratory stage, the objective was to interview younger teenagers (Year 10 in secondary school, age 14 – 15, i.e. the year before most pupils sit their GCSE examinations), in order to gauge the extent of awareness of sport sponsors among young people of that age. The intention was to examine attitudes towards sport sponsorship, in particular alcohol sponsorship, and also to investigate perceptions of the influence of sport sponsorship and its impact on purchase decisions. Furthermore, these groups were used to discuss teenage norms, perceptions and knowledge regarding alcohol consumption, participants' perceptions of the appropriateness of alcohol use for

sportspeople, and their current behaviour and future intentions with regard to alcohol. Findings were compared with available literature to investigate how far they confirmed findings from other teenage studies, and were then used to refine the hypotheses previously proposed.

At the final survey stage, a larger sample of pupils of the same age was surveyed by self-completion questionnaire in order to investigate their perceptions, attitudes and intentions with regard to alcohol, and to test, through the formulated hypotheses, whether these measures, and/or the relationships between them, were affected by involvement in sport, awareness and knowledge of sponsors, or beliefs about effects of sponsorship. The use of a questionnaire survey enables the collection of data from a large sample in a standardised form, appropriate for statistical analysis (Malhotra, 2002: Ch 10).

### **6.3.2 Exploratory research – detailed methodology**

For the exploratory stages, focus groups were selected as an appropriate method. Malhotra (2002) states that focus groups are useful for “understanding consumers’ perceptions, preferences and behaviour”, and also as an aid to structuring future questionnaires and refining hypotheses for quantitative testing – all of these were aims of the exploratory stages of the research. It was thought that focus groups would generate more useful information about the subject than individual interviews, due to the opportunities for discussion among participants. Malhotra lists among the advantages of focus groups snowballing, where one person’s comment sparks off further discussion, spontaneity, and flexible structure. In the current context, it was not only important to learn about the attitudes and behaviour of individuals within the group, but also to learn



about attitudes and behaviour of their peer group. Thus anecdotal evidence, more likely to come up spontaneously in a free-flowing discussion than in a structured interview, was very relevant.

The preliminary stage comprised three focus groups of Cardiff University second-year students who participated in, and were spectators of, at least one sport. This was a convenience sample, chosen as it was thought that they would be sufficiently confident to articulate their views honestly to a researcher, while being young enough to remember when they were below legal drinking age. The actual students participating were volunteers from the researcher's second year marketing class. Degrees of interest varied from fanatical supporters to those who only watched big televised international matches, and level of participation from university representation to those who played sport non-competitively purely to keep fit. Equal numbers of males and females (seven of each) took part, and ages ranged from 19 to 26. Students were allocated to groups according to their availability – this resulted in all groups having a mix of males and females. Participants were advised that they would be discussing sport sponsorship, but the focus on alcohol was only disclosed at debriefing, in order to minimise any experimental effect.

The population for the main exploratory stage and survey research was chosen as Year 10 (14/15 year old) pupils in Cardiff schools. As a medium-sized UK city which, in common with most UK cities, has serious concerns about the alcohol-fuelled behaviour of some young people, Cardiff was both convenient for the researcher and thought to be suitably representative of the UK. Year 10 pupils are at an age when the literature would indicate that the vast majority have already drunk alcohol, with a significant minority drinking regularly and/or binge-drinking. For the main exploratory stage, six of the

twenty schools on the Cardiff Schools Net were contacted, along with one private school. Two of the six, and the private school, expressed interest, while four declined to be involved. Subsequently, one of the schools dropped out – it was decided not to attempt to replace it as by this time the other focus groups had taken place and it was thought unlikely that going to a third school would yield any new material, in line with Malhotra's (2002) recommendation that no more focus groups are necessary when it gets to the stage that the moderator (researcher) can anticipate what will be said. In each school, one focus group of girls and one of boys was organised. In the state school, these comprised eight pupils per group. In the private school, the school could only give each group half an hour as opposed to the hour given by the state school, and thus group membership was reduced to five per group. These numbers are small compared to many authors' recommendations - Malhotra (2002) recommends 10-12, saying that groups of less than eight may not have sufficient dynamism, and would categorise five as a "mini-group". However Efken (2002) believes that smaller groups are appropriate for teenagers, while Hyden and Bulow (2003) also support smaller groups when discussing complex issues, feeling that a richer conversation may result due to the need to engage more closely with fellow participants. With young people, control issues may also be relevant: while three of these groups worked very effectively, some of the eight-boy group found it difficult to keep their concentration when a group member at the other end of the table was trying to make a more involved point, and the researcher had to work hard to ensure that they did not disengage from the discussion.

Kenyon (2004) discusses other relevant issues of focus group membership in the context of interviewing young people, and her recommendations were followed for this

study. Focus group members were to be from the same school year, so that they would know each other and hopefully be relaxed in each others' company, to encourage frank and free discussion. Selection of single-gender groups, also supported by Efken (2002), was done so as to eliminate any distraction or self-consciousness which could be caused by discussing sensitive issues in a mixed group. The actual selection of individuals was done by the school, with the researcher stipulating that she would like willing participants with a range of academic abilities and sporting involvement. Seating was around a table, with a tape recorder placed in the centre. Audio-taping was preferred to videotaping as being more anonymous – even so, one group of girls sought much reassurance that the tape would not be heard by any teacher before they commenced discussion.

As in Kenyon's research, an ice-breaker was designed to stimulate involvement of all group members. This would involve the group working as a team to pair up as many as they could of 24 sponsor/sporting property pairs, given to them on small coloured cards. The exercise was designed to serve a second important purpose of discovering the extent of sponsor knowledge within the group. Kenyon found that non-directive questioning was a more appropriate technique to use than a semi-structured style, as it led to less restrictive answers, more group interaction, and less obvious periods of silence when participants were "waiting for the next question". However, her subject matter (response to advertisements) was different, and in this case it was necessary for the group to cover several topics in a limited time. Therefore a semi-structured technique was decided upon, and the researcher prepared a list of open-ended questions to stimulate discussion. Participants were encouraged to discuss with each other rather than always directing their comments to the researcher, and this often led to the discussion moving on

to another relevant topic without the researcher specifically introducing it. Thus the researcher's role was often just to guide discussion rather than to control it more strictly. As urged by Efken (2002), the researcher was careful to respond to participants' views and revelations in a positive and non-judgmental fashion.

#### **6.4 Findings from preliminary exploratory research**

This section reports the views from the student focus groups. A high level of concern was expressed by these students that in some areas, football in particular, the commercialisation of sport had gone too far. The more subtle sponsorships of events such as Wimbledon Lawn Tennis Championships were preferred to the "clutter" of perimeter advertising at major football matches. Many participants also saw sponsorship as a major part of the "exploitation" of children by brands, and here sport sponsorship could be especially problematic, as sporting interests and abilities were often key to gaining status or acceptance in school. Thus brands with sporting associations became highly desirable, and both children and their associated adults were tempted to spend excessively on them. Issues of sponsor influence on what should be purely sporting matters, e.g. team selection, were also raised.

Participants showed a high level of awareness of major sponsors, but had little knowledge of their less high profile activities such as grass roots sponsorship. They believed that the primary objective of sponsorship was to get the brand or company name in front of the public, and there was little deep consideration of possible image effects – these were limited to believing that brands would associate with a leading club in order to be seen as successful, or with a local club in order to be seen as supporting the

community. They believed that sponsorship would only make a difference in a purchase situation where choice was between very similar alternatives, and in this case it could be a positive or negative influence, depending on the buyer's attitude to the sponsored property. Regarding alcohol, they believed that its sponsorship of football made little difference to teenage drinking behaviour; their views supported the discussion in Chapter 2, that teenage drinking is "part of growing up" and that peer group influence was the strongest factor to influence teenagers to drink. Choice of drink would be dictated by what they could afford.

However, the drinking experiences of these groups and their contemporaries appeared to have begun at around 15 to 16. This may be typical for a student sample, which would tend to be biased toward the middle class and toward more studious and conscientious young people. Yet the students also felt that brand awareness reached its peak around the start of secondary school (age 11/12), when peer group acceptance was most important, and began to decline around 15/16 as people became more independent and self-directed. They expressed concern about sponsorship by electronic games and junk food companies, which might encourage "pester power" of younger children. Thus, young people in a subculture where drinking begins at an earlier age may be more influenced by sponsorship than this sample.

In discussions of sponsorship appropriateness, these students made clear distinctions between individual and team sports. Team sponsorships were seen as corporate deals, with the main target audience being spectators who were not necessarily also sport participants. Individuals who had sponsorship were perceived as personally endorsing the sponsor's product, and therefore junk food and alcohol sponsorships were

perceived as inappropriate and promoting the wrong idea of what a serious sportsperson should consume.

A fuller report of this study can be found in Davies (2002), which is included at the end of this thesis.

## **6.5 Main exploratory research**

### **6.5.1 Objectives and agenda**

The objectives of these sessions related to the twin foci of this study, sport sponsorship and alcohol. With regard to sport sponsorship, objectives were to gauge the extent of awareness of sport sponsors among young people aged 14-15, to examine their attitudes toward sport sponsorship, in particular alcohol sponsorship, and to investigate their perceptions of the influence of sport sponsorship and its impact on purchase decisions. With regard to alcohol, the objectives were to discuss teenage norms, perceptions and knowledge regarding alcohol consumption, and to discover the influencers of teenagers' drinking and attitudes to alcohol. This would enable the elicitation of salient outcomes of alcohol consumption and salient referents in this context, for use in formulating the survey questionnaire. In addition, it was intended to explore in free discussion participants' perceptions of the appropriateness of alcohol use for sportspeople, and to investigate their current behaviour and future intentions with regard to alcohol. Findings would be compared with available literature, and used to refine the hypotheses proposed in Chapter 5.

The agenda for the focus group was developed to fulfil these objectives. After introductions had been made and the purpose of the group explained, participants were given two sets of cards to be matched up into 24 sponsorship pairings; green cards with the names of various sport sponsors and gold cards with the names of events, teams or individuals sponsored by them. There was not a strict one-to-one correspondence as one event (the Olympic Games) had two of its sponsors included, while four of the sponsors sponsored more than one of the properties. The exercise was pre-tested with the researcher's daughter, a sport-orientated 12 year old, to ensure that it was at an appropriate level of difficulty for participants. This served both as an ice-breaking activity, during which participants could communicate informally with each other and the researcher, and a tool from which the researcher could subjectively evaluate the extent of sponsor knowledge and the readiness with which this knowledge could be retrieved from memory. After this activity has been completed, participants were led into a discussion of the sports they played or were interested in, and asked what difference they felt sponsorship had made to these sports. They were asked if there were any companies/brands they would not like to see sponsoring these sports. If alcohol was not mentioned, they were asked specifically about alcohol companies. The discussion was then guided into considering the effects on participants, and people they knew, of sponsorship. Why did they think companies sponsored? What did they think about the sponsor? Had they, or anyone they knew, ever bought a brand because it was a sponsor? Did they think that the sponsored teams/players actually used the sponsor's brands? If alcohol was not mentioned, the researcher asked specifically, "What about beer brands

like Carling and Carlsberg sponsoring football? Do you think this affects what supporters drink?”

This led the discussion naturally towards young people and alcohol. Free ranging discussion was encouraged to elicit details of the participants’ own and their peers’ alcohol consumption, where alcohol is consumed, how it is obtained, what influences consumption, and what they knew about the short and long term risks and consequences of drinking. If discussion of others who would approve/disapprove of them drinking alcohol was not been fully covered in discussion, the researcher asked specific questions to ensure that all salient referents were elicited. The discussion was then steered toward the sporting perspective, if this had not already come up in discussion, by asking “Is it good for people who are serious about playing sport to drink alcohol?” and probing the answers given in terms of the extent of drinking (regularity/quantity) that was considered to be acceptable, and the reasons for their opinions. Finally, participants were asked about their plans for the future – college/university, work, sporting ambitions. They were asked to visualise themselves as they wanted to be at age 18, and asked what they would expect their alcohol consumption to be like – how often would they drink? on what occasions? how often would they get drunk? On completion, the researcher thanked the young people for their participation and repeated the assurances of confidentiality. In each group, all pupils participated in the discussion, and participants seemed at ease with each other and willing to talk openly and honestly about their attitudes and behaviour.



## 6.5.2 Findings

Both groups of boys, and one group of girls, were able to match around half of the sponsorship pairings with ease. With further reflection and discussion, the boys' groups both matched 18 pairs. All these groups found the football sponsorships easiest to match, although there was confusion between Carling and Carlsberg, and some participants expressed surprise at recent sponsor changes, although these had been in the news. Rugby sponsorships, those related to local teams, and Olympic sponsorships were also matched correctly. The unknown matches were those relating to less mainstream sports, e.g. triathlon, netball. These groups all showed medium to high levels of engagement with the task. The other group of girls, however, only matched two properties with their sponsors, and needed encouragement even to try the exercise – typical remarks were, “I can't do that. I don't know any sponsors.” and “I never look at sponsors”.

With regard to sport, all the boys played various sports, mainly football, rugby and basketball, while four were serious about their sports, e.g. selected or hoping to be selected at national junior or national schools level. All watched a wide range of televised sport. Only one girl played sport (football) outside school, but all played at school. They mentioned watching big football and rugby matches on television, and also the recent Olympic Games. Without exception they saw sponsorship as “good”, with the main perceived benefit the money received by teams, individuals or events. Many felt that without sponsorship money sports teams would be unable to survive. One girls' group also saw the benefit of “free stuff” for both teams and fans, and also perceived a lack of female-oriented sponsorship.

Regarding sponsorship appropriateness, tobacco was frequently mentioned. Opinions in all groups were split on whether alcohol sponsorship was acceptable or not (“it’s not illegal”; “you see it everywhere”), but it was not thought to be a big issue in terms of influencing young people to drink. One girl put it succinctly:

*“Drink sponsorship doesn’t make you drink – you do it cos your friends do.”*

Some of the boys in one group argued forcefully that sponsorship by the fast food chain McDonalds was much worse than alcohol sponsorship, one saying with regard to their sponsorship of the tennis player Serena Williams:

*“You eat McDonalds, you get fat – she’s fit, not fat”*

and describing McDonalds sponsorship of youth athletics as “ironic”. These boys also disapproved of sponsorship by games console companies as they are “addictive” and “make people lazy”.

For three of the groups, the question of “inappropriate” sponsorship generated a discussion on ethical issues such as the above. However, for one group of girls, the question prompted a different discussion, centred on issues of image. Inappropriate sponsors were those whose brand name or logo supporters would be “embarrassed” to wear. Toilet roll manufacturers and “cheap shops” such as Hypervalue, Poundstretcher and Oxfam were cited. One girl remembered:

*“This company that made pile cream sponsored the football – it was so embarrassing. You can’t walk round with the team you support on your T-shirt with a company that makes pile cream”.*

All had similar ideas as to why sponsors got involved with sport – for reasons of advertising and publicity. A few participants also mentioned community involvement.

None admitted buying a product purely because it was produced by a sponsor – there was acknowledgement by some that this might influence buyers positively toward a product but there would always be other considerations. One girl cited her brother's annoyance when the football team he supported got a new sponsor, because the logo was a colour he disliked. While some participants knew others who had bought products because of sponsorship, these were seen as being fanatical supporters, people who *"live football"*. One boy, when asked whether sponsorship would affect what he bought, stated:

*"No, I'm not impressionable. Some people would. Dumbos."*

The perception was of sponsorship as a purely commercial involvement with little responsibility attached to a sponsored team. In the main, participants did not feel that players were under any obligation to use or promote the sponsor's products, unless they were given for free – some believed that they were.

Alcohol sponsorship was not thought to be instrumental in influencing young people to drink – all groups agreed, as exemplified by the earlier quote, that people started drinking mainly for social reasons. However, one group of girls did also feel that they were surrounded by alcohol promotion messages in terms of advertising, large amounts of alcohol in supermarkets, and a general drinking culture which made it hard to ignore.

Turning to the participants' own use of alcohol, most drank alcohol at some time. Two classified themselves as non-drinkers – one boy who was very serious about his rugby, and one girl who did not drink because of possible weight gain effects (she controlled her food intake very strictly too). Having established that the overriding reason for drinking was that other teenagers did so, groups were encouraged to explore

the question of why teenagers in general took up drinking, and a variety of reasons emerged:

*"To be cool"*

*"To look hard"*

*"Nothing else around to do"*

*"Kids look at adults (drinking), think they're having a wicked time – want to do it now"*

*"Friends influence you away from good intentions"*

*"Everybody drinks and smokes, they've got to try it once"*

*"Gives you a buzz"*

*"Makes things more fun if you're drunk"*

*"Relieves stress"* (the girl who said this continued *"I know it's not the best way, you should talk to someone."*)

In addition, several participants mentioned that alcohol was affordable due to the many cheap deals available, and that it was easy to get – almost every one was confident that they would be able to procure alcohol if they wanted, either by asking an older person to buy some or going to a shop that did not ask for proof of age – their experience was that most small shops wanted their business and would not turn them away. One group, as reported above, also identified the high visibility and availability of alcohol as a contributory factor.

Drinking of alcohol was generally confined to weekends (for most, not every weekend). None of the participants appeared to drink regularly throughout the week, although they knew people who did. One story was recounted about girls who had

brought vodka to school in a water bottle and had been suspended for being drunk – this was disapproved of. Some girls perceived that boys of their age drunk less than girls, as boys were “*more interested in Playstations and things*”, but the findings of the boys’ groups did not corroborate this. Drink was generally consumed at parties, outside (park, woods), or in their own or friends’ houses. Drinking was not always planned or anticipated behaviour; the decision to drink could be a response to boredom, stress or peer pressure. Most of those who drank admitted being drunk on occasion; for girls this was usually only once or twice, and they could remember the specific occasions, while a few boys gave the impression that they had been drunk several times. None admitted to intending to become drunk, but neither was it seen as something shameful – some saw it as a learning experience, which would make them more cautious in the future, while others, mainly boys, just viewed getting drunk on occasion as a normal life experience for young men. Parental attitudes to drink varied; some participants would not dare to drink in the house or to come home after drinking, while others stated that their parents were happy to let them drink small amounts of alcohol.

All had discussed alcohol in their schools’ Personal and Social Education classes, and could list both short and long-term consequences of alcohol use and abuse. The possible consequences mentioned, both bad and good, are shown in Table 6.2.

Few long-term consequences, positive or negative, were perceived for drinking in moderation, though ideas of what constituted “moderation” were rather vague. Several expressed the view, though, that an appropriate level of drinking for a serious sportsperson would be lower (i.e. zero or “special occasions only”) than that for a person with no particular sporting ambitions, for whom some cited government guidelines. Only

one group mentioned the possible health benefits of a small amount of alcohol, and they were unclear as to the details.

**Table 6.2: Consequences of alcohol use**

	<b>Short term</b>	<b>Long term</b>
<b>Drinking in general</b>	Fit in with friends	Possible health benefits of moderate drinking
	Relieve stress	Negative effects on sporting performance
	Gives you a “buzz”	
	Diuretic effects	
	Appear “cool”	
	Appear “hard”	
	Would not play sport so well	
<b>Drinking too much or being drunk</b>	Hangover	Risk of addiction
	Being sick	Liver damage
	Arguments with friends	Weight gain
	Unplanned/risky sex	Pot belly
	Dry mouth in the morning	Kidney damage
	Row from parents	Kills brain cells
	Lose control of yourself	Slow reactions
	Get into fights	Become unfit
	Become “drunk and disorderly”	Stunted growth
	Make a fool of yourself	Cancer
	Get arrested/ taken home by police	No true friends
	Become vulnerable	Ageing effects on face
	Unsafe to drive	
	Makes things more fun	

For most participants, friends were by far the greatest influence on alcohol consumption, in most instances encouraging alcohol use. Most also stated that they respected their parents’ views on alcohol, and those serious about sport also respected their coaches’ views. Other family members were occasionally cited as an influence. Participants felt that teachers disapproved of drinking when it affected schoolwork, but

did not feel that teachers influenced their use of alcohol otherwise - they knew that teachers drank alcohol themselves and one group mentioned meeting a teacher, who had obviously consumed quite a lot of alcohol, on an evening out. No other salient referents were found.

There was a general perception that drinking was not good for sporting performance, both in the short term (*“if you drink before you do a sport you won't do it very well”*) and in the longer term, with effects mentioned such as weight gain, loss of fitness, dehydration, slowing down of reactions, *“kills your brain cells”*. Those who were serious about their sport either did not drink at all or moderated their drinking, e.g. not going out partying the night before a football match. One boy stated that if he made the Welsh Squad in his sport he would not drink alcohol at all but, *“If I know I'm not going to make it I may drink a bit.”* There were divided opinions on the question of top sportspeople drinking and having drunken behaviour reported – although it was recognised that they were setting a bad example, there was a feeling that it was unfair to expect them to behave differently from other people of their age. Some felt it was OK for such sportspeople to be seen drinking as long as they were doing so in moderation, and some believed that managers and coaches should be much tougher on players who drink excessively.

The majority believed that they would drink alcohol when they were over the legal drinking age, that they might *“go over the top”* once or twice but did not intend to drink excessively. For most this was just *“cos we can”* and because they *“don't have to worry about getting caught”*. There was a perception that students in further or higher education drank a lot, and that therefore they would drink more to fit in with the culture.

These focus groups corroborate the general findings of Boys *et al* (2003), in that these young people, at 14, already accept and are socialised into the UK's alcohol culture. Even if they drink little or no alcohol themselves, they accept drinking alcohol and getting drunk as normal behaviour. Some have already established a pattern of weekend alcohol use; most believe that they will drink more alcohol in the future. They have a good knowledge of the risks and consequences of alcohol use, and most accept that these are good reasons not to drink: but, for most, this rational viewpoint is overridden by the need to fit in to the social culture. However, striving for sporting success does appear to make a difference – those with serious sporting ambitions are willing to forego alcohol to better their chances of realising them.

## 6.6 Revisiting the hypotheses

In Chapter 5 the following hypotheses were proposed:

*H1a: Attitude toward drinking alcohol (getting drunk) can be predicted from the outcome evaluation of drinking alcohol (getting drunk).*

*H1b: Intention to drink alcohol (get drunk) can be predicted from attitude toward drinking alcohol (getting drunk) and subjective norms for parents, friends, teachers and (if relevant) sports coaches.*

*H1c: Better predictions of intention to drink alcohol/get drunk than those obtained by the Theory of Reasoned Action will be obtained by using perceived benefits and risks of drinking alcohol/getting drunk as predictors, along with subjective norms for parents, friends, teachers and (if relevant) sports coaches.*



**H2a:** *The inclusion of sporting involvement as a predictor variable will improve predictions of alcohol-related intentions over those obtained from using subjective norms and either attitude or benefits and risks, in the direction that increased sporting involvement will lead to increased intentions to drink alcohol and get drunk.*

**H2b:** *The inclusion of sporting performance as a predictor variable will improve predictions of alcohol-related intentions over those obtained from using subjective norms and either attitude or benefits and risks, in the direction that increased sporting performance will lead to decreased intentions to drink alcohol and get drunk.*

**H3a:** *Awareness of sponsorship will modify the relationships between attitudes or risks and benefits, subjective norms and sporting involvement, and alcohol-related intentions, in the direction that increased awareness will result in greater intentions to drink alcohol/get drunk.*

**H3b:** *Knowledge of sponsorship will modify the relationships between attitudes or risks and benefits, subjective norms and sporting involvement, and alcohol-related intentions, in the direction that increased awareness will result in greater intentions to drink alcohol/get drunk.*

**H4a:** *Those who are exposed to more alcohol sponsorship, and admit that in general they are influenced by sponsorship, will have greater intentions to drink alcohol.*

**H4b:** *Those who are exposed to more alcohol sponsorship, and believe that sponsorship persuades others to buy, will have greater intentions to drink alcohol.*

The focus group findings confirmed the importance of attitudes to alcohol, perceptions of risks and benefits, and the influences of parents and peers, and to a lesser extent teachers and sports coaches, on young people's drinking behaviour. Thus, the suggested predictors in Hypotheses 1a -1c are validated. It was evident, however, that for these teenagers drinking and particularly getting drunk sometimes took place without prior intention, and therefore a measure of likelihood rather than intention (Sheppard *et al*, 1988) would be more likely to correspond to actual behaviour.

It was also hoped that the focus groups would enable hypotheses to be formulated more specifically with regard to action, target, context and time. However, the number of different alcoholic drinks consumed, the different settings in which alcohol was consumed, and the fact that drinking behaviour was often unplanned, led to a judgement that specifying the type of alcohol or the setting would be counterproductive – a young person might be fairly certain that they would consume alcohol that weekend, but the decision of what to drink would depend on how they felt, what was available, and what others were drinking, while unless a party was specifically planned, the setting might depend on the weather, whether parents were at home or not, or whether they succeeded in getting into an establishment which sold alcohol. The one factor that could be included was time; there were strong distinctions made between the appropriateness of drinking on a school night and drinking on the weekend, while participants expected their behaviour at age 18 to differ from their current behaviour. Therefore, it was decided that each hypothesis should be tested with respect to three different times; tonight (a school night), this weekend, and at age 18, as well as for the two different behaviours, drinking alcohol and getting drunk.

Regarding the remaining hypotheses which build on the framework of the first three, there was nothing in the focus groups to suggest that they should be amended. In particular, the restraint in alcohol consumption shown by two boys playing rugby at a high level and hoping eventually to represent Wales validates the inclusion of H2b. There was little evidence that the participants perceived themselves to be influenced by sponsorship, but such influence would not always be acknowledged openly or even to oneself, thus the final two hypotheses are still proposed in their original form. Finally, the focus groups showed that there were some differences between girls and boys in their interest in sport and their patterns of alcohol consumption; therefore, it was decided to analyse the subgroups separately when testing each hypothesis. The revised set of hypotheses is presented below.

*H1a: Attitude toward drinking alcohol (getting drunk) can be predicted from the outcome evaluation of drinking alcohol (getting drunk).*

*H1b: Likelihood of drinking alcohol (getting drunk) tonight and this weekend, and intention to drink alcohol (get drunk) at age 18 can be predicted from attitude toward drinking alcohol (getting drunk) and subjective norms relating to the stated time for parents, friends, teachers and (if relevant) sports coaches.*

*H1c: Better predictions than those obtained by the Theory of Reasoned Action of likelihood of drinking alcohol (getting drunk) tonight and this weekend, and intention to drink alcohol (get drunk) at age 18, will be obtained by using perceived benefits and risks of drinking alcohol (getting drunk) as predictors, along with subjective norms for the relevant time for parents, friends, teachers and (if relevant) sports coaches.*

**H2a:** *The inclusion of sporting involvement as a predictor variable will improve predictions of alcohol-related likelihoods and intentions over those obtained from using subjective norms and either attitude or benefits and risks, in the direction that increased sporting involvement will lead to increased likelihoods and intentions of drinking alcohol (getting drunk).*

**H2b:** *The inclusion of importance of sporting performance as a predictor variable will improve predictions of alcohol-related likelihoods and intentions over those obtained from using subjective norms and either attitude or benefits and risks, in the direction that increased importance of sporting performance will lead to decreased likelihoods and intentions of drinking alcohol (getting drunk).*

**H3a:** *Awareness of sponsorship will modify the relationships between attitudes or risks and benefits, subjective norms and sporting involvement, and alcohol-related likelihoods and intentions, in the direction that increased awareness will result in greater likelihoods and intentions of drinking alcohol (getting drunk).*

**H3b:** *Knowledge of sponsorship will modify the relationships between attitudes or risks and benefits, subjective norms and sporting involvement, and alcohol-related likelihoods and intentions, in the direction that increased awareness will result in greater likelihoods and intentions of drinking alcohol (getting drunk).*

**H4a:** *Those who are exposed to more alcohol sponsorship, and admit that in general they are influenced by sponsorship, will have greater likelihoods and intentions of drinking alcohol (getting drunk).*

*H4b: Those who are exposed to more alcohol sponsorship, and believe that sponsorship persuades others to buy, will have greater likelihoods and intentions of drinking alcohol (getting drunk).*

As previously stated, each hypothesis is actually a pair, one hypothesis relating to drinking alcohol and one to getting drunk; thus H1a, for instance, expresses both:

*H1a(1): Attitude toward drinking alcohol can be predicted from the outcome evaluation of drinking alcohol , and*

*H1a(2): Attitude toward getting drunk can be predicted from the outcome evaluation of getting drunk.*

As it has been decided to test each hypothesis for three times and both genders, this means that for each numbered hypothesis from H1b onwards, 12 analyses will need to be carried out (2 behavioural intentions x 3 times x 2 genders).

The use of focus groups, therefore, achieved its objectives of eliciting perceived outcomes, positive and negative, of the behaviours under investigation, discovering salient referents, and validating the use of the Theory of Reasoned Action in this context. In addition, it was established that there was sufficient and varied experience of drinking and getting drunk, various levels of engagement with sport, and a wide range of knowledge of sponsorship within this age group, in order that a meaningful investigation could be undertaken into relationships between alcohol consumption, sport and sponsorship. Thus, survey research among this population was appropriate, and the next chapter goes on to describe the formulation of the questionnaire and selection of the sample for the final, quantitative part of this study.

## CHAPTER 7

### THE QUESTIONNAIRE

#### 7.1 Introduction

Ajzen and Fishbein (1980) stress that, for the Theory of Reasoned Action to be used effectively, it is important to define the behaviour of interest as precisely as possible, in terms of action, target, context and time. This study aimed to investigate intentions to engage in two alcohol-related behaviours – the drinking of alcohol *per se*, and getting drunk. It was decided to measure intentions only, rather than attempting to relate these to behaviour, for several reasons. Firstly, obtaining a reliable measure of behaviour would be fraught with problems. For both ethical and practical reasons, direct observation would not be possible. Therefore, it would be necessary to rely on self-reporting of behaviour. In order to do this, it would be necessary to go back into the schools a few days after questionnaire completion, to administer another questionnaire. This would have put twice the burden on schools, who often had difficulty finding a suitable slot for administering even one questionnaire. Furthermore, it is possible that an experimental effect would have occurred, with respondents being very aware of their alcohol-related behaviour and how it corresponded (or not) with their stated intentions. Finally, the reliability of the information would have been questionable, either due to deliberate over- or under-reporting of consumption, or, in the case of young people drinking to excess, inability to remember. However, Shim and Maggs (2005) found, in a

survey of alcohol consumption among US students where both intentions and behaviour were measured, that intentions were a very good predictor of behaviour in this context.

## **7.2 Formulating the questionnaire**

The following discussion on questionnaire formulation alludes to the findings of the focus groups, described in the previous chapter. Regarding the specificity of action and target, it was observed that the young people in focus groups drank beer, cider, wine, vodka, and alcopops of various types. Often choice of drink was governed by availability, price, or what friends were drinking. Thus there may be an intention or expectation of drinking without considering the specific drink that will be consumed. As the behaviour of interest is drinking any type of alcohol, breaking this down into different types was more likely to make the questionnaire harder for respondents to answer than to yield additional useful information. Therefore, the two behaviours of interest were defined as “drinking alcohol” and “getting drunk”.

Considering context and time, drink appeared to be consumed when “going out” to clubs or parties, at young people’s own or friends’ houses, or outdoors. It was more frequently consumed at the weekend than during the week, because this was when parties and clubbing were more likely to take place and when there was no need to get up for school the next day. For the purposes of the study, the researcher was interested in any drinking of alcohol, and the extent of drinking rather than whether drinking takes place in specific situations. Therefore, context was not specified. Timewise, both short and long term intentions are relevant, as concerns about alcohol consumption are related both to young people’s behaviour as underage drinkers, and the habits and norms related to

drinking that are likely to influence consumption as adults. The shorter the time interval between questionnaire administration and the behaviour taking place, the more likely it is that intentions will correctly predict behaviour (Ajzen and Fishbein, 1980). Moreover, some measure of frequency needs to be incorporated for the long term situation. Thus it was decided to use three categories – short, medium and long-term predictions. Short-term predictions related to “*Tonight*” (on such a short time frame, predictions would be more likely to be accurate, but as this would be a school night, drinking intentions would be likely to be low), while medium-term predictions related to “*This weekend*”, when focus group findings would predict greater intentions of drinking/getting drunk, but the slightly longer time frame would have a small impact on accuracy of prediction. Long term predictions related to “*at age 18*”, in an effort to predict adult behaviour. As this asked respondents to predict 3-4 years ahead, accuracy was likely to be lower, but it would nevertheless give a valuable measure of respondents’ perceptions of adult drinking behaviour.

It was decided to adopt the “estimation” type of question formulation (Sheppard *et al* 1998) for the short- and medium-term situations, asking respondents to rate the statement (e.g. “I will get drunk this weekend”) on a 1 – 7 scale from “extremely likely” to “extremely unlikely”. This was thought preferable to a formulation such as “I intend to get drunk this weekend” with an agree/disagree type scale, as it was evident from the focus groups that alcohol-related behaviours were often unplanned. Using the former style of question was thought to be likely to provide a more accurate prediction, as it would allow respondents to consider their habitual behaviour and would not require them to admit to a firm intention which some might consider wrong or irresponsible.



Attitude toward the act (i.e. either drinking alcohol or getting drunk) was measured on a scale adapted from that used by Ajzen and Fishbein (1980, pp 261, 262, 267) and Oliver and Bearden (1985) to measure attitude toward the act. (Bruner, James and Hensel, 2001, p 61), with two items being reverse coded. In focus groups, respondents had shown mixed attitudes towards drinking alcohol, realising that it was not healthy (certainly in large quantities), and that consuming too much could be foolish because it could lead to loss of control over behaviour and, particularly for young women, increased vulnerability. Nevertheless, many had also referred to positive aspects of alcohol consumption – that it was relaxing, sociable, and part of a “good night out”. Oliver and Bearden (1985) reported a Cronbach alpha of .86 using this scale, and similar scales have been used to measure “attitude toward the act” in many studies based on the Theory of Reasoned Action, achieving Cronbach alpha values of between .72 and .97 (Bruner *et al*, 2001, p62).

*Drinking alcohol is:*

- |            |   |   |   |   |   |   |   |          |
|------------|---|---|---|---|---|---|---|----------|
| Bad        | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Good     |
| Foolish    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Wise     |
| Unhealthy  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Healthy  |
| Unpleasant | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Pleasant |

*Getting drunk is:*

Bad	1	2	3	4	5	6	7	Good
Foolish	1	2	3	4	5	6	7	Wise
Unhealthy	1	2	3	4	5	6	7	Healthy
Unpleasant	1	2	3	4	5	6	7	Pleasant

Regarding behavioural beliefs, five different “themes” were extracted from the focus group findings – whether drinking alcohol/getting drunk felt good, whether it improved one’s image, whether it led to getting into trouble, whether it led to loss of control, and whether it was good or bad for health. These were operationalised as Likert scale questions, asking extent of agreement / disagreement as to whether drinking alcohol / getting drunk had this outcome for the respondent personally. Finally, in establishing subjective norms, focus groups showed that the significant referents for drinking behaviour were parents, friends, teachers and, for those heavily involved in sport, their coaches. Other family members were only mentioned occasionally so it was thought that additional questions to cover these, and motivations to comply with them, would extend the questionnaire substantially for very little benefit. Behavioural beliefs, outcome evaluations, opinions of significant others, and motivation to comply were all measured on 1-7 Likert scales. The questionnaire did not include a specific question to elicit an overall subjective norm “Most people close to me ...”, as it was evident from the focus groups that most young people were influenced both for and against drinking, and thus this would be a difficult question to answer.

A draft questionnaire was thus drawn up and piloted.

### 7.3 Piloting the Questionnaire

The two schools where focus groups had been carried out were asked if they would be willing to provide groups of 10 year 10 students to complete and discuss the pilot questionnaire. One was able to do this, but the other was not, and therefore the first school provided 20 students. Due to various other activities going on, they could not provide equal numbers of boys and girls – the group comprised 7 boys and 13 girls. These were different young people from those involved in the focus groups. The pupils were given a brief explanation of the research and the purpose of the pilot questionnaire.

Questionnaires were distributed for completion, and pupils were asked either to raise their hand or to make a note on the questionnaire if they were unsure how a question should be answered, or had any other comment on a particular question. The first pupil to finish completed the questionnaire in 10 minutes, and the last in 17 minutes. Only one question was raised at this stage – whether “watching” a live sporting event included viewing a live television transmission. This was not the researcher’s intention, and it was agreed that substituting the word “attend” for “watch” would make the meaning clear. When all questionnaires were completed, the researcher went through page by page asking for any comments or questions. At the questions referring to opinions of “parents”, it was confirmed that the usual wording in school communications was “parents or guardians”, and the questionnaire was amended accordingly. No other points were made by the pupils.

Following the session, all questionnaires were scrutinised to check for internal consistency, and whether pupils appeared to have thought about their individual answers, rather than, for instance, going through each part of a question circling the same response.

Questionnaires were largely satisfactory in these respects. However, in Section B, where two of the four items were reverse-coded, one boy's answers appeared inconsistent – it was decided that larger spacing between items might help to encourage respondents to read each item separately. A further check was made on the responses to Part 2 (2), where respondents had to circle the correct sponsor(s) of various sporting properties. There was a wide range in number of correct responses, from 2 to 12 correct out of 16, and some variability as to which sponsorships were attributed incorrectly or were unknown, and thus this set of questions was judged to be suitable in measuring actual knowledge of sponsorship. Appendix 1 shows the final questionnaire.

#### **7.4 Selection of sample**

In order to survey a wide cross section of young people, it was decided to attempt a stratified sampling procedure, with the aim of sampling at least one of the different types of school in the area, i.e. local authority schools, church schools, private schools, and Welsh medium schools. From the full list of non-private schools in Cardiff and the surrounding area, those which had already refused to take part in the study (after being contacted at the focus group stage) were removed. A stratified sample of four local authority schools, one church school, and one Welsh medium school was taken from those which remained, and a letter sent to each headteacher. A further two private school were selected from those in Cardiff and the surrounding area and letters sent to their headteachers. Two replies were received, one offering to let two Year 10 classes (approximately 60 pupils) complete the questionnaire during their Personal and Social Education lessons, and the other, a smaller school, willing to let all Year 10 pupils

complete it. Telephone follow-up led to agreement from two other schools to have all Year 10 pupils (approximately 200 pupils and 60 pupils respectively) complete the questionnaire. The other three schools were unwilling to participate, and replacement schools of the same type were drawn from the school list. One further school agreed to have three classes (around 70 pupils) complete the questionnaire. These five schools comprised one Welsh medium school, one church school, one private school and two local authority English medium schools, located in very different socio-economic areas. This now comprised a potential sample of over 400 individuals.

## **7.5 Considerations of power**

It was anticipated that the primary method of analysis would be Multiple Regression Analysis, as used by Ajzen and Fishbein (1980), using likelihood of drinking alcohol / getting drunk at each time as the dependent variables. According to Hair, Black, Babin, Anderson and Tatham (2005), studies should be designed to achieve a power of 0.80. Using a confidence level of 0.05, a sample size of 100 will be sufficient to achieve this for  $R^2$  values of 0.15 and above if there are 10 independent variables, and for  $R^2$  values of 0.21 and above if there are 20 independent variables. Previous work on the Theory of Reasoned Action (Sutton, 1998) has shown average  $R^2$  values between 0.4 and 0.5. From the differences observed in the focus groups, it was thought likely that analyses split by gender might be required, but even allowing for possible absences and incomplete or incorrectly completed questionnaires, it was judged that 400 potential respondents should provide at least 100 usable questionnaires for each gender. Thus, this number of respondents was judged to be sufficient, and no further recruitment took place.

## **7.6 Administration**

Dates were agreed with the schools, and letters for parents or guardians (see Appendix 2) were issued to these schools for distribution to the pupils taking part. This was an ethical requirement as the potential respondents were all aged under 16. Parents who did not wish their child to complete the questionnaire were asked to return a tear-off slip indicating this.

It was thought preferable for the questionnaire to be administered by the researcher, in order for her to have control over completion and be able to answer any respondent queries. However, one school insisted that this was not convenient for them, and they would rather distribute the questionnaires and have them completed during the year assembly. The researcher gave the school a short explanation of the survey to be read to the pupils. In the other schools, the researcher explained the survey and distributed the questionnaires to each class, and remained in the room to answer any queries and ensure that questionnaires were being completed without collaboration.

Following completion of questionnaires, the data was analysed using SPSS. This was chosen as it is a reputable and versatile statistical package with which the researcher was already familiar. After initial descriptive analysis of data had been done, multiple regression analysis was used to investigate the relationships specified by the Theory of Reasoned Action, with hierarchical multiple regression analysis being used to investigate additional effects of other predictors.

The next chapter presents the descriptive analysis of the survey data, prior to testing of the hypotheses in Chapter 9.

## **CHAPTER 8**

### **DATA ANALYSIS**

#### **8.1 Introduction**

Once the survey phase was completed, the next task was to examine and code the questionnaires, deal with incomplete questionnaires, and then investigate the key descriptive characteristics of the sample. This chapter describes the sample, presents the mean and variance of each variable, proposes ways in which variables could be combined into meaningful factors or constructs, investigates differences between genders and among schools, and considers the correlations of variables crucial to the testing of the previously proposed hypotheses.

#### **8.2 Characteristics of the sample**

Although the potential number of respondents was over 400, the survey yielded only 322 questionnaires. The shortfall was due to absences from school, mainly from the local authority school which said they had a Year 10 of 200 pupils but only returned 99 questionnaires. The school said it was not unusual to have such a high level of absence close to the summer holiday period, because of families taking holidays or pupils taking unauthorized absence. There is no reason to suspect that the absentees differ in any significant way from those who completed the questionnaire. Of the 322 questionnaires, 10 were removed because the respondent had omitted their gender, and a further 18 were removed because respondents had omitted whole sections, or had obviously given up

answering the questionnaire seriously, e.g. by omitting whole sections or selecting answers to make patterns with their circles. This resulted in a total of 294 usable questionnaires. 44 of these questionnaires had one or more questions unanswered.

Where it was possible to infer the missed response with a high degree of confidence, this was done. Otherwise coded missed responses were coded as “missing” and excluded listwise from relevant analyses.

Tables 8.1 (a) and (b) show the sample breakdown.

**Table 8.1(a): Sample breakdown by gender and school**

		<b>Number</b>	<b>%</b>
<b>Gender</b>	Male	161	55%
	Female	133	45%
<b>Type of school</b>	Private (P)	35	12%
	Church (C)	56	19%
	Welsh medium (W)	58	20%
	Local authority (lower socio-economic area) (LL)	82	28%
	Local authority (higher socio-economic area) (LH)	63	21%

**Table 8.1(b): Sample breakdown by sporting level**

<b>Highest sporting level reached</b>	<b>Total number</b>	<b>%</b>	<b>No. of males</b>	<b>No. of females</b>
Represent country	20	7%	14	6
Represent county, region or city	35	12%	24	11
Represent club/school	137	47%	79	58
No representation/not competitive	100	34%	42	58



216 (73%) of questionnaires were completed before the summer break and the remainder at the start of the autumn term, due to the need to fit in with the school timetables. This could have affected sponsorship knowledge, e.g. more time had elapsed since the Olympics, so respondents may have been more likely to have forgotten any sponsors they knew. However a 2 sample t-test for independent samples did not show a significant difference in mean number of correct answers, although the autumn mean was lower (7.37 / 6.82).

### **8.3 Descriptive statistics**

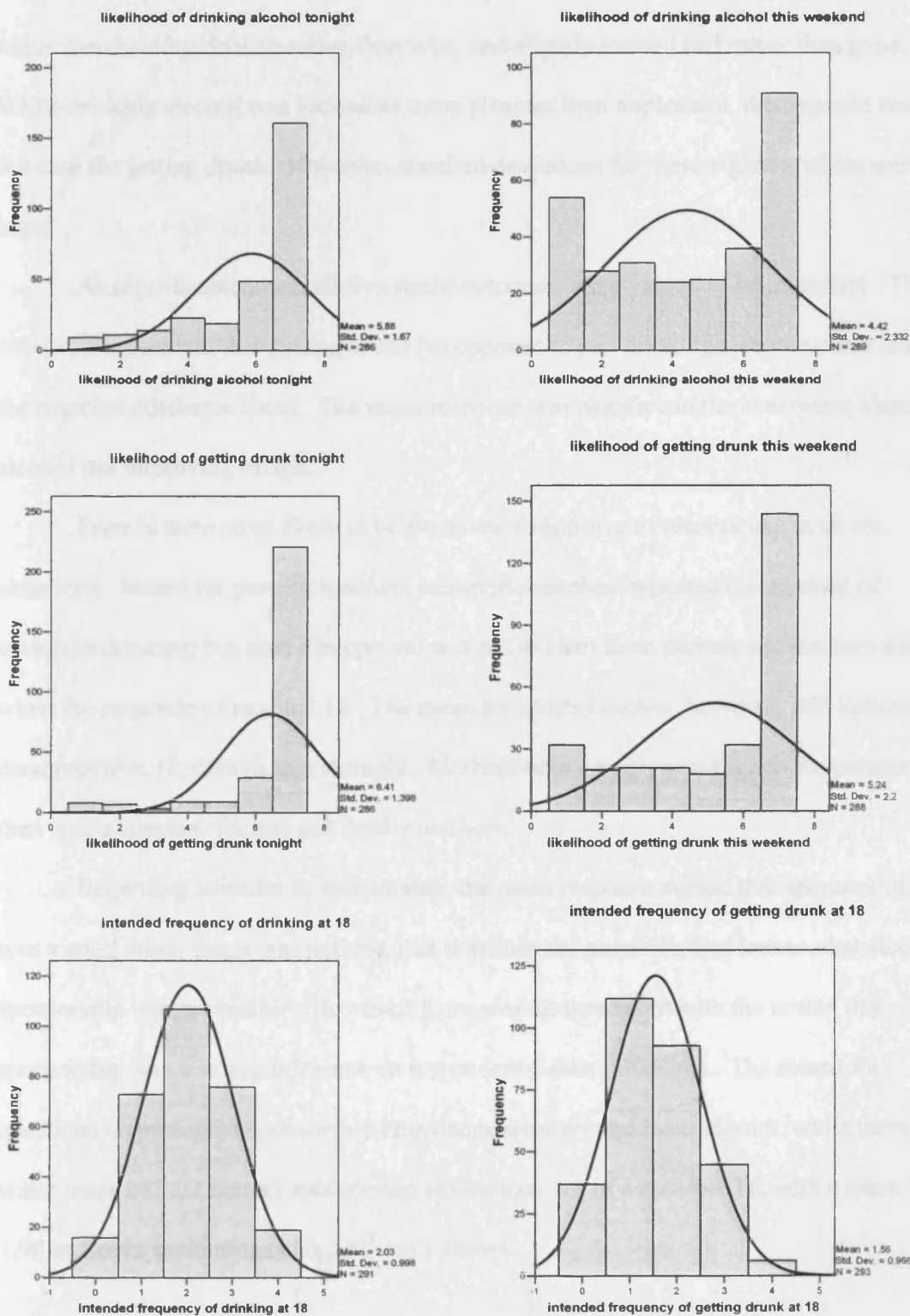
The means and standard deviations for all questionnaire variables are shown in Appendix 3. Table 8.2 shows means and standard deviations for the questions regarding sport, alcohol-related intentions, and sponsorship awareness and knowledge. As would be expected, likelihoods of drinking alcohol or getting drunk that night (a school night) were very low, while those of drinking and getting drunk at the weekend were higher, though the mean was still below the midpoint of the scale. These figures were further investigated through frequency distributions (Figure 8.1), which showed that 55% of young people were extremely unlikely to drink alcohol tonight, while 76% were extremely unlikely to get drunk. For weekend predictions, there was still a sizeable number who were extremely unlikely to drink or get drunk. For drinking at the weekend, the distribution is fairly uniform over the intermediate responses, with a large increase for “extremely unlikely” and a smaller increase for “extremely likely”. For getting drunk, the distribution is uniform apart from the large number of “extremely unlikely” responses.

**Table 8.2: Means and standard deviations of key variables**

	N	Mean	Std. Deviation
days taking part in sport	294	3.43	1.834
importance of taking part	293	3.26	1.754
importance of performing well	290	3.17	1.856
days watch sport on TV	294	2.37	2.063
live events attended last 3 months	294	1.07	1.046
highest sporting level	292	.91	.855
likelihood of drinking alcohol tonight	286	5.88	1.670
likelihood of drinking alcohol this weekend	289	4.42	2.332
likelihood of getting drunk tonight	286	6.41	1.398
likelihood of getting drunk this weekend	288	5.24	2.200
intended frequency of drinking at 18	291	2.03	.998
intended frequency of getting drunk at 18	293	1.56	.966
notice sponsors at live event	290	3.05	1.878
notice sponsors on TV	290	2.85	1.752
sponsorship influences purchase	289	3.06	1.767
choose sponsoring brand	288	4.93	1.751
feel knowledgeable about sponsorship	288	4.14	1.874
correct sponsor choices	294	7.22	3.773

In focus groups, it was noted that many young people drank at weekends, but not every weekend. Thus, those answering “extremely unlikely” to weekend drinking may comprise both non-drinkers and less frequent drinkers. Boys *et al* (2003) found that 59% of young people drank once a week; the figures here would indicate a lower percentage, but the young people surveyed here are one school year younger than those in Boys *et al*'s study. For intended behaviour at age 18, the variable distributions are much closer to normal.

**Figure 8.1:**  
**Frequency distributions of likelihoods / intentions of drinking / getting drunk**



Attitudes toward drinking alcohol and getting drunk veered toward unhealthy rather than healthy, foolish rather than wise, and slightly toward bad rather than good. While drinking alcohol was viewed as more pleasant than unpleasant, the opposite was the case for getting drunk. However, standard deviations for these eight variables were high.

As regards outcomes, all five stated outcomes were judged to be important. There was more agreement that getting drunk (as opposed to just drinking alcohol) could lead to the negative outcomes listed. The mean response was negative to the statements about alcohol use improving image.

Friends were most likely to be perceived to approve of alcohol use in all six situations. Means for parents, teachers and sports coaches indicated disapproval of underage drinking, but such disapproval was not evident from parents and teachers for when the respondents reached 18. The mean for sports coaches, however, still indicated disapproval at 18, though less strongly. Motivation to comply was highest for parents, then sports coaches, friends and finally teachers.

Regarding attitudes to sponsorship, the mean response agreed that sponsorship was a good thing, that it was noticed, that it influenced purchase, and less so, that alcohol sponsorship was acceptable. However, there was disagreement with the notion that sponsorship was a strong influence on respondents' own purchases. The means for questions on perceived sponsorship knowledge were around the midpoint, while there was a mean of 7.22 correct sponsorship attributions out of a possible 16, with a mean of 3.90 incorrect attributions and 2.81 don't knows.

#### 8.4 Possible data reduction

At this stage the data was examined to see if any variables should be combined, in particular whether an index of sporting involvement could be created, whether one attitudinal measure could be established for each of “drinking alcohol” and “getting drunk”, and whether the answer to questions on perceived sponsorship knowledge could be combined.

All variables relating to sporting involvement were highly positively intercorrelated. Carrying out exploratory factor analysis on these questions yielded one factor explaining 49.3% of the variance. A Cronbach alpha test on the scale gave a value of 0.775, which is acceptable (Hair *et al*, 2005:102). A combined scale value made by taking the mean of the variables correlated very highly with the factor ( $r = 0.97$ ), and it was decided to use this as an index of sporting involvement as it gave equal weight to each constituent variable.

A factor analysis of questions B1 to B4 led to two factors, together explaining 72% of the variance. Each loaded on one pair of variables, the first on wise/foolish and healthy/unhealthy, and the second on bad/good and unpleasant/pleasant. Cronbach alpha for the whole four variables was 0.478, for the first factor 0.696 and for the second factor 0.334. It had been hoped that it would be possible to form one factor, but these appeared to capture two different dimensions of attitude, whether drinking was sensible and whether drinking was enjoyable. A similar division of variables into two factors was found for questions B5 to B8. Here alpha for the whole scale was 0.706, for the first factor 0.818 and for the second factor 0.797. The non-ability to form a consistent scale from four variables that have in previous studies (Ajzen and Fishbein, 1980; Oliver and

Bearden, 1985) formed such a scale, points up the ambivalence of consumers' relationships with alcohol, a "pleasing product" which may be desirable but have harmful consequences.

The five variables relating to perception of sponsorship knowledge were highly positively intercorrelated. They formed a consistent scale with a Cronbach alpha of 0.920, and were therefore combined by taking the mean.

## **8.5 Gender differences**

There is generally a greater interest in sport among males than among females. Mintel (2000c), for instance, states that 67% of men participate in sport as opposed to only 53% of women, while 17% of women have no interest whatsoever in either spectating or participating, as opposed to only 9% of men. Moreover, the focus groups had shown differences in male and female attitudes to drink and drinking behaviour. Therefore, the sample was now subdivided by gender, in order to compare means. The means and standard deviations of all variables by gender are shown in Appendix 4, while Table 8.3 shows only those where differences are significant at the 5% level.

Table 8.3: Means and standard deviations, by gender

	gender	N	Mean	Std. Dev'n		Levene's Test for Equality of Variances		t-test for Equality of Means		
						F	Sig.	T	df	Sig.
ays taking part in sport	Male	161	4.02	1.797	Eq. variances assumed	1.077	.300	6.522	292	.000
	Female	133	2.71	1.613	not assumed			6.589	289.968	.000
importance of taking part	Male	161	2.78	1.665	Eq. variances assumed	.058	.810	-5.379	291	.000
	Female	132	3.84	1.689	not assumed			-5.371	278.261	.000
importance of performing well	Male	159	2.64	1.697	Eq. variances assumed	1.157	.283	-5.637	288	.000
	Female	131	3.81	1.844	not assumed			-5.592	267.487	.000
ays watch sport on TV	Male	161	3.14	2.216	Eq. variances assumed	52.804	.000	7.739	292	.000
	Female	133	1.44	1.373	not assumed			8.076	272.015	.000
ve events in last 3 months	Male	161	1.25	1.120	Eq. variances assumed	15.545	.000	3.299	292	.001
	Female	133	.86	.906	not assumed			3.365	291.882	.001
ighest sporting level	Male	159	1.06	.876	Eq. variances assumed	.083	.774	3.299	290	.001
	Female	133	.74	.797	not assumed			3.327	287.973	.001
porting involvement (actor score)	Male	157	.38	.987	Eq. variances assumed	4.813	.029	7.653	285	.000
	Female	130	-.45	.813	not assumed			7.793	284.993	.000
likelihood of getting drunk this weekend	Male	157	5.63	1.939	Eq. variances assumed	23.149	.000	3.361	286	.001
	Female	131	4.77	2.401	not assumed			3.298	248.666	.001
inking alcohol bad/good	Male	159	3.51	1.702	Eq. variances assumed	4.059	.045	-2.740	289	.007
	Female	132	4.05	1.610	not assumed			-2.755	284.076	.006
eachers approve drunk /end	Male	159	5.89	1.682	Eq. variances assumed	24.185	.000	-2.823	289	.005
	Female	132	6.37	1.073	not assumed			-2.936	272.001	.004
otice sponsors at ve event	Male	158	2.72	1.878	Eq. variances assumed	.310	.578	-3.296	288	.001
	Female	132	3.44	1.809	not assumed			-3.308	282.225	.001
otice sponsors on TV	Male	158	2.42	1.682	Eq. variances assumed	.002	.966	-4.788	288	.000
	Female	132	3.37	1.696	not assumed			-4.785	278.104	.000
cohol sponsorship OK	Male	159	3.11	1.967	Eq. variances assumed	2.166	.142	-3.487	288	.001
	Female	131	3.89	1.841	not assumed			-3.509	283.324	.001
erceived sponsorship knowledge	Male	157	3.21	1.597	Eq. variances assumed	1.513	.220	-8.331	284	.000
	Female	129	4.82	1.671	not assumed			-8.294	268.237	.000
sponsors correct	Male	161	8.14	3.688	Eq. variances assumed	.002	.969	4.758	292	.000
	Female	133	6.11	3.584	not assumed			4.771	284.396	.000
sponsors not known	Male	161	2.03	2.796	Eq. variances assumed	16.913	.000	-4.755	292	.000
	Female	133	3.75	3.410	not assumed			-4.667	254.565	.000

Male and female sample sizes are different, as are the variances of the two subsamples, thus violating one of the major assumptions and the side condition specified for the two-sample t-test, although the test is known to be robust and thus relatively unaffected by minor departures from these assumptions (Howell, 2002: 215). So both Levene's test statistic, and the significance values if equal variance are and are not assumed, are shown in the table. The significance levels vary at most by 0.001, so there is no ambiguity in the results and these can be regarded as significant differences between the genders.

It can be seen that there were a large number of such significant differences. On every measure relating to sporting involvement, boys scored more highly than girls – they participated more, placed more importance on both participation and performance, watched more sport, and were more likely to have reached higher levels of representation.

However, on some of the alcohol-related measures, girls scored more highly than boys. Girls were more likely to say they would get drunk on the weekend, and predicted greater frequency of drinking and getting drunk at age 18. As shown by the frequency diagrams (Figure 8.2), 55% of both boys and girls thought it extremely unlikely that they would drink alcohol that night, and 77% of boys and 75% of girls thought it extremely unlikely they would get drunk. Even at the weekend, 34% of boys and 27% of girls were extremely unlikely to drink alcohol, though this was balanced, for girls, by 26% who were extremely likely to do so. 54% of boys and 43% of girls thought it extremely unlikely they would get drunk. Of those who believed there was some likelihood of their drinking that night (i.e. points 1 to 3 on the Likert scale), 6 out of the 22 boys and 7 out of the 12 girls thought there was some likelihood of their getting drunk. 56 boys predicted



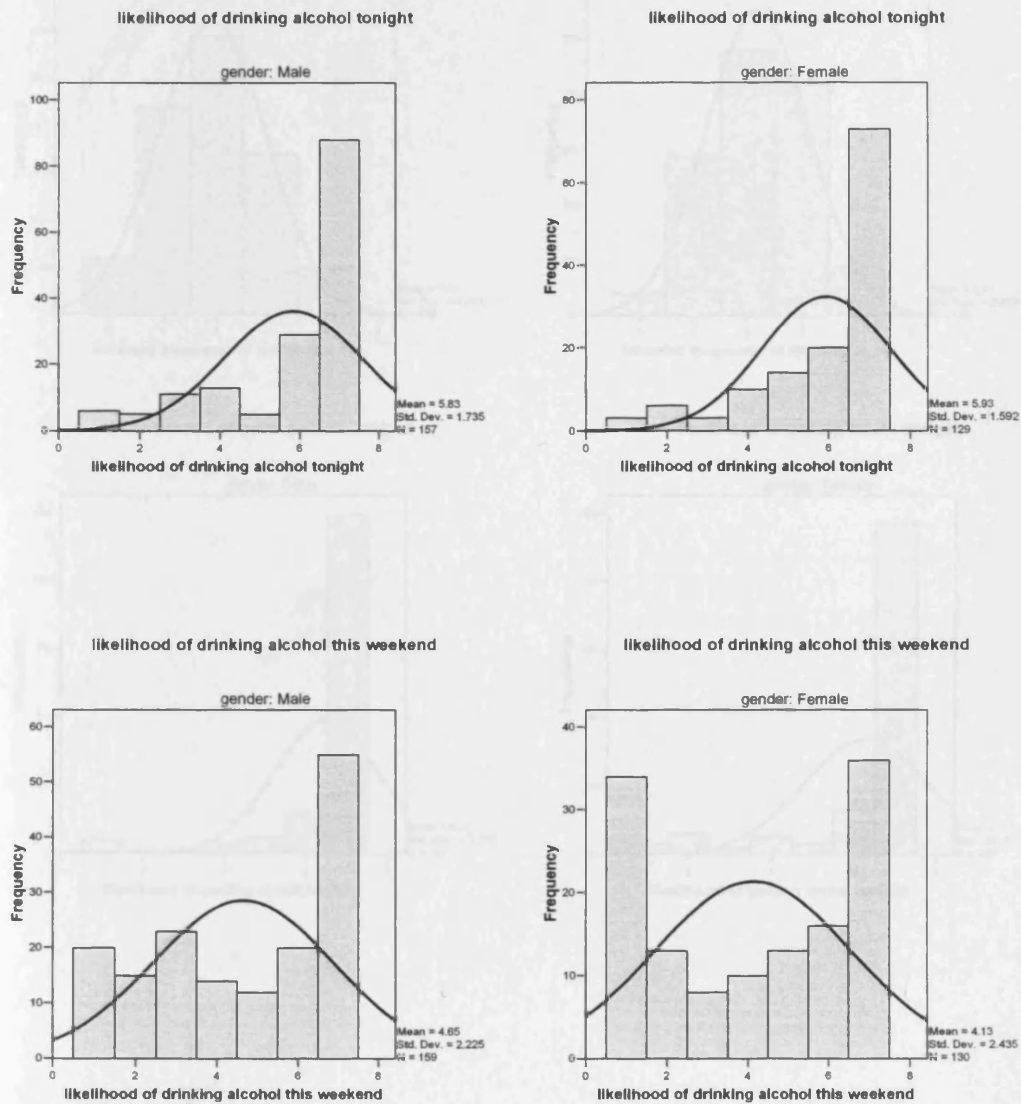
some likelihood of drinking at the weekend, and 27 of these (48%) thought there was some likelihood they would get drunk. For girls, a similar number (54) were likely to drink at the weekend, but 41 of these (76%) thought there was some likelihood they would get drunk. At this age, therefore, there appear to be around a third of boys who drink alcohol infrequently or not at all, and a similar number who drink on a regular basis. About a quarter of girls drink infrequently or not at all, while a larger percentage appear to drink regularly. Of those who drink, a larger percentage of girls predict they will get drunk. Turning to intentions at age 18, the pattern of responses becomes more similar for the two genders, with smaller numbers stating they will “never” drink or get drunk. It is noticeable, though, that fewer girls than boys have the intention of being total abstainers, or of never getting drunk.

Girls rated drinking and getting drunk more toward “good” on the good/bad continuum, and getting drunk less “unpleasant” on the pleasant/unpleasant continuum. However, there were no significant differences in male and female agreement with the outcomes of alcohol-related behaviour, nor in evaluation of these outcomes. There were few significant differences relating to (dis)approval of drinking behaviour, though girls perceived more approval of drinking from friends, less from teachers and sports coaches.

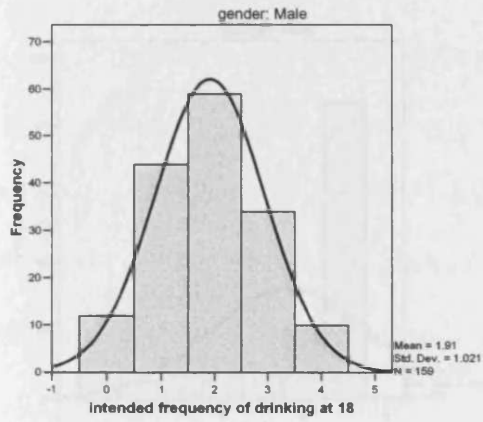
Girls were less likely to know or notice sponsors, or to believe they were personally influenced by sponsorship. They were less likely to think sponsorship is a good thing for sport and that alcohol sponsorship is OK. They made fewer correct sponsor choices and there were more sponsors that they did not know.

The strong differences observed here confirm the previous intention that gender subsamples should be analysed separately.

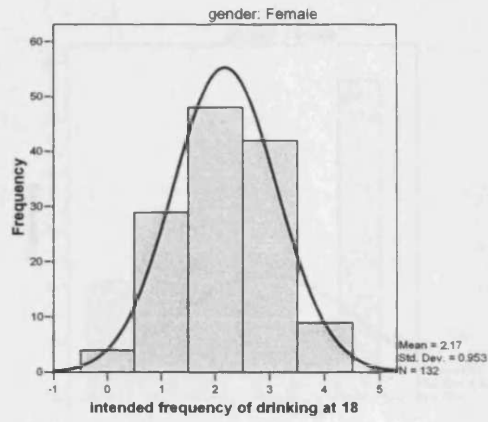
**Figure 8.2: Frequency distributions for likelihoods and intentions of drinking alcohol /getting drunk, by gender**



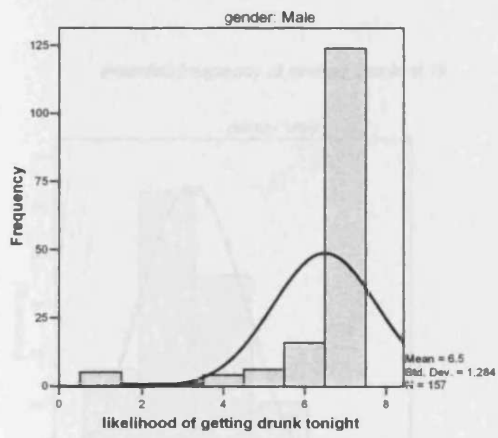
intended frequency of drinking at 18



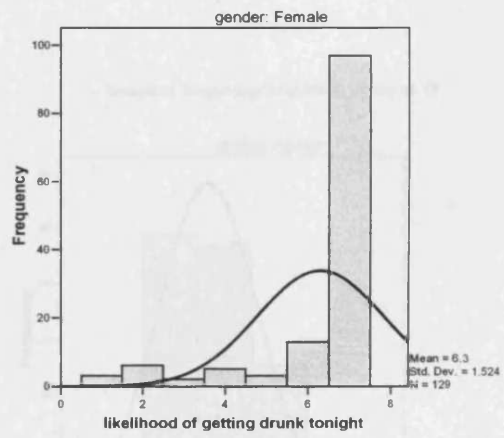
intended frequency of drinking at 18



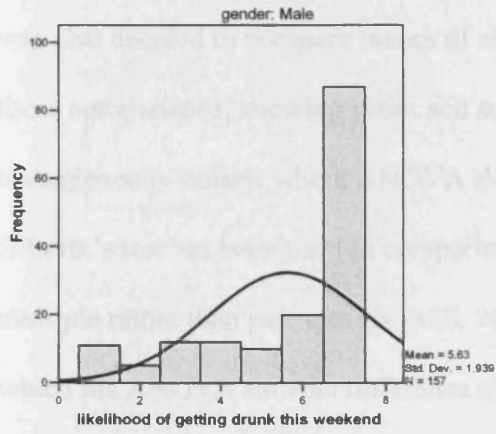
likelihood of getting drunk tonight



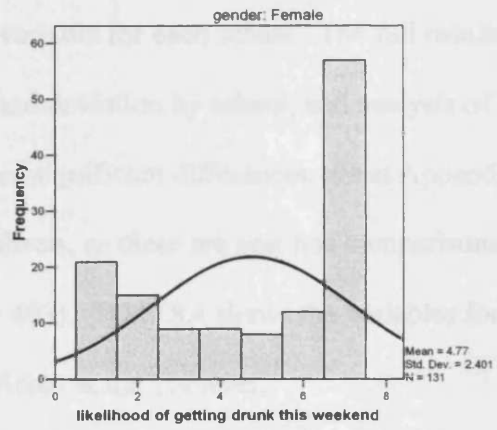
likelihood of getting drunk tonight



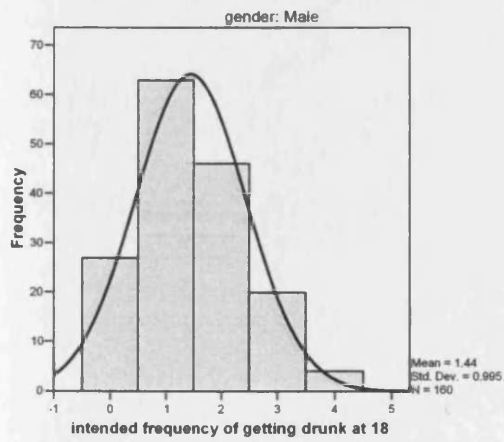
likelihood of getting drunk this weekend



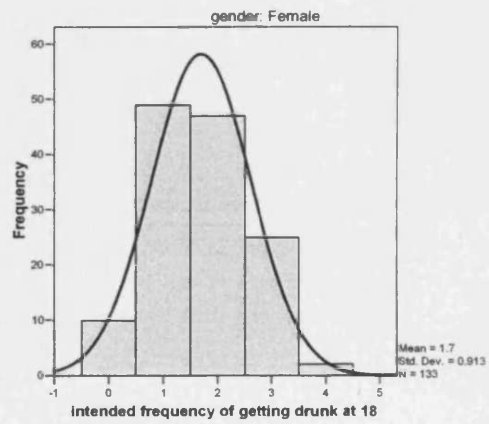
likelihood of getting drunk this weekend



intended frequency of getting drunk at 18



intended frequency of getting drunk at 18



## **8.6 Differences between schools**

Due to there being distinctive differences between the five schools surveyed, it was also decided to compare means of each variable for each school. The full results of these comparisons, showing mean and standard deviation by school, and analysis of homogeneous subsets where ANOVA showed significant differences, are at Appendix 5. Scheffe's test has been used in comparing subsets, as these are post hoc comparisons and multiple rather than pairwise (Howell, 2002: 403). Table 8.4 shows the variables for which the ANOVA showed difference significant at the 1% level.

**Table 8.4: Between schools Analysis of Variance (most significant differences)**

		Sum of Squares	df	Mean Square	F	Sig.
days watch sport on TV	Between Groups	89.981	4	22.495	5.621	.000
	Within Groups	1156.607	289	4.002		
	Total	1246.588	293			
likelihood of drinking alcohol this weekend	Between Groups	101.729	4	25.432	4.932	.001
	Within Groups	1464.610	284	5.157		
	Total	1566.339	288			
likelihood of getting drunk this weekend	Between Groups	84.681	4	21.170	4.595	.001
	Within Groups	1303.788	283	4.607		
	Total	1388.469	287			
intended frequency of drinking at 18	Between Groups	29.775	4	7.444	8.221	.000
	Within Groups	258.947	286	.905		
	Total	288.722	290			
intended frequency of getting drunk at 18	Between Groups	16.137	4	4.034	4.537	.001
	Within Groups	256.068	288	.889		
	Total	272.205	292			
drinking alcohol bad/good	Between Groups	43.228	4	10.807	3.988	.004
	Within Groups	774.958	286	2.710		
	Total	818.186	290			
drinking alcohol wise/foolish	Between Groups	38.343	4	9.586	4.551	.001
	Within Groups	591.885	281	2.106		
	Total	630.227	285			
getting drunk bad/good	Between Groups	77.580	4	19.395	5.096	.001
	Within Groups	1084.589	285	3.806		
	Total	1162.169	289			
getting drunk wise/foolish	Between Groups	96.512	4	24.128	8.380	.000
	Within Groups	811.899	282	2.879		
	Total	908.411	286			
getting drunk healthy/unhealthy	Between Groups	51.896	4	12.974	4.115	.003
	Within Groups	889.121	282	3.153		
	Total	941.017	286			
getting drunk unpleasant/pleasant	Between Groups	100.655	4	25.164	5.937	.000
	Within Groups	1199.564	283	4.239		
	Total	1300.219	287			
drinking alcohol makes feel good	Between Groups	55.044	4	13.761	4.619	.001
	Within Groups	860.902	289	2.979		
	Total	915.946	293			

		Sum of Squares	df	Mean Square	F	Sig.
getting drunk makes feel good	Between Groups	57.159	4	14.290	4.194	.003
	Within Groups	971.062	285	3.407		
	Total	1028.221	289			
getting drunk lose control	Between Groups	51.874	4	12.969	3.397	.010
	Within Groups	1088.112	285	3.818		
	Total	1139.986	289			
getting drunk lead to trouble	Between Groups	55.151	4	13.788	3.898	.004
	Within Groups	1011.640	286	3.537		
	Total	1066.790	290			
	Within Groups	923.350	288	3.206		
	Total	939.031	292			
PARENTS approve drunk w/en	Between Groups	44.561	4	11.140	4.583	.001
	Within Groups	692.818	285	2.431		
	Total	737.379	289			
approve drunk 18	Between Groups	108.329	4	27.082	6.697	.000
	Within Groups	1160.640	287	4.044		
	Total	1268.969	291			
FRIENDS approve drink tonight	Between Groups	79.842	4	19.960	5.902	.000
	Within Groups	970.597	287	3.382		
	Total	1050.438	291			
approve drink w/end	Between Groups	60.063	4	15.016	4.642	.001
	Within Groups	928.458	287	3.235		
	Total	988.521	291			
approve drunk tonight	Between Groups	92.685	4	23.171	5.689	.000
	Within Groups	1168.942	287	4.073		
	Total	1261.627	291			
approve drunk w/end	Between Groups	98.156	4	24.539	6.050	.000
	Within Groups	1155.913	285	4.056		
	Total	1254.069	289			
sponsorship good thing for sport	Between Groups	34.251	4	8.563	4.224	.002
	Within Groups	581.763	287	2.027		
	Total	616.014	291			
incorrect sponsor choices	Between Groups	139.653	4	34.913	3.880	.004
	Within Groups	2600.486	289	8.998		
	Total	2740.139	293			

Comparing the schools in the light of the means, ANOVA and homogeneous groups shows the private school pupils to have fewer days taking part in sport and watching on TV. They are less likely to drink or get drunk at the weekend, have lower intentions of drinking or getting drunk at 18, and less favourable attitudes to drinking and getting drunk. They are less likely to agree that drinking or getting drunk makes them feel good, more likely to agree that drinking or getting drunk will lead to trouble, and that getting drunk will lead them to lose control and will have health consequences. They perceive more disapproval of drinking behaviours from parents and friends, and are more motivated to comply with parents. They agree less strongly that sponsorship is a good thing, and made fewer correct sponsorship attributions and more incorrect ones.

Church school pupils were less likely to drink or get drunk at the weekend and had lower intentions of drinking at 18. They were more likely to view drinking and getting drunk as unhealthy and getting drunk as unpleasant. They perceived more parental disapproval of drinking or getting drunk at the weekend. However, in contrast to the private school whose profile on drinking behaviours was similar, they agreed more strongly that sponsorship is a good thing, and made more correct sponsorship attributions and fewer incorrect ones.

Welsh medium school pupils had more days when they took part in sport or watched it on TV, were more likely to drink and get drunk at the weekend, and had higher intended frequency of drinking and getting drunk at 18. Their attitudes to drinking and getting drunk were more favourable, and they were more likely to believe drinking improved their image and getting drunk made them feel good. They perceived more parental approval of drinking at the weekend and at 18, more approval from friends of



drinking and getting drunk, and less disapproval from teachers of drinking or getting drunk at the weekend. They made fewer incorrect sponsorship attributions.

In the local authority school in the lower socioeconomic area, there was a higher intended frequency of drinking and getting drunk at 18. Attitudes to drinking and getting drunk were more favourable, but less favourable than in the Welsh medium school. Pupils were less likely to believe drinking improves image and leads to trouble, and that getting drunk leads to trouble, loss of control, and has consequences for health. There was less perceived parental disapproval of drunkenness, and more approval from friends of drinking and getting drunk. Pupils were less motivated to comply with parents.

Pupils in the local authority school in the higher socioeconomic area were more likely to perceive drinking alcohol as pleasant but also more likely to perceive getting drunk as foolish. They were less motivated to comply with parents, and agreed less strongly that sponsorship is a good thing.

To summarise these findings, it seems that the private school pupils are slightly less involved in sport and the Welsh medium school pupils slightly more so, but not to the extent of making significant difference in the combined sporting involvement score. Of more interest are the differences in attitudes, beliefs and intentions regarding alcohol. The schools form a continuum in this respect, with the Welsh medium school and local authority school in the lower socioeconomic area having stronger intentions to drink, and both having more positive perceptions of alcohol-related behaviour themselves and attributing such perceptions to others. At the other end of the scale, the private school and the church school had weaker intentions to drink and viewed alcohol-related behaviours in a more negative light, again attributing similar perceptions to others. In

these respects the local authority school in the higher socioeconomic area exhibited views closest to the mean.

There were few significant differences in sponsorship-related variables. The private school was least knowledgeable of sponsorship, while the church school and Welsh medium school were most knowledgeable. Pupils in the private school and higher socioeconomic area local authority school agreed less strongly that sponsorship is a good thing. As the main aim of this study was to investigate the effects of sporting involvement and sponsorship awareness and beliefs, it was not thought desirable to divide the sample into school groups for further analysis (given that a gender split has already been proposed, this would also lead to several small subsamples below 30 in number). Indeed, the differing school profiles act as a reassurance that the sample is a diverse one, giving the results more generalisability than would have been obtained had the sample been confined to one school or school type.

### **8.7 Preliminary checks of correlations relevant to hypotheses**

First, in accordance with the framework of the Theory of Reasoned Action, two definitions are required:

*Outcome evaluation of a behaviour is the sum of (extent of agreement that a particular outcome will result from the behaviour  $\times$  importance of that outcome) over all outcomes.*

*The subjective norm for a particular referent/set of referents and a particular behaviour is the perceived approval/disapproval of that behaviour  $\times$  the motivation to comply with that referent/set of referents. In this study these referents are parents or guardians, friends, teachers and, for those that have them, sports coaches.*

In order to check that it was valid to use the Theory of Reasoned Action in this context, and to check whether sporting involvement and sponsorship variables were likely to be candidates for enhancing the predictive power of the Theory, correlations between attitudes, subjective norms for the four sets of referents, the likelihood and intention measures, and variables relating to sporting involvement and sponsorship were investigated. As Hypothesis 1c also proposed perceptions of benefits and risks as a possible alternative to the attitude element of the TRA, their correlations were also included. For consistency and ease of interpretation, variables which had been measured on a scale where “1” indicated a greater intention or amount, were reverse-coded. In order to minimise any multicollinearity effects when formulating multiple regression equations, all variables were also mean-centred (Yi, 1989). The full correlation tables, split by gender, are shown at Appendix 6, and the significant correlations with measures of likelihood or intention are summarised in Table 8.5. Two-tailed tests were used (Howell, 1999: 134-135), to allow for the possibility of correlations not always being in the expected direction, e.g. parental disapproval of drinking alcohol might lead teenagers to rebel by deciding to drink more.

**Table 8.5: Summary of correlations of major variables (*all positive unless stated otherwise*)**

<b>Likelihood / intention</b>	<b>Gender</b>	<b>Correlations significant at 1% level</b>	<b>Correlations significant at 5% level</b>
Drink tonight	Male	Attitude toward drinking alcohol Perceived benefits of drinking alcohol Subjective norms for all four sets of referents	
	Female	Attitude toward drinking alcohol Perceived benefits of drinking alcohol Subjective norms for parents and friends	Sporting involvement (negative correlation)
Drink this weekend	Male	Attitude toward drinking alcohol Perceived benefits of drinking alcohol Subjective norms for parents, friends and teachers Awareness of sponsorship	Perceived risks of drinking alcohol (negative correlation) Subjective norm for sports coaches
	Female	Attitude toward drinking alcohol Perceived benefits of drinking alcohol Perceived risks of drinking alcohol (negative correlation) Subjective norms for parents, friends and teachers	Belief that sponsorship influences people to buy
Drink at age 18	Male	Attitude toward drinking alcohol Perceived benefits of drinking alcohol Subjective norms for all four sets of referents	
	Female	Attitude toward drinking alcohol Perceived benefits of drinking alcohol Subjective norm for friends Belief that sponsorship influences people to buy	Subjective norm for parents

<b>Summary of correlations (continued)</b>			
Get drunk tonight	Male	Attitude toward getting drunk Subjective norms for parents, teachers and coaches	Perceived benefits of getting drunk Subjective norm for friends
	Female	Attitude toward getting drunk Perceived benefits of getting drunk Subjective norm for friends	Subjective norm for parents
Get drunk this weekend	Male	Attitude toward getting drunk Perceived benefits of getting drunk Subjective norms for all four sets of referents Sporting involvement	Awareness of sponsorship
	Female	Attitude toward getting drunk Perceived benefits of getting drunk Perceived risks of getting drunk (negative correlation) Subjective norms for parents and friends	Subjective norm for teachers Belief that sponsorship influences people to buy Actual knowledge of sponsors (negative correlation)
Get drunk at age 18	Male	Attitude toward getting drunk Perceived benefits of getting drunk Subjective norms for all four sets of referents	Sporting involvement Agreement that they would choose a sponsor's brand or product
	Female	Attitude toward drinking alcohol Perceived benefits of getting drunk Perceived risks of getting drunk (negative correlation) Subjective norms for parents, friends and teachers	

It can be seen that attitudes and subjective norms correlate strongly with all likelihoods and intentions, thus use of the Theory of Reasoned Action is appropriate. Furthermore, the perceived benefits of drinking alcohol or getting drunk show significant correlation with all likelihoods and intentions. This confirms the validity of putting

forward Hypothesis 1c. Perceived risks are only significant for male intention to drink at the weekend, but have greater significance for females. The predominance of benefits over risks accords with Kuther (2002), while the difference between the samples may be accounted for by the girls perceiving the negative consequences of drinking more seriously.

Sporting involvement, awareness of sponsorship, actual knowledge of sponsorship, and the beliefs that sponsorship influences own or others' purchasing decisions, also have significant correlation for at least one situation. In order to ensure that the "spectator" effect in sporting involvement was not masking any findings for sports players, correlations with highest sporting level reached and importance of performance were also examined, but none of these were significant. Correlations with frequency of playing sport were significant for males only, for the two weekend predictions, but in the positive direction – more frequent participants were more likely to drink and get drunk. This contradicts the findings of the limited sample in the focus groups, where both girls and boys who were serious about their sport stated that they abstained from alcohol or moderated their drinking.

For both genders, sporting involvement was also found to have strong correlations (1%) with importance of feeling good, image and health and higher motivation to comply with sports coaches. It also had significant correlations (1%) with awareness and approval of sponsorship (including, for boys only, alcohol sponsorship) and perceived and actual sponsorship knowledge. For boys only, there was also a weaker correlation (5%) with agreeing that drinking improves their image, and also positive correlations with choosing a sponsor's brand and believing that others did so. Interestingly, these last

two variables were significantly correlated, for both genders, with various motivations to comply (see Table 8.6). This suggests that young people who have higher motivation to comply with what is expected of them by their significant referents, are also more likely to comply with the expectations of corporate sponsors, and to believe that others do.

**Table 8.6: Correlations of compliance**

		Correlations						
gender		sponsorship influences purchase	choose sponsoring brand	mot to comply parents	mot to comply friends	mot to comply teachers	mot to comply sports coach	
Male	sponsorship influences purchase	Pearson Correlation	1	.219**	.220**	.176*	.241**	.182
		Sig. (2-tailed)		.006	.006	.027	.002	.060
		N	157	156	157	157	157	108
	choose sponsoring brand	Pearson Correlation	.219**	1	.172*	.305**	.188*	.134
		Sig. (2-tailed)	.006		.031	.000	.018	.166
		N	156	157	157	157	157	108
	mot to comply parents	Pearson Correlation	.220**	.172*	1	.270**	.519**	.536**
	Sig. (2-tailed)	.006	.031		.001	.000	.000	
	N	157	157	160	160	160	110	
mot to comply friends	Pearson Correlation	.176*	.305**	.270**	1	.289**	.230*	
	Sig. (2-tailed)	.027	.000	.001		.000	.016	
	N	157	157	160	160	160	110	
mot to comply teachers	Pearson Correlation	.241**	.188*	.519**	.289**	1	.549**	
	Sig. (2-tailed)	.002	.018	.000	.000		.000	
	N	157	157	160	160	160	110	
mot to comply sports coach	Pearson Correlation	.182	.134	.536**	.230*	.549**	1	
	Sig. (2-tailed)	.060	.166	.000	.016	.000		
	N	108	108	110	110	110	110	
Female	sponsorship influences purchase	Pearson Correlation	1	.302**	.043	-.038	-.022	.185
		Sig. (2-tailed)		.000	.625	.666	.799	.190
		N	132	131	132	132	132	52
	choose sponsoring brand	Pearson Correlation	.302**	1	.238**	.138	.201*	.271
		Sig. (2-tailed)	.000		.006	.117	.021	.054
		N	131	131	131	131	131	51
	mot to comply parents	Pearson Correlation	.043	.238**	1	.222*	.396**	.646**
	Sig. (2-tailed)	.625	.006		.010	.000	.000	
	N	132	131	133	133	133	53	
mot to comply friends	Pearson Correlation	-.038	.138	.222*	1	.402**	.436**	
	Sig. (2-tailed)	.666	.117	.010		.000	.001	
	N	132	131	133	133	133	53	
mot to comply teachers	Pearson Correlation	-.022	.201*	.396**	.402**	1	.656**	
	Sig. (2-tailed)	.799	.021	.000	.000		.000	
	N	132	131	133	133	133	53	
mot to comply sports coach	Pearson Correlation	.185	.271	.646**	.436**	.656**	1	
	Sig. (2-tailed)	.190	.054	.000	.001	.000		
	N	52	51	53	53	53	53	

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Regarding sponsorship knowledge, it is interesting to note that, although correlations between perceived and actual knowledge are significant for both genders (Table 8.7), there is a weaker correlation for girls than for boys.

**Table 8.7: Correlations between perceived and actual knowledge**

Correlations			correct sponsor choices	perceived sponsorship knowledge
Male	correct sponsor choices	Pearson Correlation	1	-.474**
		Sig. (2-tailed)		.000
		N	161	157
	perceived sponsorship knowledge	Pearson Correlation	-.474**	1
	Sig. (2-tailed)	.000		
	N	157	157	
Female	correct sponsor choices	Pearson Correlation	1	-.185*
		Sig. (2-tailed)		.036
		N	133	129
	perceived sponsorship knowledge	Pearson Correlation	-.185*	1
	Sig. (2-tailed)	.036		
	N	129	129	

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Having examined relevant correlations and validated the use of the analytical framework previously proposed, Chapter 9 now proceeds to the testing of the hypotheses of the study.



## CHAPTER 9

### HYPOTHESIS TESTING

#### 9.1 The study hypotheses

This chapter proceeds to test the nine hypotheses presented at the end of Chapter 6. For convenience, they are reproduced below. As previously stated, it should be remembered that each hypothesis as listed is actually a pair of hypotheses, one relating to drinking alcohol and one to getting drunk, and that each will be tested separately for males and females. Also, from Hypothesis 1b onwards, each will be tested for three different times (tonight, this weekend, and at age 18).

*H1a: Attitude toward drinking alcohol (getting drunk) can be predicted from the outcome evaluation of drinking alcohol (getting drunk).*

*H1b: Likelihood of drinking alcohol (getting drunk) tonight and this weekend, and intention to drink alcohol (get drunk) at age 18 can be predicted from attitude toward drinking alcohol (getting drunk) and subjective norms relating to the stated time for parents, friends, teachers and (if relevant) sports coaches.*

*H1c: Better predictions than those obtained by the Theory of Reasoned Action of likelihood of drinking alcohol (getting drunk) tonight and this weekend, and intention to drink alcohol (get drunk) at age 18, will be obtained by using perceived benefits and risks of drinking alcohol (getting drunk) as predictors, along with subjective norms for the relevant time for parents, friends, teachers and (if relevant) sports coaches.*

*H2a: The inclusion of sporting involvement as a predictor variable will improve predictions of alcohol-related likelihoods and intentions over those obtained from using subjective norms and either attitude or benefits and risks, in the direction that increased sporting involvement will lead to increased likelihoods and intentions of drinking alcohol (getting drunk).*

*H2b: The inclusion of importance of sporting performance as a predictor variable will improve predictions of alcohol-related likelihoods and intentions over those obtained from using subjective norms and either attitude or benefits and risks, in the direction that increased importance of sporting performance will lead to decreased likelihoods and intentions of drinking alcohol (getting drunk).*

*H3a: Awareness of sponsorship will modify the relationships between attitudes or risks and benefits, subjective norms and sporting involvement, and alcohol-related likelihoods and intentions, in the direction that increased awareness will result in greater likelihoods and intentions of drinking alcohol (getting drunk).*

*H3b: Knowledge of sponsorship will modify the relationships between attitudes or risks and benefits, subjective norms and sporting involvement, and alcohol-related likelihoods and intentions, in the direction that increased awareness will result in greater likelihoods and intentions of drinking alcohol (getting drunk).*

*H4a: Those who are exposed to more alcohol sponsorship, and admit that in general they are influenced by sponsorship, will have greater likelihoods and intentions of drinking alcohol (getting drunk).*

*H4b: Those who are exposed to more alcohol sponsorship, and believe that sponsorship persuades others to buy, will have greater likelihoods and intentions of drinking alcohol (getting drunk).*

## **9.2 Testing of Hypotheses**

Following Ajzen and Fishbein (1980) and numerous other studies based on the Theory of Reasoned Action, multiple regression analysis is used to investigate the proposed relationships. As previously stated, it was anticipated that the strength of the relationships would be significantly different for males and females and thus the genders are analysed separately. As the additional effect of additional variables is being tested in Hypotheses 2a to 4b, hierarchical regression is employed.

### **Hypothesis 1a**

*Attitude toward drinking alcohol (getting drunk) can be predicted from the outcome evaluation of drinking alcohol (getting drunk).*

Of the five outcome beliefs investigated, the first two (feeling good and improving image) are positive consequences, while the remaining three are negative consequences, of either drinking alcohol or getting drunk. Thus, the beliefs and evaluations sections C and D of the questionnaire were reverse coded so that higher scores indicated higher agreement or importance, and the overall outcome evaluation score was calculated as follows:

Outcome evaluation:

of drinking alcohol =  $(C1*D1) + (C2*D2) - (C3*D3) - (C4*D4) - (C5*D5)$ ,

of getting drunk =  $(C6*D1) + (C7*D2) - (C8*D3) - (C9*D4) - (C10*D5)$

As the attitudinal measures did not form a single consistent scale (Chapter 8), the correlations of the outcome evaluation measures with each of the attitudinal variables were examined. Correlations are shown at Table 9.1. Bearing in mind that the second and third attitude items are reverse coded, it can be seen that there is the expected positive correlation between outcome evaluation and attitudes, and therefore **Hypothesis 1a is supported**. The magnitude of the correlation compares favourably with those found in the studies quoted by Ajzen and Fishbein (1980). The statement “For me, drinking alcohol (getting drunk) is bad .. good” had the highest correlation with outcome evaluation for male/drinking ( $r = 0.496$ ), male/drunk ( $r = 0.432$ ) and female/drunk ( $r = 0.559$ ), and second highest correlation for female/drink ( $r = 0.492$ ), only marginally below the highest correlation ( $r = 0.509$ ). As this statement also appears to convey the most general representation of attitude, i.e. not specifically related to either health or hedonic aspects, it was selected as the best representation of attitude to be used in future calculations. The distribution of this variable is shown at Figure 9.1; its main deviation from a normal distribution is an overrepresentation at the “bad” extreme, especially for “getting drunk”.

**Table 9.1: Correlations of attitude statements**

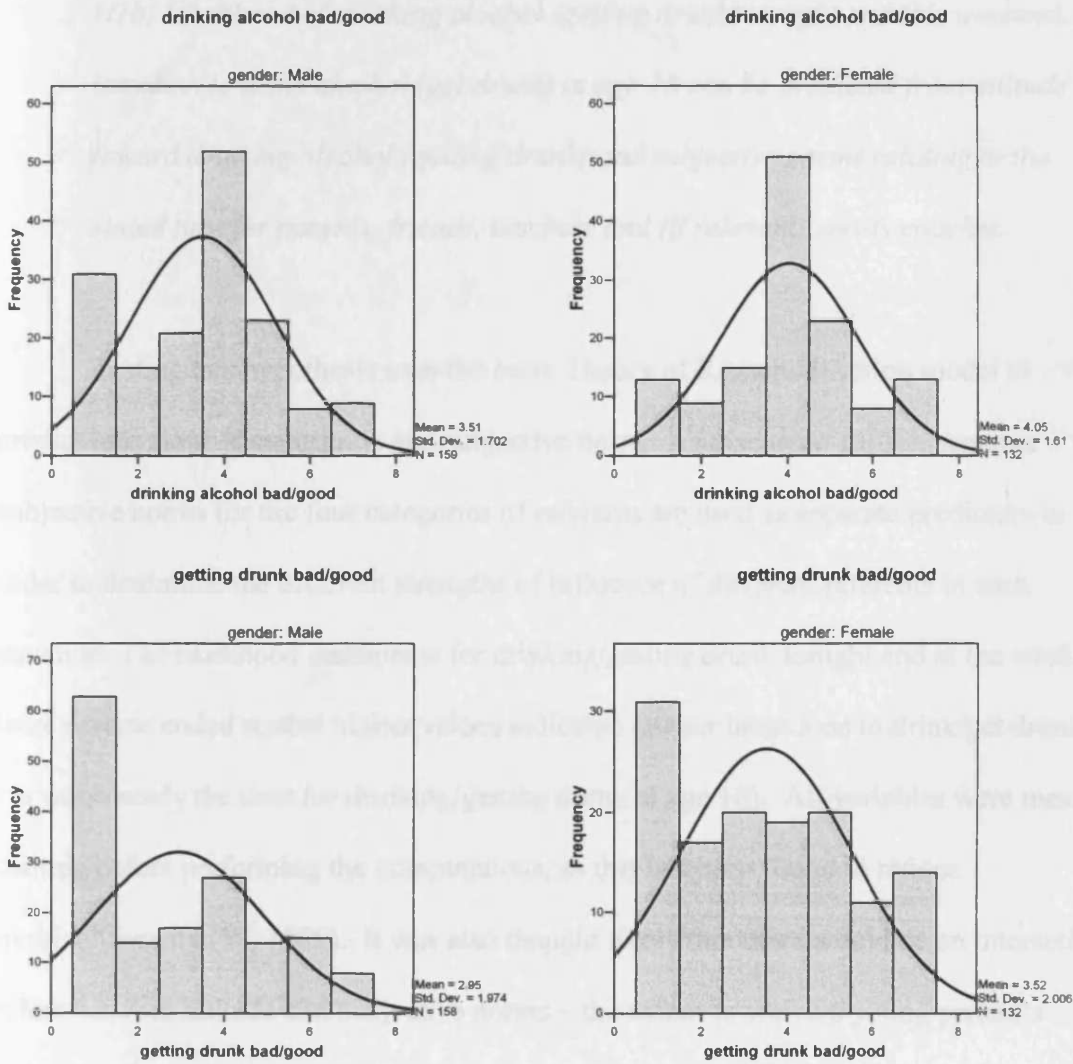
**Correlations**

gender			getting drunk bad/good	getting drunk wise/foolish	getting drunk healthy/unhe althy	getting drunk unpleasant/p leasant	outcome_ evaluation_ drunk
Male	getting drunk bad/good	Pearson Correlation	1	-.416**	-.250**	.695**	.432**
		Sig. (1-tailed)		.000	.001	.000	.000
		N	158	158	158	158	150
	getting drunk wise/foolish	Pearson Correlation	-.416**	1	.691**	-.401**	-.310**
		Sig. (1-tailed)	.000		.000	.000	.000
		N	158	159	158	158	151
getting drunk healthy/unhealthy	Pearson Correlation	-.250**	.691**	1	-.303**	-.245**	
	Sig. (1-tailed)	.001	.000		.000	.001	
	N	158	158	158	158	150	
getting drunk unpleasant/pleasant	Pearson Correlation	.695**	-.401**	-.303**	1	.406**	
	Sig. (1-tailed)	.000	.000	.000		.000	
	N	158	158	158	159	151	
outcome_evaluation_drunk	Pearson Correlation	.432**	-.310**	-.245**	.406**	1	
	Sig. (1-tailed)	.000	.000	.001	.000		
	N	150	151	150	151	153	
Female	getting drunk bad/good	Pearson Correlation	1	-.248**	-.042	.615**	.559**
		Sig. (1-tailed)		.002	.319	.000	.000
		N	132	128	128	129	130
	getting drunk wise/foolish	Pearson Correlation	-.248**	1	.699**	-.035	-.263**
		Sig. (1-tailed)	.002		.000	.348	.001
		N	128	128	128	128	126
getting drunk healthy/unhealthy	Pearson Correlation	-.042	.699**	1	.025	-.147*	
	Sig. (1-tailed)	.319	.000		.388	.049	
	N	128	128	129	128	127	
getting drunk unpleasant/pleasant	Pearson Correlation	.615**	-.035	.025	1	.557**	
	Sig. (1-tailed)	.000	.348	.388		.000	
	N	129	128	128	129	127	
outcome_evaluation_drunk	Pearson Correlation	.559**	-.263**	-.147*	.557**	1	
	Sig. (1-tailed)	.000	.001	.049	.000		
	N	130	126	127	127	131	

\*\* Correlation is significant at the 0.01 level (1-tailed).

\* Correlation is significant at the 0.05 level (1-tailed).

**Figure 9.1: Frequency distributions for attitude measures**



## Hypothesis 1b

*H1b: Likelihood of drinking alcohol (getting drunk) tonight and this weekend, and intention to drink alcohol (get drunk) at age 18 can be predicted from attitude toward drinking alcohol (getting drunk) and subjective norms relating to the stated time for parents, friends, teachers and (if relevant) sports coaches.*

Testing this hypothesis uses the basic Theory of Reasoned Action model to predict intentions from attitude and subjective norm. As discussed earlier, separate subjective norms for the four categories of referents are used as separate predictors in order to determine the different strengths of influence of different referents in each situation. The likelihood statements for drinking/getting drunk tonight and at the weekend were reverse coded so that higher values indicated greater intentions to drink/get drunk (as was already the case for drinking/getting drunk at age 18). All variables were mean-centred before performing the computations, as this has been found to reduce multicollinearity (Yi, 1989). It was also thought likely that there would be an interactive effect between attitude and subjective norms – the extent to which a young person's attitude influences their alcohol-related intentions and behaviour may well be moderated by the norms of their significant others (e.g. persuasion by friends to drink more than they wish to), and therefore an interactive term (Attitude \* Subjective Norm) is included for each subjective norm (Howell, 2002: 578-582), as in some later studies which use the Theory of Reasoned Action (e.g. Bagozzi, Baumgartner and Yi, 1992). In all multiple regressions run to test these hypotheses, the adjusted  $R^2$  value will be reported, as this makes an adjustment for random error, which is more likely as the number of predictors

is increased (Howell, 1999: 204): the inclusion of interactive terms and the fact that subjective norms are being entered as separate independent variables, means that even in the basic model there are 10 potential predictor variables, plus 6 more for each additional variable to be tested (the variable itself plus interactive terms with attitude and subjective norms).

For all six situations valid predictions could be made, with F values significant at 1% level, although the  $R^2$  values differed considerably and only two (for male intentions at age 18) reached the average values of 40 – 50% recorded in studies using the Theory of Reasoned Action (Sutton, 1998). The  $R^2$  values and most significant predictors (significance of  $t \leq 0.1$ ) are shown in Table 9.2, while the full results can be seen in Appendix 7.

For the short-term intention of drinking/getting drunk tonight, males showed primarily normative influences, with attitude only significant in interaction with subjective norm for teachers, i.e. a positive attitude toward drinking/getting drunk combined with a perception that teachers would not disapprove too strongly, predicts a greater likelihood of the behaviour. For females, in contrast, attitude was a stronger predictor than subjective norms. It must be remembered, however, that the vast majority of young people surveyed stated that it was unlikely they would drink tonight.

For medium term intentions relating to the weekend, both attitudinal and normative influences were significant for both genders. Attitude was the most significant predictor, with friends' subjective norms also significant in all cases.



**Table 9.2: Predictions using Theory of Reasoned Action**

Likelihood / Intention	Gender	R <sup>2</sup> (adjusted)	Significant predictors	β value	Sig. t
Drink alcohol tonight	Male	0.30	SN (parents)	.31	.000
			SN (friends)	.18	.015
			SN (teachers) x ATT	.26	.018
	Female	0.28	ATT	.48	.000
			SN (parents)	.16	.054
Drink alcohol this weekend	Male	0.37	ATT	.28	.000
			SN (parents)	.25	.003
			SN (friends)	.25	.001
	Female	0.24	ATT	.34	.000
			SN (friends)	.18	.063
			SN (teachers)	.15	.086
Drink alcohol at age 18	Male	0.45	ATT	.56	.000
			SN (friends)	.22	.002
			SN (coaches)	.15	.037
			SN (teachers) x ATT	-.16	.054
	Female	0.30	ATT	.46	.000
			SN (friends)	.22	.018
Get drunk tonight	Male	0.33	SN (teachers)	.28	.005
			SN (teachers) x ATT	.26	.011
			SN (coaches)	.16	.063
	Female	0.10	ATT	.26	.007
	Get drunk this weekend	Male	0.38	ATT	.33
SN (parents)				.16	.064
SN (friends)				.13	.098
SN (teachers)				.16	.063
Female		0.32	ATT	.34	.000
			SN (parents)	.23	.009
Get drunk at age 18	Male	0.44	ATT	.46	.000
			SN (friends)	.27	.000
			SN (friends) x ATT	.12	.080
	Female	0.34	ATT	.38	.000
			SN (friends)	.26	.004

For intentions at age 18, attitude was an even more predominant influence for both genders, with friends' subjective norm also significant. Only one situation, that of male intention to drink alcohol at age 18, still showed significant adult influence on intentions: coach subjective norm was a direct influence, while the teacher subjective norm interacted with attitude so that a positive attitude toward drinking was strengthened by teacher disapproval, or a negative attitude weakened by teacher acceptance of drinking once they are 18. The former explanation could indicate that at age 18, when they are no longer under direct control of adults, young men may feel they will rebel against the advice they have been given at school on drinking. This would be similar to the findings of Collins (2002) who found that young people whose parents had discussed the dangers of alcohol with them in their teens were likely to drink more when they went to college. There was also a positive interactive effect between friends' subjective norm and attitudes for male intention to get drunk at age 18.

Valid regression equations have been formed for each situation, albeit with rather low  $R^2$  values, and therefore *H1b is supported*.

### **Hypothesis 1c**

*Better predictions than those obtained by the Theory of Reasoned Action of likelihood of drinking alcohol (getting drunk) tonight and this weekend, and intention to drink alcohol (get drunk) at age 18, will be obtained by using perceived benefits and risks of drinking alcohol (getting drunk) as predictors, along with subjective norms for the relevant time for parents, friends, teachers and (if relevant) sports coaches.*

Hypothesis 1c suggests an alternative possibility for predicting likelihoods / intentions. Thus, regression equations were formed in a similar way for each situation, substituting perceived benefits and risks for attitude, and using interactive terms which combined these with subjective norms. Again, valid regression equations were formed. The comparison of  $R^2$  values (adjusted) with those obtained using attitude are shown in Table 9.3, and the full regression analysis is shown at Appendix 8.

**Table 9.3: Comparing predictions using attitude and those using perceived risks / benefits**

Likelihood / Intention	Gender	$R^2$ (adjusted) using attitude	$R^2$ (adjusted) using perceived benefits and risks	Difference
Drink alcohol tonight	Male	0.30	0.30	-
	Female	0.28	0.12	0.16
Drink alcohol this weekend	Male	0.37	0.35	0.02
	Female	0.24	0.22	0.02
Drink alcohol at age 18	Male	0.45	0.44	0.01
	Female	0.30	0.21	0.09
Get drunk tonight	Male	0.33	0.25	0.08
	Female	0.10	0.09	0.01
Get drunk this weekend	Male	0.38	0.31	0.07
	Female	0.32	0.27	0.05
Get drunk at age 18	Male	0.44	0.41	0.03
	Female	0.34	0.25	0.09

It can be seen that, although the differences are not large, in every case but one (where the figures are the same), using attitude gives stronger predictions than using perceived benefits and risks. Therefore, **Hypothesis 1c is not supported**, and the Theory of Reasoned Action framework will be used to test the remaining hypotheses. We now proceed to Hypothesis 2a, by introducing Sporting Involvement as a predictor variable.

## Hypothesis 2a

*H2a: The inclusion of sporting involvement as a predictor variable will improve predictions of alcohol-related likelihoods and intentions over those obtained from using subjective norms and either attitude or benefits and risks, in the direction that increased sporting involvement will lead to increased likelihoods and intentions of drinking alcohol (getting drunk).*

The factor Sporting Involvement, and related interactive terms formed by multiplying this factor by attitude and each subjective norm, were added as independent variables and the regressions were re-run. It was found that in every case for males, and in four of the predictions for females, the addition of Sporting Involvement and related interactive terms improved predictions, with improvements in  $R^2$  values ranging from 0.01 to 0.05. Again, only  $R^2$  values, and predictors with significance of  $t \leq 0.1$ , are shown in Table 9.4, with the full results set out in Appendix 9.

**Table 9.4: Predictions of likelihood/intention of alcohol-related behaviours, with Sporting Involvement (SI) added as an independent variable**

Likelihood / Intention	Gender	$R^2$ (adjusted)	Increase in $R^2$	Significant predictors	$\beta$ value	Sig. t
Drink alcohol tonight	Male	0.35	0.05	SN (parents)	.34	.000
				SN (friends)	.23	.004
				SN (teachers) x ATT	.24	.038
				ATT x SI	.24	.009
				SNP x SI	-.18	.040
				SNF x SI	-.20	.023
				SNT x SI	.21	.031
	Female	0.29	0.01	ATT	.41	.000
				SN (parents)	.25	.011
				SN (teachers) x ATT	-.16	.091
				SN (teachers) x SI	-.19	.051

Likelihood / Intention	Gender	R <sup>2</sup> (adjusted)	Increase in R <sup>2</sup>	Significant predictors	β value	Sig. t
Drink alcohol this weekend	Male	0.42	0.05	ATT	.19	.021
				SN (parents)	.25	.003
				SN (friends)	.29	.000
				SI	.19	.008
				SI x ATT	.29	.001
	Female	0.23	none	ATT	.27	.022
SN (parents)				.18	.082	
SN (friends)				.25	.027	
Drink alcohol at age 18	Male	0.50	0.05	ATT	.51	.000
				SN (friends)	.22	.006
				SN (coaches)	.21	.029
				SI	.22	.001
				SN (teachers) x ATT	-.18	.028
				SI x ATT	.23	.004
	Female	0.34	0.04	ATT	.47	.000
				SN (coaches)	-.15	.088
Get drunk tonight	Male	0.36	0.03	SN (teachers)	.18	.089
				SN (parents) x ATT	.24	.025
				SN (teachers) x ATT	.22	.036
				SN (parents) x SI	-.27	.009
	Female	0.13	0.03	ATT	.31	.011
				SI	-.15	.100
Get drunk this weekend	Male	0.42	0.04	ATT	.25	.010
				SN (parents)	.20	.027
				SI	.22	.002
				SI x ATT	.19	.041
	Female	0.31	none	ATT	.46	.000
				SN (coaches) x ATT	-.15	.096
Get drunk at age 18	Male	0.46	0.02	ATT	.43	.000
				SN (friends)	.26	.001
				SI	.16	.022
				SN (teachers) x ATT	-.14	.087
	Female	0.35	0.01	ATT	.34	.001
				SN (friends)	.24	.025
				SN (teachers)	.24	.022
			SN (teachers) x SI	.24	.021	

Considering the male results first, for both medium term (weekend) and long term (age 18) predictions, Sporting Involvement is shown to be a significant additional predictor, and in each case greater sporting involvement predicts greater likelihood of drinking alcohol or getting drunk. *Hypothesis 2a is therefore supported for the male subsample.* In three of these four situations, Sporting Involvement also modifies Attitude, i.e. the effect of positive attitudes toward alcohol is enhanced by being involved in sport. In the two situations dealing with alcohol use tonight, Sporting Involvement does not show a main effect, but there are interactive effects which enhance the effect of attitude and the subjective norm of teachers, but negatively modify the effects of the subjective norm of friends and parents. For the female subsample, Sporting Involvement only shows a main effect on likelihood of getting drunk tonight, but it is in the opposite direction – girls who are involved in sport are less likely to get drunk on a school night. In predicting drinking intentions at age 18, sporting involvement negatively modifies the effect of friends' subjective norm, and enhances the effect of teachers' subjective norm - although for likelihood of drinking tonight sporting involvement negatively modifies this.

While sporting involvement appears to play a smaller part in female predictions than in male ones, the indications are that effects are in the opposite direction, and thus **Hypothesis 2a is therefore NOT supported for the female subsample.** While involvement in sport appears to increase the likelihood that a young man will drink alcohol and get drunk, the same does not hold for young women.

It should be remembered, however, that while the distributions for intentions at age 18 were a reasonable approximation to the normal distribution, those for the shorter term predictions were not, especially those for “tonight” which were very heavily

weighted toward non-likelihood. Therefore, in order to confirm the above findings for the short-term and medium-term predictions, an alternative test was carried out. The male and female subsamples were each divided into two groups for each question, one comprising those whose answers showed a positive likelihood of the relevant behaviour (codes 1 to 3 in the original coding) and the other comprising those whose answers showed a negative likelihood of the relevant behaviour (codes 5 to 7 in the original coding). Answers coded 4 were excluded from the analysis. The means of these two groups for sporting involvement were compared, and a t-test for independent samples carried out. Findings are shown at Table 9.5.

**Table 9.5: Comparison of groups with positive and negative likelihood of alcohol-related behaviours**

**Group Statistics**

gender	likelihood of drinking alcohol tonight	N	Mean	Std. Deviation	Std. Error Mean
Male	sporting involvement measured as average of variables >= 4	119	3.6329	1.34559	.12335
	< 4	21	3.8339	1.01693	.22191
Female	sporting involvement measured as average of variables >= 4	104	2.6576	1.02727	.10073
	< 4	12	2.2954	.94043	.27148

**Independent Samples Test**

gender	sporting involvement measured as average of variables	Equal variances assumed Equal variances not assumed	Levene's Test for Equality of Variances		t-test for Equality of Means						
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower	Upper
Male	sporting involvement measured as average of variables	Equal variances assumed	2.123	.147	-.652	138	.516	-.20100	.30843	-.81086	.40887
		Equal variances not assumed			-.792	33.723	.434	-.20100	.25389	-.71712	.31513
Female	sporting involvement measured as average of variables	Equal variances assumed	.126	.723	1.166	114	.246	.36222	.31073	-.25334	.97777
		Equal variances not assumed			1.251	14.209	.231	.36222	.28956	-.25799	.98242

**Group Statistics**

gender	likelihood of drinking alcohol this weekend	N	Mean	Std. Deviation	Std. Error Mean
Male	sporting involvement measured as average of variables >= 4	85	3.5524	1.33271	.14455
	< 4	57	3.8388	1.25089	.16568
Female	sporting involvement measured as average of variables >= 4	62	2.6007	1.04762	.13305
	< 4	55	2.5331	1.02601	.13835

**Independent Samples Test**

gender			Levene's Test for Equality of Variances		t-test for Equality of Means						
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower	Upper
Male	sporting involvement measured as average of variables	Equal variances assumed	.293	.589	-1.286	140	.201	-.28637	.22266	-.72658	.15384
		Equal variances not assumed			-1.302	125.299	.195	-.28637	.21988	-.72153	.14878
Female	sporting involvement measured as average of variables	Equal variances assumed	.269	.605	.352	115	.726	.06759	.19218	-.31309	.44828
		Equal variances not assumed			.352	113.859	.725	.06759	.19194	-.31266	.44783

**Group Statistics**

gender	likelihood of getting drunk tonight	N	Mean	Std. Deviation	Std. Error Mean
Male	sporting involvement measured as average of variables >= 4	142	3.6350	1.29933	.10904
	< 4	7	4.1492	.87402	.33035
Female	sporting involvement measured as average of variables >= 4	110	2.6644	1.01736	.09700
	< 4	11	2.2697	.77576	.23390

**Independent Samples Test**

gender			Levene's Test for Equality of Variances		t-test for Equality of Means						
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower	Upper
Male	sporting involvement measured as average of variables	Equal variances assumed	1.403	.238	-1.034	147	.303	-.51423	.49741	-1.49722	.46876
		Equal variances not assumed			-1.478	7.375	.181	-.51423	.34788	-1.32843	.29997
Female	sporting involvement measured as average of variables	Equal variances assumed	.716	.399	1.249	119	.214	.39475	.31601	-.23098	1.02048
		Equal variances not assumed			1.559	13.698	.142	.39475	.25322	-.14947	.93897



**Group Statistics**

gender	likelihood of getting drunk this weekend	N	Mean	Std. Deviation	Std. Error Mean
Male	sporting involvement measured as average of variables >= 4	113	3.5140	1.30686	.12294
	< 4	28	4.1452	1.17633	.22231
Female	sporting involvement measured as average of variables >= 4	75	2.6145	.95574	.11036
	< 4	44	2.6063	1.08404	.16343

**Independent Samples Test**

gender			Levene's Test for Equality of Variances		t-test for Equality of Means						
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower	Upper
Male	sporting involvement measured as average of variables	Equal variances assumed	.126	.723	-2.332	139	.021	-.63128	.27075	-1.16659	-.09596
		Equal variances not assumed			-2.485	45.025	.017	-.63128	.25403	-1.14292	-.11963
Female	sporting involvement measured as average of variables	Equal variances assumed	.621	.432	.043	117	.966	.00821	.19081	-.36968	.38609
		Equal variances not assumed			.042	81.332	.967	.00821	.19720	-.38413	.40054

In every situation it can be seen that the score on sporting involvement is higher for males who believe they are likely to drink /get drunk, than for males who believe this will be unlikely. In every case, the difference for females is in the opposite direction. Although (due in part to the small sample size for those who predict a positive likelihood of the behaviour) t values are only significant in one case, that of male likelihood of getting drunk at the weekend, this does back up the findings of the regression analysis, in that sporting involvement is linked with greater propensity for males to drink and get drunk, but females involved in sport are less likely to perform these behaviours.

## Hypothesis 2b

*H2b: The inclusion of sporting performance as a predictor variable will improve predictions of alcohol-related likelihoods and intentions over those obtained from using subjective norms and either attitude or benefits and risks, in the direction that increased sporting performance will lead to decreased likelihoods and intentions of drinking alcohol (getting drunk).*

This hypothesis was tested by replacing the factor Sporting Involvement by the variable Importance of Sporting Performance. The regressions were then run hierarchically, first using the validated Theory of Reasoned Action model and at the second step adding Importance of Sporting Performance and its associated interactive terms. In no case did Importance of Sporting Performance show a significant main effect. An interactive effect of at least 1% significance was apparent in six of the 12 predictive situations (Table 9.6). The full tables of coefficients are at Appendix 10.

**Table 9.6: Interactive effects of Importance of Sporting Performance**

Likelihood/intention	Gender	Significant interaction with	Sig. t	Direction of effect
Drink tonight	Male	Subjective norm for parents	.079	Strengthens
Drink tonight	Female	Attitude Subjective norm for friends	.051 .040	Strengthens Weakens
Drink at weekend	Male	Attitude	.099	Weakens
Get drunk tonight	Male	Attitude Subjective norm for teachers	.021 .035	Weakens Strengthens
Get drunk tonight	Female	Subjective norm for teachers	.097	Weakens
Get drunk at age 18	Male	Subjective norm for teachers	.024	Weakens

These effects are very weak and do not show a consistent pattern. There is no evidence here to support the hypothesis.

Another variable related to sporting performance would be the highest level reached in sport. It would be reasonable to suppose that those young people who compete in sport at a representational level would take their sporting performance more seriously. Therefore, an ANOVA was done to compare means for the various likelihoods and intentions of drinking between the four categories of representation (none (0), school or club (1), region, county or city (2), and country (3)). This is shown in Appendix 11. For the male students, mean likelihoods /intentions for each prediction showed that those who represented at a higher level were more likely to use alcohol, though the differences were not large enough to be significant. For females, the findings were inconclusive, with no significant differences or consistency between the different predictions. Thus, **Hypothesis 2b is not supported**, and in fact, for males, there is a suggestion that reaching a higher level in sport actually leads to more, rather than less, use of alcohol. It does not appear, therefore, that the effects of sporting involvement occur solely through spectating.

### **Hypothesis 3a**

*H3a: Awareness of sponsorship will modify the relationships between attitudes or risks and benefits, subjective norms and sporting involvement, and alcohol-related likelihoods and intentions, in the direction that increased awareness will result in greater likelihoods and intentions of drinking alcohol (getting drunk).*

This hypothesis is investigating whether any additional effects, over and above those associated with sporting involvement, accrue from awareness of sponsorship. Thus, three-stage hierarchical regressions were run for each situation, using the enter method. In the first stage, only attitude, subjective norms and related interactive terms were entered. In the second stage, sporting involvement and its related interactive terms were added. Finally in the third stage, awareness and its related interactive terms were added (awareness being measured as the average response to the statements “When I attend a live sporting event, I usually notice who the sponsors are” and “When I watch a sporting event on television, I usually notice who the sponsors are”, mean-centred and recoded so that higher values indicate higher awareness.). Model summaries are shown at Appendix 12, with salient points summarised in Table 9.7.

It can be seen that the addition of awareness and related variables had a smaller additional effect on  $R^2$  than the prior addition of sporting involvement. In over half the predictions, while  $R^2$  is raised, the adjusted value was not raised due to the increase in the number of variables. Nevertheless, for male likelihood of drinking / getting drunk on the weekend, awareness showed a main effect in increasing the likelihood of these

behaviours, and also strengthened the effect of attitude on likelihood of drinking, i.e. positive attitudes toward drinking are reinforced by the presence of sponsorship.

**Table 9.7: Effect of adding the variable “awareness” and associated interactive terms**

Likelihood / Intention	Gender	R <sup>2</sup> after adding sporting involvement		R <sup>2</sup> after adding awareness	Change in R <sup>2</sup>	Additional significant predictors	Sign of $\beta$
		Unadjusted	Adjusted				
Drink tonight	Male	Unadjusted	.42	.45	.03	None	
		Adjusted	.35				
	Female	Unadjusted	.38	.42	.04	Awareness modifies effect of attitude	+ve
		Adjusted	.29				
Drink this weekend	Male	Unadjusted	.48	.54	.06	Awareness (main effect) Awareness modifies effect of attitude	+ve +ve
		Adjusted	.42				
	Female	Unadjusted	.33	.42	.09	Awareness modifies effect of attitude Awareness modifies effect of SN (parents) Awareness modifies effect of SN (coaches)	+ve -ve +ve
		Adjusted	.23				
Drink at age 18	Male	Unadjusted	.54	.55	.01	None	
		Adjusted	.50				
	Female	Unadjusted	.42	.46	.04	None	
		Adjusted	.34				
Get drunk tonight	Male	Unadjusted	.43	.46	.03	None	
		Adjusted	.36				
	Female	Unadjusted	.24	.27	.03	None	
		Adjusted	.13				
Get drunk this weekend	Male	Unadjusted	.47	.51	.04	Awareness (main effect)	+ve
		Adjusted	.42				
	Female	Unadjusted	.40	.45	.05	None	
		Adjusted	.31				
Get drunk at age 18	Male	Unadjusted	.52	.53	.01	None	
		Adjusted	.46				
	Female	Unadjusted	.43	.46	.03	None	
		Adjusted	.35				

For females, awareness also modified attitude in this way for likelihood of drinking tonight and at the weekend, and also modified subjective norms for the latter, strengthening that for coaches but weakening that for parents. For the shorter term predictions, therefore, awareness has been shown not only to modify effects of previous predictor variables, but also to be a significant predictor of male drinking intentions at the weekend. **Hypothesis 3a is therefore supported**, with the modification that awareness does not just modify effects of other predictors, but for males, is a significant predictor itself.

### **Hypothesis 3b**

*3b: Knowledge of sponsorship will modify the relationships between attitudes or risks and benefits, subjective norms and sporting involvement, and alcohol-related likelihoods and intentions, in the direction that increased awareness will result in greater likelihoods and intentions of drinking alcohol (getting drunk).*

Hypothesis 3a investigated the role of awareness, which as measured in this study was a self-reported perception of how much the respondent noticed sponsorship in sport. An alternative, more objective measure of the extent to which sponsorship has impacted upon a respondent is a test of recognition of sponsors associated with different sporting properties, as given in the final questions of the questionnaire. If a respondent has noticed a sponsor and the impact has been strong enough to create a link in memory between sponsor and sporting property, they should recognise it as a correct alternative. As the question covered a range of popular sporting events and teams, including many where alcohol sponsorship is prevalent, it was thought it could provide a good measure of

the extent to which sponsorship knowledge was processed and retained by respondents. The test was carried out similarly to the test of Hypothesis 3a, looking at the additional effects of actual knowledge after attitudinal and normative variables, and sporting involvement, had been accounted for. Output is shown at Appendix 13, with a summary in Table 9.8 .

Similarly to the previous test, in five cases any increase in  $R^2$  was not apparent in the adjusted value. However, in the other cases actual knowledge did provide increased predictive power. In four situations of predictions for males, it provided a significant predictor: in one case there was a main effect of increased likelihood of drinking, in another it reinforced the contribution of sporting involvement to a greater likelihood of getting drunk. In three situations it had a negative effect on the contribution of the subjective norms of teachers or coaches; as these were influencing toward a lower likelihood of drinking /getting drunk, knowledge once again modified the prediction toward a higher likelihood of alcohol related behaviours. *Hypothesis 3b is thus supported* for males at least; for females, although three situations showed an increase in  $R^2$ , there was no significant effect shown to be attributed to knowledge.

**Table 9.8: Effect of adding the variable “actual knowledge” and associated interactive terms**

Likelihood / Intention	Gender	R <sup>2</sup> after adding sporting involvement		R <sup>2</sup> after adding actual knowledge	Change in R <sup>2</sup>	Additional significant predictors related to knowledge	Sign of $\beta$
		Unadjusted	Adjusted				
Drink tonight	Male	Unadjusted	.42	.48	.06	Actual knowledge (main effect)	+ve
		Adjusted	.35				
	Female	Unadjusted	.38	.40	.02	None	
		Adjusted	.29				
Drink this weekend	Male	Unadjusted	.48	.50	.02	None	
		Adjusted	.42				
	Female	Unadjusted	.33	.35	.02	None	
		Adjusted	.23				
Drink at age 18	Male	Unadjusted	.54	.58	.04	Actual knowledge modifies effect of SN (teachers)	-ve
		Adjusted	.50				
	Female	Unadjusted	.42	.46	.04	None	
		Adjusted	.34				
Get drunk tonight	Male	Unadjusted	.43	.48	.05	Actual knowledge modifies effect of SN (coaches)	-ve
		Adjusted	.36				
	Female	Unadjusted	.24	.31	.07	None	
		Adjusted	.13				
Get drunk this weekend	Male	Unadjusted	.47	.49	.02	None	
		Adjusted	.42				
	Female	Unadjusted	.40	.48	.09	None	
		Adjusted	.31				
Get drunk at age 18	Male	Unadjusted	.52	.56	.05	Actual knowledge modifies effect of sporting involvement	+ve
		Adjusted	.46				
	Female	Unadjusted	.43	.46	.03	None	
		Adjusted	.35				



#### **Hypothesis 4a**

*H4a: Those who are exposed to more alcohol sponsorship, and admit that in general they are influenced by sponsorship, will have greater likelihoods and intentions of drinking alcohol (getting drunk).*

This hypothesis assumes that we can measure the extent of exposure to alcohol sponsorship, which we have not done directly. The prevalence of such sponsorship in sport would imply that those with higher sporting involvement have a large amount of exposure to such sponsorship, and thus sporting involvement is used as a proxy measure, i.e. we expected to find that the interactive term (CHOOSE (sponsoring brand) x Sporting Involvement (SI)) had a significant positive impact on alcohol-related likelihoods and intentions for the male subsample. (As it was found in testing Hypothesis 3 that for females the influence of sporting involvement was in the opposite direction, i.e. away from alcohol, we would not expect this to hold for the female subsample.) However, it is entirely possible that young people with other interests may also have such exposure (for instance, certain music festivals also have alcohol sponsorship), or that a young person may be involved solely with one of the few sports in which there is no alcohol sponsorship. It was also possible that some respondents had not answered the direct question on the influence of sponsorship on their personal decision-making accurately, either through unwillingness to appear impressionable, or a lack of self-awareness. For these reasons, it was likely that any relationships found would be weak.

The regression equations run for Hypothesis 3 were re-run, including the terms CHOOSE and (CHOOSE x SI) as independent variables. CHOOSE was not a significant predictor in any of the 6 cases, and (CHOOSE x SI) was not significant in any case for

the female subsample. However, in the prediction of intentions for males drinking alcohol and getting drunk at age 18, the interactive term was significant at a 90% confidence level, showing t values significant at levels of 0.069 and 0.090 respectively (0.068 and 0.046 when regression was rerun without including the variable CHOOSE). The sign of  $\beta$  was positive as expected, i.e. the already significant positive effect of sporting involvement on the frequency with which young men intend to drink alcohol and get drunk once they are 18 is enhanced for those whose buying behaviour is influenced by sponsorship. *Hypothesis 4a is thus partially supported*, only for the male subsample and the long-term prediction. SPSS output for these two models is shown at Appendix 14.

It could be argued that awareness would also be relevant here, i.e. sponsorship messages can only influence drinking behaviour if the respondent is inclined to be influenced by sponsorship, is exposed to such sponsorship, and takes notice of it. However, inserting the variable “awareness” and related interactive terms in the equations did not produce any other significant predictors.

#### **Hypothesis 4b**

*H4b: Those who are exposed to more alcohol sponsorship, and believe that sponsorship persuades others to buy, will have greater likelihoods and intentions of drinking alcohol (getting drunk).*

As with Hypothesis 4a, “sporting involvement” was used as a proxy measure for being exposed to alcohol sponsorship. Therefore, the caveats on Hypothesis 4a also apply. With the addition of INF (the response to “Sponsorship influences people to buy

brands or products they would not otherwise buy”), the false consensus effect was brought in, and it was proposed that the belief that others buy because of sponsorship would increase an individual’s likelihood of purchasing it. Following Bauman and Geher (2002), this belief is purported to act as a descriptive norm to influence intentions (main effect). It may also act to reinforce, for the male subsample, the descriptive norm which links alcohol use with sport, and lessen the effect of personal attitude toward alcohol on intentions and behaviour. Therefore, the terms INF, INF x SI, and INF x ATT were added to the regression equations found at Hypothesis 3.

The findings were that in no case did INF turn out to be a significant predictor, and in only four cases was any interactive term associated with INF a significant predictor. For female intentions to drink and get drunk at the weekend, the interactive term INF x SI was a significant predictor at 1% level (sig t = 0.081 and 0.099 respectively), and the sign of  $\beta$  was negative, i.e. the influence of sporting involvement, which was found to be away from alcohol use for girls, is weakened. For males, INF was found to enhance the effect of attitude for predicting likelihood of getting drunk tonight, and to enhance the effect of sporting involvement in predicting intentions to get drunk at 18. In these four cases,  $R^2$  was raised by between 0.01 and 0.03 by the addition of the additional independent variables. The effects, while minimal, are in the hypothesised direction, and therefore we can say that **Hypothesis 4b is tentatively supported**. SPSS output for these four models is shown at Appendix 15.

### 9.3 Re-tests excluding those extremely unlikely to drink alcohol

So far, the nine hypotheses have been tested on the full dataset. However, attention was drawn earlier to the skewed distributions for the short and medium-term predictions, which is likely to be due to the fact that many of the young people surveyed have not yet taken up drinking alcohol on any regular basis. If young people are drinking alcohol regularly, the time they are most likely to drink would be the weekend rather than during the week in termtime; therefore, the majority of those who say it is extremely unlikely that they will drink alcohol on the weekend, are likely to be those who do not yet drink regularly. A t-test was done to compare means of the two subsamples; those who answered that they were “extremely unlikely” to drink at the weekend, and all others. Unsurprisingly, there were significant differences in mean intentions to drink / get drunk at 18, in attitudes to drinking and getting drunk, all in the direction that would be expected. However, the means for sporting involvement did not differ significantly.

Regressions were run as previously with the subsample of those who did not answer “extremely unlikely”; in every case  $R^2$  values were lower than when run with the whole dataset. SPSS output is shown at Appendix 16. But for males, sporting involvement was still a significant predictor of likelihood of drinking and getting drunk at the weekend. It also interacted with attitude, producing increased intentions of drinking when sporting involvement was coupled with a positive attitude toward alcohol. For females, sporting involvement only acted as a modifier, lessening the effects of the subjective norm relating to teachers. This would tend to suggest that for girls who already drink alcohol, the influence of sporting involvement is in the same direction as that for boys, toward alcohol, and that the previous finding of tendencies in the opposite

direction indicates that many girls who are highly involved in sport do not drink alcohol regularly. However, the effects for girls were so small that firm conclusions cannot be drawn from this study. For boys, this appeared to confirm that sporting involvement is a strong influence on alcohol-related behaviour.

## **9.4 Consideration of important aspects of the multiple regression analysis**

### **9.4.1 Multicollinearity**

One perennial problem in carrying out multiple regression is the collinearity of supposedly “independent” variables. As stated previously, variables in this study were mean-centred to reduce collinearity effects (Yi, 1989) and the Variance Inflation Factor (VIF) was also examined for all sets of regression results. A commonly used upper limit of acceptability for this is 10 (Hair *et al*, 2005: 193), while in this study no VIF values exceeded 5, and the vast majority did not exceed 3 (see Appendices 6 onwards).

### **9.4.2 Prediction and causation**

It must be remembered that the ability to predict one variable from others does not necessarily imply causation (Howell, 2002: 259-260), i.e. greater intentions to drink alcohol are not necessarily caused by the significant predictor variables. The most we can say is that these variables predict alcohol-related intentions. With regard to the additional variables added to the Theory of Reasoned Action, a critic could dispute the direction of the relationship, stating that young people who are already drinking alcohol could be more aware of alcohol-related sponsorship as they would, for instance,

recognise the brand names. Though this may be true, the study guarded against drawing incorrect conclusions here by measuring sponsorship awareness generally (in the self-reported questions), and over many categories of sponsor, in the knowledge questions. There appears no reason why a drinker should be more aware of sponsorship in general.

Considering the sporting involvement variable, again, it does not seem sensible to say that boys would drink alcohol and that would cause them to get more involved in sport, as the age at which boys would start taking part in sport is much earlier than that at which they would take interest in alcohol (at least for the vast majority). Therefore the researcher has confidence that the directionality of the regression equations is correct.

A further possible explanation is that there are other factors which may cause young men to be interested in both sport and alcohol, and this would be a good avenue for future research. For instance, both may be linked to a desire for a manly or macho image, or particular personality types may be drawn more strongly to both sport and alcohol consumption. However, the fact that there may be underlying causes which have not been unearthed does not invalidate the findings of this study.

### **9.4.3 Reliability**

Reliability refers to the ability of the measuring instrument (in this case, the questionnaire) to produce consistent results (McDaniel and Gates, 2007, Ch 9).

Reliability may be tested by administering the same questionnaire, or an equivalent one, to the same respondents at a later time or date. In this study, this would not have been suitable for practical reasons (schools were cooperative enough to reorganise their classes to give the time necessary for questionnaire completion, but it would have been difficult

to persuade them it was necessary to do this twice), and also because measurement of sponsorship knowledge would have been invalidated. Respondents would be sure to discuss their selections of correct sponsors, or check to see if their answers were correct. Given that the original sample of sponsored properties had included major recent events such as the 2004 Olympics, it would have been impossible to provide an equivalent set of items.

An alternative method of checking reliability is by checking for internal consistency using the split-half technique, and measuring the Cronbach alpha. This was done for each major construct measured, as shown in Table 9.9. It can be seen that all but two Cronbach alphas reach the acceptable level of 0.7 (Hair *et al*, 2005:102). The low value for attitudes to drinking alcohol has already been discussed in Section 8.4, and is postulated to reflect the ambivalent attitudes held toward alcohol. While responses to questions on current likelihoods of alcohol use appear consistent, the final item in the table shows that these do not have high consistency with intended behaviour at age 18. This is a plausible finding, due to the fact that more law-abiding young people may not use alcohol now but fully intend to do so when old enough to do so legally, and conversely, the point of view expressed by some focus group subjects that they would drink more moderately when they became 18 because there was no longer the thrill of “forbidden fruit”.

The measuring instrument therefore appears reliable.

**Table 9.9: Checks of reliability**

<b>Construct</b>	<b>Questionnaire items</b>	<b>Number of items</b>	<b>Cronbach alpha</b>
Sporting involvement	All items relating to sport participation and spectating	6	0.78
Sponsorship awareness and knowledge	Items relating to awareness of live and TV sponsorship, perceived sponsorship knowledge, and number of sponsors correctly identified	8	0.70
Attitude toward drinking alcohol	Attitude related statements (B1 – B4)	4	0.48*
Attitude to getting drunk	Attitude related statements (B5 – B8)	4	0.71
Perceived parental attitudes	Statements relating to parental approval of drinking alcohol / getting drunk	6	0.81
Perceived friends' attitudes	Statements relating to friends' approval of drinking alcohol / getting drunk	6	0.93
Perceived teachers' attitudes	Statements relating to teachers' approval of drinking alcohol / getting drunk	6	0.84
Perceived coaches' attitudes	Statements relating to coaches approval of drinking alcohol / getting drunk	6	0.93
Current alcohol-related intentions (likelihoods)	Likelihoods of drinking / getting drunk tonight / this weekend (statements A1 – A4)	4	0.83
All alcohol-related intentions (likelihoods)	All likelihoods /intentions of drinking / getting drunk (statements A1 – A6)	6	0.51*

\* = low Cronbach alpha



#### **9.4.4 Validity**

Validity is concerned with ensuring that the constructs we are purporting to measure, and what is actually being measured, are one and the same (McDaniel and Gates, 2007: Ch. 9). There are several different aspects of validity.

##### *9.4.4.1 Face validity*

If an instrument measures what it seems to measure, then it has face validity. The questionnaire for this study uses simple and direct questions, and was piloted to ensure that there were no ambiguities. The questions related to outcomes, attitudes and subjective norms are based on those previously used in tests of the Theory of Reasoned Action, and those relating to sporting involvement and sponsorship ask about extent of both time-related and psychological involvement, and different types of sponsorship response (awareness, knowledge, and effects). The questionnaire was also shown to other researchers, including the thesis supervisors, before administration, and it was agreed that the correct questions were being asked. Thus, it has face validity.

##### *9.4.4.2 Content validity*

Content validity refers to the sampling adequacy of items for each construct. Taking these in turn, sporting involvement was measured in the contexts of both participating and spectating, and also considered both time-based involvement (how often) and psychological involvement (how important). In hindsight, the one further item that could have been included could have been a psychological measure related to spectating (e.g. would the respondent describe him/herself as a sports fanatic, a casual

supporter, etc.). However, this would be likely to have high correlation with the amount of sport watched, and therefore its omission was not a serious one.

In measuring perceived sponsorship knowledge, respondents were asked about the three major types of sponsored properties (teams, events and individuals), while the range of sponsorships used to test actual knowledge covered a range of mainstream sports and high profile events. Awareness of sponsors included both live and televised events.

For Section C, the questions on outcomes of drinking alcohol or getting drunk, all outcomes mentioned in the focus groups were not used, as this would have lengthened the questionnaire considerably. Five representative outcomes were selected as an appropriate number, using terms that encapsulated as many of the ideas given by the focus groups as possible (e.g. “trouble with others” could include parents, friends or the police; “serious consequences for health” could include both short- and long-term outcomes). No major themes addressed by the focus groups were omitted entirely.

The attitudinal measures (Section B) for drinking alcohol and getting drunk were adapted from Ajzen and Fishbein (1980: 261, 262,267) and Oliver and Bearden (1985). (Bruner *et al*, 2001: 61). They addressed specific aspects of consumption as well as including an all-encompassing measure (good...bad) which was the one used for analysis. Subjective norms were sought for all categories of influencer that were mentioned consistently by focus groups. In terms of likelihoods and intentions of alcohol-related behaviour, these were measured for three different timeframes in order to do separate analyses which would contribute to an overall picture.

Thus, content validity has been considered for each aspect and is deemed satisfactory.

#### *9.4.4.3 Concurrent validity*

Concurrent validity addresses the question of whether measured variables predict the values of other concurrently measured variables with which a relationship would be expected. In the sponsorship context, self-reported awareness of sponsorship is a good predictor of actual knowledge – the correlation between them is significant at 1% level. Also, the basic Theory of Reasoned Action model holds and makes significant predictions in each case, thus confirming concurrent validity of outcomes and their evaluations with attitudes, and attitudes and subjective norms with intentions. The related construct of predictive validity cannot be addressed, as this refers to a future time, and there were practical and ethical difficulties, as discussed previously in Chapter 6, in extending this study into observation of behaviour or a second survey of the sample.

#### *9.4.4.4 Construct validity*

Finally, construct validity refers to the relationships between how the constructs were operationalised and the constructs themselves. The basic Theory of Reasoned Action constructs (outcome beliefs and evaluations, attitudes, subjective norms and intentions) were measured in previously tested and validated ways. Where these deviated from the Ajzen and Fishbein (1980) recommendations, justification with reference to previous work has already been offered in Chapter 6.

The concept of sporting involvement has been defined for this study to include both participation and performance, and the items used measure both psychological and time-based involvement.

Awareness of sponsorship is of necessity self-reported, and therefore is actually measuring respondents' perceptions of awareness, which would not include any subconscious effects. However, measurement of actual awareness would have to be done mechanically to observe brain activity, and one such measurement in a specific situation would not necessarily be representative of general awareness levels, due to possibilities of bias from outside distractions, experimental effects, or the particular sporting event or sponsors. Thus, the self-reported measure is a best estimate of the construct.

Finally, knowledge of sponsorship has been defined in this study to mean "knowing who the sponsor is", rather than any deeper form of knowledge *about* the sponsor. Knowledge has been tested by using a variety of sponsors from a range of different mainstream sports, and was found to correlate highly with self-perceived knowledge, thus validating it as a general measure. It may be that dedicated fans of a particular sport would score very highly on a set of questions relating to that sport (e.g. a football fanatic may know every Premiership team sponsor); unless that knowledge extended into other sports, they would not have scored highly on this study. Therefore, knowledge only has construct validity if it is made clear that it is a general measure over different sports.

#### **9.4.5 Generalisability**

Generalisability, or external validity, is concerned with to what extent the findings of this study can be applied to other populations. It is an important requirement, as it is hoped that findings could inform public policy, which aspires to improve the good of the whole population, or at least the majority. It was addressed at the sampling stage; Cardiff is a typical UK city in terms of its population and underage drinking problems, while the different types of schools surveyed ensured a wide representation of different social classes (see Chapter 6 for a fuller discussion). The researcher contends, therefore, that generalisability is high as regards extending the findings to major towns and cities of the UK. Generalisability to highly rural areas may be lower, due to fewer opportunities to see live sport, and less anonymity for young people, which may impact upon their use of alcohol. It is unlikely that the findings would be generalisable outside the UK, certainly not to countries such as those in Southern Europe whose alcohol-related culture is different.

#### **9.5 Implications as regards the Theory of Reasoned Action**

This study confirms the appropriateness of the use of the TRA in predicting alcohol-related behaviour. Although some authors have proposed an outcome-based framework, considering risks and benefits separately, in this study the predictions obtained using that framework were slightly inferior to those obtained using the TRA. This would imply that young people do, to some extent, balance the benefits and risks of alcohol consumption in forming their attitudes toward drinking and getting drunk.

Subjective norms relating to parents and friends were dominant, with some lesser effects from those of teachers and sports coaches. Friends' subjective norms were most important for predictions at age 18. The different weightings and conflicting influences of these different referents support the decision to include them separately.

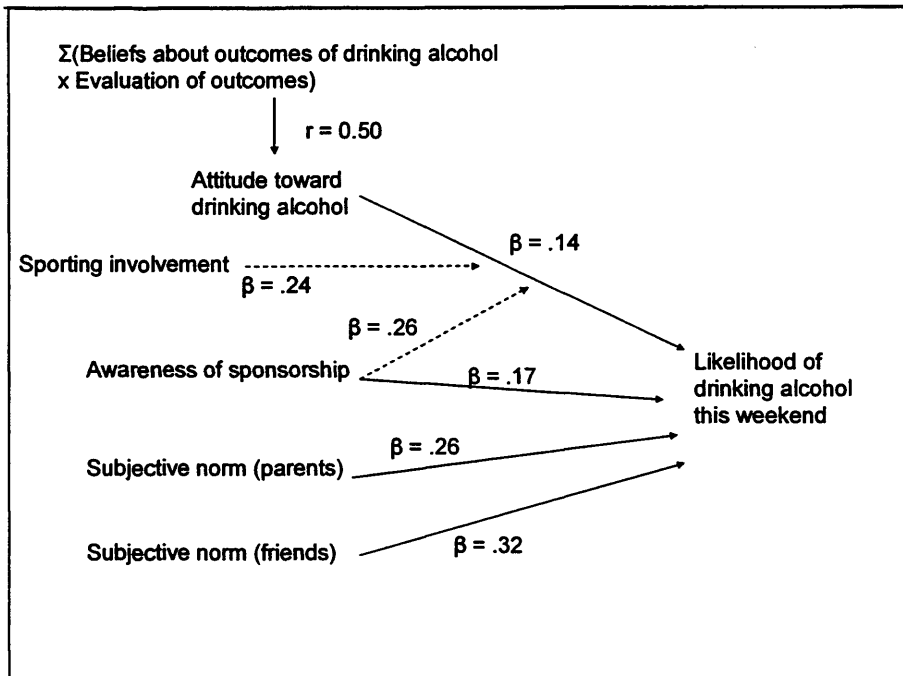
Sporting involvement was found to have main effects, for males, on both medium and long term predictions of intention to drink alcohol and to get drunk. The additional variance explained by including this variable ranged from 2% (getting drunk, age 18) to 5% for both medium and long term predictions of drinking alcohol. Accepting that the UK culture has strong links between alcohol and sport, we can say that, for males, sporting involvement (at least in certain sports) implies a certain set of norms regarding alcohol, and so this study acts as further confirmation of the findings of Prentice and Miller (1993), Sheeran and Orbell (1999) and Rimal and Real (2005), that descriptive norms have a distinct role, aside from that of subjective norms, in predicting behaviour.

The main effects found for awareness, over and above those of sporting involvement, are interesting. It appears that observing sponsorship has a direct effect on behavioural intentions, as well as modifying effects of attitude and subjective norms.

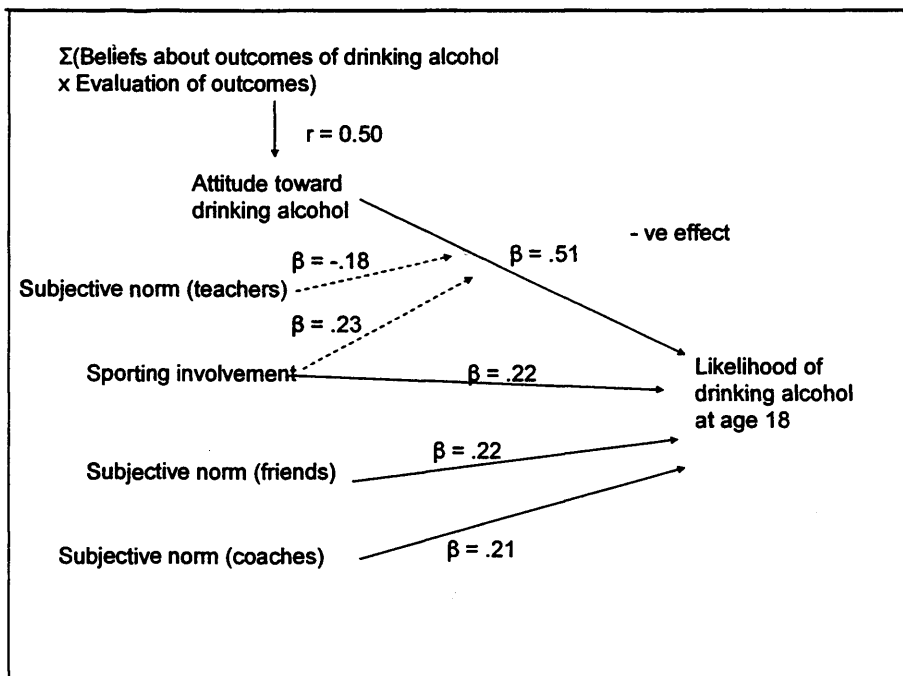
The analysis has enabled the production of revised models for the male subsample, as shown in Figure 9.2. Due to the very small samples of those with intentions to "drink tonight", these are shown for the medium (weekend) and long-term (age 18) intentions only. Figure 9.3 then shows composite models, in which the findings from all analyses for each gender have been combined to give an overall picture of the importance of different influences on young people's drinking behaviour. In Figure 9.3, the size of font has been varied to reflect the relative importance of different influences.

**Figure 9.2: Enhanced TRA models for intentions to drink alcohol / get drunk**

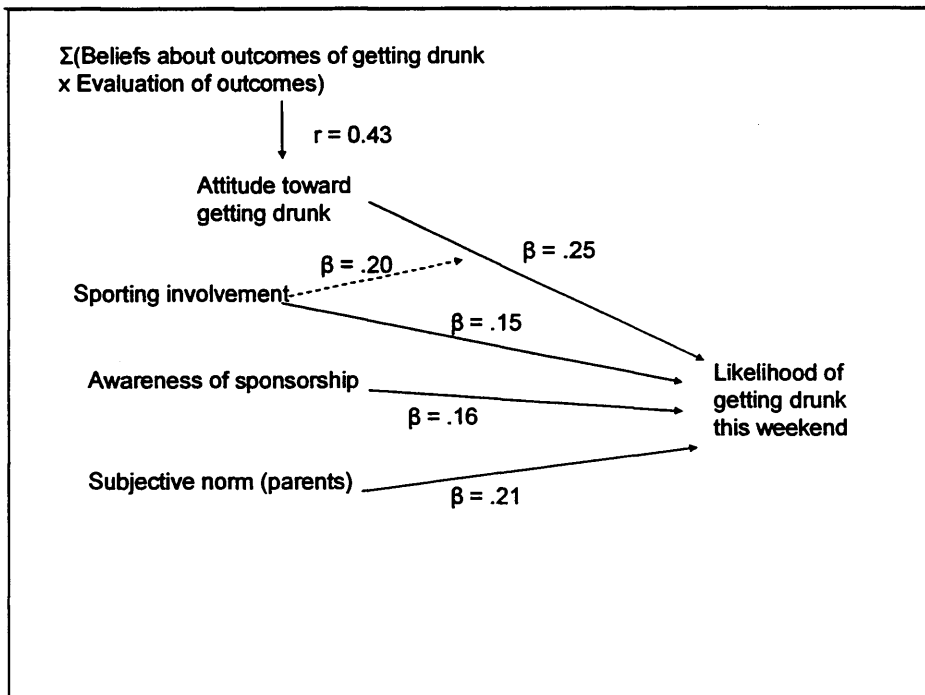
**Boys: likelihood of drinking this weekend**



**Boys: likelihood of drinking at age 18**



**Boys: likelihood of getting drunk this weekend**



**Boys: likelihood of getting drunk at age 18**

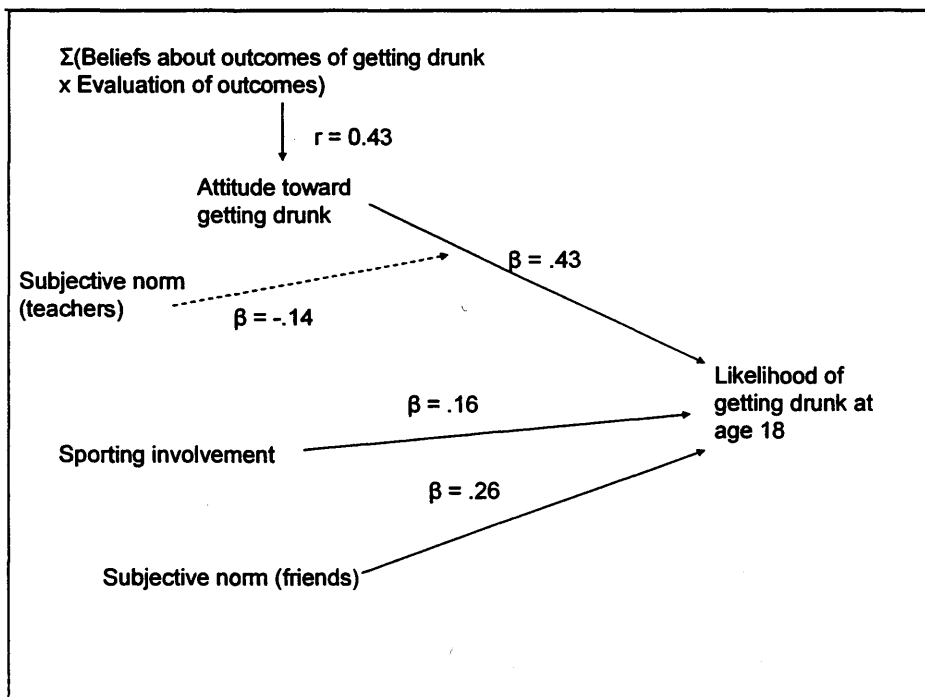
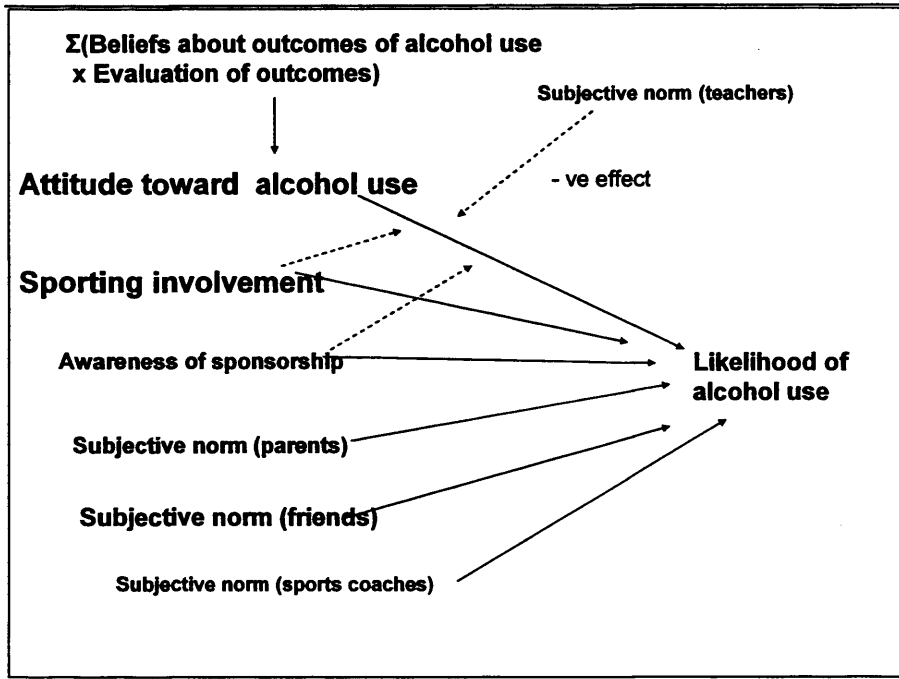


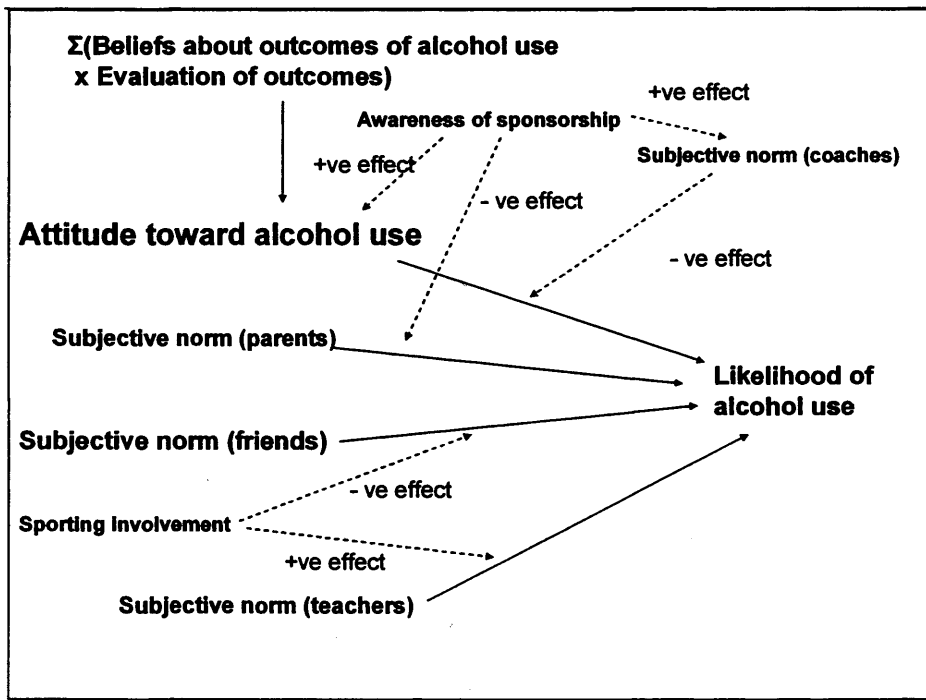


Figure 9.3: Composite models of alcohol use

Boys: composite model of predictors of alcohol use



Girls: composite model of predictors of alcohol use



## 9.6 Discussion of findings

Tests have now confirmed that sporting involvement (on its own or in combination) is a significant predictor of young male drinking intentions, and may have some smaller but opposite influence on female drinking intentions. Even when it is important for males to perform well, this does not appear to affect their drinking habits, and the boy in the focus group who did not drink due to his sporting ambitions appears to be non-typical. Other variables have been tested by adding them to the model including sporting involvement, and awareness and knowledge have been shown to have both main and interactive effects in at least one situation. Whether personal choice is influenced by sponsorship, and the belief that sponsorship influences the choices of others, have been shown to have modifying effects only.

Thus for males, taking into account the extent of sporting involvement, awareness and knowledge of sponsorship can improve the accuracy of predictions for intentions to drink alcohol and get drunk in each of these situations, ranging from 4% improvement for drinking alcohol tonight to 11% improvement for drinking alcohol this weekend. The effects are unambivalent – greater involvement in sport increases likelihood of these behaviours, as does greater awareness and knowledge of sponsorship. Furthermore, the influence of positive attitudes to alcohol is reinforced by being involved in sport and aware and knowledgeable of sponsors. These factors also tend to decrease the effect of subjective norms of adult referents on drinking behaviour. If the intention-behaviour (or likelihood-behaviour) relationship holds good, then for boys, being involved with sport means greater use of alcohol, and this is further increased for those who take note of sponsors. For girls, the picture is much less clear. Attitude toward alcohol is the

predominant predictor of behaviour, followed by subjective norms. The only main effects of other variables are knowledge, influencing away from alcohol use, and the belief that sponsorship influences others, influencing toward alcohol use. Sporting involvement shows interactive effects only. Taken in conjunction with the previous findings at earlier stages, the picture is one where sporting involvement has much less influence than it has for boys, but the tendency is for its influence to be in the opposite direction, away from alcohol use.

These findings provide confirmation that the links discussed in Chapter 2 between drinking and sport in the UK are evident in young men even at the age of 14 or 15. Boys *et al* (2003) opined that normalisation of involvement with alcohol occurred between the ages of 15 and 17. This survey suggests that an involvement with sport, especially if combined with attention to sponsorship, is instrumental in helping that normalisation for young men. Boys who take part in and/or watch more sport are more likely than others to take on board the cultural norms regarding alcohol use, rather than the healthier messages which are promoted to them in school. The involvement in itself makes a stronger consistent contribution to drinking intentions than does awareness and knowledge of sponsorship, but these have some additional effect. For girls, on the other hand, involvement with sport does not predict greater involvement with alcohol, and there are weak indications that it may even inhibit alcohol use. For the short and medium term situations (i.e. predicting drinking intentions while still underage for buying alcohol), attitude predominates for girls as the major predictor, while normative influences are more important for boys. But for the long-term predictions of intentions at age 18, attitude is the strongest predictor for both genders.

One reason that could explain differences between the genders in terms of the influence of sporting involvement, is that respondents were not asked in which sports they participated or those they preferred to watch. Despite recent advances which have seen a higher profile for women in sports such as football and rugby which are strongly associated with alcohol, these are still played much more by men than by women, and men also form the majority of spectators for these sports. Many girls who are involved in sport may be more interested in sports such as netball, athletics or gymnastics, which do not have strong associations with alcohol. Further research could focus on young people of both genders who play football and/or rugby, and who are fans of football or rugby teams, to determine whether such gender differences still hold.

This analysis has shown, therefore, that awareness and knowledge of sponsorship has some effect on young people's drinking intentions, but, for boys, a stronger predictor of drinking intentions is simply being involved in sport. In the next chapter we consider the implications of these findings for the position of alcohol sponsorship of sport.

## **CHAPTER 10**

### **CONCLUSION: IMPLICATIONS AND RECOMMENDATIONS**

#### **10.1 Review of objectives**

The objectives of this thesis were:

- 1) To explore the issues of alcohol consumption in the UK, with particular reference to young people and links with sport.
- 2) To investigate the rationale for sponsorship of sport by alcohol companies
- 3) To examine the ethical issues related to alcohol marketing through sport
- 4) To investigate empirically the effects of alcohol sponsorship of sport on young people
- 5) To determine whether involvement in sport, and sponsorship awareness, knowledge and responses, play any part in predicting young people's intentions with regard to alcohol consumption; and if so, to examine implications for the Theory of Reasoned Action.
- 6) To make alcohol policy recommendations consistent with the study findings.

Objectives 1 to 3 have been fulfilled in Chapters 2 to 4 respectively, while the empirical work described in Chapters 5 to 9 has addressed the fourth and fifth objectives. Objective 6 will be addressed in this chapter. Firstly, there follows a brief summary of findings so far.

### 10.1.1 Literature review and secondary research

The literature review and secondary research indicated that the trends among young people drinking in UK were toward greater alcohol consumption, and that opinion was divided on whether it was preferable to try to delay the age of first drinking as long as possible, or to accept that most teenagers were going to start drinking and encourage moderate and responsible use of alcohol. It was noted that many social factors played a part in determining whether young people would drink alcohol, and that cultural, parental, and peer group norms were also very important. The conclusion from the most recent study, that of Boys *et al* (2003), was that young people were socialised into the UK's alcohol culture between the ages of 15 and 17, with a large minority often binge drinking.

It was noted that alcohol has long been an integral part of the social culture of the UK, a natural accompaniment to all kinds of celebrations and social events, and that drunkenness, generally, has been treated with indulgence and as an excuse for otherwise unacceptable behaviour, unless it causes great risk to others as in the case of drink-driving. Also discussed were the historical links between alcohol and sport, which persist even though serious sportspersons nowadays would be advised to use alcohol in moderation or not at all, due to its detrimental effects upon performance. It was observed that these links are tied into a predominantly masculine culture, and that they make it easy for alcohol brands to be seen as natural sponsors of sporting activities.

Turning to sport sponsorship by alcohol companies, it was shown that as expenditure on sponsorship increased dramatically in the 1980s and 90s, alcohol marketers selected many different sports to sponsor, seeking a fit with the brand image

and target market. Football, the most popular sport among teenage males, was heavily sponsored by beer brands, and, apart from track and field athletics, all sports popular with the 15-24 age group had at least one prominent alcohol sponsor.

The primary objectives of sponsorship were found to be awareness, image and sales. It was suggested that alcohol companies sponsoring sport would use and leverage such sponsorship to bring their name to the attention of the target market, and to promote a positive image by linking it with a healthy pursuit and with an individual, team or event already regarded favourably by the target market. There was some evidence to show that even if fans did not specifically remember the sponsor name, it could be lodged in the brain at a subconscious level. It was noted that a natural synergy between sponsor and sponsored property, whether this related to function, image or some other factor, aided in establishing a memorable link between the two, and thus sponsorship of sporting properties by alcohol brands both capitalised upon and strengthened the links between alcohol and sport. A consumer's involvement with the sponsored sport was primarily important for the number of opportunities it gave them to see the sponsor name.

Sponsors are therefore able to ensure that many young people (their future target market) are familiar with their name before they become of a legal drinking age, and to promote favourable associations of the name with a team young people support, or an event which they enjoy watching.

Ethical issues arise in this context because alcohol can be harmful, to oneself and others, if misused. Due to the fact that the teen brain is not yet fully formed (White, 2006), an excess of alcohol may have irreversible long-term consequences for teenagers, as well as the medical and behavioural consequences that may result for anyone who

drinks too much. It was therefore suggested, after consideration of the different points of view on ethical responsibility and social marketing, that the case could be made for two very different ethical positions for alcohol marketers; they could market alcohol in a controlled and responsible fashion, helping to educate young people in responsible consumption, or they could make it clear that their products should not be used by underage drinkers at all. In the UK, alcohol marketers would contend that they are doing the former; but sponsorship of sport does not generally send any message of responsible consumption – it is just the link of the name with the sporting team or event. Young people may receive a plethora of mixed messages regarding alcohol, and the study aimed to cast some light on how those messages connected with sport were received.

#### **10.1.2 The research study**

The analysis carried out in Chapter 9 showed that being involved in sport is a predictor of intentions to use alcohol and to drink to excess, for boys aged 14 to 15. As a casual observer might surmise if they visited Cardiff on the day of a rugby international or FA Cup Final, many young teenagers are already inculcated into the sport and alcohol culture. Stronger alcohol-related intentions have been observed for those who engage more with sponsorship, and even for girls awareness and knowledge of sponsorship have been shown to have modifying effects. Warning messages about the effects of alcohol are, in the main, drowned out by social pressure and the ubiquitous presence of alcohol branding, including sponsorship and associated leveraging activities. The perception of the young people themselves, as expressed in the focus groups, is that they are influenced by social pressures but only those (others) fanatical about a particular team are influenced



by sponsorship. The survey findings show that it is indeed subjective and descriptive norms (both of which could be described as social pressures), that play the major part in influencing drinking intentions, though engagement with sponsorship does have a further lesser influence. However, more involvement with sport may also affect drinking intentions through sponsorship effects because it gives more opportunity to see sponsorship messages (Lardinois and Derbaix, 2001 – discussed in Chapter 3), and in this way the effects of sponsorship and sporting involvement are mutually reinforced.

Of course it is not just those who follow sport who are affected by alcohol-related sponsorship, but the findings of this study show that sporting involvement is one factor, for boys, in increasing intentions toward alcohol use. During the focus groups, one exception was found, a boy who was very serious about his rugby and did not drink alcohol at all in order to maximise his fitness, but none of the 14 boys surveyed who represented their country exhibited similar behaviour; in fact there was a tendency for those who had reached higher levels to drink more. It is possible, however, that they moderated their drinking before competitive games, as did the other serious players in the focus groups. For girls, however, greater involvement in sport did not imply increased drinking. It is therefore suggested that sporting involvement, for males, implies certain norms with regard to alcohol, which contribute to the Theory of Reasoned Action model as descriptive norms. This is consistent with previous work in the area, e.g. Prentice and Miller (1993) and Rimal and Real (2005) who proposed descriptive norms as an addition to the basic Theory of Reasoned Action model in this context (see Chapter 5).

## **10.2 Implications of the findings**

So, if the government wishes to reduce alcohol consumption levels among young people, does this study make a case for arguing that sponsorship of sport by alcohol brands should be subject to greater regulation? The argument for regulation is simple. Awareness and knowledge of sponsorship has been shown to have additional effects over and above that of sporting involvement, in increasing intentions to use alcohol. Thus, removing the influence of sponsorship should reduce by a small amount young people's intentions to use alcohol.

The argument against, is that banning sponsorship will not change the cultural associations which, as detailed by Collins and Vamplew (2002) and discussed in Chapter 2, have existed since long before sponsorship became a part of the marketing mix. Sporting involvement, on its own, predicts a significant increase in young men's alcohol-related intentions, and removing the influence of sponsorship would not address this problem. In order to do this, the deeply entrenched norms of the sporting culture would need to be challenged. Teenagers who aspire to be part of a particular subculture will try to fit in with the norms of that subculture, whether that is a grouping based on musical taste or sporting preferences. If the older men in a football or rugby club adjourn to the pub after a game, and stagger home drunk several hours later, boys will believe that this is the behaviour to emulate in order to be accepted into the group. If a sports club weekend away for competition is promoted to be as much about the potential for drinking afterwards as the importance of the event, these are the relative values that the teenager will embrace. If the norm for following a big football competition is either to watch it on the big screen in the pub, or at home, having got in several crates of beer, these are the

behaviours that young men will be socialised into. As observed by participants in the focus groups (Chapter 6), young people of the age surveyed are still very orientated toward observing group norms and “fitting in”. But for those who have embraced the alcohol-related norms of sport, relinquishing them at a later date, when they become more independent, may be problematic. They may already have some level of addiction to alcohol. The evidence (Chapter 2: Gonzalez (1989); Chou and Pickering (1992); Grant and Dawson (1997)) is that those who start drinking at an earlier age have more alcohol-related problems in later life. Many of their friendships may be maintained through shared sporting interests which involve drinking together. Thus, early involvement in the sport and drinking culture may have effects which are not apparent until many years in the future.

So, could banning sponsorship have any effect on these scenarios? The opponents of such a move would say no. These situations arise because young men are socialised into the sport and alcohol culture by watching what adults do and taking on board the descriptive norms of that culture. Sponsorship, on the other hand, only consists of showing the brand name; it does not suggest that you should drink the product after the game, or buy a case for consumption while watching sport. It does, however, link the name of the alcohol brand with sport, thus reinforcing any links which already exist in the brain between sport and alcohol. And, as discussed in Chapter 3, sponsorship is of little use without associated leveraging activities to provide an integrated marketing communications package (Thwaites *et al*, 1998); these include advertising which promotes the links with sport, suggesting that a particular beer is for sporting heroes, or that a can of another would be a good accompaniment to watching the World Cup

matches. When such advertising is shown at half time in important televised matches, the link between sport and alcohol is reinforced. At the age of 14 - 15 (and much younger), most young boys keen on the sport will be watching, whether after the 9pm watershed or not! Thus a serious attempt to weaken the link between sport and alcohol through media regulation would have to ban all alcohol advertising linked to sport, as well as sponsorship.

If this measure were taken, the current cultural associations would not be reinforced with all the corporate muscle of the big brand alcohol marketers. These would, however, be entitled to protest that their rights to advertise to “responsible drinkers” were being denied. Also, numerous sporting entities, from huge clubs such as Liverpool FC to road races sponsored by a local brewery, would be aggrieved at the loss of a generous source of funding. However, sports sponsored by alcohol companies have not developed a strong and exclusive association with alcohol in the way that snooker, for instance, was associated with tobacco, and therefore should have much less difficulty in finding alternative sponsors. Yet, young men would still be influenced by the societal norms toward drinking alcohol in a sporting context, as discussed in Chapter 2, whether as a spectator (Eastman and Land, 1997) or participant (Reilly, 1996; Collins and Vamplew, 2002). Even if such norms are not represented in their own family, they are likely to observe them in the actions of friends’ families, of neighbours, in television reports, and the pronouncements of some sporting figures. The findings of the survey show that, while it was evident from the focus groups (Chapter 6) that boys know and believe the undesirable consequences of alcohol use which they are taught in school, many of them, particularly those involved in sport, appear not to be influenced by these

consequences when it comes to their own behaviour. What they see around them gives the impression that many adults do not take the consequences of alcohol use seriously. Thus, if the government wished to reduce youth alcohol consumption, their problem would be one of changing attitudes in society, not just focusing on youth.

The economic and social arguments for such a change are strong. If our society could reach a stage where drunkenness was totally unacceptable and binge drinking was considered anti-social and undesirable, where the norm was to drink alcohol, if at all, in a slow and controlled manner, where it was commonplace to drink alcohol-free or low alcohol beers on a night out or while watching football ... then massive savings would be made in the emergency services, from hospital and police costs of attending to violent incidents and accidents attributable to excess alcohol, and in subsequent costs of prosecutions. Alcohol is estimated to cost the NHS alone up to £1.7bn annually, while total costs including those of alcohol-fuelled crime, lost productivity due to absence from work, and human suffering are estimated at £20bn (Dobson, 2003). There would be a decrease in the number of relationship breakdowns, unplanned pregnancies, rapes, and inappropriate relationships entered into under the influence of drink. People now frightened to enter certain city centres at night, due to the number of drunks around, would no longer be afraid. With all these possible benefits, the libertarian views of Marsh (2001) seem to favour the individual too much at the expense of society. If there were a real will to change the culture, it would be possible to envisage an alternative role for alcohol companies in sport sponsorship, thus mitigating to some extent the anticipated grievances if sponsorship were more heavily regulated. For instance, since smoking has come to be seen as an undesirable habit, the aid to quitting smoking, Niquitin, has taken

sponsorship of the McLaren team in Formula 1. The chairmen of the Scottish football teams Glasgow Celtic and Glasgow Rangers, both sponsored by Carling, have also joined forces to promote a moderate drinking message. Regulation would still be necessary as, left to themselves, alcohol companies have no incentive to change the status quo. The next section presents some ideas of how, given the political will, such cultural change might be promoted, and the role that sponsorship could play.

### **10.3 Recommendations based on this study**

If a UK Government decided that the problems caused by alcohol in our society, especially among young people, warranted an effort being made to promote cultural change, they would need to address this in several ways: economic, regulatory, promotional and advisory. Some measures are now recommended that could be used to promote a healthier relationship between alcohol and sport, while giving some consideration to the concerns of alcohol companies about loss of revenue.

First, considering the economic viewpoint, taxes on alcohol could be raised substantially. Studies in various countries have shown a correlation between higher alcohol prices and decreased consumption (e.g. Smith and Mitry, 2006 (Scandinavia); Williams, Chaloupka and Wechsler, 2005 (USA)), while Matthews, Shepherd and Sivarajasingham (2006) found a negative correlation between beer prices and violence-related injuries in England and Wales. While a price increase might annoy responsible drinkers, it is to be hoped that they would consider the sacrifice worth making in order to improve society. The effect would of course hit those hardest who bought most alcohol, and would make it that much harder for young people to afford to drink regularly. Tax

on no-alcohol and very low-alcohol variants, however, could be reduced to minimal levels in order to give drinkers a financial as well as health advantage to switching. Alcohol manufacturers would thus have an incentive to develop and promote these brands, in order to compensate for the inevitable drop in revenue from alcohol brands.

Turning to regulatory measures, sponsorship and advertising by alcohol brands could be more strictly regulated. Alcohol brands would not be allowed to sponsor sporting teams, events, individuals or broadcasts, but companies could still sponsor sport through their no alcohol brands. This would send the message that alcohol and sport did not mix, and would promote a strong image for non-alcohol brands through their sporting associations. Television advertising of purely alcohol brands would not be allowed at all during sporting programmes. Corporate advertising for an alcohol company would only be permitted if their advertising gave equal prominence to their non alcohol brands. This would send the message that these were as acceptable as alcohol as a choice of drink, while still enabling a company to promote alcohol brands.

All alcohol advertising would carry a warning of the dangers of excess consumption. This would also be mandatory on packaging – i.e. wine and spirit labels, beer cans, etc.

In the legal system, drunkenness would not be accepted as an excuse for criminal behaviour, i.e. a drunk driver who kills a pedestrian would automatically be on trial for manslaughter, a person who commits a violent crime under the influence of drink would face exactly the same charges as if they had offended while sober. Existing laws against drunkenness would be strictly enforced.

Public service advertising currently runs hard-hitting advertisements on the risks of drink-driving. These could be extended to advertising warning against the other possible consequences of excess alcohol – e.g. risky sex, alcohol-related violence. Such advertising would be shown in prime time, during sport programming and during programmes aimed at young teens. In addition, public service advertisements could be aired during adult viewing time, aimed at parents and other adults– urging them to look at their own alcohol-related behaviour and ask if it was setting the right example to their children and to young people who might look to them as role models. In this way, young people could be made more aware of the possible dangers of alcohol, and less vulnerable to influence from positive images and associations; as discussed in Chapter 4, reducing vulnerability of young people can be considered a desirable social goal.

Economic incentives and regulatory changes would thus motivate alcohol companies to promote their no alcohol and low alcohol brands. If these were the brands involved in sport sponsorship, suitable high profile sportsmen and women could be recruited as spokespersons and endorsers of the brand. They would not necessarily have to be teetotal, but responsible drinkers whose lifestyle demonstrated that alcohol and sport did not mix. Some suitable candidates would be Kenyan distance runners, who have a high profile from events such as the London marathon, footballers who are known to have beaten a drink problem, or well-known football or rugby players who do not conform to the heavy drinking stereotype, such as the teetotal Jason Robinson (Aldred, 2004) or Jonny Wilkinson, who drinks alcohol very rarely (Crampton, 2004). In order to gain credibility with a young male audience, it would be essential to include some sportsmen such as these who were perceived to be macho.



Commentators and programme-makers in the written and spoken media could be invited to be involved in formulating alcohol-related media policies. If these were seen in the context of an integrated drive to reduce youth drinking, loosen the sport-alcohol ties, and reduce alcohol-fuelled crime, it is to be hoped that they would be willing to be involved. There are many occasions where sport commentary, deeply rooted in the sport-alcohol culture, serves unwittingly to reinforce the norms – e.g. the assumption that a victorious team will go out and get drunk, or that a disappointment will lead to an individual “drowning his sorrows”. Raising awareness of this could help to reduce such instances.

Aspects of this strategy utilise some of the benefits of sponsorship and integrated marketing communications discussed in Chapter 3. The association of a low alcohol or no alcohol brand with a high profile sportsperson, team or event will impact upon the image of the brand and indirectly on the image of low alcohol /no alcohol brands as a whole, increasing their acceptability and also increasing awareness of these brands. It is important, however, that such a strategy is implemented wholesale rather than piecemeal, as a diluted, ambiguous or fragmented message would not be strong enough to promote the substantial cultural change required. The recruitment of high profile individuals in the sporting field, whom young people admire and respect, will be a key plank of the strategy.

#### 10.4 The wider picture

This study has focused solely on the associations of alcohol with sport. There are of course many other ways in which alcohol-related messages are transmitted to young people, and two very recent studies (released in September 2006, after analysis of this study's findings) had a wider brief and make significant recommendations. These are the UK report from the government body Advisory Council on the Misuse of Drugs (ACMD), which assessed use of tobacco, alcohol and other drugs by young people in the UK, and the Europe-wide study "Alcohol in Europe: a public health perspective" (Anderson and Baumberg, 2005). The former highlights that "*of all drugs, the use of alcohol has shown the greatest recent growth and causes the most widespread problems among young people in the UK today. It is also the least regulated and the most heavily marketed.*" (p6). The report confirms the findings of this research in terms of the proportions of young people drinking, the ease of availability of drink, and the general ineffectiveness of schools' alcohol education programmes in influencing teenage drinking behaviour. It casts doubt on the effectiveness of the Government's current alcohol policies in reducing alcohol use, and makes a total of 24 recommendations, including increased taxation on alcohol, much more stringent regulation of alcohol advertising and sponsorship, stricter enforcement of alcohol purchasing laws, and increased use of the media to convey warning methods about the real risks of alcohol use.

Anderson and Baumberg (2005) have taken a more in depth look at the advertising and promotional methods used by the alcohol industry, and also the informal ways in which alcohol-related norms are conveyed to young people. They note that the portrayal of alcohol on television is overwhelmingly positive, with frequent references to

alcohol and frequent consumption (often by characters who could be considered attractive or successful), but extremely few indications of risks or possible negative consequences of alcohol consumption. They also cite the large numbers of alcohol references in popular music, music videos and films – again, depicting a predominantly positive view of alcohol use. They perceive self-regulation of advertising and promotion by the alcohol industry to have a poor track record of effectiveness, and conclude that any such arrangements need to be monitored by an independent body. A further recommendation is that a pan-European policy should be developed on alcohol marketing, with the ultimate aim being “*no advertising on TV and cinema, no sponsorship, and limitation of messages and images only referring to the quality of the product*” (p416). Unsurprisingly, this has triggered an angry riposte from the European Sponsorship Association (ESA, 2006). The association refutes any links between sponsorship and alcohol misuse, cites the impact that a sponsorship ban would have on sport and other activities, and states its belief that alcohol companies are already acting responsibly. The response, however, makes no mention whatsoever of young people.

In this debate, it is clear that there is a plethora of conflicting interests. Those who approach the issues from a medical or social welfare viewpoint advocate increased regulation, while alcohol manufacturers oppose this due to concerns that they will see profits fall if each successive generation of young people is not socialised into alcohol use. The government is reluctant to impose regulation or increase excise duty on alcohol, for fear of antagonising the alcohol industry or the general public respectively. Sporting bodies which accept alcohol sponsorship are understandably reluctant to support any measure which would mean loss of substantial sponsorship income. The media say that

their programmes reflect life and society, and do not see it as their role to promote cultural change in this way – although the number of programmes now on television about eating more healthily, helping adults and children to lose weight, making communities fitter, and so on, would suggest that they are happy to promote change in some areas.

Perhaps the first recommendation made by the ACMD report (2006) should be seriously considered:

*“As their actions are similar and their harmfulness to individuals and society is no less than that of other psychoactive drugs, tobacco and alcohol should be explicitly included within the terms of reference of the Advisory Council on the Misuse of Drugs”.*

If alcohol is as harmful as other drugs, then those who support continued sponsorship of sport (and other activities) by alcohol companies should logically be unconcerned if a brand of amphetamines or a dealer in cannabis decided to sponsor a team or event. Such a proposal would surely provoke a public outcry! Yet because alcohol use is so deeply embedded in our culture, in the personal cultures of policymakers and educators as well as those of the general public, there appears to be a perception that alcohol is somehow “different” to other mind-altering drugs. There are social issues here as well, a perceived divide between “us” (the “good citizens” who use alcohol sensibly and responsibly) and “them” (the alcoholics, the lager louts, the drunken yobs who form part of a regrettable underclass). But it is only necessary to consider a few recent cases such as that of Charles Kennedy, the Liberal Democrat leader who resigned recently following alcohol problems, or the numerous celebrities who have checked into the Priory Centre, to realize how artificial that line is, and how easy it is to be tipped by life’s circumstances from one

side to the other. If we are concerned about the number of people whose lives are negatively affected by their own or others' use of alcohol, if we want to ensure that as many young people as possible reach their full potential, then we need to stop promoting overwhelmingly positive images of alcohol. The current study shows that in the sporting arena, that means stopping sport sponsorship, but also breaking the cultural links between sport and alcohol.

### **10.5 Limitations of the study and recommendations for further research**

Considering methodological aspects of this study, sampling was generally adequate as the young people surveyed formed a good cross section of society, and numbers were sufficient to provide an adequate distribution of responses for both medium-term and long-term predictions. However, short-term predictions for alcohol use "tonight" are unreliable due to the massively skewed distribution of responses and very small numbers who responded positively. Information on the sports in which young people were involved was not collected, due to the great variety and multiplicity of responses that would have been expected. However, such information could be useful in differentiating between sports which do or do not have alcohol sponsors, and in identifying any where involvement leads more strongly to alcohol-related intentions. A difficulty was identified in producing a single measure of attitude from a scale which had in previous studies been found to be consistent; attitudes to alcohol are often ambivalent and thus it may be very difficult to produce such a measure.

Other research could usefully be done to enhance the findings of this study.

There is no reason to suppose that young people in Cardiff are atypical of the UK, but

similar studies carried out in different areas would lend weight to the findings and confirm their generalisability. More focused studies, dealing with young people involved with particular sports, would help to determine which sports were particularly affected by the alcohol culture, and this could usefully inform future strategy. The findings of this study with regard to young women did not throw any light on the “ladette” phenomenon, and so it would be interesting to carry out research among a selected population of young women who had a strong involvement in a sport associated with alcohol, such as rugby or football, to discover if such young women’s alcohol use and intentions conformed to the male pattern.

Longitudinal studies which investigated how closely young people’s long-term drinking intentions as a teenager were mirrored by their actual behaviour at age 18 and later, and how this was related to sporting involvement, would also be very useful in determining the accuracy of long-term predictions in this area. As has been advocated by researchers in social policy areas, such studies could also monitor the relationships between teen drinking and drinking intentions and alcohol-related problems in later life, again considering whether these related in any way to sporting involvement.

Research could also be carried out in other fields of activity where alcohol sponsorship is prevalent. The most obvious one would be the music industry, also highly relevant to young people. The search for more effective ways of influencing young people’s alcohol-related behaviour through educational and interventional strategies should continue. Finally, if a government decides to tackle the problems discussed in this study seriously, along the lines recommended, monitoring of cultural change should take

place through regular surveys of young people's attitudes to alcohol and their relationship with sporting involvement.

#### **10.6 Conclusion: this study's contribution to research and public policy**

This study has fulfilled its objectives. It has added to the number of studies which have enhanced and expanded the Theory of Reasoned Action model, while providing an alternative perspective to sociological studies on young people's drinking, and investigating in depth the links between sport, sponsorship and young people's alcohol consumption intentions. It has also indicated that heavy sponsorship of sport by the alcohol industry does appear to have some generic effects, in that greater awareness and knowledge of sponsorship is a minor predictor of alcohol-related intentions; however, the picture is very complex due to the sport-alcohol links which underpin the sponsorships. Recommendations have been provided as to the sport-, sponsorship- and media-related measures that a government could take toward lessening the influences on young people toward drinking alcohol. The report supports, in one specific context, the findings of the 2006 ACMD report and the recommendations given, and sets out a possible way in which the government could carry out some of these recommendations, without totally cutting off alcohol company sponsorship. Thus it should be of interest to, and indeed required reading for, all those working to lessen the impact of alcohol in the lives of Britain's young people, and any government which shows a serious intent to address this problem.

# **APPENDIX 1**

## **THE SURVEY QUESTIONNAIRE**



## ALCOHOL AND SPORT QUESTIONNAIRE

### INTRODUCTION

This questionnaire is part of a research project investigating links between sport and alcohol. So it asks your opinions on questions related to both these topics. For all questions, please just circle the appropriate answer. For most of the questions, this will be a number on a scale, where the ends of the scale are labelled with two opposing views and the middle of the scale represents the neutral position.

### Firstly, a little about yourself

#### Your gender

Male

Female

#### Your involvement in sport

In a typical week, on how many days do you take part in one or more sports?

0    1    2    3    4    5    6    7

How important is it to you to take part in sport?

Extremely important    1    2    3    4    5    6    7    Not at all important

How important is it to you to perform well in sport?

Extremely important    1    2    3    4    5    6    7    Not at all important

In an average week, on how many days do you watch sport on television?

0    1    2    3    4    5    6    7

How many live sporting events have you attended in the last three months?

None            One            2 – 5            6 – 10            More than 10

Please circle the highest level you have reached in any competitive sport:

Representing Wales (or another country)    Representing county, region or city

Representing a sports club    Representing your school

None of these    I don't do competitive sport

**PART 1 – You and alcohol**

**Section A: What you do**

For each question, please circle the number which best corresponds to how likely it is that you will behave as stated in the question.

	Extremely likely				Extremely unlikely		
I will drink alcohol tonight	1	2	3	4	5	6	7
I will drink alcohol this weekend	1	2	3	4	5	6	7
I will get drunk tonight	1	2	3	4	5	6	7
I will get drunk this weekend	1	2	3	4	5	6	7

When I reach the age of 18, I will drink alcohol ...

very often    quite often    sometimes    occasionally    never

When I reach the age of 18, I will get drunk ...

very often    quite often    sometimes    occasionally    never

**Section B: What you think**

For me, drinking alcohol is:

Bad	1	2	3	4	5	6	7	Good
Wise	1	2	3	4	5	6	7	Foolish
Healthy	1	2	3	4	5	6	7	Unhealthy
Unpleasant	1	2	3	4	5	6	7	Pleasant

For me, getting drunk is:

Bad	1	2	3	4	5	6	7	Good
Wise	1	2	3	4	5	6	7	Foolish
Healthy	1	2	3	4	5	6	7	Unhealthy
Unpleasant	1	2	3	4	5	6	7	Pleasant

Section C: What you believe

	Strongly agree				Strongly disagree			
Drinking alcohol will make me feel good	1	2	3	4	5	6	7	
Drinking alcohol will improve my image	1	2	3	4	5	6	7	
Drinking alcohol will lead to my losing control of my behaviour	1	2	3	4	5	6	7	
Drinking alcohol will lead to trouble with others	1	2	3	4	5	6	7	
Drinking alcohol will have serious consequences for my health	1	2	3	4	5	6	7	
Getting drunk will make me feel good	1	2	3	4	5	6	7	
Getting drunk will improve my image	1	2	3	4	5	6	7	
Getting drunk will lead to my losing control of my behaviour	1	2	3	4	5	6	7	
Getting drunk will lead to trouble with others	1	2	3	4	5	6	7	
Getting drunk will have serious consequences for my health	1	2	3	4	5	6	7	

Section D: What's important to you

	Very important				Very unimportant			
For me, feeling good is ...	1	2	3	4	5	6	7	
For me, my image is ...	1	2	3	4	5	6	7	
For me, being in control of my behaviour is...	1	2	3	4	5	6	7	
For me, keeping out of trouble with others is...	1	2	3	4	5	6	7	
For me, my health is ...	1	2	3	4	5	6	7	

**Section E: What other people think**

These questions ask about other people's opinions.

Firstly, please answer about your parent(s) or guardian(s).

	Definitely agree				Definitely disagree		
My parent(s) or guardian(s) would approve of my drinking alcohol tonight	1	2	3	4	5	6	7
My parent(s) or guardian(s) would approve of my drinking alcohol this weekend	1	2	3	4	5	6	7
My parent(s) or guardian(s) would approve of my drinking alcohol when I reach the age of 18	1	2	3	4	5	6	7
My parent(s) or guardian(s) would approve of my getting drunk tonight	1	2	3	4	5	6	7
My parent(s) or guardian(s) would approve of my getting drunk this weekend	1	2	3	4	5	6	7
My parent(s) or guardian(s) would approve of my getting drunk when I reach the age of 18	1	2	3	4	5	6	7

Now the same questions for your friends.

	Definitely agree				Definitely disagree		
My friends would approve of my drinking alcohol tonight	1	2	3	4	5	6	7
My friends would approve of my drinking alcohol this weekend	1	2	3	4	5	6	7
My friends would approve of my drinking alcohol when I reach the age of 18	1	2	3	4	5	6	7
My friends would approve of my getting drunk tonight	1	2	3	4	5	6	7
My friends would approve of my getting drunk this weekend	1	2	3	4	5	6	7
My friends would approve of my getting drunk when I reach the age of 18	1	2	3	4	5	6	7

Now please answer regarding your teachers.

	Definitely agree				Definitely disagree		
My teachers would approve of my drinking alcohol tonight	1	2	3	4	5	6	7
My teachers would approve of my drinking alcohol this weekend	1	2	3	4	5	6	7
My teachers would approve of my drinking alcohol when I reach the age of 18	1	2	3	4	5	6	7
My teachers would approve of my getting drunk tonight	1	2	3	4	5	6	7
My teachers would approve of my getting drunk this weekend	1	2	3	4	5	6	7
My teachers would approve of my getting drunk when I reach the age of 18	1	2	3	4	5	6	7

Finally, if you have a sports coach, please answer the next set of questions – otherwise please skip to Section F.

<i>Answer only if you have a sports coach or coaches</i>	Definitely agree				Definitely disagree		
My sports coach(es) would approve of my drinking alcohol tonight	1	2	3	4	5	6	7
My sports coach(es) would approve of my drinking alcohol this weekend	1	2	3	4	5	6	7
My sports coach(es) would approve of my drinking alcohol when I reach the age of 18	1	2	3	4	5	6	7
My sports coach(es) would approve of my getting drunk tonight	1	2	3	4	5	6	7
My sports coach(es) would approve of my getting drunk this weekend	1	2	3	4	5	6	7
My sports coach(es) would approve of my getting drunk when I reach the age of 18	1	2	3	4	5	6	7

Section F

	Definitely agree				Definitely disagree		
When it comes to drinking alcohol, I want to do what my parent(s) or guardian(s) think I should do	1	2	3	4	5	6	7
When it comes to drinking alcohol, I want to do what my friends think I should do	1	2	3	4	5	6	7
When it comes to drinking alcohol, I want to do what my teachers think I should do	1	2	3	4	5	6	7
When it comes to drinking alcohol, I want to do what my sports coach(es) think I should do ( <i>Answer only if you have a sports coach</i> )	1	2	3	4	5	6	7

**PART 2 Sport sponsorship**

1 Your attitudes

Sponsorship is a good thing for sport.

Definitely agree 1 2 3 4 5 6 7 Definitely disagree

When I attend a live sporting event, I usually notice who the sponsors are.

Definitely agree 1 2 3 4 5 6 7 Definitely disagree

When I watch a sporting event on television, I usually notice who the sponsors are.

Definitely agree 1 2 3 4 5 6 7 Definitely disagree

Sponsorship influences people to buy brands or products they would not otherwise buy.

Definitely agree 1 2 3 4 5 6 7 Definitely disagree

It is OK for alcohol companies to sponsor sport.

Definitely agree 1 2 3 4 5 6 7 Definitely disagree

If a brand sponsors a team I support, I will always buy it over other competing brands.

Definitely agree 1 2 3 4 5 6 7 Definitely disagree

## 2 Your knowledge

I feel quite knowledgeable about sport sponsorship.

Definitely agree 1 2 3 4 5 6 7 Definitely disagree

I know who sponsors the sports teams that I support.

Definitely agree 1 2 3 4 5 6 7 Definitely disagree

I know who sponsors my favourite sports personalities.

Definitely agree 1 2 3 4 5 6 7 Definitely disagree

I know the sponsors of most of the major teams and personalities in the sports I am interested in.

Definitely agree 1 2 3 4 5 6 7 Definitely disagree

I know who sponsors most of the sporting events I like to watch.

Definitely agree 1 2 3 4 5 6 7 Definitely disagree

The shirt sponsor of Cardiff Football Club is: *(please circle your answer)*

Brains          Redrow Homes          Arriva Trains          Rockport          Don't know

The shirt sponsor of Liverpool Football Club is:

Carling          Guinness          Carlsberg          Grolsch          Don't know

The shirt sponsor of Chelsea Football Club in the 2004/2005 season was:

Vodafone          Dreamcast          Carlsberg          Emirates          Don't know

The football Premiership is sponsored by:

Carling          Coca Cola          Barclays          AXA          Don't know

The Rugby Union Six Nations tournament is sponsored by:

Lloyds TSB          Royal Bank of Scotland          Barclays          Nat West          Don't know

The shirt sponsor of the Welsh rugby union team is:

Rockport      Principality      Red Dragon Radio      Brains      Don't know

The Rally of Great Britain is sponsored by:

Ford      Network Q      RAC      AA      Don't know

The Grand National is sponsored by:

John Smiths      Boddingtons      Johnnie Walker      Smirnoff      Don't know

The London Marathon is sponsored by:

Mars      Nike      Flora      Guinness      Don't know

The Olympic Games in Athens 2004 had many sponsors. Which of these companies were involved in Olympic sponsorship? (circle your answers – you may select as many as you wish)

McDonalds      Carlsberg      Sony      Tag Heuer

American Express      Kodak      Pepsi      Heineken

Visa      Samsung      Carling      Panasonic

Burger King      Seiko      Coca Cola      Smirnoff

**Many thanks for your help in completing this survey! Please check quickly that you have completed all the questions that apply to you, and then hand it in.**



## **APPENDIX 2**

### **LETTER TO PARENTS**

(date) 2005

Dear Parent or Guardian

I am a lecturer at Cardiff Business School, where I am carrying out research into the effects of sport sponsorship. (*Name of school*), among others, has agreed to help in my current study, which is looking at sport sponsorship by alcohol companies and investigating how young people's knowledge of such sponsorship, and their involvement in sport, affect their attitudes to alcohol.

My study involves a short self-completion questionnaire on alcohol, sponsorship and sport being completed by Year 10 pupils. This will be taking place on (*date*) 2005. All questionnaires will be anonymous, will be given directly to me following completion, and will not be read by any school staff. When my research is published, the schools taking part will be identified only as "Cardiff schools", not by individual name.

I hope that you will be happy for your child to take part in this study. If you have any questions about it, please contact me on (*telephone numbers*), or e-mail [daviesfm@cf.ac.uk](mailto:daviesfm@cf.ac.uk). However, if for any reason you do NOT wish your child to take part, please return the tear-off slip to the school on or before the date of the study.

Yours sincerely

Fiona Davies  
Lecturer in Marketing  
Cardiff Business School

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I do NOT wish my son/daughter (name).....  
to complete the alcohol and sport questionnaire being distributed by Mrs Fiona Davies.

Signed .....

**APPENDIX 3**

**MEANS  
AND  
STANDARD DEVIATIONS  
OF  
QUESTIONNAIRE VARIABLES**

	N	Mean	Std. Deviation
days taking part in sport	294	3.43	1.834
importance of taking part	293	3.26	1.754
importance of performing well	290	3.17	1.856
days watch sport on TV	294	2.37	2.063
live events attended last 3 months	294	1.07	1.046
highest sporting level	292	.91	.855
likelihood of drinking alcohol tonight	286	5.88	1.670
likelihood of drinking alcohol this weekend	289	4.42	2.332
likelihood of getting drunk tonight	286	6.41	1.398
likelihood of getting drunk this weekend	288	5.24	2.200
intended frequency of drinking at 18	291	2.03	.998
intended frequency of getting drunk at 18	293	1.56	.966
drinking alcohol bad/good	291	3.75	1.680
drinking alcohol wise/foolish	286	4.77	1.487
drinking alcohol healthy/unhealthy	287	5.61	1.700
drinking alcohol unpleasant/pleasant	289	4.60	3.511
getting drunk bad/good	290	3.21	2.005
getting drunk wise/foolish	287	5.24	1.782
getting drunk healthy/unhealthy	287	5.69	1.814
getting drunk unpleasant/pleasant	288	3.72	2.128
drinking alcohol makes feel good	294	3.99	1.768
drinking alcohol improve image	294	5.97	1.288
drinking alcohol lose control	293	3.29	1.889
drinking alcohol lead to trouble	293	3.73	1.966
drinking alcohol consequences for health	292	3.34	1.801

	N	Mean	Std Deviation
getting drunk makes feel good	290	4.33	1.886
getting drunk improve image	292	6.02	1.383
getting drunk lose control	290	2.99	1.986
getting drunk lead to trouble	291	3.21	1.918
getting drunk consequences for health	289	2.97	1.844
importance feel good	293	1.77	1.145
importance image	293	2.94	1.644
importance in control	292	2.34	1.508
importance out of trouble	293	2.49	1.569
importance health	293	1.76	1.181
<b>PARENTS</b>			
approve drink tonight	293	5.41	1.793
approve drink w/end	292	5.01	1.850
approve drink 18	293	2.50	1.713
approve drunk tonight	292	6.26	1.337
approve drunk w/end	290	5.83	1.597
approve drunk 18	292	3.51	2.088
<b>FRIENDS</b>			
approve drink tonight	292	3.33	1.900
approve drink w/end	292	2.86	1.843
approve drink 18	292	2.11	1.597
approve drunk tonight	292	3.73	2.082
approve drunk w/end	290	3.31	2.083
approve drunk 18	291	2.40	1.849
<b>TEACHERS</b>			
approve drink tonight	292	6.08	1.428
approve drink w/end	291	5.88	1.573
approve drink 18	292	3.73	2.256
approve drunk tonight	291	6.22	1.383
approve drunk w/end	291	6.11	1.456
approve drunk 18	291	4.07	2.274
<b>SPORTS COACHES</b>			
approve drink tonight	162	5.93	1.714
approve drink w/end	162	5.62	1.872
approve drink 18	162	4.38	2.292
approve drunk tonight	162	6.06	1.669
approve drunk w/end	162	5.82	1.848
approve drunk 18	162	4.57	2.303
mot to comply parents	293	3.87	1.810
mot to comply friends	293	4.92	1.702
mot to comply teachers	293	5.24	1.750
mot to comply sports coach	163	4.37	2.030

	N	Mean	Std Deviation
sponsorship good thing for sport	292	2.18	1.455
notice sponsors at live event	290	3.05	1.878
notice sponsors on TV	290	2.85	1.752
sponsorship influences purchase	289	3.06	1.767
alcohol sponsorship OK	290	3.46	1.947
choose sponsoring brand	288	4.93	1.751
feel knowledgeable about sponsorship	288	4.14	1.874
know team sponsors	287	3.42	2.267
know personalities sponsors	287	4.11	2.133
know most sponsors in sports of interest	287	3.99	2.120
know event sponsors	287	4.07	2.018
correct sponsor choices	294	7.22	3.773
incorrect sponsor choices	294	3.90	3.058
sponsors not known	294	2.81	3.201

**APPENDIX 4**

**MEANS  
AND  
STANDARD DEVIATIONS  
BY GENDER**

**Means and standard deviations, by gender**

	gender	N	Mean	Std. Dev'n		Levene's Test for Equality of Variances		t-test for Equality of Means		
						F	Sig.	T	df	Sig. (2-tailed)
days taking part in sport**	Male	161	4.02	1.797	Eq. variances assumed	1.077	.300	6.522	292	.000
	Female	133	2.71	1.613	not assumed			6.589	289.968	.000
importance of taking part**	Male	161	2.78	1.665	Eq. variances assumed	.058	.810	-5.379	291	.000
	Female	132	3.84	1.689	not assumed			-5.371	278.261	.000
importance of performing well**	Male	159	2.64	1.697	Eq. variances assumed	1.157	.283	-5.637	288	.000
	Female	131	3.81	1.844	not assumed			-5.592	267.487	.000
days watch sport on TV**	Male	161	3.14	2.216	Eq. variances assumed	52.804	.000	7.739	292	.000
	Female	133	1.44	1.373	not assumed			8.076	272.015	.000
live events attended last 3 months**	Male	161	1.25	1.120	Eq. variances assumed	15.545	.000	3.299	292	.001
	Female	133	.86	.906	not assumed			3.365	291.882	.001
Highest sporting level**	Male	159	1.06	.876	Eq. variances assumed	.083	.774	3.299	290	.001
	Female	133	.74	.797	not assumed			3.327	287.973	.001
sporting involvement (factor score)**	Male	157	.38	.987	Eq. variances assumed	4.813	.029	7.653	285	.000
	Female	130	-.45	.813	not assumed			7.793	284.993	.000
likelihood of drinking alcohol tonight	Male	157	5.83	1.735	Eq. variances assumed	1.212	.272	-.482	284	.630
	Female	129	5.93	1.592	not assumed			-.486	280.533	.627
likelihood of drinking alcohol this weekend	Male	159	4.65	2.225	Eq. variances assumed	3.466	.064	1.906	287	.058
	Female	130	4.13	2.435	not assumed			1.889	264.565	.060
likelihood of getting drunk tonight	Male	157	6.50	1.284	Eq. variances assumed	4.154	.042	1.171	284	.242
	Female	129	6.30	1.524	not assumed			1.152	250.877	.250
likelihood of getting drunk this weekend**	Male	157	5.63	1.939	Eq. variances assumed	23.149	.000	3.361	286	.001
	Female	131	4.77	2.401	not assumed			3.298	248.666	.001
intended frequency of drinking at 18*	Male	159	1.91	1.021	Eq. variances assumed	.071	.790	-2.248	289	.025
	Female	132	2.17	.953	not assumed			-2.262	285.035	.024
intended frequency of getting drunk at 18*	Male	160	1.44	.995	Eq. variances assumed	1.203	.274	-2.271	291	.024
	Female	133	1.70	.913	not assumed			-2.289	288.171	.023

drinking alcohol bad/good**	Male	159	3.51	1.702	Eq. variances assumed	4.059	.045	-2.740	289	.007
	Female	132	4.05	1.610	not assumed			-2.755	284.076	.006
drinking alcohol wise/foolish	Male	158	4.73	1.586	Eq. variances assumed	2.805	.095	-.486	284	.627
	Female	128	4.82	1.360	not assumed			-.494	283.061	.621
drinking alcohol healthy/unhealthy	Male	158	5.56	1.754	Eq. variances assumed	1.019	.314	-.512	285	.609
	Female	129	5.67	1.636	not assumed			-.515	279.940	.607
drinking alcohol unpleasant/pleasant	Male	159	4.76	4.434	Eq. variances assumed	1.027	.312	.888	287	.375
	Female	130	4.39	1.832	not assumed			.954	219.159	.341
getting drunk bad/good*	Male	158	2.95	1.974	Eq. variances assumed	.012	.912	-2.446	288	.015
	Female	132	3.52	2.006	not assumed			-2.442	277.282	.015
getting drunk wise/foolish	Male	159	5.23	1.865	Eq. variances assumed	1.498	.222	-.148	285	.882
	Female	128	5.26	1.680	not assumed			-.150	281.393	.881
getting drunk healthy/unhealthy	Male	158	5.58	1.943	Eq. variances assumed	5.805	.017	-1.215	285	.225
	Female	129	5.84	1.638	not assumed			-1.236	284.690	.218
getting drunk unpleasant/pleasant	Male	159	3.52	2.201	Eq. variances assumed	6.768	.010	-1.748	286	.082
	Female	129	3.96	2.017	not assumed			-1.764	281.757	.079
drinking alcohol makes feel good	Male	161	4.12	1.879	Eq. variances assumed	5.711	.017	1.407	292	.161
	Female	133	3.83	1.617	not assumed			1.427	291.499	.155
drinking alcohol improve image	Male	161	5.88	1.394	Eq. variances assumed	3.523	.062	-1.332	292	.184
	Female	133	6.08	1.142	not assumed			-1.357	291.983	.176
drinking alcohol lose control	Male	161	3.34	2.018	Eq. variances assumed	5.522	.019	.487	291	.627
	Female	132	3.23	1.724	not assumed			.495	290.504	.621
drinking alcohol lead to trouble	Male	160	3.54	2.043	Eq. variances assumed	3.897	.049	-1.817	291	.070
	Female	133	3.95	1.850	not assumed			-1.833	288.854	.068
drinking alcohol consequences for health	Male	161	3.26	1.759	Eq. variances assumed	.423	.516	-.858	290	.392
	Female	131	3.44	1.853	not assumed			-.853	271.806	.394
getting drunk makes feel good	Male	158	4.24	1.917	Eq. variances assumed	.226	.635	-.894	288	.372
	Female	132	4.44	1.850	Eq. variances not assumed			-.897	282.037	.371
getting drunk improve image	Male	160	5.97	1.429	Eq. variances assumed	1.738	.188	-.657	290	.512
	Female	132	6.08	1.329	not assumed			-.662	285.869	.509
getting drunk lose control	Male	159	3.03	2.070	Eq. variances assumed	1.883	.171	.362	288	.718
	Female	131	2.95	1.886	not assumed			.365	285.044	.715



getting drunk lead to trouble	Male	160	3.08	1.916	Eq. variances assumed	.216	.643	-1.297	289	.196
	Female	131	3.37	1.915	not assumed			-1.297	277.861	.196
getting drunk consequences for health	Male	158	2.96	1.851	Eq. variances assumed	.000	.983	-.034	287	.973
	Female	131	2.97	1.844	not assumed			-.034	277.551	.973
importance feel good	Male	160	1.76	1.153	Eq. variances assumed	.236	.627	-.303	291	.762
	Female	133	1.80	1.140	not assumed			-.303	282.442	.762
importance image	Male	160	2.94	1.639	Eq. variances assumed	.001	.981	-.012	291	.990
	Female	133	2.94	1.655	not assumed			-.012	280.333	.990
importance in control	Male	159	2.35	1.603	Eq. variances assumed	1.232	.268	.043	290	.966
	Female	133	2.34	1.392	not assumed			.043	289.581	.966
importance out of trouble	Male	160	2.46	1.594	Eq. variances assumed	.000	.985	-.387	291	.699
	Female	133	2.53	1.545	not assumed			-.388	284.186	.698
importance health	Male	160	1.66	1.138	Eq. variances assumed	2.104	.148	-1.571	291	.117
	Female	133	1.88	1.225	not assumed			-1.561	272.736	.120
PARENTS approve drink tonight	Male	160	5.38	1.798	Eq. variances assumed	.001	.982	-.332	291	.740
	Female	133	5.45	1.794	not assumed			-.332	281.481	.740
approve drink w/end	Male	160	5.01	1.801	Eq. variances assumed	.950	.331	.057	290	.954
	Female	132	5.00	1.914	not assumed			.057	272.507	.955
approve drink 18*	Male	160	2.69	1.788	Eq. variances assumed	3.305	.070	2.047	291	.042
	Female	133	2.28	1.597	not assumed			2.068	289.476	.040
approve drunk tonight	Male	159	6.25	1.283	Eq. variances assumed	.081	.776	-.121	290	.903
	Female	133	6.27	1.404	not assumed			-.120	270.484	.904
approve drunk w/end	Male	158	5.82	1.509	Eq. variances assumed	1.278	.259	-.130	288	.897
	Female	132	5.84	1.702	not assumed			-.128	264.410	.898
approve drunk 18	Male	160	3.66	2.056	Eq. variances assumed	1.073	.301	1.317	290	.189
	Female	132	3.33	2.121	not assumed			1.313	276.114	.190
FRIENDS approve drink tonight	Male	159	3.40	1.883	Eq. variances assumed	.612	.435	.725	290	.469
	Female	133	3.24	1.923	not assumed			.723	278.795	.470
approve drink w/end*	Male	159	3.09	1.848	Eq. variances assumed	.142	.706	2.363	290	.019
	Female	133	2.59	1.805	not assumed			2.368	283.097	.019
approve drink 18*	Male	159	2.31	1.627	Eq. variances assumed	4.209	.041	2.416	290	.016
	Female	133	1.86	1.531	not assumed			2.429	285.963	.016
approve drunk tonight	Male	159	3.79	2.050	Eq. variances assumed	1.764	.185	.565	290	.573
	Female	133	3.65	2.125	not assumed			.563	277.188	.574

approve drunk w/end	Male	158	3.50	2.099	Eq. variances assumed	.178	.673	1.702	288	.090
	Female	132	3.08	2.049	not assumed			1.705	281.085	.089
approve drunk 18*	Male	159	2.61	1.855	Eq. variances assumed	2.099	.148	2.190	289	.029
	Female	132	2.14	1.815	not assumed			2.194	281.327	.029
TEACHERS approve drink tonight*	Male	159	5.91	1.570	Eq. variances assumed	11.376	.001	-2.282	290	.023
	Female	133	6.29	1.210	not assumed			-2.334	288.126	.020
approve drink w/end*	Male	159	5.68	1.722	Eq. variances assumed	15.792	.000	-2.364	289	.019
	Female	132	6.11	1.340	not assumed			-2.418	287.846	.016
approve drink 18	Male	159	3.82	2.235	Eq. variances assumed	.166	.684	.753	290	.452
	Female	133	3.62	2.285	not assumed			.752	278.682	.453
approve drunk tonight**	Male	159	6.04	1.587	Eq. variances assumed	20.991	.000	-2.537	289	.012
	Female	132	6.45	1.051	not assumed			-2.631	276.093	.009
approve drunk w/end**	Male	159	5.89	1.682	Eq. variances assumed	24.185	.000	-2.823	289	.005
	Female	132	6.37	1.073	not assumed			-2.936	272.001	.004
approve drunk 18	Male	159	4.13	2.241	Eq. variances assumed	.757	.385	.441	289	.660
	Female	132	4.01	2.320	not assumed			.439	275.504	.661
SPORTS COACHES approve drink tonight	Male	111	5.82	1.759	Eq. variances assumed	2.525	.114	-1.164	160	.246
	Female	51	6.16	1.605	not assumed			-1.204	105.800	.231
approve drink w/end	Male	111	5.49	1.897	Eq. variances assumed	2.156	.144	-1.315	160	.190
	Female	51	5.90	1.803	not assumed			-1.340	101.818	.183
approve drink 18	Male	111	4.48	2.296	Eq. variances assumed	.058	.810	.826	160	.410
	Female	51	4.16	2.292	not assumed			.826	97.303	.411
approve drunk tonight	Male	111	5.95	1.708	Eq. variances assumed	2.582	.110	-1.133	160	.259
	Female	51	6.27	1.576	not assumed			-1.167	104.664	.246
approve drunk w/end	Male	111	5.66	1.890	Eq. variances assumed	5.838	.017	-1.669	160	.097
	Female	51	6.18	1.717	not assumed			-1.729	106.211	.087
approve drunk 18	Male	111	4.61	2.321	Eq. variances assumed	.095	.759	.313	160	.754
	Female	51	4.49	2.284	not assumed			.315	98.609	.753
mot to comply parents	Male	160	3.88	1.955	Eq. variances assumed	6.411	.012	.049	291	.961
	Female	133	3.86	1.627	not assumed			.049	290.999	.961
mot to comply friends	Male	160	4.79	1.746	Eq. variances assumed	1.741	.188	-1.443	291	.150
	Female	133	5.08	1.641	not assumed			-1.451	286.640	.148
mot to comply teachers*	Male	160	5.06	1.881	Eq. variances assumed	6.531	.011	-2.007	291	.046
	Female	133	5.47	1.555	not assumed			-2.042	290.993	.042
mot to comply sports coach	Male	110	4.21	2.059	Eq. variances assumed	.376	.541	-1.445	161	.150
	Female	53	4.70	1.947	not assumed			-1.474	108.154	.143

sponsorship good thing for sport*	Male	159	2.03	1.447	Eq. variances assumed	1.340	.248	-1.981	290	.049
	Female	133	2.37	1.448	not assumed			-1.981	280.859	.049
notice sponsors at live event**	Male	158	2.72	1.878	Eq. variances assumed	.310	.578	-3.296	288	.001
	Female	132	3.44	1.809	not assumed			-3.308	282.225	.001
notice sponsors on TV**	Male	158	2.42	1.682	Eq. variances assumed	.002	.966	-4.788	288	.000
	Female	132	3.37	1.696	not assumed			-4.785	278.104	.000
sponsorship influences purchase*	Male	157	2.87	1.765	Eq. variances assumed	.127	.722	-2.069	287	.039
	Female	132	3.30	1.746	not assumed			-2.071	279.535	.039
alcohol sponsorship OK**	Male	159	3.11	1.967	Eq. variances assumed	2.166	.142	-3.487	288	.001
	Female	131	3.89	1.841	not assumed			-3.509	283.324	.001
choose sponsoring brand*	Male	157	4.73	1.883	Eq. variances assumed	7.943	.005	-2.146	286	.033
	Female	131	5.17	1.550	not assumed			-2.184	285.952	.030
perceived sponsorship knowledge**	Male	157	3.21	1.597	Eq. variances assumed	1.513	.220	-8.331	284	.000
	Female	129	4.82	1.671	not assumed			-8.294	268.237	.000
correct sponsor choices**	Male	161	8.14	3.688	Eq. variances assumed	.002	.969	4.758	292	.000
	Female	133	6.11	3.584	not assumed			4.771	284.396	.000
incorrect sponsor choices	Male	161	4.02	3.216	Eq. variances assumed	.712	.400	.723	292	.470
	Female	133	3.76	2.861	not assumed			.731	290.380	.465
sponsors not known**	Male	161	2.03	2.796	Eq. variances assumed	16.913	.000	-4.755	292	.000
	Female	133	3.75	3.410	not assumed			-4.667	254.565	.000

\*\*difference significant at 1% level

\*difference significant at 5% level

**APPENDIX 5**  
**BETWEEN SCHOOLS ANALYSIS**

### Means and standard deviations, by schools

		N	Mean	Std. Deviation
days taking part in sport	Private	35	2.77	1.646
	Church	56	3.55	1.694
	Welsh medium	58	3.93	2.126
	Local authority, lower SE	82	3.27	1.792
	Local authority, higher SE	63	3.41	1.729
	Total	294	3.43	1.834
importance of taking part	Private	35	3.03	1.562
	Church	56	3.34	1.832
	Welsh medium	58	3.02	1.915
	Local authority, lower SE	81	3.41	1.672
	Local authority, higher SE	63	3.35	1.752
	Total	293	3.26	1.754
importance of performing well	Private	34	2.65	1.649
	Church	56	3.00	1.716
	Welsh medium	58	3.34	2.040
	Local authority, lower SE	80	3.19	1.808
	Local authority, higher SE	62	3.40	1.954
	Total	290	3.17	1.856
days watch sport on TV	Private	35	1.71	2.094
	Church	56	2.71	2.042
	Welsh medium	58	3.26	2.489
	Local authority, lower SE	82	2.23	1.650
	Local authority, higher SE	63	1.79	1.815
	Total	294	2.37	2.063
live events attended last 3 months	Private	35	1.26	1.221
	Church	56	.96	.990
	Welsh medium	58	1.09	1.031
	Local authority, lower SE	82	1.20	1.105
	Local authority, higher SE	63	.90	.911
	Total	294	1.07	1.046
highest sporting level	Private	35	.89	.900
	Church	55	.91	.845
	Welsh medium	58	1.05	.867
	Local authority, lower SE	81	.84	.829
	Local authority, higher SE	63	.90	.875
	Total	292	.91	.855
Sporting involvement (factor score)	Private	34	-.0273513	.96113427
	Church	55	.0381222	.89940431
	Welsh medium	58	.2112591	1.20207202
	Local authority, lower SE	78	-.0713207	.88685289
	Local authority, higher SE	62	-.1267225	1.03085221
	Total	287	.0000000	1.00000000

likelihood of drinking alcohol tonight	Private	33	6.21	1.576
	Church	54	6.06	1.774
	Welsh medium	57	5.47	1.784
	Local authority, lower SE	79	5.80	1.588
	Local authority, higher SE	63	6.02	1.591
	Total	286	5.88	1.670
likelihood of drinking alcohol this weekend	Private	34	5.24	2.297
	Church	56	5.18	2.225
	Welsh medium	57	3.54	2.330
	Local authority, lower SE	79	4.30	2.382
	Local authority, higher SE	63	4.24	2.092
	Total	289	4.42	2.332
likelihood of getting drunk tonight	Private	33	6.73	.719
	Church	54	6.43	1.326
	Welsh medium	57	6.25	1.550
	Local authority, lower SE	79	6.22	1.677
	Local authority, higher SE	63	6.62	1.156
	Total	286	6.41	1.398
likelihood of getting drunk this weekend	Private	33	6.15	1.752
	Church	54	5.93	1.747
	Welsh medium	58	4.60	2.286
	Local authority, lower SE	80	4.93	2.407
	Local authority, higher SE	63	5.16	2.157
	Total	288	5.24	2.200
intended frequency of drinking at 18	Private	35	1.57	1.037
	Church	54	1.61	.940
	Welsh medium	58	2.47	.863
	Local authority, lower SE	82	2.18	.995
	Local authority, higher SE	62	2.05	.931
	Total	291	2.03	.998
intended frequency of getting drunk at 18	Private	34	1.09	.965
	Church	56	1.36	.862
	Welsh medium	58	1.83	.994
	Local authority, lower SE	82	1.72	.972
	Local authority, higher SE	63	1.54	.913
	Total	293	1.56	.966
drinking alcohol bad/good	Private	35	2.91	1.541
	Church	56	3.55	1.897
	Welsh medium	57	4.02	1.329
	Local authority, lower SE	81	4.14	1.759
	Local authority, higher SE	62	3.66	1.568
	Total	291	3.75	1.680
drinking alcohol wise/foolish	Private	34	5.47	1.542
	Church	55	5.11	1.474
	Welsh medium	56	4.48	1.250
	Local authority, lower SE	79	4.41	1.401
	Local authority, higher SE	62	4.82	1.605
	Total	286	4.77	1.487

drinking alcohol healthy/unhealthy	Private	34	5.94	1.650
	Church	55	6.11	1.315
	Welsh medium	57	5.16	1.709
	Local authority, lower SE	79	5.46	1.866
	Local authority, higher SE	62	5.60	1.703
	Total	287	5.61	1.700
drinking alcohol unpleasant/pleasant	Private	34	3.56	2.092
	Church	55	3.91	1.937
	Welsh medium	57	5.26	1.275
	Local authority, lower SE	80	4.39	1.919
	Local authority, higher SE	63	5.41	6.584
	Total	289	4.60	3.511
getting drunk bad/good	Private	34	2.09	1.782
	Church	56	2.95	1.911
	Welsh medium	57	3.53	1.764
	Local authority, lower SE	81	3.75	2.010
	Local authority, higher SE	62	3.06	2.149
	Total	290	3.21	2.005
getting drunk wise/foolish	Private	34	6.41	1.258
	Church	54	5.43	1.609
	Welsh medium	57	4.63	1.779
	Local authority, lower SE	80	4.76	1.802
	Local authority, higher SE	62	5.61	1.759
	Total	287	5.24	1.782
getting drunk healthy/unhealthy	Private	34	6.38	1.477
	Church	54	6.11	1.436
	Welsh medium	57	5.07	2.129
	Local authority, lower SE	79	5.48	1.866
	Local authority, higher SE	63	5.79	1.715
	Total	287	5.69	1.814
getting drunk unpleasant/pleasant	Private	35	2.49	2.147
	Church	55	3.36	2.049
	Welsh medium	57	4.53	1.983
	Local authority, lower SE	79	3.92	1.973
	Local authority, higher SE	62	3.73	2.189
	Total	288	3.72	2.128
drinking alcohol makes feel good	Private	35	5.03	1.774
	Church	56	3.96	1.887
	Welsh medium	58	3.48	1.442
	Local authority, lower SE	82	4.05	1.805
	Local authority, higher SE	63	3.81	1.683
	Total	294	3.99	1.768
drinking alcohol improve image	Private	35	6.00	1.328
	Church	56	6.11	1.090
	Welsh medium	58	5.48	1.625
	Local authority, lower SE	82	6.20	1.012
	Local authority, higher SE	63	6.00	1.320
	Total	294	5.97	1.288

drinking alcohol lose control	Private	35	3.09	1.915
	Church	56	3.29	2.060
	Welsh medium	58	3.60	1.844
	Local authority, lower SE	82	3.20	1.739
	Local authority, higher SE	62	3.23	1.970
	Total	293	3.29	1.889
drinking alcohol lead to trouble	Private	34	3.09	2.050
	Church	56	3.66	2.065
	Welsh medium	58	3.81	1.821
	Local authority, lower SE	82	4.12	1.901
	Local authority, higher SE	63	3.54	1.982
	Total	293	3.73	1.966
drinking alcohol consequences for health	Private	35	3.20	1.982
	Church	56	3.13	1.936
	Welsh medium	58	3.72	1.519
	Local authority, lower SE	81	3.41	1.869
	Local authority, higher SE	62	3.18	1.713
	Total	292	3.34	1.801
getting drunk makes feel good	Private	35	5.29	1.872
	Church	55	4.36	1.809
	Welsh medium	56	3.66	1.643
	Local authority, lower SE	81	4.35	1.898
	Local authority, higher SE	63	4.35	1.961
	Total	290	4.33	1.886
getting drunk improve image	Private	35	6.46	1.146
	Church	55	6.35	.927
	Welsh medium	58	5.81	1.527
	Local authority, lower SE	81	5.74	1.618
	Local authority, higher SE	63	6.03	1.282
	Total	292	6.02	1.383
getting drunk lose control	Private	35	2.17	1.543
	Church	54	2.67	1.962
	Welsh medium	58	3.02	1.924
	Local authority, lower SE	81	3.52	2.019
	Local authority, higher SE	62	3.03	2.088
	Total	290	2.99	1.986
getting drunk lead to trouble	Private	35	2.14	1.593
	Church	55	3.13	1.935
	Welsh medium	58	3.29	1.737
	Local authority, lower SE	81	3.63	1.952
	Local authority, higher SE	62	3.27	2.010
	Total	291	3.21	1.918
getting drunk consequences for health	Private	35	2.26	1.669
	Church	53	3.06	1.965
	Welsh medium	58	3.03	1.675
	Local authority, lower SE	81	3.37	1.952
	Local authority, higher SE	62	2.69	1.733
	Total	289	2.97	1.844



importance feel good	Private	35	1.97	1.317
	Church	55	1.69	1.230
	Welsh medium	58	1.48	.995
	Local authority, lower SE	82	1.90	1.118
	Local authority, higher SE	63	1.84	1.110
	Total	293	1.77	1.145
importance image	Private	35	2.54	1.442
	Church	55	2.76	1.610
	Welsh medium	58	3.24	1.593
	Local authority, lower SE	82	2.99	1.760
	Local authority, higher SE	63	2.97	1.656
	Total	293	2.94	1.644
importance in control	Private	34	2.26	1.797
	Church	55	2.24	1.688
	Welsh medium	58	2.40	1.567
	Local authority, lower SE	82	2.40	1.313
	Local authority, higher SE	63	2.35	1.393
	Total	292	2.34	1.508
importance out of trouble	Private	35	2.60	1.866
	Church	55	2.36	1.614
	Welsh medium	58	2.33	1.407
	Local authority, lower SE	82	2.71	1.519
	Local authority, higher SE	63	2.43	1.573
	Total	293	2.49	1.569
importance health	Private	35	1.86	1.537
	Church	55	1.56	.996
	Welsh medium	58	1.66	1.278
	Local authority, lower SE	82	1.93	1.052
	Local authority, higher SE	63	1.76	1.174
	Total	293	1.76	1.181
PARENTS approve drink tonight	Private	35	5.54	1.721
	Church	55	5.73	1.737
	Welsh medium	58	5.03	1.955
	Local authority, lower SE	82	5.33	1.833
	Local authority, higher SE	63	5.52	1.654
	Total	293	5.41	1.793
approve drink w/end	Private	35	5.51	1.738
	Church	54	5.44	1.777
	Welsh medium	58	4.43	1.975
	Local authority, lower SE	82	4.93	1.878
	Local authority, higher SE	63	4.98	1.699
	Total	292	5.01	1.850
approve drink 18	Private	35	3.11	2.166
	Church	55	2.33	1.634
	Welsh medium	58	2.10	1.294
	Local authority, lower SE	82	2.48	1.751
	Local authority, higher SE	63	2.71	1.717
	Total	293	2.50	1.713

approve drunk tonight	Private	35	6.89	.530
	Church	55	6.29	1.181
	Welsh medium	58	6.16	1.554
	Local authority, lower SE	81	5.95	1.540
	Local authority, higher SE	63	6.38	1.170
	Total	292	6.26	1.337
approve drunk w/end	Private	34	6.50	1.261
	Church	54	6.31	1.061
	Welsh medium	58	5.64	1.662
	Local authority, lower SE	82	5.41	1.770
	Local authority, higher SE	62	5.76	1.666
	Total	290	5.83	1.597
approve drunk 18	Private	35	4.94	2.195
	Church	54	3.04	1.952
	Welsh medium	58	3.43	1.557
	Local authority, lower SE	82	3.04	2.134
	Local authority, higher SE	63	3.81	2.154
	Total	292	3.51	2.088
FRIENDS approve drink tonight	Private	35	4.26	1.961
	Church	55	3.35	2.020
	Welsh medium	58	3.00	1.707
	Local authority, lower SE	81	2.75	1.750
	Local authority, higher SE	63	3.84	1.833
	Total	292	3.33	1.900
approve drink w/end	Private	35	3.74	2.005
	Church	55	3.11	1.941
	Welsh medium	58	2.33	1.538
	Local authority, lower SE	81	2.52	1.747
	Local authority, higher SE	63	3.10	1.838
	Total	292	2.86	1.843
approve drink 18	Private	35	2.17	1.723
	Church	55	2.36	1.757
	Welsh medium	58	1.74	1.332
	Local authority, lower SE	81	2.06	1.495
	Local authority, higher SE	63	2.25	1.713
	Total	292	2.11	1.597
approve drunk tonight	Private	35	4.80	2.041
	Church	55	3.75	2.162
	Welsh medium	58	3.50	1.922
	Local authority, lower SE	81	3.06	2.002
	Local authority, higher SE	63	4.19	1.983
	Total	292	3.73	2.082
approve drunk w/end	Private	35	4.37	2.250
	Church	53	3.57	2.162
	Welsh medium	58	2.64	1.744
	Local authority, lower SE	81	2.84	2.015
	Local authority, higher SE	63	3.73	1.977
	Total	290	3.31	2.083

approve drunk 18	Private	35	3.11	2.246
	Church	54	2.56	1.910
	Welsh medium	58	1.84	1.309
	Local authority, lower SE	81	2.26	1.738
	Local authority, higher SE	63	2.54	1.999
	Total	291	2.40	1.849
	<b>TEACHERS</b>			
approve drink tonight	Private	35	6.37	1.165
	Church	55	6.29	1.100
	Welsh medium	58	5.74	1.585
	Local authority, lower SE	81	6.07	1.515
	Local authority, higher SE	63	6.05	1.518
	Total	292	6.08	1.428
	approve drink w/end	Private	35	6.14
Church		55	6.25	1.158
Welsh medium		58	5.41	1.797
Local authority, lower SE		81	5.90	1.570
Local authority, higher SE		62	5.79	1.681
Total		291	5.88	1.573
approve drunk 18		Private	35	3.86
	Church	55	3.96	2.560
	Welsh medium	58	3.40	2.051
	Local authority, lower SE	81	3.54	2.259
	Local authority, higher SE	63	4.02	2.254
	Total	292	3.73	2.256
	approve drunk tonight	Private	35	6.57
Church		54	6.30	1.075
Welsh medium		58	6.02	1.584
Local authority, lower SE		81	6.21	1.320
Local authority, higher SE		63	6.17	1.582
Total		291	6.22	1.383
approve drunk w/end		Private	35	6.71
	Church	54	6.33	1.116
	Welsh medium	58	5.72	1.641
	Local authority, lower SE	81	6.07	1.515
	Local authority, higher SE	63	5.98	1.651
	Total	291	6.11	1.456
	approve drunk 18	Private	35	4.51
Church		54	3.87	2.585
Welsh medium		58	3.95	1.968
Local authority, lower SE		81	4.00	2.419
Local authority, higher SE		63	4.21	2.223
Total		291	4.07	2.274
<b>SPORTS COACHES</b>				
approve drink tonight	Private	21	6.29	1.347
	Church	29	6.00	1.535
	Welsh medium	33	5.42	1.921
	Local authority, lower SE	40	5.65	1.981
	Local authority, higher SE	39	6.38	1.426
	Total	162	5.93	1.714

approve drink w/end	Private	21	5.90	1.546
	Church	29	5.62	1.801
	Welsh medium	33	5.12	2.012
	Local authority, lower SE	40	5.35	2.143
	Local authority, higher SE	39	6.15	1.565
	Total	162	5.62	1.872
approve drink 18	Private	21	4.48	2.250
	Church	29	4.10	2.512
	Welsh medium	33	4.00	2.046
	Local authority, lower SE	40	4.18	2.241
	Local authority, higher SE	39	5.05	2.361
	Total	162	4.38	2.292
approve drunk tonight	Private	21	6.57	1.248
	Church	29	5.97	1.546
	Welsh medium	33	5.67	1.963
	Local authority, lower SE	40	5.68	1.940
	Local authority, higher SE	39	6.56	1.188
	Total	162	6.06	1.669
approve drunk w/end	Private	21	6.24	1.578
	Church	29	5.83	1.794
	Welsh medium	33	5.45	1.938
	Local authority, lower SE	40	5.40	2.170
	Local authority, higher SE	39	6.33	1.457
	Total	162	5.82	1.848
approve drunk 18	Private	21	4.67	2.309
	Church	29	4.24	2.668
	Welsh medium	33	4.45	2.017
	Local authority, lower SE	40	4.10	2.262
	Local authority, higher SE	39	5.36	2.182
	Total	162	4.57	2.303
mot to comply parents	Private	35	3.00	1.879
	Church	55	3.89	1.771
	Welsh medium	58	3.86	1.791
	Local authority, lower SE	82	4.04	1.746
	Local authority, higher SE	63	4.13	1.818
	Total	293	3.87	1.810
mot to comply friends	Private	35	5.09	1.669
	Church	55	5.18	1.645
	Welsh medium	58	4.50	1.750
	Local authority, lower SE	82	5.02	1.714
	Local authority, higher SE	63	4.84	1.687
	Total	293	4.92	1.702
mot to comply teachers	Private	35	4.51	2.049
	Church	55	5.42	1.384
	Welsh medium	58	5.21	1.833
	Local authority, lower SE	82	5.34	1.642
	Local authority, higher SE	63	5.40	1.863
	Total	293	5.24	1.750

not to comply sports coach	Private	21	3.52	2.250
	Church	29	4.41	1.862
	Welsh medium	33	4.03	2.023
	Local authority, lower SE	39	4.54	1.945
	Local authority, higher SE	41	4.88	2.027
	Total	163	4.37	2.030
sponsorship good thing for sport	Private	35	2.63	1.592
	Church	54	1.72	1.295
	Welsh medium	58	2.12	1.312
	Local authority, lower SE	82	2.00	1.315
	Local authority, higher SE	63	2.63	1.649
	Total	292	2.18	1.455
notice sponsors at live event	Private	35	2.94	2.028
	Church	54	3.11	1.880
	Welsh medium	57	2.95	1.894
	Local authority, lower SE	81	3.28	1.912
	Local authority, higher SE	63	2.84	1.752
	Total	290	3.05	1.878
notice sponsors on TV	Private	35	2.57	1.852
	Church	54	2.80	1.522
	Welsh medium	57	2.70	1.762
	Local authority, lower SE	82	3.09	1.932
	Local authority, higher SE	62	2.89	1.631
	Total	290	2.85	1.752
sponsorship influences purchase	Private	34	2.85	1.395
	Church	54	3.07	1.757
	Welsh medium	58	3.17	1.912
	Local authority, lower SE	80	3.08	1.895
	Local authority, higher SE	63	3.05	1.689
	Total	289	3.06	1.767
alcohol sponsorship OK	Private	35	4.03	1.757
	Church	54	3.20	1.994
	Welsh medium	58	3.28	1.843
	Local authority, lower SE	80	3.64	2.082
	Local authority, higher SE	63	3.32	1.899
	Total	290	3.46	1.947
choose sponsoring brand	Private	35	4.83	1.902
	Church	53	4.74	1.734
	Welsh medium	58	5.22	1.777
	Local authority, lower SE	79	5.30	1.636
	Local authority, higher SE	63	4.40	1.680
	Total	288	4.93	1.751
perceived sponsorship knowledge	Private	35	3.9714	1.81052
	Church	53	3.6566	1.49531
	Welsh medium	57	3.7579	1.95840
	Local authority, lower SE	78	4.1897	1.84768
	Local authority, higher SE	63	4.0095	1.89785
	Total	286	3.9385	1.81614

correct sponsor choices	Private	35	6.14	3.431
	Church	56	8.18	3.664
	Welsh medium	58	6.93	4.030
	Local authority, lower SE	82	7.16	3.895
	Local authority, higher SE	63	7.33	3.547
	Total	294	7.22	3.773
incorrect sponsor choices	Private	35	4.97	2.802
	Church	56	3.36	2.951
	Welsh medium	58	3.24	3.300
	Local authority, lower SE	82	3.60	2.784
	Local authority, higher SE	63	4.79	3.127
	Total	294	3.90	3.058
sponsors not known	Private	35	3.23	3.182
	Church	56	2.45	3.179
	Welsh medium	58	3.21	3.323
	Local authority, lower SE	82	2.80	3.469
	Local authority, higher SE	63	2.54	2.752
	Total	294	2.81	3.201

**Analysis of homogeneous subsets (using Scheffe's test) where ANOVA shows significant differences between groups**

**Days taking part in sport**

school	N	Subset for alpha = .05	
		1	2
Private	35	2.77	
Local authority, lower SE	82	3.27	3.27
Local authority, higher SE	63	3.41	3.41
Church	56	3.55	3.55
Welsh medium	58		3.93
Sig.		.284	.460

**Days watch sport on TV**

school	N	Subset for alpha = .05	
		1	2
Private	35	1.71	
Local authority, higher SE	63	1.79	
Local authority, lower SE	82	2.23	2.23
Church	56	2.71	2.71
Welsh medium	58		3.26
Sig.		.150	.130

**Likelihood of drinking alcohol this weekend**

school	N	Subset for alpha = .05	
		1	2
Welsh medium	57	3.54	
Local authority, higher SE	63	4.24	4.24
Local authority, lower SE	79	4.30	4.30
Church	56		5.18
Private	34		5.24
Sig.		.559	.274

**Likelihood of getting drunk this weekend**

school	N	Subset for alpha = .05	
		1	2
Welsh medium	58	4.60	
Local authority, lower SE	80	4.93	4.93
Local authority, higher SE	63	5.16	5.16
Church	54		5.93
Private	33		6.15
Sig.		.778	.074

**Intended frequency of drinking at 18**

school	N	Subset for alpha = .05	
		1	2
Private	35	1.57	
Church	54	1.61	
Local authority, higher SE	62	2.05	2.05
Local authority, lower SE	82		2.18
Welsh medium	58		2.47
Sig.		.151	.272

**Intended frequency of getting drunk at 18**

school	N	Subset for alpha = .05	
		1	2
Private	34	1.09	
Church	56	1.36	1.36
Local authority, higher SE	63	1.54	1.54
Local authority, lower SE	82		1.72
Welsh medium	58		1.83
Sig.		.189	.155

**Drinking alcohol bad/good**

school	N	Subset for alpha = .05	
		1	2
Private	35	2.91	
Church	56	3.55	3.55
Local authority, higher SE	62	3.66	3.66
Welsh medium	57		4.02
Local authority, lower SE	81		4.14
Sig.		.237	.497

**Drinking alcohol wise/foolish**

school	N	Subset for alpha = .05	
		1	2
Local authority, lower SE	79	4.41	
Welsh medium	56	4.48	
Local authority, higher SE	62	4.82	4.82
Church	55	5.11	5.11
Private	34		5.47
Sig.		.185	.262

**Getting drunk bad/good**

school	N	Subset for alpha = .05	
		1	2
Private	34	2.09	
Church	56	2.95	2.95
Local authority, higher SE	62	3.06	3.06
Welsh medium	57		3.53
Local authority, lower SE	81		3.75
Sig.		.155	.335

**Getting drunk wise/foolish**

school	N	Subset for alpha = .05	
		1	2
Welsh medium	57	4.63	
Local authority, lower SE	80	4.76	
Church	54	5.43	5.43
Local authority, higher SE	62	5.61	5.61
Private	34		6.41
Sig.		.067	.065

**Getting drunk healthy/unhealthy**

school	N	Subset for alpha = .05	
		1	2
Welsh medium	57	5.07	
Local authority, lower SE	79	5.48	5.48
Local authority, higher SE	63	5.79	5.79
Church	54	6.11	6.11
Private	34		6.38
Sig.		.060	.147

**Getting drunk unpleasant/pleasant**

school	N	Subset for alpha = .05	
		1	2
Private	35	2.49	
Church	55	3.36	3.36
Local authority, higher SE	62		3.73
Local authority, lower SE	79		3.92
Welsh medium	57		4.53
Sig.		.302	.076



**Drinking alcohol makes me feel good**

school	N	Subset for alpha = .05	
		1	2
Welsh medium	58	3.48	
Local authority, higher SE	63	3.81	
Church	56	3.96	
Local authority, lower SE	82	4.05	4.05
Private	35		5.03
Sig.		.570	.070

**Getting drunk makes me feel good**

school	N	Subset for alpha = .05	
		1	2
Welsh medium	56	3.66	
Local authority, lower SE	81	4.35	4.35
Local authority, higher SE	63	4.35	4.35
Church	55	4.36	4.36
Private	35		5.29
Sig.		.421	.140

**Getting drunk makes me lose control**

school	N	Subset for alpha = .05	
		1	2
Private	35	2.17	
Church	54	2.67	2.67
Welsh medium	58	3.02	3.02
Local authority, higher SE	62	3.03	3.03
Local authority, lower SE	81		3.52
Sig.		.267	.278

**Getting drunk will lead to trouble**

school	N	Subset for alpha = .05	
		1	2
Private	35	2.14	
Church	55	3.13	3.13
Local authority, higher SE	62		3.27
Welsh medium	58		3.29
Local authority, lower SE	81		3.63
Sig.		.119	.749

**Getting drunk will have consequences for my health**

school	N	Subset for alpha = .05	
		1	2
Private	35	2.26	
Local authority, higher SE	62	2.69	2.69
Welsh medium	58	3.03	3.03
Church	53	3.06	3.06
Local authority, lower SE	81		3.37
Sig.		.274	.450

**Parents approve drink at 18**

school	N	Subset for alpha = .05	
		1	2
Welsh medium	58	2.10	
Church	55	2.33	2.33
Local authority, lower SE	82	2.48	2.48
Local authority, higher SE	63	2.71	2.71
Private	35		3.11
Sig.		.477	.215

**Parents approve getting drunk tonight**

school	N	Subset for alpha = .05	
		1	2
Local authority, lower SE	81	5.95	
Welsh medium	58	6.16	6.16
Church	55	6.29	6.29
Local authority, higher SE	63	6.38	6.38
Private	35		6.89
Sig.		.576	.082

**Parents approve getting drunk at weekend**

school	N	Subset for alpha = .05	
		1	2
Local authority, lower SE	82	5.41	
Welsh medium	58	5.64	5.64
Local authority, higher SE	62	5.76	5.76
Church	54	6.31	6.31
Private	34		6.50
Sig.		.066	.088

**Parents approve getting drunk at 18**

school	N	Subset for alpha = .05	
		1	2
Local authority, lower SE	82	3.04	
Church	54	3.04	
Welsh medium	58	3.43	
Local authority, higher SE	63	3.81	3.81
Private	35		4.94
Sig.		.408	.075

**Friends approve drink tonight**

school	N	Subset for alpha = .05	
		1	2
Local authority, lower SE	81	2.75	
Welsh medium	58	3.00	
Church	55	3.35	3.35
Local authority, higher SE	63	3.84	3.84
Private	35		4.26
Sig.		.052	.158

**Friends approve drink at weekend**

school	N	Subset for alpha = .05	
		1	2
Welsh medium	58	2.33	
Local authority, lower SE	81	2.52	
Local authority, higher SE	63	3.10	3.10
Church	55	3.11	3.11
Private	35		3.74
Sig.		.278	.477

**Friends approve getting drunk tonight**

school	N	Subset for alpha = .05	
		1	2
Local authority, lower SE	81	3.06	
Welsh medium	58	3.50	
Church	55	3.75	3.75
Local authority, higher SE	63	4.19	4.19
Private	35		4.80
Sig.		.078	.119

**Friends approve getting drunk at weekend**

school	N	Subset for alpha = .05	
		1	2
Welsh medium	58	2.64	
Local authority, lower SE	81	2.84	
Church	53	3.57	3.57
Local authority, higher SE	63	3.73	3.73
Private	35		4.37
Sig.		.098	.369

**Friends approve getting drunk at 18**

school	N	Subset for alpha = .05	
		1	2
Welsh medium	58	1.84	
Local authority, lower SE	81	2.26	2.26
Local authority, higher SE	63	2.54	2.54
Church	54	2.56	2.56
Private	35		3.11
Sig.		.395	.207

**Teachers approve getting drunk at weekend**

school	N	Subset for alpha = .05	
		1	2
Welsh medium	58	5.72	
Local authority, higher SE	63	5.98	5.98
Local authority, lower SE	81	6.07	6.07
Church	54	6.33	6.33
Private	35		6.71
Sig.		.304	.140

**Motivation to comply with parents**

school	N	Subset for alpha = .05	
		1	2
Private	35	3.00	
Welsh medium	58	3.86	3.86
Church	55	3.89	3.89
Local authority, lower SE	82	4.04	4.04
Local authority, higher SE	63		4.13
Sig.		.062	.964

**Sponsorship is a good thing for sport**

school	N	Subset for alpha = .05	
		1	2
Church	54	1.72	
Local authority, lower SE	82	2.00	2.00
Welsh medium	58	2.12	2.12
Private	35		2.63
Local authority, higher SE	63		2.63
Sig.		.714	.253

**APPENDIX 6**

**TABLES OF CORRELATIONS  
FOR  
MALE AND FEMALE SUBSAMPLES**

gender		likelihood of drinking alcohol tonight	likelihood of drinking alcohol this weekend	likelihood of getting drunk tonight	likelihood of getting drunk this weekend	intended frequency of drinking at 18	intended frequency of getting drunk at 18	
Male	drinking alcohol bad/good	Pearson Correlation Sig. (2-tailed) N	-.304(***) .000 155	-.482(***) .000 157	-.294(***) .000 155	-.413(***) .000 155	.633(***) .000 157	.428(***) .000 158
	drinking alcohol wise/foolish	Pearson Correlation Sig. (2-tailed) N	.195(*) .015 154	.373(***) .000 156	.317(***) .000 154	.391(***) .000 154	-.456(***) .000 156	-.351(***) .000 157
	drinking alcohol healthy/unhealthy	Pearson Correlation Sig. (2-tailed) N	.093 .251 154	.149 .063 156	.206(*) .011 154	.232(***) .004 154	-.312(***) .000 156	-.335(***) .000 157
	drinking alcohol unpleasant/pleasant	Pearson Correlation Sig. (2-tailed) N	-.211(***) .008 155	-.213(***) .007 157	-.081 .316 155	-.104 .196 155	.228(***) .004 157	.129 .107 158
	getting drunk bad/good	Pearson Correlation Sig. (2-tailed) N	-.220(***) .006 154	-.464(***) .000 156	-.316(***) .000 154	-.570(***) .000 154	.552(***) .000 156	.582(***) .000 157
	getting drunk wise/foolish	Pearson Correlation Sig. (2-tailed) N	.078 .335 155	.250(***) .002 157	.170(*) .035 155	.294(***) .000 155	-.377(***) .000 157	-.365(***) .000 158
	getting drunk healthy/unhealthy	Pearson Correlation Sig. (2-tailed) N	.026 .745 154	.200(*) .012 156	.148 .067 154	.278(***) .000 154	-.336(***) .000 156	-.347(***) .000 157
	getting drunk unpleasant/pleasant	Pearson Correlation Sig. (2-tailed) N	-.156 .053 155	-.413(***) .000 157	-.269(***) .001 155	-.476(***) .000 155	.470(***) .000 157	.529(***) .000 158

gender			likelihood of drinking alcohol tonight	likelihood of drinking alcohol this weekend	likelihood of getting drunk tonight	likelihood of getting drunk this weekend	intended frequency of drinking at 18	intended frequency of getting drunk at 18
Female	drinking alcohol bad/good	Pearson Correlation Sig. (2-tailed)	-.500(**) .000	-.424(**) .000	-.467(**) .000	-.428(**) .000	.508(**) .000	.532(**) .000
		N	128	129	128	130	131	132
	drinking alcohol wise/foolish	Pearson Correlation Sig. (2-tailed)	.152 .091	.130 .147	.071 .433	.087 .332	-.273(**) .002	-.398(**) .000
		N	125	126	125	126	127	128
	drinking alcohol healthy/unhealthy	Pearson Correlation Sig. (2-tailed)	.166 .064	-.046 .606	.138 .124	.006 .949	-.211(*) .017	-.274(**) .002
		N	126	127	126	127	128	129
	drinking alcohol unpleasant/pleasant	Pearson Correlation Sig. (2-tailed)	-.235(**) .008	-.284(**) .001	-.257(**) .004	-.322(**) .000	.442(**) .000	.420(**) .000
		N	127	128	127	128	129	130
	getting drunk bad/good	Pearson Correlation Sig. (2-tailed)	-.336(**) .000	-.535(**) .000	-.337(**) .000	-.509(**) .000	.377(**) .000	.490(**) .000
		N	128	129	128	130	131	132
	getting drunk wise/foolish	Pearson Correlation Sig. (2-tailed)	.179(*) .045	.062 .488	.193(*) .031	.113 .207	-.069 .440	-.238(**) .007
		N	125	126	125	126	127	128
getting drunk healthy/unhealthy	Pearson Correlation Sig. (2-tailed)	.104 .245	-.101 .258	.136 .129	-.050 .574	-.120 .176	-.185(*) .036	
	N	126	127	126	127	128	129	
getting drunk unpleasant/pleasant	Pearson Correlation Sig. (2-tailed)	-.206(*) .021	-.397(**) .000	-.217(*) .015	-.375(**) .000	.441(**) .000	.459(**) .000	
	N	126	127	126	127	128	129	

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

gender			likelihood of drinking alcohol tonight	likelihood of drinking alcohol this weekend	intended frequency of drinking at 18
Male	sn_p_drink2nite	Pearson Correlation	-.432(**)	-.373(**)	.480(**)
		Sig. (2-tailed)	.000	.000	.000
		N	156	158	158
	sn_f_drink2nite	Pearson Correlation	-.330(**)	-.359(**)	.409(**)
		Sig. (2-tailed)	.000	.000	.000
		N	156	158	157
	sn_t_drink2nite	Pearson Correlation	-.248(**)	-.239(**)	.374(**)
		Sig. (2-tailed)	.002	.003	.000
		N	155	157	157
	sn_c_drink2nite	Pearson Correlation	-.245(**)	-.129	.270(**)
		Sig. (2-tailed)	.002	.105	.001
		N	157	159	159
	sn_p_drinkwend	Pearson Correlation	-.346(**)	-.439(**)	.432(**)
		Sig. (2-tailed)	.000	.000	.000
		N	156	158	158
	sn_f_drinkwend	Pearson Correlation	-.254(**)	-.431(**)	.468(**)
		Sig. (2-tailed)	.001	.000	.000
		N	156	158	157
	sn_t_drinkwend	Pearson Correlation	-.236(**)	-.339(**)	.380(**)
		Sig. (2-tailed)	.003	.000	.000
		N	155	157	157
	sn_c_drinkwend	Pearson Correlation	-.203(*)	-.148	.275(**)
		Sig. (2-tailed)	.011	.063	.000
		N	157	159	159
	sn_p_drink18	Pearson Correlation	-.193(*)	-.199(*)	.327(**)
		Sig. (2-tailed)	.016	.012	.000
		N	156	158	158
	sn_f_drink18	Pearson Correlation	-.236(**)	-.310(**)	.385(**)
		Sig. (2-tailed)	.003	.000	.000
		N	156	158	157
	sn_t_drink18	Pearson Correlation	-.133	-.151	.215(**)
		Sig. (2-tailed)	.100	.059	.007
		N	155	157	157
	sn_c_drink18	Pearson Correlation	-.126	-.100	.273(**)
		Sig. (2-tailed)	.115	.212	.001
		N	157	159	159

Note re variable names: **sn\_p\_drink2nite** is the subjective norm for parents for **drinking tonight**. Other variable names are formed similarly (f = friends, t = teachers, c = sports coaches).

gender			likelihood of drinking alcohol tonight	likelihood of drinking alcohol this weekend	intended frequency of drinking at 18
Female	sn_p_drink2nite	Pearson Correlation	-.271(**)	-.164	.238(**)
		Sig. (2-tailed)	.002	.062	.006
		N	129	130	132
	sn_f_drink2nite	Pearson Correlation	-.234(**)	-.205(*)	.325(**)
		Sig. (2-tailed)	.008	.020	.000
		N	129	130	132
	sn_t_drink2nite	Pearson Correlation	.003	-.156	.010
		Sig. (2-tailed)	.976	.076	.908
		N	129	130	132
	sn_c_drink2nite	Pearson Correlation	-.019	.043	.031
		Sig. (2-tailed)	.833	.628	.726
		N	129	130	132
	sn_p_drinkwend	Pearson Correlation	-.201(*)	-.316(**)	.271(**)
		Sig. (2-tailed)	.023	.000	.002
		N	128	129	131
	sn_f_drinkwend	Pearson Correlation	-.215(*)	-.356(**)	.371(**)
		Sig. (2-tailed)	.015	.000	.000
		N	129	130	132
	sn_t_drinkwend	Pearson Correlation	-.008	-.241(**)	-.051
		Sig. (2-tailed)	.926	.006	.564
		N	128	129	131
	sn_c_drinkwend	Pearson Correlation	-.060	-.041	.055
		Sig. (2-tailed)	.496	.646	.533
		N	129	130	132
	sn_p_drink18	Pearson Correlation	-.129	-.152	.189(*)
		Sig. (2-tailed)	.146	.083	.030
		N	129	130	132
	sn_f_drink18	Pearson Correlation	-.130	-.172	.318(**)
		Sig. (2-tailed)	.143	.051	.000
		N	129	130	132
	sn_t_drink18	Pearson Correlation	-.017	-.166	-.025
		Sig. (2-tailed)	.847	.059	.780
		N	129	130	132
	sn_c_drink18	Pearson Correlation	-.024	-.098	.001
		Sig. (2-tailed)	.791	.265	.993
		N	129	130	132

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).



gender			likelihood of getting drunk tonight	likelihood of getting drunk this weekend	intended frequency of getting drunk at 18
Male	sn_p_drunk2nite	Pearson Correlation	-.295(**)	-.337(**)	.400(**)
		Sig. (2-tailed)	.000	.000	.000
		N	155	155	158
	sn_f_drunk2nite	Pearson Correlation	-.202(*)	-.306(**)	.419(**)
		Sig. (2-tailed)	.012	.000	.000
		N	156	156	158
	sn_t_drunk2nite	Pearson Correlation	-.291(**)	-.267(**)	.387(**)
		Sig. (2-tailed)	.000	.001	.000
		N	155	155	158
	sn_c_drunk2nite	Pearson Correlation	-.200(*)	-.107	.191(*)
		Sig. (2-tailed)	.012	.181	.015
		N	157	157	160
	sn_p_drunkwend	Pearson Correlation	-.290(**)	-.442(**)	.479(**)
		Sig. (2-tailed)	.000	.000	.000
		N	154	154	157
	sn_f_drunkwend	Pearson Correlation	-.155	-.376(**)	.433(**)
		Sig. (2-tailed)	.054	.000	.000
		N	155	155	157
	sn_t_drunkwend	Pearson Correlation	-.290(**)	-.345(**)	.338(**)
		Sig. (2-tailed)	.000	.000	.000
		N	155	155	158
	sn_c_drunkwend	Pearson Correlation	-.226(**)	-.189(*)	.217(**)
		Sig. (2-tailed)	.004	.018	.006
		N	157	157	160
	sn_p_drunk18	Pearson Correlation	-.113	-.229(**)	.443(**)
		Sig. (2-tailed)	.161	.004	.000
		N	156	156	159
	sn_f_drunk18	Pearson Correlation	-.101	-.308(**)	.467(**)
		Sig. (2-tailed)	.209	.000	.000
		N	156	156	158
	sn_t_drunk18	Pearson Correlation	-.193(*)	-.264(**)	.323(**)
		Sig. (2-tailed)	.016	.001	.000
		N	155	155	158
	sn_c_drunk18	Pearson Correlation	-.213(**)	-.168(*)	.221(**)
		Sig. (2-tailed)	.007	.036	.005
		N	157	157	160

gender			likelihood of getting drunk tonight	likelihood of getting drunk this weekend	intended frequency of getting drunk at 18
Female	sn_p_drunk2nite	Pearson Correlation	-.175(*)	-.248(**)	.228(**)
		Sig. (2-tailed)	.047	.004	.008
		N	129	131	133
	sn_f_drunk2nite	Pearson Correlation	-.257(**)	-.383(**)	.388(**)
		Sig. (2-tailed)	.003	.000	.000
		N	129	131	133
	sn_t_drunk2nite	Pearson Correlation	.014	-.141	-.081
		Sig. (2-tailed)	.871	.109	.356
		N	128	130	132
	sn_c_drunk2nite	Pearson Correlation	-.089	-.040	.121
		Sig. (2-tailed)	.313	.653	.166
		N	129	131	133
	sn_p_drunkwend	Pearson Correlation	-.096	-.403(**)	.369(**)
		Sig. (2-tailed)	.283	.000	.000
		N	128	130	132
	sn_f_drunkwend	Pearson Correlation	-.234(**)	-.413(**)	.471(**)
		Sig. (2-tailed)	.008	.000	.000
		N	128	130	132
	sn_t_drunkwend	Pearson Correlation	.025	-.218(*)	-.026
		Sig. (2-tailed)	.779	.013	.764
		N	128	130	132
	sn_c_drunkwend	Pearson Correlation	-.079	-.025	.086
		Sig. (2-tailed)	.373	.780	.326
		N	129	131	133
	sn_p_drunk18	Pearson Correlation	-.156	-.369(**)	.395(**)
		Sig. (2-tailed)	.078	.000	.000
		N	128	130	132
	sn_f_drunk18	Pearson Correlation	-.122	-.257(**)	.446(**)
		Sig. (2-tailed)	.170	.003	.000
		N	128	130	132
	sn_t_drunk18	Pearson Correlation	-.055	-.240(**)	.242(**)
		Sig. (2-tailed)	.540	.006	.005
		N	128	130	132
	sn_c_drunk18	Pearson Correlation	-.057	-.101	.132
		Sig. (2-tailed)	.523	.250	.129
		N	129	131	133

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

gender	sporting involvement	Pearson Correlation	likelihood of drinking alcohol tonight	likelihood of drinking alcohol this weekend	likelihood of getting drunk tonight	likelihood of getting drunk this weekend	intended frequency of drinking at 18	intended frequency of getting drunk at 18
Male	days taking part in sport	Pearson Correlation Sig. (2-tailed)	.403 153	.091 155	.142 153	.003 153	.079 155	.201(*) 156
	importance of taking part	Pearson Correlation Sig. (2-tailed)	-.090 157	-.128 159	-.133 157	-.221(**) 157	.159(*) 159	.214(**) 160
	importance of performing well	Pearson Correlation Sig. (2-tailed)	.262 157	.109 159	.096 157	.005 157	.046 159	.007 160
	days watch sport on TV	Pearson Correlation Sig. (2-tailed)	.023 157	.052 159	.082 157	.161(*) 157	-.063 159	-.068 160
	live events attended last 3 months	Pearson Correlation Sig. (2-tailed)	.778 157	.512 159	.307 157	.044 157	.429 159	.394 160
	highest sporting level	Pearson Correlation Sig. (2-tailed)	.008 155	.013 157	.053 155	.108 155	-.021 157	-.088 158

gender		likelihood of drinking alcohol tonight	likelihood of drinking alcohol this weekend	likelihood of getting drunk tonight	likelihood of getting drunk this weekend	intended frequency of drinking at 18	intended frequency of getting drunk at 18
Female	sporting involvement inc	Pearson Correlation Sig. (2-tailed) .198(*)	.022	.166	-.003	-.053	-.006
		N	.808	.063	.977	.553	.947
	days taking part in sport	Pearson Correlation Sig. (2-tailed) .296	-.035	.096	-.010	.052	.145
		N	.690	.279	.910	.555	.095
	importance of taking part	Pearson Correlation Sig. (2-tailed) .155	-.007	-.106	.053	.169	.112
		N	.933	.236	.552	.054	.202
	importance of performing well	Pearson Correlation Sig. (2-tailed) .171	-.041	-.133	-.057	.127	.067
		N	.646	.136	.524	.151	.446
	days watch sport on TV	Pearson Correlation Sig. (2-tailed) .089	.088	.071	.057	.069	-.034
		N	.316	.425	.517	.431	.701
live events attended last 3 months		Pearson Correlation Sig. (2-tailed) .749	-.016	-.077	-.138	.161	.085
		N	.858	.388	.116	.065	.330
	highest sporting level	Pearson Correlation Sig. (2-tailed) .171	-.054	.207(*)	-.002	-.041	.026
		N	.539	.019	.980	.641	.768
		129	130	129	131	132	133

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

gender		likelihood of drinking alcohol tonight	likelihood of drinking alcohol this weekend	likelihood of getting drunk tonight	likelihood of getting drunk this weekend	intended frequency of drinking at 18
Male	notice sponsors at live event	.136	.268(**)	.094	.215(**)	-.098
		.093	.001	.247	.007	.225
		154	156	154	154	156
	notice sponsors on TV	.084	.159(*)	.090	.172(*)	-.095
		.302	.047	.268	.032	.236
		154	156	154	154	156
	sponsorship influences purchase	-.046	-.021	-.005	.044	.083
		.574	.793	.947	.586	.303
		153	155	153	153	155
	choose sponsoring brand	.076	.101	-.007	.102	-.057
	.351	.209	.931	.211	.478	
	153	155	153	153	155	
perceived sponsorship knowledge	.046	.070	.039	.133	-.010	
	.570	.384	.630	.101	.900	
	153	155	153	153	155	
correct sponsor choices	-.065	-.063	-.062	-.094	.107	
	.420	.433	.441	.241	.181	
	157	159	157	157	159	

gender		likelihood of drinking alcohol tonight	likelihood of drinking alcohol this weekend	likelihood of getting drunk tonight	likelihood of getting drunk this weekend	intended frequency of drinking at 18
Female	notice sponsors at live event	.053	-.003	.022	-.032	-.031
			.971	.802	.720	.725
			128	128	130	131
	notice sponsors on TV	.136	.005	.042	-.029	.007
			.959	.642	.743	.933
sponsorship influences purchase		.128	129	128	130	131
			.209(*)	.082	.193(*)	-.229(**)
			.017	.358	.027	.008
choose sponsoring brand		.109	129	128	130	131
			.012	.116	-.031	-.165
perceived sponsorship knowledge		.894	.889	.194	.727	.060
			128	127	129	130
correct sponsor choices		.019	-.041	-.033	-.099	.037
			.650	.719	.266	.677
		.835	126	125	127	128
		.125	.048	.092	.072	.002
		.038	.588	.301	.412	.986
		.670	130	129	131	132
		.129				

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

## **APPENDIX 7**

# **MULTIPLE REGRESSION MODEL FOR THEORY OF REASONED ACTION**

# Likelihood of drinking tonight

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.582 <sup>a</sup>	.339	.297	1.41820
Female	1	.576 <sup>b</sup>	.332	.281	1.32788

- a. Predictors: (Constant), IAattdrink2nitec, sntdrink2nitemc, snfdrink2nitemc, IAattdrink2nitef, attdrinkmc, sncdrink2nitemc, snpdrink2nitemc, IAattdrink2nitep, IAattdrink2nitet
- b. Predictors: (Constant), IAattdrink2nitec, sntdrink2nitemc, IAattdrink2nitep, IAattdrink2nitef, attdrinkmc, snpdrink2nitemc, snfdrink2nitemc, IAattdrink2nitet, sncdrink2nitemc

## ANOVA<sup>c</sup>

gender	Model		Sum of Squares	df	Mean Square	F	Sig.
Male	1	Regression	148.272	9	16.475	8.191	.000 <sup>a</sup>
		Residual	289.624	144	2.011		
		Total	437.896	153			
Female	1	Regression	102.501	9	11.389	6.459	.000 <sup>b</sup>
		Residual	206.302	117	1.763		
		Total	308.803	126			

- a. Predictors: (Constant), IAattdrink2nitec, sntdrink2nitemc, snfdrink2nitemc, IAattdrink2nitef, attdrinkmc, sncdrink2nitemc, snpdrink2nitemc, IAattdrink2nitep, IAattdrink2nitet
- b. Predictors: (Constant), IAattdrink2nitec, sntdrink2nitemc, IAattdrink2nitep, IAattdrink2nitef, attdrinkmc, snpdrink2nitemc, snfdrink2nitemc, IAattdrink2nitet, sncdrink2nitemc
- c. Dependent Variable: intdrink2nitemcrev

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
			B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
Male	1	(Constant)	-.086	.124		-.695	.488						
		attdrinkmc	.060	.077	.061	.777	.438	.304	.065	.053	.748	1.336	
		snpdrink2nitemc	.057	.015	.308	3.835	.000	.479	.304	.260	.712	1.405	
		snfdrink2nitemc	.043	.017	.185	2.464	.015	.363	.201	.167	.813	1.230	
		sntdrink2nitemc	.029	.021	.123	1.387	.168	.299	.115	.094	.587	1.703	
		sncdrink2nitemc	.022	.018	-.099	1.223	.223	.322	.101	.083	.702	1.425	
		IAattdrink2nitep	.001	.009	.010	.108	.914	.077	.009	.007	.578	1.731	
		IAattdrink2nitef	-.002	.013	-.011	-.130	.896	.069	-.011	-.009	.667	1.500	
		IAattdrink2nitet	.032	.013	.264	2.399	.018	.164	.196	.163	.381	2.628	
		IAattdrink2nitec	-.016	.014	-.123	-1.169	.245	.053	-.097	-.079	.412	2.430	
Female	1	(Constant)	-.283	.135		-2.101	.038						
		attdrinkmc	.470	.087	.483	5.432	.000	.501	.449	.410	.722	1.384	
		snpdrink2nitemc	.030	.016	.164	1.946	.054	.266	.177	.147	.808	1.238	
		snfdrink2nitemc	.005	.019	.021	.238	.812	.246	.022	.018	.717	1.395	
		sntdrink2nitemc	-.021	.027	-.064	-.788	.432	-.013	-.073	-.060	.856	1.168	
		sncdrink2nitemc	-.034	.031	-.101	-1.091	.277	-.039	-.100	-.082	.668	1.498	
		IAattdrink2nitep	.017	.011	.147	1.621	.108	-.058	.148	.122	.696	1.436	
		IAattdrink2nitef	.011	.010	.087	1.080	.283	.077	.099	.082	.871	1.148	
		IAattdrink2nitet	-.026	.017	-.137	-1.546	.125	-.203	-.141	-.117	.730	1.370	
		IAattdrink2nitec	-.018	.014	-.110	-1.222	.224	-.096	-.112	-.092	.702	1.424	

- a. Dependent Variable: intdrink2nitemcrev

*Note on variable names for this and subsequent appendices: IA indicates an interactive term, e.g. IAattdrink2nitep represents the interactive term (attitude toward drinking x subjective norm for parents for drinking tonight).*



# Likelihood of drinking this weekend

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.635 <sup>a</sup>	.403	.367	1.74018
Female	1	.542 <sup>b</sup>	.293	.239	2.13961

- a. Predictors: (Constant), IAattdrinkwendc, snfdrinkwendmc, sncdrinkwendmc, IAattdrinkwendf, attdrinkmc, snpdrinkwendmc, sntdrinkwendmc, IAattdrinkwendp, IAattdrinkwendt
- b. Predictors: (Constant), IAattdrinkwendc, sntdrinkwendmc, attdrinkmc, IAattdrinkwendp, IAattdrinkwendf, snpdrinkwendmc, IAattdrinkwendt, snfdrinkwendmc, sncdrinkwendmc

## ANOVA<sup>c</sup>

gender	Model		Sum of Squares	df	Mean Square	F	Sig.
Male	1	Regression	299.027	9	33.225	10.972	.000 <sup>a</sup>
		Residual	442.120	146	3.028		
		Total	741.147	155			
Female	1	Regression	220.462	9	24.496	5.351	.000 <sup>b</sup>
		Residual	531.038	116	4.578		
		Total	751.500	125			

- a. Predictors: (Constant), IAattdrinkwendc, snfdrinkwendmc, sncdrinkwendmc, IAattdrinkwendf, attdrinkmc, snpdrinkwendmc, sntdrinkwendmc, IAattdrinkwendp, IAattdrinkwendt
- b. Predictors: (Constant), IAattdrinkwendc, sntdrinkwendmc, attdrinkmc, IAattdrinkwendp, IAattdrinkwendf, snpdrinkwendmc, IAattdrinkwendt, snfdrinkwendmc, sncdrinkwendmc
- c. Dependent Variable: intdrinkwendmcrev

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
			B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
Male	1	(Constant)	-.304	.156		-1.954	.053						
		attdrinkmc	.367	.098	.285	3.753	.000	.484	.297	.240	.707	1.415	
		snpdrinkwendmc	.060	.020	.248	3.071	.003	.470	.246	.196	.628	1.591	
		snfdrinkwendmc	.076	.023	.251	3.372	.001	.466	.269	.216	.739	1.353	
		sntdrinkwendmc	.029	.026	.096	1.118	.265	.372	.092	.071	.552	1.813	
		sncdrinkwendmc	-.020	.022	-.072	-0.925	.356	.234	-.076	-.059	.681	1.468	
		IAattdrinkwendp	-.006	.013	-.045	-0.491	.624	-.059	-.041	-.031	.476	2.100	
		IAattdrinkwendf	.020	.015	.096	1.312	.192	-.009	.108	.084	.763	1.310	
		IAattdrinkwendt	.022	.016	.144	1.386	.168	.077	.114	.089	.377	2.651	
		IAattdrinkwendc	-.016	.015	-.102	-1.057	.292	-.004	-.087	-.068	.440	2.271	
		Female	1	(Constant)	.210	.217		.967	.336				
attdrinkmc	.512			.141	.335	3.623	.000	.423	.319	.283	.714	1.400	
snpdrinkwendmc	.033			.025	.118	1.322	.189	.316	.122	.103	.771	1.297	
snfdrinkwendmc	.063			.033	.178	1.874	.063	.360	.171	.146	.675	1.483	
sntdrinkwendmc	.073			.042	.152	1.734	.086	.236	.159	.135	.794	1.259	
sncdrinkwendmc	-.052			.050	-.099	-1.038	.302	.037	-.096	-.081	.674	1.484	
IAattdrinkwendp	-.021			.017	-.120	-1.276	.204	-.186	-.118	-.100	.687	1.457	
IAattdrinkwendf	-.010			.017	-.049	-0.560	.576	-.112	-.052	-.044	.800	1.250	
IAattdrinkwendt	.028			.027	.097	1.060	.291	-.091	.098	.083	.733	1.364	
IAattdrinkwendc	.003			.023	.014	.149	.882	-.037	.014	.012	.709	1.410	

a. Dependent Variable: intdrinkwendmcrev

# Drinking intentions at age 18

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.695 <sup>a</sup>	.483	.450	.76080
Female	1	.594 <sup>b</sup>	.352	.304	.79892

a. Predictors: (Constant), IAattdrink18c, snfdrink18mc, attdrinkmc, sntdrink18mc, IAattdrink18f, sncdrink18mc, snpdrink18mc, IAattdrink18t, IAattdrink18p

b. Predictors: (Constant), IAattdrink18c, sntdrink18mc, IAattdrink18p, attdrinkmc, sncdrink18mc, IAattdrink18t, snpdrink18mc, snfdrink18mc, IAattdrink18f

## ANOVA<sup>c</sup>

gender	Model		Sum of Squares	df	Mean Square	F	Sig.
Male	1	Regression	77.716	9	8.635	14.919	.000 <sup>a</sup>
		Residual	83.349	144	.579		
		Total	161.065	153			
Female	1	Regression	41.685	9	4.632	7.257	.000 <sup>b</sup>
		Residual	76.592	120	.638		
		Total	118.277	129			

a. Predictors: (Constant), IAattdrink18c, snfdrink18mc, attdrinkmc, sntdrink18mc, IAattdrink18f, sncdrink18mc, snpdrink18mc, IAattdrink18t, IAattdrink18p

b. Predictors: (Constant), IAattdrink18c, sntdrink18mc, IAattdrink18p, attdrinkmc, sncdrink18mc, IAattdrink18t, snpdrink18mc, snfdrink18mc, IAattdrink18f

c. Dependent Variable: intdrink18mc

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
			B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
Male	1	(Constant)	-.028	.066		-.433	.666						
		attdrinkmc	.338	.040	.557	8.449	.000	.628	.576	.506	.828	1.207	
		snpdrink18mc	.001	.009	.007	.089	.929	.327	.007	.005	.591	1.693	
		snfdrink18mc	.034	.011	.219	3.121	.002	.382	.252	.187	.728	1.373	
		sntdrink18mc	-.011	.010	-.081	-1.125	.262	.214	-.093	-.067	.699	1.430	
		sncdrink18mc	.018	.009	.147	2.104	.037	.284	.173	.126	.741	1.350	
		IAattdrink18p	.000	.005	-.004	-.047	.963	-.174	-.004	-.003	.507	1.974	
		IAattdrink18f	.007	.008	.068	.944	.347	-.093	.078	.057	.693	1.443	
		IAattdrink18t	-.011	.006	-.158	-1.941	.054	-.178	-.160	-.116	.540	1.853	
		IAattdrink18c	3.396E-05	.006	.000	.006	.995	-.133	.000	.000	.539	1.856	
Female	1	(Constant)	.069	.075		.913	.363						
		attdrinkmc	.276	.048	.462	5.736	.000	.510	.464	.421	.833	1.200	
		snpdrink18mc	.010	.011	.079	.919	.360	.199	.084	.067	.737	1.357	
		snfdrink18mc	.034	.014	.217	2.400	.018	.350	.214	.176	.662	1.511	
		sntdrink18mc	-.011	.012	-.078	-.892	.374	-.023	-.081	-.066	.712	1.404	
		sncdrink18mc	-.018	.015	-.097	-1.156	.250	.008	-.105	-.085	.763	1.310	
		IAattdrink18p	.002	.006	.024	.263	.793	-.111	.024	.019	.672	1.488	
		IAattdrink18f	-.003	.008	-.039	-.426	.671	-.179	-.039	-.031	.644	1.553	
		IAattdrink18t	-.003	.007	-.036	-.437	.663	-.089	-.040	-.032	.797	1.254	
		IAattdrink18c	-.011	.009	-.107	-1.217	.226	-.160	-.110	-.089	.694	1.441	

a. Dependent Variable: intdrink18mc

# Likelihood of getting drunk tonight

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.612 <sup>a</sup>	.374	.334	.92827
Female	1	.412 <sup>b</sup>	.170	.105	1.42909

a. Predictors: (Constant), IAattdrunk2nitec, sncdrunk2nitemc, snfdrunk2nitemc, IAattdrunk2nitef, attdrunkmc, sntdrunk2nitemc, snpdrunk2nitemc, IAattdrunk2nitet, IAattdrunk2nitep

b. Predictors: (Constant), IAattdrunk2nitec, sntdrunk2nitemc, attdrunkmc, IAattdrunk2nitet, IAattdrunk2nitef, sncdrunk2nitemc, snpdrunk2nitemc, IAattdrunk2nitep, snfdrunk2nitemc

## ANOVA<sup>c</sup>

gender	Model		Sum of Squares	df	Mean Square	F	Sig.
Male	1	Regression	73.107	9	8.123	9.427	.000 <sup>a</sup>
		Residual	122.360	142	.862		
		Total	195.467	151			
Female	1	Regression	48.396	9	5.377	2.633	.008 <sup>b</sup>
		Residual	236.906	116	2.042		
		Total	285.302	125			

a. Predictors: (Constant), IAattdrunk2nitec, sncdrunk2nitemc, snfdrunk2nitemc, IAattdrunk2nitef, attdrunkmc, sntdrunk2nitemc, snpdrunk2nitemc, IAattdrunk2nitet, IAattdrunk2nitep

b. Predictors: (Constant), IAattdrunk2nitec, sntdrunk2nitemc, attdrunkmc, IAattdrunk2nitet, IAattdrunk2nitef, sncdrunk2nitemc, snpdrunk2nitemc, IAattdrunk2nitep, snfdrunk2nitemc

c. Dependent Variable: intdrunk2nitemcrev

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
			B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
Male	1	(Constant)	-.300	.085		-3.529	.001						
		attdrunkmc	.029	.044	.051	.650	.517	.310	.054	.043	.729	1.371	
		snpdrunk2nitemc	.011	.014	.075	.800	.425	.369	.067	.053	.496	2.017	
		snfdrunk2nitemc	.014	.011	.096	1.231	.220	.283	.103	.082	.727	1.376	
		sntdrunk2nitemc	.042	.015	.275	2.829	.005	.381	.231	.188	.466	2.146	
		sncdrunk2nitemc	.024	.013	.161	1.876	.063	.423	.155	.125	.597	1.675	
		IAattdrunk2nitep	.011	.007	.161	1.570	.119	.364	.131	.104	.417	2.395	
		IAattdrunk2nitef	.006	.006	.079	.992	.323	.242	.083	.066	.704	1.421	
		IAattdrunk2nitet	.019	.007	.259	2.567	.011	.280	.211	.170	.432	2.316	
		IAattdrunk2nitec	-.006	.006	-.099	-1.089	.278	.203	-.091	-.072	.532	1.881	
Female	1	(Constant)	.036	.140		.261	.795						
		attdrunkmc	.198	.072	.258	2.757	.007	.321	.248	.233	.815	1.227	
		snpdrunk2nitemc	.027	.021	.124	1.283	.202	.168	.118	.109	.762	1.312	
		snfdrunk2nitemc	.031	.019	.157	1.585	.116	.263	.146	.134	.732	1.365	
		sntdrunk2nitemc	-.036	.029	-.116	-1.230	.221	-.024	-.113	-.104	.800	1.251	
		sncdrunk2nitemc	-.022	.030	-.068	-.727	.469	-.008	-.067	-.062	.811	1.233	
		IAattdrunk2nitep	.011	.011	.093	.971	.333	-.004	.090	.082	.781	1.281	
		IAattdrunk2nitef	.000	.009	-.002	-.017	.986	.023	-.002	-.001	.822	1.216	
		IAattdrunk2nitet	-.025	.017	-.140	-1.476	.143	-.126	-.136	-.125	.797	1.255	
		IAattdrunk2nitec	-.010	.019	-.052	-.536	.593	-.080	-.050	-.045	.751	1.331	

a. Dependent Variable: intdrunk2nitemcrev

# Likelihood of getting drunk this weekend

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.646 <sup>a</sup>	.417	.379	1.52462
Female	1	.608 <sup>b</sup>	.370	.322	1.98247

a. Predictors: (Constant), IAattdrunkwendc, sntdrunkwendmc, snfdrunkwendmc, IAattdrunkwendf, attdrunkmc, IAattdrunkwendp, sncdrunkwendmc, snpdrunkwendmc, IAattdrunkwendt

b. Predictors: (Constant), IAattdrunkwendc, snpdrunkwendmc, IAattdrunkwendp, sncdrunkwendmc, IAattdrunkwendf, snfdrunkwendmc, sntdrunkwendmc, IAattdrunkwendt, attdrunkmc

## ANOVA<sup>c</sup>

gender	Model		Sum of Squares	df	Mean Square	F	Sig.
Male	1	Regression	232.547	9	25.839	11.116	.000 <sup>a</sup>
		Residual	325.426	140	2.324		
		Total	557.973	149			
Female	1	Regression	272.113	9	30.235	7.693	.000 <sup>b</sup>
		Residual	463.762	118	3.930		
		Total	735.875	127			

a. Predictors: (Constant), IAattdrunkwendc, sntdrunkwendmc, snfdrunkwendmc, IAattdrunkwendf, attdrunkmc, IAattdrunkwendp, sncdrunkwendmc, snpdrunkwendmc, IAattdrunkwendt

b. Predictors: (Constant), IAattdrunkwendc, snpdrunkwendmc, IAattdrunkwendp, sncdrunkwendmc, IAattdrunkwendf, snfdrunkwendmc, sntdrunkwendmc, IAattdrunkwendt, attdrunkmc

c. Dependent Variable: intdrunkwendmcrev

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
			B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
Male	1	(Constant)	-.478	.149		-3.209	.002						
		attdrunkmc	.321	.082	.331	3.939	.000	.565	.316	.254	.588	1.700	
		snpdrunkwendmc	.036	.019	.156	1.867	.064	.477	.156	.120	.593	1.687	
		snfdrunkwendmc	.031	.018	.127	1.668	.098	.396	.140	.108	.722	1.385	
		sntdrunkwendmc	.041	.022	.159	1.871	.063	.381	.156	.121	.574	1.742	
		sncdrunkwendmc	.003	.020	.014	.172	.863	.345	.015	.011	.640	1.562	
		IAattdrunkwendp	.001	.009	.006	.070	.945	.230	.006	.004	.613	1.631	
		IAattdrunkwendf	.010	.010	.076	.999	.319	.184	.084	.064	.722	1.386	
		IAattdrunkwendt	.017	.011	.138	1.548	.124	.225	.130	.100	.524	1.908	
		IAattdrunkwendc	-.004	.009	-.039	-.475	.636	.182	-.040	-.031	.619	1.617	
Female	1	(Constant)	.340	.201		1.695	.093						
		attdrunkmc	.407	.103	.336	3.966	.000	.501	.343	.290	.742	1.347	
		snpdrunkwendmc	.068	.026	.228	2.641	.009	.417	.236	.193	.715	1.398	
		snfdrunkwendmc	.060	.028	.178	2.103	.038	.416	.190	.154	.746	1.340	
		sntdrunkwendmc	.035	.042	.067	.838	.404	.220	.077	.061	.825	1.213	
		sncdrunkwendmc	-.040	.039	-.082	-1.044	.299	.011	-.096	-.076	.868	1.152	
		IAattdrunkwendp	-.003	.014	-.020	-.252	.801	-.025	-.023	-.018	.810	1.235	
		IAattdrunkwendf	.001	.013	.004	.044	.965	.004	.004	.003	.840	1.190	
		IAattdrunkwendt	.007	.023	.026	.320	.750	-.029	.029	.023	.822	1.216	
		IAattdrunkwendc	-.030	.021	-.116	-1.428	.156	-.159	-.130	-.104	.814	1.228	

a. Dependent Variable: intdrunkwendmcrev

# Intentions of getting drunk at age 18

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.691 <sup>a</sup>	.477	.444	.75274
Female	1	.618 <sup>b</sup>	.382	.336	.75152

a. Predictors: (Constant), IAattdrunk18c, snpdrunk18mc, sncdrunk18mc, IAattdrunk18f, attdrunkmc, sntdrunk18mc, snfdrunk18mc, IAattdrunk18t, IAattdrunk18p

b. Predictors: (Constant), IAattdrunk18c, snpdrunk18mc, sncdrunk18mc, IAattdrunk18f, attdrunkmc, IAattdrunk18t, sntdrunk18mc, snfdrunk18mc, IAattdrunk18p

## ANOVA<sup>c</sup>

gender	Model		Sum of Squares	df	Mean Square	F	Sig.
Male	1	Regression	74.382	9	8.265	14.586	.000 <sup>a</sup>
		Residual	81.592	144	.567		
		Total	155.974	153			
Female	1	Regression	41.918	9	4.658	8.247	.000 <sup>b</sup>
		Residual	67.774	120	.565		
		Total	109.692	129			

a. Predictors: (Constant), IAattdrunk18c, snpdrunk18mc, sncdrunk18mc, IAattdrunk18f, attdrunkmc, sntdrunk18mc, snfdrunk18mc, IAattdrunk18t, IAattdrunk18p

b. Predictors: (Constant), IAattdrunk18c, snpdrunk18mc, sncdrunk18mc, IAattdrunk18f, attdrunkmc, IAattdrunk18t, sntdrunk18mc, snfdrunk18mc, IAattdrunk18p

c. Dependent Variable: intdrunk18mc

## Coefficients<sup>a</sup>

gender	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
Male	1	(Constant)	-.015	.068		-.214	.831					
		attdrunkmc	.234	.035	.458	6.682	.000	.580	.487	.403	.773	1.294
		snpdrunk18mc	.013	.009	.123	1.472	.143	.444	.122	.089	.524	1.907
		snfdrunk18mc	.036	.010	.266	3.628	.000	.467	.289	.219	.676	1.479
		sntdrunk18mc	.006	.011	.043	.541	.589	.331	.045	.033	.571	1.752
		sncdrunk18mc	-.008	.009	-.062	-.881	.380	.244	-.073	-.053	.723	1.384
		IAattdrunk18p	-.005	.004	-.089	-1.075	.284	-.152	-.089	-.065	.535	1.871
		IAattdrunk18f	.009	.005	.124	1.763	.080	.030	.145	.106	.730	1.370
		IAattdrunk18t	-.008	.005	-.123	-1.520	.131	-.130	-.126	-.092	.553	1.809
		IAattdrunk18c	-.001	.004	-.022	-.309	.758	-.023	-.026	-.019	.692	1.446
Female	1	(Constant)	.084	.073		1.145	.254					
		attdrunkmc	.177	.037	.382	4.746	.000	.491	.398	.341	.796	1.256
		snpdrunk18mc	.009	.009	.089	.945	.347	.396	.086	.068	.584	1.714
		snfdrunk18mc	.034	.011	.258	2.975	.004	.466	.262	.213	.684	1.462
		sntdrunk18mc	.014	.012	.100	1.189	.237	.241	.108	.085	.731	1.367
		sncdrunk18mc	-.003	.015	-.019	-.239	.812	.125	-.022	-.017	.821	1.218
		IAattdrunk18p	-.006	.005	-.124	-1.358	.177	-.143	-.123	-.097	.614	1.629
		IAattdrunk18f	.003	.006	.044	.510	.611	-.072	.047	.037	.698	1.432
		IAattdrunk18t	-.004	.006	-.050	-.607	.545	-.055	-.055	-.044	.756	1.322
		IAattdrunk18c	.000	.008	-.004	-.049	.961	-.095	-.005	-.004	.749	1.336

a. Dependent Variable: intdrunk18mc

## **APPENDIX 8**

# **MULTIPLE REGRESSION MODEL USING PREDICTED BENEFITS AND RISKS**

# Likelihood of drinking tonight

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.605 <sup>a</sup>	.366	.302	1.43830
Female	1	.465 <sup>b</sup>	.216	.116	1.47894

a. Predictors: (Constant), IArisksncdrink2nite, IAbensncdrink2nite, snpdrink2nitemc, IArisksnfdrink2nite, risks of drinking, IArisksntdrink2nite, snfdrink2nitemc, sncdrink2nitemc, IAbensnfdrink2nite, IArisksnpdrink2nite, benefits of drinking, sntdrink2nitemc, IAbensnpdrink2nite, IAbensntdrink2nite

b. Predictors: (Constant), IArisksncdrink2nite, IAbensntdrink2nite, sncdrink2nitemc, benefits of drinking, IArisksnpdrink2nite, snpdrink2nitemc, snfdrink2nitemc, risks of drinking, IAbensncdrink2nite, sntdrink2nitemc, IAbensnfdrink2nite, IArisksnfdrink2nite, IAbensnpdrink2nite, IArisksntdrink2nite

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Male	1	(Constant)	-.062	.128		-.482	.631		
		benefits of drinking	.056	.104	.045	.533	.595	.646	1.549
		risks of drinking	.088	.080	.080	1.101	.273	.874	1.144
		snpdrink2nitemc	.042	.017	.223	2.525	.013	.587	1.704
		snfdrink2nitemc	.050	.019	.215	2.651	.009	.691	1.447
		sntdrink2nitemc	.006	.020	.026	.298	.766	.615	1.627
		sncdrink2nitemc	.019	.019	.085	1.023	.308	.666	1.500
		IAbensnpdrink2nite	.020	.011	.188	1.855	.066	.444	2.252
		IAbensnfdrink2nite	-.019	.013	-.129	-1.436	.153	.566	1.766
		IAbensntdrink2nite	.046	.015	.339	3.033	.003	.366	2.731
		IAbensncdrink2nite	-.025	.014	-.196	-1.711	.089	.348	2.875
		IArisksnpdrink2nite	.012	.009	.120	1.371	.173	.598	1.672
		IArisksnfdrink2nite	.006	.011	.043	.561	.576	.788	1.269
		IArisksntdrink2nite	-.002	.011	-.011	-.137	.891	.745	1.342
IArisksncdrink2nite	.019	.010	.141	1.811	.072	.752	1.330		
Female	1	(Constant)	-.078	.143		-.544	.588		
		benefits of drinking	.279	.133	.201	2.104	.038	.784	1.276
		risks of drinking	.028	.107	.025	.258	.797	.776	1.289
		snpdrink2nitemc	.045	.018	.245	2.563	.012	.779	1.283
		snfdrink2nitemc	.046	.021	.211	2.204	.030	.779	1.284
		sntdrink2nitemc	-.049	.032	-.152	-1.570	.119	.760	1.316
		sncdrink2nitemc	-.015	.032	-.045	-.474	.636	.783	1.276
		IAbensnpdrink2nite	.034	.019	.212	1.823	.071	.526	1.903
		IAbensnfdrink2nite	-.013	.017	-.085	-.778	.439	.595	1.680
		IAbensntdrink2nite	-.062	.031	-.210	-2.038	.044	.669	1.494
		IAbensncdrink2nite	.029	.028	.101	1.035	.303	.748	1.337
		IArisksnpdrink2nite	.012	.013	.096	.926	.356	.663	1.507
		IArisksnfdrink2nite	-.011	.015	-.080	-.722	.472	.585	1.709
		IArisksntdrink2nite	-.037	.025	-.182	-1.501	.136	.485	2.061
IArisksncdrink2nite	.007	.027	.031	.271	.787	.531	1.885		

a. Dependent Variable: intdrink2nitemcrev

# Likelihood of drinking this weekend

## Model Summary

gender	Model	R	R-Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.639 <sup>a</sup>	.409	.350	1.77580
Female	1	.555 <sup>b</sup>	.308	.220	2.17181

a. Predictors: (Constant), IArisksncdrinkwend, IAbensntdrinkwend, snpdrinkwendmc, risks of drinking, IArisksnfdrinkwend, sncdrinkwendmc, IArisksntdrinkwend, benefits of drinking, IAbensnfdrinkwend, snfdrinkwendmc, sntdrinkwendmc, IArisksnpdrinkwend, IAbensnpdrinkwend, IAbensncdrinkwend

b. Predictors: (Constant), IArisksncdrinkwend, snfdrinkwendmc, IArisksnpdrinkwend, sncdrinkwendmc, IAbensntdrinkwend, snpdrinkwendmc, sntdrinkwendmc, risks of drinking, IAbensncdrinkwend, benefits of drinking, IArisksnfdrinkwend, IAbensnfdrinkwend, IAbensnpdrinkwend, IArisksntdrinkwend

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Male	1	(Constant)	-.302	.161		-1.875	.063		
		benefits of drinking	.556	.130	.348	4.287	.000	.635	1.576
		risks of drinking	-.110	.099	-.078	-1.111	.269	.859	1.164
		snpdrinkwendmc	.045	.022	.185	2.088	.039	.536	1.865
		snfdrinkwendmc	.061	.025	.200	2.445	.016	.629	1.591
		sntdrinkwendmc	.013	.027	.045	.488	.626	.503	1.988
		sncdrinkwendmc	-.031	.022	-.109	-1.389	.167	.681	1.468
		IAbensnpdrinkwend	.016	.016	.102	.986	.326	.393	2.547
		IAbensnfdrinkwend	.002	.018	.010	.108	.915	.529	1.890
		IAbensntdrinkwend	.029	.020	.170	1.476	.142	.316	3.165
		IAbensncdrinkwend	-.029	.017	-.179	-1.666	.098	.365	2.738
		IArisksnpdrinkwend	-.016	.014	-.116	-1.198	.233	.443	2.255
		IArisksnfdrinkwend	.018	.015	.097	1.248	.214	.699	1.431
		IArisksntdrinkwend	.012	.017	.065	.699	.486	.493	2.030
IArisksncdrinkwend	.021	.013	.126	1.645	.102	.713	1.402		
Female	1	(Constant)	.242	.217		1.117	.266		
		benefits of drinking	.517	.201	.238	2.569	.012	.738	1.355
		risks of drinking	-.307	.159	-.176	-1.927	.057	.761	1.314
		snpdrinkwendmc	.034	.025	.124	1.379	.171	.783	1.277
		snfdrinkwendmc	.050	.036	.141	1.393	.166	.617	1.622
		sntdrinkwendmc	.041	.043	.086	.950	.344	.782	1.279
		sncdrinkwendmc	-.049	.046	-.094	-1.061	.291	.810	1.234
		IAbensnpdrinkwend	-.005	.026	-.020	-.175	.862	.506	1.977
		IAbensnfdrinkwend	-.046	.027	-.186	-1.731	.086	.547	1.827
		IAbensntdrinkwend	.026	.046	.056	.570	.570	.657	1.522
		IAbensncdrinkwend	-.012	.041	-.028	-.297	.767	.701	1.427
		IArisksnpdrinkwend	.012	.020	.065	.619	.537	.571	1.752
		IArisksnfdrinkwend	-.024	.024	-.114	-.989	.325	.480	2.084
		IArisksntdrinkwend	-.016	.041	-.054	-.400	.690	.344	2.905
IArisksncdrinkwend	-.029	.046	-.075	-.630	.530	.448	2.232		

a. Dependent Variable: intrdrinkwendmcrev



## Intention of drinking at age 18

Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.703 <sup>a</sup>	.494	.443	.76497
Female	1	.548 <sup>b</sup>	.300	.213	.84845

a. Predictors: (Constant), IArisksncdrink18, IAbensnfdrink18, snfdrink18mc, IArisksnfdrink18, risks of drinking, sncdrink18mc, IAbensncdrink18, IAbensnpdrink18, sntdrink18mc, IArisksntdrink18, benefits of drinking, snpdrink18mc, IAbensntdrink18, IArisksnpdrink18

b. Predictors: (Constant), IArisksncdrink18, sntdrink18mc, benefits of drinking, IArisksnpdrink18, IAbensntdrink18, risks of drinking, sncdrink18mc, IAbensnfdrink18, snfdrink18mc, IAbensncdrink18, snpdrink18mc, IArisksntdrink18, IArisksnfdrink18, IAbensnpdrink18

Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Male	1	(Constant)	-.077	.068		-1.123	.263		
		benefits of drinking	.409	.054	.550	7.617	.000	.699	1.431
		risks of drinking	-.035	.043	-.053	-.807	.421	.856	1.168
		snpdrink18mc	.004	.009	.036	.484	.629	.654	1.530
		snfdrink18mc	.015	.011	.097	1.305	.194	.658	1.519
		sntdrink18mc	-.001	.010	-.008	-.110	.912	.710	1.408
		sncdrink18mc	.013	.008	.105	1.567	.119	.818	1.222
		IAbensnpdrink18	-.009	.005	-.133	-1.713	.089	.603	1.658
		IAbensnfdrink18	.009	.008	.092	1.193	.235	.612	1.633
		IAbensntdrink18	-.004	.007	-.057	-.636	.526	.450	2.224
		IAbensncdrink18	-.007	.006	-.097	-1.161	.248	.525	1.905
		IArisksnpdrink18	-.006	.006	-.095	-1.032	.304	.432	2.313
		IArisksnfdrink18	.016	.008	.167	2.128	.035	.589	1.698
		IArisksntdrink18	-.001	.006	-.013	-.174	.862	.704	1.420
IArisksncdrink18	.004	.005	.058	.879	.381	.846	1.182		
Female	1	(Constant)	.137	.080		1.709	.090		
		benefits of drinking	.312	.075	.363	4.174	.000	.818	1.223
		risks of drinking	-.001	.060	-.001	-.017	.987	.801	1.249
		snpdrink18mc	.009	.014	.069	.620	.537	.498	2.007
		snfdrink18mc	.025	.015	.169	1.678	.096	.613	1.630
		sntdrink18mc	-.018	.014	-.127	-1.265	.209	.617	1.620
		sncdrink18mc	-.009	.016	-.049	-.548	.585	.769	1.301
		IAbensnpdrink18	-.001	.012	-.015	-.113	.911	.334	2.994
		IAbensnfdrink18	-.012	.013	-.106	-.899	.371	.442	2.263
		IAbensntdrink18	-6.13E-05	.013	.000	-.005	.996	.657	1.523
		IAbensncdrink18	-.021	.016	-.130	-1.348	.180	.667	1.500
		IArisksnpdrink18	.001	.009	.019	.154	.878	.410	2.441
		IArisksnfdrink18	-.007	.013	-.078	-.583	.561	.349	2.868
		IArisksntdrink18	.011	.011	.131	1.056	.293	.402	2.485
IArisksncdrink18	-.026	.014	-.197	-1.868	.064	.555	1.803		

a. Dependent Variable: intrdrink18mc

# Likelihood of getting drunk tonight

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.566 <sup>a</sup>	.320	.248	1.07265
Female	1	.438 <sup>b</sup>	.192	.090	1.44120

a. Predictors: (Constant), IArisksncdrunk2nite, snfdrunk2nitemc, IAbensnfdrunk2nite, risks of getting drunk, IArisksnfdrunk2nite, sncdrunk2nitemc, IAbensntdrunk2nite, benefits of getting drunk, IArisksntdrunk2nite, snpdrunk2nitemc, IArisksnpdrunk2nite, sntdrunk2nitemc, IAbensncdrunk2nite, IAbensnpdrunk2nite

b. Predictors: (Constant), IArisksncdrunk2nite, benefits of getting drunk, sntdrunk2nitemc, IAbensnpdrunk2nite, risks of getting drunk, IArisksnpdrunk2nite, IAbensncdrunk2nite, IArisksnfdrunk2nite, snfdrunk2nitemc, snpdrunk2nitemc, IArisksntdrunk2nite, sncdrunk2nitemc, IAbensntdrunk2nite, IAbensnfdrunk2nite

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Male	1	(Constant)	-.221	.102		-2.174	.031		
		benefits of getting drunk	-.011	.081	-.012	-.136	.892	.629	1.591
		risks of getting drunk	-.023	.065	-.030	-.357	.722	.725	1.379
		snpdrunk2nitemc	.009	.017	.056	.532	.596	.454	2.203
		snfdrunk2nitemc	.022	.014	.137	1.544	.125	.653	1.532
		sntdrunk2nitemc	.014	.018	.083	.754	.452	.425	2.351
		sncdrunk2nitemc	.025	.016	.154	1.543	.125	.517	1.935
		IAbensnpdrunk2nite	.027	.012	.312	2.330	.021	.285	3.514
		IAbensnfdrunk2nite	-.003	.009	-.034	-.365	.715	.595	1.679
		IAbensntdrunk2nite	.014	.012	.152	1.158	.249	.298	3.355
		IAbensncdrunk2nite	-.008	.011	-.093	-.726	.469	.311	3.212
		IArisksnpdrunk2nite	-.011	.012	-.104	-.910	.364	.392	2.552
		IArisksnfdrunk2nite	.008	.008	.083	1.033	.304	.787	1.271
		IArisksntdrunk2nite	.017	.011	.169	1.577	.117	.446	2.241
		IArisksncdrunk2nite	.013	.012	.122	1.110	.269	.425	2.354
Female	1	(Constant)	.054	.140		.384	.702		
		benefits of getting drunk	.237	.118	.197	2.013	.047	.761	1.313
		risks of getting drunk	-.010	.087	-.011	-.118	.907	.832	1.202
		snpdrunk2nitemc	.019	.023	.089	.818	.415	.609	1.641
		snfdrunk2nitemc	.044	.020	.225	2.238	.027	.723	1.384
		sntdrunk2nitemc	-.047	.032	-.153	-1.473	.144	.674	1.484
		sncdrunk2nitemc	-.020	.037	-.060	-.524	.601	.551	1.814
		IAbensnpdrunk2nite	.025	.017	.175	1.470	.144	.513	1.950
		IAbensnfdrunk2nite	.003	.017	.019	.163	.871	.530	1.888
		IAbensntdrunk2nite	.005	.022	.028	.243	.808	.549	1.820
		IAbensncdrunk2nite	-.021	.029	-.087	-.723	.471	.497	2.011
		IArisksnpdrunk2nite	.016	.014	.119	1.160	.249	.688	1.453
		IArisksnfdrunk2nite	-.003	.013	-.023	-.232	.817	.739	1.353
		IArisksntdrunk2nite	.026	.021	.141	1.266	.208	.585	1.710
		IArisksncdrunk2nite	-.037	.028	-.145	-1.341	.183	.624	1.602

a. Dependent Variable: intdrunk2nitemcrev

# Likelihood of getting drunk this weekend

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.615 <sup>a</sup>	.378	.312	1.64136
Female	1	.592 <sup>b</sup>	.351	.271	2.06068

- a. Predictors: (Constant), IArisksncdrunkwend, benefits of getting drunk, IAbensncdrunkwend, risks of getting drunk, IArisksnfdrunkwend, sncdrunkwendmc, IArisksntdrunkwend, IAbensnfdrunkwend, snfdrunkwendmc, snpdrunkwendmc, sntdrunkwendmc, IArisksnpdrunkwend, IAbensnpdrunkwend, IAbensntdrunkwend
- b. Predictors: (Constant), IArisksncdrunkwend, sntdrunkwendmc, benefits of getting drunk, risks of getting drunk, IArisksnpdrunkwend, IAbensntdrunkwend, IAbensnfdrunkwend, sncdrunkwendmc, snfdrunkwendmc, IArisksnfdrunkwend, snpdrunkwendmc, IAbensncdrunkwend, IArisksntdrunkwend, IAbensnpdrunkwend

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Male	1	(Constant)	-.536	.159		-3.367	.001		
		benefits of getting drunk	.334	.131	.232	2.555	.012	.573	1.745
		risks of getting drunk	-.074	.097	-.059	-.757	.450	.768	1.302
		snpdrunkwendmc	.040	.024	.176	1.670	.097	.426	2.350
		snfdrunkwendmc	.036	.021	.146	1.749	.083	.678	1.476
		sntdrunkwendmc	.018	.025	.068	.710	.479	.509	1.966
		sncdrunkwendmc	.010	.023	.039	.418	.677	.542	1.846
		IAbensnpdrunkwend	.004	.015	.028	.243	.809	.364	2.748
		IAbensnfdrunkwend	.022	.016	.129	1.393	.166	.547	1.828
		IAbensntdrunkwend	.020	.018	.129	1.080	.282	.329	3.042
		IAbensncdrunkwend	-.007	.017	-.050	-.420	.675	.333	3.003
		IArisksnpdrunkwend	-.004	.016	-.024	-.232	.817	.442	2.262
		IArisksnfdrunkwend	.006	.012	.036	.457	.648	.774	1.292
		IArisksntdrunkwend	.013	.016	.081	.828	.409	.496	2.014
IArisksncdrunkwend	.019	.016	.119	1.203	.231	.484	2.065		
Female	1	(Constant)	.510	.203		2.515	.013		
		benefits of getting drunk	.232	.169	.121	1.371	.173	.742	1.347
		risks of getting drunk	-.146	.125	-.098	-1.168	.245	.808	1.238
		snpdrunkwendmc	.096	.031	.324	3.047	.003	.508	1.967
		snfdrunkwendmc	.080	.031	.239	2.608	.010	.684	1.462
		sntdrunkwendmc	.065	.047	.123	1.378	.171	.716	1.397
		sncdrunkwendmc	-.098	.047	-.197	-2.103	.038	.656	1.523
		IAbensnpdrunkwend	.015	.023	.074	.662	.510	.454	2.203
		IAbensnfdrunkwend	-.046	.024	-.183	-1.891	.061	.613	1.632
		IAbensntdrunkwend	.018	.036	.048	.493	.623	.611	1.636
		IAbensncdrunkwend	-.020	.035	-.062	-.588	.558	.516	1.939
		IArisksnpdrunkwend	.035	.016	.220	2.234	.027	.590	1.694
		IArisksnfdrunkwend	-.021	.020	-.095	-1.046	.298	.690	1.449
		IArisksntdrunkwend	-.049	.032	-.156	-1.525	.130	.548	1.825
IArisksncdrunkwend	.001	.039	.003	.031	.975	.548	1.825		

a. Dependent Variable: intdrunkwendmcrev

# Intention to get drunk at age 18

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.681 <sup>a</sup>	.464	.408	.77542
Female	1	.578 <sup>b</sup>	.334	.253	.79711

- a. Predictors: (Constant), lArisksncdrunk18, sntdrunk18mc, lAbensnfd drunk18, risks of getting drunk, benefits of getting drunk, lAbensntdrunk18, lArisksnfd drunk18, sncdrunk18mc, lArisksnpdrunk18, snfd drunk18mc, lAbensnpdrunk18, snpdrunk18mc, lArisksntdrunk18, lAbensncdrunk18
- b. Predictors: (Constant), lArisksncdrunk18, benefits of getting drunk, sntdrunk18mc, lArisksnpdrunk18, risks of getting drunk, lAbensntdrunk18, snfd drunk18mc, lArisksntdrunk18, lAbensnpdrunk18, lAbensncdrunk18, sncdrunk18mc, lArisksnfd drunk18, snpdrunk18mc, lAbensnfd drunk18

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Male	1	(Constant)	-.116	.072		-1.610	.110		
		benefits of getting drunk	.237	.056	.322	4.226	.000	.684	1.463
		risks of getting drunk	.023	.044	.036	.520	.604	.815	1.227
		snpdrunk18mc	.018	.009	.178	2.005	.047	.503	1.987
		snfd drunk18mc	.026	.011	.195	2.388	.018	.595	1.680
		sntdrunk18mc	.008	.011	.057	.663	.509	.546	1.831
		sncdrunk18mc	.008	.009	.067	.910	.365	.731	1.369
		lAbensnpdrunk18	.004	.006	.049	.586	.559	.571	1.751
		lAbensnfd drunk18	.019	.008	.195	2.452	.015	.629	1.591
		lAbensntdrunk18	-.025	.008	-.322	-3.137	.002	.377	2.652
		lAbensncdrunk18	.003	.007	.047	.490	.625	.424	2.359
		lArisksnpdrunk18	.001	.005	.018	.221	.826	.594	1.684
		lArisksnfd drunk18	.014	.007	.168	2.027	.045	.581	1.722
		lArisksntdrunk18	-.007	.008	-.089	-.950	.344	.453	2.206
lArisksncdrunk18	.006	.006	.075	.993	.322	.705	1.418		
Female	1	(Constant)	.135	.077		1.760	.081		
		benefits of getting drunk	.168	.062	.227	2.705	.008	.819	1.221
		risks of getting drunk	-.056	.046	-.099	-1.211	.229	.862	1.160
		snpdrunk18mc	.011	.011	.110	.983	.328	.466	2.146
		snfd drunk18mc	.037	.013	.290	2.951	.004	.602	1.662
		sntdrunk18mc	.009	.013	.062	.677	.500	.686	1.457
		sncdrunk18mc	-.005	.019	-.026	-.260	.795	.567	1.763
		lAbensnpdrunk18	-.002	.008	-.030	-.272	.786	.460	2.176
		lAbensnfd drunk18	-.002	.011	-.018	-.154	.878	.424	2.358
		lAbensntdrunk18	-.003	.010	-.028	-.281	.779	.601	1.663
		lAbensncdrunk18	-.006	.012	-.049	-.492	.624	.580	1.725
		lArisksnpdrunk18	.008	.005	.153	1.639	.104	.661	1.513
		lArisksnfd drunk18	-.005	.009	-.064	-.588	.558	.493	2.028
		lArisksntdrunk18	-.005	.008	-.069	-.683	.496	.562	1.779
lArisksncdrunk18	-.005	.012	-.037	-.397	.692	.652	1.533		

a. Dependent Variable: intdrunk18mc

## **APPENDIX 9**

# **MULTIPLE REGRESSION MODEL WITH ADDITION OF SPORTING INVOLVEMENT**

# Likelihood of drinking tonight

Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.646 <sup>a</sup>	.417	.352	1.36101
Female	1	.616 <sup>b</sup>	.380	.293	1.32723

- a. Predictors: (Constant), IAsncdrink2nitesi, IAattdrink2nitec, sportinginvolvementmc, snfdrink2nitemc, attdrinkmc, IAattdrink2nitef, IAsnfdrink2nitesi, sntdrink2nitemc, snpdrink2nitemc, IAsnpdrink2nitesi, IAattdrinks, IAattdrink2nitep, IAsntdrink2nitesi, sncdrink2nitemc, IAattdrink2nitet
- b. Predictors: (Constant), IAsncdrink2nitesi, IAsntdrink2nitesi, snpdrink2nitemc, IAattdrink2nitet, sportinginvolvementmc, IAattdrink2nitef, snfdrink2nitemc, IAattdrinks, sncdrink2nitemc, IAattdrink2nitep, sntdrink2nitemc, IAsnfdrink2nitesi, IAsnpdrink2nitesi, IAattdrink2nitec, attdrinkmc

ANOVA<sup>a</sup>

gender	Model		Sum of Squares	df	Mean Square	F	Sig.
Male	1	Regression	177.624	15	11.842	6.393	.000 <sup>a</sup>
		Residual	248.216	134	1.852		
		Total	425.840	149			
Female	1	Regression	116.358	15	7.757	4.404	.000 <sup>b</sup>
		Residual	190.246	108	1.762		
		Total	306.605	123			

- a. Predictors: (Constant), IAsncdrink2nitesi, IAattdrink2nitec, sportinginvolvementmc, snfdrink2nitemc, attdrinkmc, IAattdrink2nitef, IAsnfdrink2nitesi, sntdrink2nitemc, snpdrink2nitemc, IAsnpdrink2nitesi, IAattdrinks, IAattdrink2nitep, IAsntdrink2nitesi, sncdrink2nitemc, IAattdrink2nitet
- b. Predictors: (Constant), IAsncdrink2nitesi, IAsntdrink2nitesi, snpdrink2nitemc, IAattdrink2nitet, sportinginvolvementmc, IAattdrink2nitef, snfdrink2nitemc, IAattdrinks, sncdrink2nitemc, IAattdrink2nitep, sntdrink2nitemc, IAsnfdrink2nitesi, IAsnpdrink2nitesi, IAattdrink2nitec, attdrinkmc
- c. Dependent Variable: intdrink2nitemcrev

Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
			B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
Male	1	(Constant)	-.067	.129		-.520	.604						
		sportinginvolvementmc	.119	.101	.090	1.184	.239	.063	.102	.078	.760	1.315	
		attdrinkmc	-.006	.079	-.006	-.076	.939	.294	-.007	-.005	.688	1.454	
		IAattdrinks	.174	.066	.241	2.645	.009	.300	.223	.174	.524	1.907	
		snpdrink2nitemc	.064	.016	.344	4.150	.000	.463	.338	.274	.635	1.575	
		snfdrink2nitemc	.052	.018	.229	2.954	.004	.368	.247	.195	.727	1.376	
		sntdrink2nitemc	.009	.023	.038	.408	.684	.314	.035	.027	.491	2.037	
		sncdrink2nitemc	.011	.024	.049	.456	.649	.320	.039	.030	.375	2.670	
		IAattdrink2nitep	-.006	.009	-.063	-.694	.489	.079	-.060	-.046	.529	1.891	
		IAattdrink2nitef	-.006	.012	-.043	-.525	.601	.077	-.045	-.035	.642	1.557	
		IAattdrink2nitet	.029	.014	.238	2.098	.038	.166	.178	.138	.339	2.952	
		IAattdrink2nitec	-.010	.014	-.080	-.734	.464	.060	-.063	-.048	.363	2.755	
		IAsnpdrink2nitesi	-.025	.012	-.181	-2.072	.040	.142	-.176	-.137	.567	1.762	
		IAsnfdrink2nitesi	-.031	.014	-.202	-2.302	.023	.117	-.195	-.152	.567	1.765	
		IAsntdrink2nitesi	.037	.017	.212	2.180	.031	.327	.185	.144	.458	2.182	
IAsncdrink2nitesi	.009	.014	.071	.663	.508	.332	.057	.044	.384	2.605			
Female	1	(Constant)	-.333	.160		-2.079	.040						
		sportinginvolvementmc	-.137	.132	-.088	-1.038	.302	-.191	-.099	-.079	.801	1.249	
		attdrinkmc	.397	.106	.409	3.756	.000	.500	.340	.285	.484	2.064	
		IAattdrinks	-.070	.083	-.089	-.844	.401	-.357	-.081	-.064	.519	1.926	
		snpdrink2nitemc	.048	.019	.254	2.596	.011	.295	.242	.197	.600	1.665	
		snfdrink2nitemc	.008	.023	.039	.367	.714	.253	.035	.028	.515	1.943	
		sntdrink2nitemc	-.052	.032	-.156	-1.593	.114	-.018	-.151	-.121	.601	1.664	
		sncdrink2nitemc	-.027	.033	-.080	-.807	.422	-.045	-.077	-.061	.591	1.691	
		IAattdrink2nitep	.019	.012	.159	1.611	.110	-.066	.153	.122	.593	1.687	
		IAattdrink2nitef	.012	.011	.101	1.135	.259	.072	.109	.086	.721	1.387	
		IAattdrink2nitet	-.030	.018	-.159	-1.705	.091	-.209	-.162	-.129	.658	1.521	
		IAattdrink2nitec	-.026	.017	-.166	-1.548	.125	-.099	-.147	-.117	.500	2.001	
		IAsnpdrink2nitesi	.017	.018	.101	.974	.332	-.222	.093	.074	.538	1.860	
		IAsnfdrink2nitesi	.005	.023	.021	.203	.840	-.204	.020	.015	.525	1.906	
		IAsntdrink2nitesi	-.049	.025	-.188	-1.975	.051	-.090	-.187	-.150	.632	1.582	
IAsncdrink2nitesi	-.008	.031	-.025	-.248	.805	.047	-.024	-.019	.583	1.716			

a. Dependent Variable: intdrink2nitemcrev

# Likelihood of drinking this weekend

Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.690 <sup>a</sup>	.476	.418	1.66167
Female	1	.572 <sup>b</sup>	.328	.233	2.13694

a.

Predictors: (Constant), IAsncdrinkwendsi, sportinginvolvementmc, IAattdrinkwendp, attdrinkmc, IAsnfdrinkwendsi, IAattdrinkwendf, snpdrinkwendmc, snfdrinkwendmc, sntdrinkwendmc, IAattdrinkwendc, IAattdrinks, IAsnpdrinkwendsi, IAsntdrinkwendsi, IAattdrinkwendt, sncdrinkwendmc

b.

Predictors: (Constant), IAsncdrinkwendsi, IAattdrinkwendp, snfdrinkwendmc, IAsntdrinkwendsi, IAattdrinks, IAattdrinkwendf, sportinginvolvementmc, sncdrinkwendmc, snpdrinkwendmc, IAsnfdrinkwendsi, IAattdrinkwendt, IAsnpdrinkwendsi, sntdrinkwendmc, IAattdrinkwendc, attdrinkmc

ANOVA<sup>c</sup>

gender	Model		Sum of Squares	df	Mean Square	F	Sig.
Male	1	Regression	340.877	15	22.725	8.230	.000 <sup>a</sup>
		Residual	375.518	136	2.761		
		Total	716.395	151			
Female	1	Regression	238.212	15	15.881	3.478	.000 <sup>b</sup>
		Residual	488.617	107	4.567		
		Total	726.829	122			

a. Predictors: (Constant), IAsncdrinkwendsi, sportinginvolvementmc, IAattdrinkwendp, attdrinkmc, IAsnfdrinkwendsi, IAattdrinkwendf, snpdrinkwendmc, snfdrinkwendmc, sntdrinkwendmc, IAattdrinkwendc, IAattdrinks, IAsnpdrinkwendsi, IAsntdrinkwendsi, IAattdrinkwendt, sncdrinkwendmc

b. Predictors: (Constant), IAsncdrinkwendsi, IAattdrinkwendp, snfdrinkwendmc, IAsntdrinkwendsi, IAattdrinks, IAattdrinkwendf, sportinginvolvementmc, sncdrinkwendmc, snpdrinkwendmc, IAsnfdrinkwendsi, IAattdrinkwendt, IAsnpdrinkwendsi, sntdrinkwendmc, IAattdrinkwendc, attdrinkmc

c. Dependent Variable: intrdrinkwendmcrev

Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
			B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
Male	1	(Constant)	-.395	.163		-2.423	.017						
		sportinginvolvementmc	.321	.119	.187	2.700	.008	.160	.226	.168	.804	1.243	
		attdrinkmc	.240	.103	.187	2.332	.021	.484	.196	.145	.602	1.661	
		IAattdrinks	.268	.082	.286	3.282	.001	.289	.271	.204	.507	1.971	
		snpdrinkwendmc	.082	.021	.251	3.017	.003	.461	.250	.187	.555	1.801	
		snfdrinkwendmc	.087	.023	.291	3.761	.000	.479	.307	.233	.644	1.552	
		sntdrinkwendmc	.032	.027	.105	1.176	.242	.407	.100	.073	.486	2.056	
		sncdrinkwendmc	-.004	.029	-.016	-.151	.881	.253	-.013	-.009	.362	2.760	
		IAattdrinkwendp	-.010	.013	-.072	-.763	.447	-.065	-.065	-.047	.434	2.302	
		IAattdrinkwendf	.014	.015	.069	.932	.353	-.004	.080	.058	.708	1.413	
		IAattdrinkwendt	.026	.016	.164	1.593	.113	.056	.135	.099	.363	2.755	
		IAattdrinkwendc	-.022	.016	-.133	-1.361	.176	-.023	-.116	-.085	.402	2.488	
		IAsnpdrinkwendsi	-.022	.016	-.125	-1.329	.186	.124	-.113	-.083	.434	2.305	
		IAsnfdrinkwendsi	-.018	.018	-.092	-.986	.326	.184	-.084	-.061	.439	2.278	
		IAsntdrinkwendsi	.007	.021	.031	.316	.752	.225	.027	.020	.407	2.456	
IAsncdrinkwendsi	-.008	.017	-.050	-.483	.630	.238	-.041	-.030	.362	2.766			
Female	1	(Constant)	.283	.264		.996	.322						
		sportinginvolvementmc	-.014	.216	-.006	-.067	.947	-.017	-.006	-.005	.781	1.280	
		attdrinkmc	.401	.172	.266	2.333	.022	.424	.220	.185	.484	2.067	
		IAattdrinks	-.104	.137	-.085	-7.59	.449	-.271	-.073	-.060	.499	2.003	
		snpdrinkwendmc	.049	.028	.175	1.756	.082	.342	.167	.139	.633	1.579	
		snfdrinkwendmc	.087	.039	.249	2.236	.027	.377	.211	.177	.506	1.974	
		sntdrinkwendmc	.033	.052	.069	.639	.524	.239	.062	.051	.545	1.834	
		sncdrinkwendmc	-.043	.054	-.082	-.795	.428	.028	-.077	-.063	.589	1.698	
		IAattdrinkwendp	-.018	.018	-.104	-1.018	.311	-.191	-.098	-.081	.605	1.652	
		IAattdrinkwendf	-.006	.019	-.029	-.293	.770	-.127	-.028	-.023	.658	1.520	
		IAattdrinkwendt	.022	.029	.076	.753	.453	-.100	.073	.060	.614	1.629	
		IAattdrinkwendc	-.011	.027	-.045	-.405	.686	-.043	-.039	-.032	.518	1.930	
		IAsnpdrinkwendsi	.018	.025	.072	.700	.486	-.201	.068	.055	.588	1.702	
		IAsnfdrinkwendsi	.037	.038	.104	.965	.337	-.138	.093	.077	.542	1.844	
		IAsntdrinkwendsi	-.058	.040	-.152	-1.451	.150	-.208	-.139	-.115	.576	1.735	
IAsncdrinkwendsi	-.028	.048	-.058	-.583	.561	-.061	-.056	-.046	.637	1.569			

a. Dependent Variable: intrdrinkwendmcrev

# Intention of drinking at age 18

**Model Summary**

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.739 <sup>a</sup>	.546	.495	.73234
Female	1	.648 <sup>b</sup>	.420	.341	.77486

a. Predictors: (Constant), IAsncdrink18si, sportinginvolvementmc, IAattdrink18t, attdrinkmc, IAsnpdrink18si, IAattdrink18f, snfdrink18mc, sntdrink18mc, IAattdrinks, IAattdrink18p, IAsnfdrink18si, IAattdrink18c, IAsntdrink18si, snpdrink18mc, sncdrink18mc

b. Predictors: (Constant), IAsncdrink18si, IAattdrink18p, IAsnfdrink18si, sntdrink18mc, sportinginvolvementmc, IAattdrinks, IAattdrink18c, sncdrink18mc, IAsnpdrink18si, IAattdrink18t, attdrinkmc, snpdrink18mc, IAattdrink18f, IAsntdrink18si, snfdrink18mc

**ANOVA<sup>a</sup>**

gender	Model		Sum of Squares	df	Mean Square	F	Sig.
Male	1	Regression	86.327	15	5.755	10.731	.000 <sup>a</sup>
		Residual	71.867	134	.536		
		Total	158.193	149			
Female	1	Regression	48.190	15	3.213	5.351	.000 <sup>b</sup>
		Residual	66.644	111	.600		
		Total	114.835	126			

a. Predictors: (Constant), IAsncdrink18si, sportinginvolvementmc, IAattdrink18t, attdrinkmc, IAsnpdrink18si, IAattdrink18f, snfdrink18mc, sntdrink18mc, IAattdrinks, IAattdrink18p, IAsnfdrink18si, IAattdrink18c, IAsntdrink18si, snpdrink18mc, sncdrink18mc

b. Predictors: (Constant), IAsncdrink18si, IAattdrink18p, IAsnfdrink18si, sntdrink18mc, sportinginvolvementmc, IAattdrinks, IAattdrink18c, sncdrink18mc, IAsnpdrink18si, IAattdrink18t, attdrinkmc, snpdrink18mc, IAattdrink18f, IAsntdrink18si, snfdrink18mc

c. Dependent Variable: intdrink18mc

**Coefficients<sup>a</sup>**

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
			B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
Male	1	(Constant)	-.112	.069		-1.632	.105						
		sportinginvolvementmc	.180	.052	.223	3.450	.001	.157	.286	.201	.813	1.231	
		attdrinkmc	.312	.041	.509	7.604	.000	.626	.549	.443	.758	1.319	
		IAattdrinks	.103	.035	.231	2.928	.004	.302	.245	.170	.546	1.833	
		snpdrink18mc	.001	.010	.010	.123	.902	.316	.011	.007	.487	2.055	
		snfdrink18mc	.034	.012	.223	2.774	.006	.388	.233	.161	.525	1.906	
		sntdrink18mc	-.013	.011	-.092	-1.222	.224	.211	-.105	-.071	.601	1.664	
		sncdrink18mc	.026	.012	.211	2.213	.029	.279	.188	.129	.372	2.685	
		IAattdrink18p	.001	.005	.021	.255	.799	-.170	.022	.015	.499	2.003	
		IAattdrink18f	.003	.008	.029	.403	.688	-.083	.035	.023	.651	1.537	
		IAattdrink18t	-.013	.006	-.177	-2.216	.028	-.171	-.188	-.129	.533	1.876	
		IAattdrink18c	-.003	.006	-.038	-.474	.636	-.120	-.041	-.028	.541	1.850	
		IAsnpdrink18si	-.006	.007	-.063	-.856	.393	.171	-.074	-.050	.623	1.604	
		IAsnfdrink18si	-.004	.008	-.039	-.490	.625	.254	-.042	-.029	.538	1.860	
		IAsntdrink18si	.003	.008	.033	.398	.691	.170	.034	.023	.497	2.011	
IAsncdrink18si	-.008	.007	-.105	-1.121	.264	.193	-.096	-.065	.383	2.612			
Female	1	(Constant)	.065	.088		.737	.463						
		sportinginvolvementmc	-.047	.075	-.050	-.625	.533	-.044	-.059	-.045	.826	1.211	
		attdrinkmc	.277	.056	.468	4.915	.000	.512	.423	.355	.577	1.734	
		IAattdrinks	.024	.045	.048	.522	.602	-.265	.050	.038	.618	1.618	
		snpdrink18mc	.018	.012	.146	1.478	.142	.199	.139	.107	.539	1.856	
		snfdrink18mc	.017	.017	.110	1.024	.308	.357	.097	.074	.453	2.208	
		sntdrink18mc	.001	.015	.010	.092	.927	-.046	.009	.007	.488	2.051	
		sncdrink18mc	-.027	.016	-.148	-1.722	.088	-.012	-.161	-.125	.713	1.403	
		IAattdrink18p	.003	.007	.038	.400	.690	-.113	.038	.029	.570	1.754	
		IAattdrink18f	-.007	.009	-.079	-.790	.431	-.188	-.075	-.057	.527	1.898	
		IAattdrink18t	-.001	.007	-.013	-.154	.878	-.096	-.015	-.011	.727	1.376	
		IAattdrink18c	-.007	.009	-.072	-.776	.440	-.167	-.073	-.056	.599	1.670	
		IAsnpdrink18si	.012	.011	.112	1.090	.278	.006	.103	.079	.495	2.022	
		IAsnfdrink18si	-.034	.016	-.223	-2.131	.035	-.271	-.198	-.154	.476	2.101	
		IAsntdrink18si	.026	.012	.229	2.138	.035	.143	.199	.155	.455	2.199	
IAsncdrink18si	-.005	.016	-.025	-.298	.766	-.140	-.028	-.022	.761	1.313			

a. Dependent Variable: intdrink18mc



# Likelihood of getting drunk tonight

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.654 <sup>a</sup>	.427	.362	.91869
Female	1	.490 <sup>b</sup>	.240	.133	1.42012

- a. Predictors: (Constant), IAsncdrunk2nitesi, sportinginvolvementmc, IAattdrunk2nitet, attdrunkmc, IAattdrunk2nitet, snfdrunk2nitemc, IAattdrunksi, sntdrunk2nitemc, IAattdrunk2nitet, IAsnfdrunk2nitesi, snpdrunk2nitemc, IAsnpdrunk2nitesi, IAattdrunk2nitet, IAsntdrunk2nitesi, sncdrunk2nitemc
- b. Predictors: (Constant), IAsncdrunk2nitesi, snpdrunk2nitemc, IAattdrunk2nitet, IAattdrunk2nitet, IAattdrunksi, sportinginvolvementmc, IAsnfdrunk2nitesi, IAsntdrunk2nitesi, sncdrunk2nitemc, IAattdrunk2nitet, IAattdrunk2nitet, attdrunkmc, sntdrunk2nitemc, IAsnpdrunk2nitesi, snfdrunk2nitemc

## ANOVA<sup>a</sup>

gender	Model		Sum of Squares	df	Mean Square	F	Sig.
Male	1	Regression	83.160	15	5.544	6.569	.000 <sup>a</sup>
		Residual	111.407	132	.844		
		Total	194.568	147			
Female	1	Regression	68.078	15	4.539	2.250	.009 <sup>b</sup>
		Residual	215.792	107	2.017		
		Total	283.870	122			

- a. Predictors: (Constant), IAsncdrunk2nitesi, sportinginvolvementmc, IAattdrunk2nitet, attdrunkmc, IAattdrunk2nitet, snfdrunk2nitemc, IAattdrunksi, sntdrunk2nitemc, IAattdrunk2nitet, IAsnfdrunk2nitesi, snpdrunk2nitemc, IAsnpdrunk2nitesi, IAattdrunk2nitet, IAsntdrunk2nitesi, sncdrunk2nitemc
- b. Predictors: (Constant), IAsncdrunk2nitesi, snpdrunk2nitemc, IAattdrunk2nitet, IAattdrunk2nitet, IAattdrunksi, sportinginvolvementmc, IAsnfdrunk2nitesi, IAsntdrunk2nitesi, sncdrunk2nitemc, IAattdrunk2nitet, IAattdrunk2nitet, attdrunkmc, sntdrunk2nitemc, IAsnpdrunk2nitesi, snfdrunk2nitemc
- c. Dependent Variable: intdrunk2nitemcrev

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
			B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
Male	1	(Constant)	-.291	.091		-3.193	.002						
		sportinginvolvementmc	.089	.088	.076	1.009	.315	.138	.088	.066	.775	1.290	
		attdrunkmc	.020	.048	.035	.414	.679	.313	.036	.027	.621	1.609	
		IAattdrunksi	.008	.038	.019	.208	.836	.194	.018	.014	.512	1.952	
		snpdrunk2nitemc	.024	.015	.163	1.599	.112	.384	.138	.105	.416	2.406	
		snfdrunk2nitemc	.014	.012	.094	1.155	.250	.285	.100	.076	.658	1.520	
		sntdrunk2nitemc	.029	.017	.185	1.712	.089	.404	.147	.113	.373	2.681	
		sncdrunk2nitemc	.018	.017	.118	1.055	.293	.427	.091	.069	.347	2.878	
		IAattdrunk2nitet	.016	.007	.240	2.270	.025	.364	.194	.150	.390	2.566	
		IAattdrunk2nitet	.007	.006	.093	1.119	.265	.241	.097	.074	.627	1.595	
		IAattdrunk2nitet	.016	.008	.216	2.124	.036	.284	.182	.140	.418	2.393	
		IAattdrunk2nitet	-.010	.006	-.146	-1.576	.117	.206	-.136	-.104	.504	1.982	
		IAsnpdrunk2nitesi	-.027	.010	-.273	-2.654	.009	.220	-.225	-.175	.409	2.447	
		IAsnfdrunk2nitesi	-.008	.009	-.075	-.825	.411	.234	-.072	-.054	.532	1.881	
IAsntdrunk2nitesi	.016	.013	.131	1.230	.221	.377	.106	.081	.382	2.620			
IAsncdrunk2nitesi	.016	.010	.178	1.593	.114	.424	.137	.105	.348	2.876			
Female	1	(Constant)	-.116	.172		-.672	.503						
		sportinginvolvementmc	-.230	.139	-.153	-1.658	.100	-.162	-.158	-.140	.839	1.191	
		attdrunkmc	.239	.092	.309	2.592	.011	.315	.243	.218	.501	1.996	
		IAattdrunksi	.035	.079	.052	.441	.660	-.192	.043	.037	.512	1.952	
		snpdrunk2nitemc	-.001	.028	-.004	-.032	.975	.177	-.003	-.003	.438	2.284	
		snfdrunk2nitemc	.008	.026	.041	.314	.754	.267	.030	.026	.420	2.381	
		sntdrunk2nitemc	-.024	.036	-.076	-.655	.514	-.027	-.063	-.055	.527	1.897	
		sncdrunk2nitemc	-.014	.035	-.045	-.416	.678	-.011	-.040	-.035	.611	1.637	
		IAattdrunk2nitet	.011	.011	.096	.978	.330	-.015	.094	.082	.739	1.353	
		IAattdrunk2nitet	.003	.010	.027	.290	.772	.016	.028	.024	.804	1.244	
		IAattdrunk2nitet	-.029	.018	-.159	-1.585	.116	-.125	-.151	-.134	.703	1.423	
		IAattdrunk2nitet	-.016	.020	-.081	-.784	.435	-.077	-.076	-.066	.660	1.515	
		IAsnpdrunk2nitesi	-.035	.024	-.184	-1.448	.150	-.196	-.139	-.122	.440	2.275	
		IAsnfdrunk2nitesi	-.037	.024	-.182	-1.509	.134	-.197	-.144	-.127	.487	2.052	
IAsntdrunk2nitesi	.017	.027	.070	.631	.530	.044	.061	.053	.580	1.723			
IAsncdrunk2nitesi	.043	.028	.148	1.511	.134	.101	.145	.127	.742	1.347			

- a. Dependent Variable: intdrunk2nitemcrev

# Likelihood of getting drunk this weekend

Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.689 <sup>a</sup>	.475	.415	1.49273
Female	1	.628 <sup>b</sup>	.394	.310	1.98946

- a. Predictors: (Constant), IAsncdrunkwendsi, sportinginvolvementmc, IAattdrunkwendp, snfdrunkwendmc, sntdrunkwendmc, IAattdrunkwenc, IAattdrunksi, IAattdrunkwendf, snpdrunkwendmc, IAsnpdrunkwendsi, IAsnfrunkwendsi, IAattdrunkwendt, attdrunkmc, sncdrunkwendmc, IAsntdrunkwendsi
- b. Predictors: (Constant), IAsncdrunkwendsi, IAattdrunkwendf, snpdrunkwendmc, IAattdrunksi, IAattdrunkwendt, sportinginvolvementmc, IAsntdrunkwendsi, snfdrunkwendmc, sncdrunkwendmc, IAattdrunkwendp, IAattdrunkwenc, IAsnfrunkwendsi, IAsnpdrunkwendsi, sntdrunkwendmc, attdrunkmc

ANOVA<sup>a</sup>

gender	Model		Sum of Squares	df	Mean Square	F	Sig.
Male	1	Regression	262.356	15	17.490	7.849	.000 <sup>a</sup>
		Residual	289.671	130	2.228		
		Total	552.027	145			
Female	1	Regression	280.311	15	18.687	4.721	.000 <sup>b</sup>
		Residual	431.417	109	3.958		
		Total	711.728	124			

- a. Predictors: (Constant), IAsncdrunkwendsi, sportinginvolvementmc, IAattdrunkwendp, snfdrunkwendmc, sntdrunkwendmc, IAattdrunkwenc, IAattdrunksi, IAattdrunkwendf, snpdrunkwendmc, IAsnpdrunkwendsi, IAsnfrunkwendsi, IAattdrunkwendt, attdrunkmc, sncdrunkwendmc, IAsntdrunkwendsi
- b. Predictors: (Constant), IAsncdrunkwendsi, IAattdrunkwendf, snpdrunkwendmc, IAattdrunksi, IAattdrunkwendt, sportinginvolvementmc, IAsntdrunkwendsi, snfdrunkwendmc, sncdrunkwendmc, IAattdrunkwendp, IAattdrunkwenc, IAsnfrunkwendsi, IAsnpdrunkwendsi, sntdrunkwendmc, attdrunkmc
- c. Dependent Variable: intdrunkwendmcrev

Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
			B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
Male	1	(Constant)	-.844	.160		-4.020	.000						
		sportinginvolvementmc	.345	.111	.220	3.101	.002	.252	.262	.197	.801	1.249	
		attdrunkmc	.245	.093	.251	2.630	.010	.569	.225	.167	.442	2.264	
		IAattdrunksi	.135	.066	.189	2.059	.041	.342	.178	.131	.479	2.086	
		snpdrunkwendmc	.047	.021	.203	2.244	.027	.487	.193	.143	.495	2.021	
		snfdrunkwendmc	.021	.019	.088	1.132	.260	.396	.099	.072	.665	1.503	
		sntdrunkwendmc	.035	.023	.132	1.490	.139	.406	.130	.095	.511	1.957	
		sncdrunkwendmc	.028	.026	.116	1.099	.274	.350	.096	.070	.364	2.748	
		IAattdrunkwendp	.003	.009	.026	.293	.770	.225	.026	.019	.524	1.909	
		IAattdrunkwendf	.007	.011	.051	.618	.537	.181	.054	.039	.602	1.660	
		IAattdrunkwendt	.011	.011	.091	1.006	.316	.222	.088	.064	.493	2.029	
		IAattdrunkwenc	-.005	.009	-.051	-.615	.540	.182	-.054	-.039	.584	1.712	
		IAsnpdrunkwendsi	-.009	.017	-.050	-.517	.606	.223	-.045	-.033	.437	2.287	
		IAsnfrunkwendsi	-.004	.015	-.024	-.260	.795	.267	-.023	-.017	.481	2.079	
IAsntdrunkwendsi	.008	.021	.044	.412	.681	.305	.036	.026	.351	2.851			
IAsncdrunkwendsi	-.020	.016	-.136	-1.240	.217	.279	-.108	-.079	.337	2.984			
Female	1	(Constant)	.385	.259		1.489	.139						
		sportinginvolvementmc	-.012	.195	-.005	-.061	.951	-.005	-.006	-.005	.820	1.220	
		attdrunkmc	.560	.140	.465	3.989	.000	.521	.357	.297	.408	2.448	
		IAattdrunksi	.170	.119	.160	1.427	.156	-.136	.135	.106	.441	2.265	
		snpdrunkwendmc	.049	.031	.162	1.560	.122	.393	.148	.116	.513	1.948	
		snfdrunkwendmc	.051	.038	.154	1.350	.180	.406	.128	.101	.427	2.343	
		sntdrunkwendmc	-.026	.056	-.049	-.456	.649	.208	-.044	-.034	.486	2.060	
		sncdrunkwendmc	-.001	.045	-.002	-.022	.982	.003	-.002	-.002	.645	1.551	
		IAattdrunkwendp	.001	.015	.006	.074	.941	.022	.007	.006	.756	1.323	
		IAattdrunkwendf	.001	.014	.007	.089	.930	.020	.008	.007	.803	1.245	
		IAattdrunkwendt	.011	.025	.038	.447	.656	-.004	.043	.033	.755	1.324	
		IAattdrunkwenc	-.037	.022	-.147	-1.680	.096	-.153	-.159	-.125	.726	1.378	
		IAsnpdrunkwendsi	-.015	.027	-.057	-.543	.588	-.129	-.052	-.040	.502	1.991	
		IAsnfrunkwendsi	.008	.035	.026	.240	.811	-.105	.023	.018	.477	2.095	
IAsntdrunkwendsi	-.067	.042	-.168	-1.613	.110	-.148	-.153	-.120	.514	1.945			
IAsncdrunkwendsi	.047	.037	.106	1.274	.205	.044	.121	.095	.797	1.254			

- a. Dependent Variable: intdrunkwendmcrev

# Intention of getting drunk at age 18

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Male	1	.714 <sup>a</sup>	.510	.455	.74821
Female	1	.655 <sup>b</sup>	.429	.352	.74189

a. Predictors: (Constant), IAsncdrunk18si, sportinginvolvementmc, IAattdrunk18t, snpdrunk18mc, IAsnpdrunk18si, IAattdrunk18f, attdrunkmc, IAattdrunk18c, snfdrunk18mc, IAattdrunk18p, sntdrunk18mc, IAsnfdunk18si, IAattdrunk18p, sncdrunk18mc, IAsntdrunk18si

b. Predictors: (Constant), IAsncdrunk18si, IAattdrunk18t, IAsnfdunk18si, attdrunkmc, sncdrunk18mc, sportinginvolvementmc, IAattdrunk18f, sntdrunk18mc, IAattdrunk18c, IAattdrunk18p, IAsnpdrunk18si, IAattdrunk18p, snfdrunk18mc, IAsntdrunk18si, snpdrunk18mc

## ANOVA<sup>a</sup>

gender	Model		Sum of Squares	df	Mean Square	F	Sig.
Male	1	Regression	78.157	15	5.210	9.307	.000 <sup>a</sup>
		Residual	75.016	134	.560		
		Total	153.173	149			
Female	1	Regression	45.929	15	3.062	5.563	.000 <sup>b</sup>
		Residual	61.095	111	.550		
		Total	107.024	126			

a. Predictors: (Constant), IAsncdrunk18si, sportinginvolvementmc, IAattdrunk18t, snpdrunk18mc, IAsnpdrunk18si, IAattdrunk18f, attdrunkmc, IAattdrunk18c, snfdrunk18mc, IAattdrunk18p, sntdrunk18mc, IAsnfdunk18si, IAattdrunk18p, sncdrunk18mc, IAsntdrunk18si

b. Predictors: (Constant), IAsncdrunk18si, IAattdrunk18t, IAsnfdunk18si, attdrunkmc, sncdrunk18mc, sportinginvolvementmc, IAattdrunk18f, sntdrunk18mc, IAattdrunk18c, IAattdrunk18p, IAsnpdrunk18si, IAattdrunk18p, snfdrunk18mc, IAsntdrunk18si, snpdrunk18mc

c. Dependent Variable: intdrunk18mc

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
			B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
Male	1	(Constant)	-.067	.073		-.919	.360						
		sportinginvolvementmc	.126	.054	.157	2.319	.022	.215	.196	.140	.795	1.258	
		attdrunkmc	.218	.038	.427	5.780	.000	.584	.447	.349	.669	1.496	
		IAattdrunk18f	.039	.029	.105	1.339	.183	.278	.115	.081	.591	1.692	
		snpdrunk18mc	.011	.009	.108	1.241	.217	.441	.107	.075	.479	2.090	
		snfdrunk18mc	.036	.011	.262	3.334	.001	.466	.277	.202	.592	1.690	
		sntdrunk18mc	.007	.011	.051	.606	.546	.332	.052	.037	.510	1.959	
		sncdrunk18mc	-.015	.012	-.125	-1.321	.189	.229	-.113	-.080	.410	2.437	
		IAattdrunk18p	-.005	.005	-.084	-.997	.321	-.141	-.086	-.060	.515	1.941	
		IAattdrunk18f	.007	.006	.101	1.323	.188	.033	.114	.080	.633	1.580	
		IAattdrunk18t	-.010	.006	-.144	-1.722	.087	-.124	-.147	-.104	.521	1.919	
		IAattdrunk18c	-.002	.004	-.036	-.481	.631	-.007	-.042	-.029	.662	1.510	
		IAsnpdrunk18si	.004	.007	.051	.641	.523	.156	.055	.039	.574	1.743	
		IAsnfdunk18si	-.006	.007	-.063	-.788	.432	.258	-.068	-.048	.571	1.750	
IAsntdrunk18si	-.004	.009	-.040	-.412	.681	.133	-.036	-.025	.387	2.582			
IAsncdrunk18si	.007	.007	.098	1.025	.307	.198	.088	.062	.401	2.496			
Female	1	(Constant)	.013	.089		.152	.880						
		sportinginvolvementmc	-.032	.070	-.036	-.465	.643	-.002	-.044	-.033	.879	1.137	
		attdrunkmc	.157	.045	.340	3.467	.001	.508	.313	.249	.535	1.869	
		IAattdrunk18f	-.023	.038	-.057	-.606	.546	-.245	-.057	-.043	.589	1.696	
		snpdrunk18mc	.006	.010	.059	.545	.587	.394	.052	.039	.446	2.241	
		snfdrunk18mc	.032	.014	.244	2.275	.025	.462	.211	.163	.448	2.232	
		sntdrunk18mc	.033	.014	.237	2.319	.022	.245	.215	.166	.494	2.024	
		sncdrunk18mc	-.011	.015	-.062	-.748	.456	.117	-.071	-.054	.759	1.318	
		IAattdrunk18p	-.005	.005	-.093	-1.008	.315	-.139	-.095	-.072	.608	1.644	
		IAattdrunk18f	.004	.006	.058	.656	.513	-.057	.062	.047	.668	1.497	
		IAattdrunk18t	-.006	.006	-.085	-1.001	.319	-.047	-.095	-.072	.721	1.387	
		IAattdrunk18c	.003	.009	.026	.295	.769	-.084	.028	.021	.663	1.508	
		IAsnpdrunk18si	-.007	.009	-.078	-.745	.458	-.140	-.071	-.053	.469	2.133	
		IAsnfdunk18si	5.945E-05	.014	.000	.004	.997	-.122	.000	.000	.418	2.393	
IAsntdrunk18si	.027	.011	.240	2.336	.021	.091	.216	.167	.487	2.051			
IAsncdrunk18si	-.015	.015	-.080	-1.027	.307	-.148	-.097	-.074	.840	1.190			

a. Dependent Variable: intdrunk18mc

## **APPENDIX 10**

# **COEFFICIENTS FOR MULTIPLE REGRESSION MODEL WITH SPORTING PERFORMANCE**

# Likelihood of drinking tonight

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
			B	Std. Error	Beta			
Male	1	(Constant)	.151	.157		.959	.340	
		attdrinkmc	.011	.101	.011	.112	.911	
		snpdrink2nitemc	-.054	.020	-.285	-2.740	.007	
		snfdrink2nitemc	-.040	.020	-.191	-2.007	.048	
		sntdrink2nitemc	-.028	.029	-.119	-.992	.324	
		snccdrink2nitemc	-.038	.022	-.181	-1.738	.086	
		IAattdrink2nitep	-.014	.013	-.126	-1.013	.314	
		IAattdrink2nitef	.002	.016	.013	.116	.908	
		IAattdrink2nitet	-.015	.021	-.121	-.707	.481	
		IAattdrink2nitec	.012	.017	.095	.669	.505	
	2	(Constant)	.288	.180		1.602	.113	
		attdrinkmc	-.029	.105	-.028	-.275	.784	
		snpdrink2nitemc	-.048	.020	-.254	-2.375	.020	
		snfdrink2nitemc	-.043	.020	-.205	-2.148	.034	
		sntdrink2nitemc	-.022	.030	-.091	-.731	.467	
		snccdrink2nitemc	-.041	.022	-.196	-1.864	.066	
		IAattdrink2nitep	-.019	.014	-.173	-1.318	.191	
		IAattdrink2nitef	.004	.017	.030	.261	.795	
		IAattdrink2nitet	-.011	.023	-.092	-.499	.619	
IAattdrink2nitec		.006	.018	.053	.356	.722		
	impperfmc	-.139	.106	-.120	-1.313	.192		
	IAPERfattedrink	.001	.055	.002	.020	.984		
	IAPERfsnpdrink2nite	-.021	.012	-.190	-1.779	.079		
	IAPERfsnfdrink2nite	.019	.015	.133	1.227	.223		
	IAPERfsntdrink2nite	-.016	.013	-.127	-1.221	.225		
	IAPERfsnccdrink2nite	.003	.011	.032	.311	.757		
	Female	1	(Constant)	.522	.323		1.615	.115
			attdrinkmc	-.668	.188	-.642	-3.554	.001
			snpdrink2nitemc	-.033	.033	-.176	-1.012	.318
			snfdrink2nitemc	.037	.040	.195	.932	.357
sntdrink2nitemc			-.059	.062	-.174	-.950	.349	
snccdrink2nitemc			.060	.056	.166	1.062	.295	
IAattdrink2nitep			-.045	.023	-.346	-1.942	.060	
IAattdrink2nitef			-.002	.021	-.019	-.098	.923	
IAattdrink2nitet			.039	.034	.189	1.141	.261	
IAattdrink2nitec			.039	.054	.161	.723	.474	
2	(Constant)	.223	.341		.654	.518		
	attdrinkmc	-.689	.198	-.661	-3.484	.002		
	snpdrink2nitemc	-.001	.036	-.008	-.041	.967		
	snfdrink2nitemc	.016	.041	.083	.386	.702		
	sntdrink2nitemc	-.080	.068	-.236	-1.162	.254		
	snccdrink2nitemc	.086	.059	.237	1.454	.156		
	IAattdrink2nitep	-.028	.025	-.219	-1.114	.274		
	IAattdrink2nitef	-.005	.022	-.044	-.218	.829		
	IAattdrink2nitet	.031	.035	.150	.868	.392		
	IAattdrink2nitec	.044	.055	.183	.804	.428		
	impperfmc	.072	.151	.067	.475	.638		
	IAPERfattedrink	-.314	.155	-.329	-2.032	.051		
	IAPERfsnpdrink2nite	-.037	.029	-.243	-1.306	.201		
	IAPERfsnfdrink2nite	.069	.032	.343	2.145	.040		
IAPERfsntdrink2nite	.035	.045	.174	.774	.445			
IAPERfsnccdrink2nite	-.022	.033	-.137	-.683	.500			

a. Dependent Variable: intdrink2nitemc

# Likelihood of drinking this weekend

## Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
			B	Std. Error	Beta			
Male	1	(Constant)	.154	.204		.753	.453	
		attdrinkmc	-.311	.135	-.228	-2.299	.024	
		snpdrinkwendmc	-.048	.026	-.195	-1.843	.068	
		snfdrinkwendmc	-.068	.028	-.239	-2.424	.017	
		sntdrinkwendmc	-.038	.036	-.121	-1.055	.294	
		sncdrinkwendmc	.006	.028	.022	.217	.828	
		IAattdrinkwendp	.011	.018	.076	.601	.549	
		IAattdrinkwendf	-.014	.023	-.066	-.604	.547	
		IAattdrinkwendt	-.016	.025	-.096	-.637	.526	
	IAattdrinkwendc	.002	.021	.011	.090	.929		
	2	(Constant)	.146	.237		.616	.540	
		attdrinkmc	-.299	.144	-.219	-2.071	.041	
		snpdrinkwendmc	-.040	.027	-.162	-1.479	.143	
		snfdrinkwendmc	-.066	.028	-.233	-2.350	.021	
		sntdrinkwendmc	-.053	.037	-.171	-1.446	.152	
		sncdrinkwendmc	.015	.028	.054	.542	.589	
		IAattdrinkwendp	.004	.019	.028	.209	.835	
		IAattdrinkwendf	.006	.024	.028	.242	.809	
		IAattdrinkwendt	-.025	.026	-.149	-.939	.350	
IAattdrinkwendc		.006	.021	.039	.299	.766		
impperfmc	.081	.140	.053	.578	.565			
	IAperfattdrink	.130	.078	.179	1.667	.099		
	IAperfsnpdrinkwend	-.029	.018	-.191	-1.625	.108		
	IAperfsnfdrinkwend	.004	.020	.019	.181	.857		
	IAperfsntdrinkwend	.016	.018	.105	.876	.383		
	IAperfsncdrinkwend	-.012	.014	-.092	-.911	.365		
	Female	1	(Constant)	-.390	.443		-.881	.385
			attdrinkmc	-.306	.268	-.201	-1.141	.261
			snpdrinkwendmc	-.049	.045	-.179	-1.086	.285
			snfdrinkwendmc	-.084	.058	-.279	-1.454	.155
sntdrinkwendmc			-.115	.085	-.248	-1.348	.186	
sncdrinkwendmc			.131	.091	.252	1.430	.162	
IAattdrinkwendp			-.005	.029	-.026	-.165	.870	
IAattdrinkwendf			.041	.030	.261	1.358	.183	
IAattdrinkwendt			-.086	.048	-.274	-1.788	.082	
IAattdrinkwendc	-.034	.070	-.105	-.485	.630			
2	(Constant)	-.509	.531		-.957	.346		
	attdrinkmc	-.050	.324	-.033	-.154	.878		
	snpdrinkwendmc	-.062	.047	-.229	-1.329	.194		
	snfdrinkwendmc	-.099	.067	-.328	-1.473	.151		
	sntdrinkwendmc	-.054	.104	-.117	-.519	.607		
	sncdrinkwendmc	.066	.102	.127	.646	.523		
	IAattdrinkwendp	.026	.035	.143	.741	.464		
	IAattdrinkwendf	.015	.034	.093	.432	.669		
	IAattdrinkwendt	-.077	.053	-.247	-1.475	.151		
	IAattdrinkwendc	.004	.076	.012	.052	.959		
	impperfmc	-.171	.249	-.109	-.687	.497		
	IAperfattdrink	.067	.270	.048	.248	.806		
	IAperfsnpdrinkwend	-.056	.042	-.288	-1.327	.195		
	IAperfsnfdrinkwend	-.065	.055	-.205	-1.178	.248		
IAperfsntdrinkwend	.008	.062	.026	.125	.902			
IAperfsncdrinkwend	.007	.047	.029	.147	.885			

a. Dependent Variable: intdrinkwendmc

# Intention of drinking at age 18

Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
			B	Std. Error	Beta			
Male	1	(Constant)	-.053	.086		-.619	.538	
		attdrinkmc	.303	.056	.478	5.443	.000	
		snpdrink18mc	-.012	.013	-.107	-.974	.333	
		snfdrink18mc	.036	.014	.255	2.652	.009	
		sntdrink18mc	-.014	.013	-.099	-1.014	.313	
		sncdrink18mc	.027	.011	.241	2.548	.012	
		IAattdrink18p	-.008	.007	-.131	-1.032	.305	
		IAattdrink18f	.010	.011	.095	.933	.353	
		IAattdrink18t	-.005	.008	-.070	-.624	.534	
		IAattdrink18c	.005	.008	.066	.543	.588	
	2	(Constant)	-.028	.103		-.269	.788	
		attdrinkmc	.289	.060	.455	4.834	.000	
		snpdrink18mc	-.014	.013	-.127	-1.089	.279	
		snfdrink18mc	.038	.014	.271	2.664	.009	
		sntdrink18mc	-.011	.015	-.076	-.705	.483	
		sncdrink18mc	.028	.011	.247	2.459	.016	
		IAattdrink18p	-.009	.008	-.148	-1.101	.274	
		IAattdrink18f	.010	.011	.097	.880	.382	
		IAattdrink18t	-.004	.009	-.062	-.518	.606	
		IAattdrink18c	.004	.009	.053	.405	.687	
imppperfmc		-.046	.062	-.066	-.737	.463		
	IAperfattdrink	-.021	.033	-.063	-.641	.523		
	IAperfsnpdrink18	-.004	.008	-.059	-.563	.575		
	IAperfsnfdrink18	.000	.008	.005	.052	.958		
	IAperfsntdrink18	.004	.008	.062	.578	.565		
	IAperfsncdrink18	.001	.005	.025	.262	.794		
	Female	1	(Constant)	.007	.139		.051	.960
			attdrinkmc	.219	.092	.366	2.371	.023
			snpdrink18mc	-.007	.021	-.062	-.334	.740
			snfdrink18mc	.030	.024	.248	1.220	.230
			sntdrink18mc	.026	.027	.176	.954	.346
			sncdrink18mc	-.010	.024	-.060	-.418	.678
			IAattdrink18p	-.013	.012	-.206	-1.027	.311
			IAattdrink18f	.005	.013	.077	.367	.716
IAattdrink18t			.005	.016	.053	.303	.764	
IAattdrink18c			-.018	.020	-.168	-.878	.385	
2	(Constant)	.032	.156		.203	.841		
	attdrinkmc	.186	.100	.311	1.856	.073		
	snpdrink18mc	-.018	.024	-.159	-.732	.470		
	snfdrink18mc	.050	.029	.417	1.737	.092		
	sntdrink18mc	.007	.029	.050	.249	.805		
	sncdrink18mc	-.007	.029	-.044	-.253	.802		
	IAattdrink18p	-.021	.014	-.340	-1.481	.149		
	IAattdrink18f	.015	.016	.242	.968	.341		
	IAattdrink18t	.020	.018	.219	1.101	.279		
	IAattdrink18c	-.025	.023	-.241	-1.078	.289		
	imppperfmc	.166	.096	.270	1.721	.095		
	IAperfattdrink	.030	.101	.056	.301	.766		
	IAperfsnpdrink18	.032	.021	.432	1.516	.140		
	IAperfsnfdrink18	.000	.020	.003	.015	.988		
IAperfsntdrink18	-.044	.028	-.519	-1.606	.119			
IAperfsncdrink18	.010	.014	.128	.730	.471			

a. Dependent Variable: intdrink18mc

# Likelihood of getting drunk tonight

Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
			B	Std. Error	Beta			
Male	1	(Constant)	.416	.109		3.824	.000	
		attdrunkmc	-.008	.057	-.014	-.135	.893	
		snpdrunk2nitemc	.011	.017	.074	.623	.535	
		snfdrunk2nitemc	-.011	.013	-.080	-.839	.404	
		sntdrunk2nitemc	-.045	.018	-.294	-2.556	.012	
		sncdrunk2nitemc	-.036	.015	-.249	-2.396	.019	
		IAattdrunk2nitep	-.015	.008	-.229	-1.803	.075	
		IAattdrunk2nitef	-.010	.008	-.129	-1.274	.206	
		IAattdrunk2nitet	-.014	.008	-.196	-1.624	.108	
	IAattdrunk2nitec	.009	.007	.155	1.391	.168		
	2	(Constant)	.447	.119		3.744	.000	
		attdrunkmc	-.013	.056	-.023	-.237	.814	
		snpdrunk2nitemc	.012	.017	.085	.738	.463	
		snfdrunk2nitemc	-.019	.013	-.134	-1.437	.154	
		sntdrunk2nitemc	-.043	.017	-.278	-2.473	.015	
		sncdrunk2nitemc	-.035	.015	-.241	-2.391	.019	
		IAattdrunk2nitep	-.011	.008	-.162	-1.283	.203	
		IAattdrunk2nitef	-.012	.008	-.152	-1.508	.135	
		IAattdrunk2nitet	-.019	.009	-.268	-2.195	.031	
IAattdrunk2nitec		.009	.007	.154	1.408	.163		
	impperfmc	.036	.064	.046	.561	.576		
	IAPERFATDRUNK	.074	.031	.221	2.356	.021		
	IAPERFSNPDRUNK2NITE	-.008	.010	-.100	-.820	.415		
	IAPERFSNFDRUNK2NITE	.009	.010	.097	.970	.335		
	IAPERFSNTDRUNK2NITE	-.022	.010	-.258	-2.148	.035		
	IAPERFSNCDRUNK2NITE	.007	.008	.104	.906	.367		
	Female	1	(Constant)	.049	.229		.215	.831
			attdrunkmc	-.347	.113	-.479	-3.074	.004
			snpdrunk2nitemc	-.036	.032	-.194	-1.113	.273
			snfdrunk2nitemc	.015	.026	.101	.585	.562
sntdrunk2nitemc			.019	.042	.067	.444	.660	
sncdrunk2nitemc			.011	.056	.033	.205	.839	
IAattdrunk2nitep			-.023	.016	-.219	-1.479	.148	
IAattdrunk2nitef			-.002	.013	-.025	-.161	.873	
IAattdrunk2nitet			.045	.026	.261	1.740	.090	
IAattdrunk2nitec	.027	.032	.150	.846	.403			
2	(Constant)	-.112	.234		-.481	.634		
	attdrunkmc	-.357	.124	-.493	-2.890	.007		
	snpdrunk2nitemc	-.025	.032	-.135	-.773	.446		
	snfdrunk2nitemc	.026	.028	.175	.941	.354		
	sntdrunk2nitemc	-.007	.048	-.026	-.153	.880		
	sncdrunk2nitemc	-.022	.055	-.065	-.407	.687		
	IAattdrunk2nitep	-.012	.018	-.116	-.683	.500		
	IAattdrunk2nitef	-.002	.013	-.027	-.168	.868		
	IAattdrunk2nitet	.052	.030	.300	1.722	.095		
	IAattdrunk2nitec	.035	.032	.193	1.106	.278		
	impperfmc	.028	.132	.031	.213	.833		
	IAPERFATDRUNK	-.132	.102	-.262	-1.292	.206		
	IAPERFSNPDRUNK2NITE	-.005	.034	-.027	-.151	.881		
IAPERFSNFDRUNK2NITE	.038	.026	.261	1.441	.160			
IAPERFSNTDRUNK2NITE	.066	.038	.396	1.713	.097			
IAPERFSNCDRUNK2NITE	-.028	.027	-.200	-1.061	.297			

a. Dependent Variable: intdrunk2nitemc



# Likelihood of getting drunk this weekend

Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Male	1	(Constant)	.335	.202		1.654	.102
		attdrunkmc	-.289	.107	-.296	-2.709	.008
		snpdrunkwendmc	-.049	.028	-.201	-1.750	.084
		snfdrunkwendmc	-.044	.023	-.191	-1.949	.054
		sntdrunkwendmc	-.012	.029	-.047	-.414	.680
		sncdrunkwendmc	-.002	.025	-.008	-.081	.936
		IAattdrunkwendp	.003	.014	.027	.236	.814
		IAattdrunkwendf	-.013	.012	-.106	-1.075	.285
		IAattdrunkwendt	-.011	.015	-.088	-.706	.482
	IAattdrunkwendc	.005	.011	.046	.441	.660	
	2	(Constant)	.197	.233		.848	.399
		attdrunkmc	-.324	.110	-.332	-2.950	.004
		snpdrunkwendmc	-.038	.029	-.159	-1.334	.186
		snfdrunkwendmc	-.042	.023	-.182	-1.823	.072
		sntdrunkwendmc	-.019	.030	-.074	-.629	.531
		sncdrunkwendmc	-.003	.026	-.014	-.132	.895
		IAattdrunkwendp	.009	.014	.076	.626	.533
		IAattdrunkwendf	-.010	.013	-.078	-.769	.444
		IAattdrunkwendt	-.016	.016	-.131	-1.010	.316
IAattdrunkwendc		.005	.011	.047	.449	.654	
impperfmc	.142	.126	.102	1.121	.265		
IAperfattdrunk	.070	.064	.119	1.102	.274		
IAperfsnpdrunkwend	-.011	.017	-.072	-.605	.547		
IAperfsnfdrunkwend	.023	.016	.146	1.411	.162		
IAperfsntdrunkwend	.004	.015	.030	.248	.804		
IAperfsncdrunkwend	-.004	.014	-.034	-.284	.777		
Female	1	(Constant)	-.390	.370		-1.055	.298
		attdrunkmc	-.170	.181	-.138	-.938	.354
		snpdrunkwendmc	-.167	.056	-.550	-2.998	.005
		snfdrunkwendmc	-.010	.044	-.034	-.224	.824
		sntdrunkwendmc	-.039	.079	-.067	-.489	.627
		sncdrunkwendmc	.090	.094	.151	.953	.347
		IAattdrunkwendp	-.028	.028	-.167	-.994	.327
		IAattdrunkwendf	.003	.019	.023	.174	.863
		IAattdrunkwendt	-.031	.043	-.101	-.724	.474
	IAattdrunkwendc	.090	.050	.304	1.804	.079	
	2	(Constant)	-.324	.446		-.727	.473
		attdrunkmc	-.011	.187	-.009	-.062	.951
		snpdrunkwendmc	-.151	.055	-.497	-2.722	.010
		snfdrunkwendmc	-.055	.053	-.190	-1.038	.307
		sntdrunkwendmc	.020	.081	.036	.251	.803
		sncdrunkwendmc	.169	.104	.283	1.623	.114
		IAattdrunkwendp	-.023	.031	-.137	-.733	.469
		IAattdrunkwendf	-.012	.020	-.084	-.613	.544
		IAattdrunkwendt	-.101	.053	-.324	-1.924	.063
IAattdrunkwendc		.089	.055	.301	1.615	.116	
impperfmc	-.294	.226	-.184	-1.302	.202		
IAperfattdrunk	-.202	.145	-.237	-1.394	.173		
IAperfsnpdrunkwend	-.066	.048	-.245	-1.363	.182		
IAperfsnfdrunkwend	.007	.047	.026	.156	.877		
IAperfsntdrunkwend	.022	.067	.065	.327	.746		
IAperfsncdrunkwend	-.051	.048	-.219	-1.063	.296		

a. Dependent Variable: intrunkwendmc

# Intention of getting drunk at age 18

Coefficients<sup>a</sup>

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
			B	Std. Error	Beta			
Male	1	(Constant)	-.047	.083		-.568	.571	
		attdrunkmc	.232	.042	.454	5.571	.000	
		snpdrunk18mc	.011	.011	.098	.953	.343	
		snfdrunk18mc	.029	.011	.229	2.581	.011	
		sntdrunk18mc	.009	.013	.067	.731	.467	
		sncdrunk18mc	.003	.011	.023	.266	.791	
		IAattdrunk18p	-.013	.006	-.237	-2.206	.030	
		IAattdrunk18f	.007	.006	.094	1.110	.270	
		IAattdrunk18t	.002	.007	.032	.328	.743	
	IAattdrunk18c	.005	.005	.091	1.021	.310		
	2	(Constant)	.005	.097		.049	.961	
		attdrunkmc	.215	.043	.420	5.008	.000	
		snpdrunk18mc	.011	.011	.100	.934	.353	
		snfdrunk18mc	.031	.011	.246	2.749	.007	
		sntdrunk18mc	.008	.013	.058	.606	.546	
		sncdrunk18mc	.006	.011	.047	.530	.597	
		IAattdrunk18p	-.014	.006	-.261	-2.391	.019	
		IAattdrunk18f	.006	.006	.091	1.029	.306	
		IAattdrunk18t	.004	.007	.059	.596	.553	
IAattdrunk18c		.003	.005	.057	.639	.524		
imppermc		-.034	.058	-.048	-.580	.563		
	IAperfattdrunk	.006	.027	.018	.209	.835		
	IAperfsnpdrunk18	-.004	.006	-.064	-.628	.532		
	IAperfsnfdrunk18	.002	.007	.027	.286	.776		
	IAperfsntdrunk18	.017	.007	.236	2.306	.024		
	IAperfsncdrunk18	-.008	.006	-.142	-1.437	.154		
	Female	1	(Constant)	.168	.112		1.504	.141
			attdrunkmc	.255	.058	.535	4.389	.000
			snpdrunk18mc	.008	.014	.092	.597	.554
			snfdrunk18mc	.021	.016	.182	1.296	.203
sntdrunk18mc			.013	.020	.082	.659	.514	
sncdrunk18mc			.009	.023	.046	.370	.714	
IAattdrunk18p			-.012	.007	-.254	-1.674	.102	
IAattdrunk18f			.009	.008	.161	1.116	.271	
IAattdrunk18t			-.004	.010	-.054	-.438	.664	
IAattdrunk18c	-.005	.012	-.053	-.395	.695			
2	(Constant)	.152	.121		1.250	.220		
	attdrunkmc	.248	.065	.522	3.792	.001		
	snpdrunk18mc	.006	.015	.062	.372	.712		
	snfdrunk18mc	.023	.018	.206	1.285	.208		
	sntdrunk18mc	.020	.022	.125	.889	.381		
	sncdrunk18mc	.023	.028	.122	.810	.424		
	IAattdrunk18p	-.016	.008	-.334	-1.957	.059		
	IAattdrunk18f	.013	.009	.229	1.402	.171		
	IAattdrunk18t	-.006	.011	-.069	-.492	.626		
	IAattdrunk18c	-.005	.014	-.054	-.353	.727		
	imppermc	.048	.078	.077	.612	.545		
	IAperfattdrunk	-.001	.051	-.002	-.012	.991		
	IAperfsnpdrunk18	-.002	.014	-.026	-.130	.897		
IAperfsnfdrunk18	-.024	.016	-.254	-1.482	.148			
IAperfsntdrunk18	.020	.019	.233	1.088	.285			
IAperfsncdrunk18	-.010	.015	-.125	-.698	.490			

a. Dependent Variable: intdrunk18mc

## **APPENDIX 11**

# **COMPARISONS OF LIKELIHOODS/INTENTIONS OF ALCOHOL USE BY SPORTING LEVEL**

## ANOVA

gender			Sum of Squares	df	Mean Square	F	Sig.	
Male	intdrink2nitemc	Between Groups	9.512	3	3.171	1.100	.351	
		Within Groups	435.366	151	2.883			
		Total	444.877	154				
	intdrinkwendmc	Between Groups	15.689	3	5.230	1.062	.367	
		Within Groups	753.738	153	4.926			
		Total	769.427	156				
	intdrink18mc	Between Groups	2.374	3	.791	.763	.517	
		Within Groups	158.709	153	1.037			
		Total	161.083	156				
	intdrunk2nitemc	Between Groups	.708	3	.236	.158	.925	
		Within Groups	225.911	151	1.496			
		Total	226.619	154				
	intdrunkwendmc	Between Groups	2.609	3	.870	.228	.877	
		Within Groups	575.159	151	3.809			
		Total	577.768	154				
	intdrunk18mc	Between Groups	1.002	3	.334	.334	.801	
		Within Groups	154.093	154	1.001			
		Total	155.095	157				
	Female	intdrink2nitemc	Between Groups	2.885	3	.962	.374	.772
			Within Groups	321.487	125	2.572		
			Total	324.372	128			
intdrinkwendmc		Between Groups	5.733	3	1.911	.317	.813	
		Within Groups	759.044	126	6.024			
		Total	764.777	129				
intdrink18mc		Between Groups	4.448	3	1.483	1.657	.180	
		Within Groups	114.544	128	.895			
		Total	118.992	131				
intdrunk2nitemc		Between Groups	3.376	3	1.125	.479	.698	
		Within Groups	293.833	125	2.351			
		Total	297.209	128				
intdrunkwendmc		Between Groups	10.123	3	3.374	.580	.629	
		Within Groups	739.007	127	5.819			
		Total	749.130	130				
intdrunk18mc		Between Groups	1.843	3	.614	.733	.534	
		Within Groups	108.126	129	.838			
		Total	109.970	132				

## Homogeneous Subsets

### Likelihood of drinking tonight

gender=Male

Scheffe<sup>a,b</sup>

		Subset for alpha = .05
highest sporting level	N	1
represent country	14	-.4514
represent county, region or city	23	-.4452
represent sports club or school	77	.0551
no representation	41	.2176
Sig.		.566

Means for groups in homogeneous subsets are displayed.

- Uses Harmonic Mean Sample Size = 26.267.
- The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

gender=Female

Scheffe<sup>a,b</sup>

		Subset for alpha = .05
highest sporting level	N	1
represent sports club or school	57	-.1081
represent country	6	-.0467
no representation	55	.1927
represent county, region or city	11	.2109
Sig.		.965

Means for groups in homogeneous subsets are displayed.

- Uses Harmonic Mean Sample Size = 13.638.
- The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

## Likelihood of drinking this weekend

gender=Male

Scheffe<sup>a,b</sup>

		Subset for alpha = .05
highest sporting level	N	1
represent county, region or city	23	-.4200
represent country	14	.1514
represent sports club or school	78	.2467
no representation	42	.6038
Sig.		.425

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 26.396.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

gender=Female

Scheffe<sup>a,b</sup>

		Subset for alpha = .05
highest sporting level	N	1
represent sports club or school	57	-.4551
no representation	56	-.2593
represent county, region or city	11	.0345
represent country	6	.4133
Sig.		.836

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 13.653.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

# Intention of drinking at age 18

gender=Male

Scheffe<sup>a,b</sup>

		Subset for alpha = .05
highest sporting level	N	1
represent sports club or school	79	-.1692
no representation	42	-.1490
represent country	13	-.1069
represent county, region or city	23	.1874
Sig.		.668

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 25.499.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

gender=Female

Scheffe<sup>a,b</sup>

		Subset for alpha = .05
highest sporting level	N	1
represent country	6	-.5300
no representation	58	.0562
represent sports club or school	57	.2682
represent county, region or city	11	.3336
Sig.		.133

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 13.682.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

## Likelihood of getting drunk tonight

gender=Male

Scheffe<sup>a,b</sup>

		Subset for alpha = .05
highest sporting level	N	1
represent county, region or city	23	.0248
represent country	14	.0900
represent sports club or school	77	.0965
no representation	41	.2241
Sig.		.950

Means for groups in homogeneous subsets are displayed.

- Uses Harmonic Mean Sample Size = 26.267.
- The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

gender=Female

Scheffe<sup>a,b</sup>

		Subset for alpha = .05
highest sporting level	N	1
represent country	6	-.4100
represent sports club or school	57	-.2521
represent county, region or city	11	-.0464
no representation	55	.0627
Sig.		.885

Means for groups in homogeneous subsets are displayed.

- Uses Harmonic Mean Sample Size = 13.638.
- The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.



## Likelihood of getting drunk this weekend

gender=Male

Scheffe<sup>a,b</sup>

		Subset for alpha = .05
highest sporting level	N	1
represent county, region or city	23	.1513
represent sports club or school	77	.4094
no representation	41	.4185
represent country	14	.6886
Sig.		.802

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 26.267.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

gender=Female

Scheffe<sup>a,b</sup>

		Subset for alpha = .05
highest sporting level	N	1
represent sports club or school	58	-.6021
represent county, region or city	11	-.5127
no representation	56	-.4543
represent country	6	.7600
Sig.		.538

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 13.667.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

## Intention of getting drunk at age 18

### gender=Male

Scheffe<sup>a,b</sup>

highest sporting level	N	Subset for alpha = .05
represent sports club or school	79	-.1549
no representation	42	-.1314
represent county, region or city	24	-.0600
represent country	13	.1323
Sig.		.786

Means for groups in homogeneous subsets are displayed.

- Uses Harmonic Mean Sample Size = 25.797.
- The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

### gender=Female

Scheffe<sup>a,b</sup>

highest sporting level	N	Subset for alpha = .05
represent country	6	-.2267
no representation	58	.1124
represent sports club or school	58	.1469
represent county, region or city	11	.4400
Sig.		.309

Means for groups in homogeneous subsets are displayed.

- Uses Harmonic Mean Sample Size = 13.696.
- The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

## **APPENDIX 12**

# **HIERARCHICAL MULTIPLE REGRESSION MODEL WITH ADDITION OF AWARENESS**

# Likelihood of drinking tonight

## Model Summary

gender	Model	R	R Square	Adjusted R Square		R Square Change	F Change	Sig. F Change
Male	1	.569(a)	.324	.280	1.44079	.324	7.351	.000
	2	.648(b)	.420	.354	1.36448	.096	3.644	.002
	3	.670(c)	.449	.352	1.36712	.029	.927	.488
Female	1	.586(d)	.344	.291	1.33247	.344	6.576	.000
	2	.618(e)	.382	.296	1.32852	.039	1.112	.360
	3	.647(f)	.418	.290	1.33364	.036	.883	.523

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	-.098	.140		-.697	.487		
	attdrinkmc	-.045	.085	-.045	-.523	.602	.600	1.667
	snpdrink2nite mc	.069	.018	.363	3.875	.000	.503	1.988
	snfdrink2nite mc	.043	.023	.187	1.844	.068	.428	2.334
	sntdrink2nite mc	.023	.028	.096	.822	.413	.326	3.065
	sncdrink2nite mc	.002	.029	.010	.079	.937	.265	3.777
	lAattdrink2nite p	-.004	.009	-.042	-.444	.658	.502	1.990
	lAattdrink2nite f	-.017	.013	-.110	-1.246	.215	.564	1.772
	lAattdrink2nite t	.033	.015	.269	2.204	.029	.295	3.384
	lAattdrink2nite c	-.011	.015	-.088	-.738	.462	.313	3.198
	sportinginvolvementmc	.031	.124	.023	.250	.803	.522	1.915
	lAattdrinks	.157	.069	.217	2.292	.024	.491	2.035
	lAsnpdrink2nite esi	-.035	.015	-.254	-2.421	.017	.399	2.503
	lAsnfdrink2nite esi	-.029	.015	-.179	-1.858	.065	.473	2.115
	lAsntdrink2nite esi	.036	.018	.205	2.012	.046	.424	2.360
	lAsncdrink2nite esi	.010	.017	.073	.583	.561	.279	3.581
	awareness	.092	.083	.090	1.119	.265	.674	1.483
	lAwarenessAttdrink	.093	.051	.157	1.835	.069	.605	1.654
	lAwarenessS	.058	.068	.069	.862	.390	.683	1.464
	lAwarenesspdrink2nite	.004	.012	.037	.353	.724	.409	2.447
	lAwarenessfdrink2nite	.008	.013	.060	.604	.547	.452	2.213
	lAwarenessstdrink2nite	-.009	.017	-.060	-.492	.624	.300	3.332
	lAwarenesscdrink2nite	.006	.015	.051	.401	.689	.275	3.640

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	-.371	.167		-2.222	.029		
	attdrinkmc	.360	.111	.371	3.256	.002	.448	2.230
	snpdrink2nite mc	.047	.019	.245	2.413	.018	.562	1.779
	snfdrink2nite mc	.000	.025	.002	.019	.985	.438	2.284
	sntdrink2nite mc	-.029	.036	-.087	-.786	.433	.480	2.083
	sncdrink2nite mc	-.027	.037	-.078	-.724	.471	.496	2.016
	IAattdrink2nite p	.020	.013	.168	1.545	.126	.491	2.037
	IAattdrink2nite f	.011	.012	.093	.950	.344	.604	1.656
	IAattdrink2nite t	-.026	.019	-.136	-1.343	.182	.568	1.760
	IAattdrink2nite c	-.029	.018	-.181	-1.576	.118	.443	2.258
	sportinginvolvementmc	-.173	.152	-.111	-1.138	.258	.613	1.631
	IAattdrinks	-.183	.097	-.231	-1.881	.063	.385	2.600
	IASnpdrink2nite esi	.024	.019	.140	1.268	.208	.479	2.087
	IASnfdrink2nite esi	.007	.024	.030	.269	.788	.484	2.066
	IASntdrink2nite esi	-.032	.029	-.124	-1.104	.272	.464	2.157
	IASncdrink2nite esi	-.007	.035	-.024	-.211	.833	.463	2.158
	awareness	.147	.105	.149	1.401	.164	.512	1.952
	IAawarenessAttdrink	.127	.063	.247	2.005	.048	.383	2.610
	IAawarenessS	.100	.093	.141	1.072	.286	.337	2.970
	IAawarenesspdrink2nite	-.009	.012	-.076	-.733	.465	.543	1.840
	IAawarenessfdrink2nite	-.013	.016	-.093	-.835	.406	.465	2.150
	IAawarenessstdrink2nite	-.014	.026	-.056	-.535	.594	.532	1.879
	IAawarenesscdrink2nite	.007	.027	.026	.255	.800	.545	1.836

a Dependent Variable: drink2nitemcrev

# Likelihood of drinking this weekend

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.637(a)	.405	.367	1.74034	.405	10.596	.000
	2	.692(b)	.479	.421	1.66504	.074	3.158	.006
	3	.734(c)	.539	.459	1.60881	.060	2.362	.027
Female	1	.556(d)	.309	.254	2.10336	.309	5.567	.000
	2	.572(e)	.328	.233	2.13270	.019	.490	.815
	3	.648(f)	.420	.291	2.04936	.093	2.257	.036

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	-.431	.172		-2.499	.014		
	attdrinkmc	.174	.105	.135	1.658	.100	.547	1.828
	snpdrinkwendmc	.065	.023	.260	2.809	.006	.425	2.352
	snfdrinkwendmc	.096	.030	.316	3.173	.002	.365	2.738
	sntdrinkwendmc	.037	.034	.122	1.088	.279	.291	3.440
	sncdrinkwendmc	.005	.034	.017	.143	.886	.253	3.947
	IAattdrinkwendp	-.008	.013	-.061	-.645	.520	.409	2.445
	IAattdrinkwendf	.007	.015	.033	.436	.663	.631	1.584
	IAattdrinkwendt	.020	.016	.130	1.265	.208	.346	2.894
	IAattdrinkwendc	-.012	.016	-.075	-.750	.455	.362	2.761
	sportinginvolvementmc	.078	.147	.045	.531	.596	.512	1.954
	IAattdrinks	.226	.082	.241	2.764	.007	.479	2.089
	IASnpdrinkwendsi	-.028	.019	-.165	-1.474	.143	.290	3.445
	IASnfdrinkwendsi	-.002	.020	-.010	-.100	.921	.345	2.902
	IASntdrinkwendsi	.005	.022	.025	.239	.812	.344	2.905
	IASncdrinkwendsi	-.009	.020	-.054	-.469	.640	.273	3.668
	awareness	.224	.099	.169	2.270	.025	.653	1.532
	IAawarenessAttdrink	.201	.063	.261	3.217	.002	.552	1.811
	IAawarenessS	.121	.082	.112	1.482	.141	.641	1.560
	IAawarenesspdrinkwend	.002	.018	.011	.095	.925	.277	3.605
	IAawarenessfdrinkwend	-.027	.018	-.144	-1.480	.141	.384	2.603
	IAawarenesssdrinkwend	-.010	.021	-.052	-.449	.654	.267	3.744
	IAawarenesscdrinkwend	.000	.018	-.001	-.006	.995	.269	3.719

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	.177	.265		.670	.504		
	attdrinkmc	.446	.168	.298	2.660	.009	.467	2.139
	snpdrinkwend mc	.044	.027	.161	1.664	.099	.625	1.600
	snfdrinkwend mc	.074	.042	.213	1.756	.082	.399	2.504
	sntdrinkwend mc	.009	.058	.018	.153	.879	.403	2.484
	sncdrinkwend mc	-.027	.055	-.051	-.488	.626	.530	1.888
	IAattdrinkwen dp	-.019	.018	-.110	-1.040	.301	.522	1.916
	IAattdrinkwen df	.006	.020	.034	.327	.744	.551	1.814
	IAattdrinkwen dt	.031	.030	.109	1.063	.290	.554	1.806
	IAattdrinkwen dc	-.043	.028	-.176	-1.529	.129	.443	2.259
	sportinginvolv ementmc	-.133	.232	-.056	-.574	.567	.618	1.618
	IAattdrinks i	-.227	.147	-.187	-1.547	.125	.401	2.492
	IASnpdrinkwen dsi	.027	.026	.112	1.028	.307	.497	2.011
	IASnfdrinkwen dsi	.050	.041	.141	1.217	.226	.438	2.283
	IASntdrinkwen dsi	-.096	.048	-.254	-2.007	.047	.366	2.731
	IASncdrinkwen dsi	-.095	.051	-.197	-1.851	.067	.518	1.931
	awareness	-.074	.162	-.049	-.458	.648	.506	1.975
	IAawarenessA ttdrink	.215	.097	.273	2.210	.029	.385	2.597
	IAawarenessS 	.004	.145	.004	.027	.978	.328	3.045
	IAawarenessp drinkwend	-.039	.019	-.201	-2.026	.045	.593	1.687
	IAawarenessf drinkwend	-.044	.032	-.161	-1.372	.173	.424	2.359
	IAawarenesst drinkwend	.048	.038	.129	1.255	.213	.558	1.792
	IAawarenessc drinkwend	.094	.044	.219	2.124	.036	.549	1.823

a Dependent Variable: drinkwendmcrev

# Intention of drinking at age 18

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.556(a)	.309	.265	1.87511	.309	6.972	.000
	2	.616(b)	.379	.309	1.81770	.069	2.497	.025
	3	.671(c)	.450	.355	1.75629	.072	2.362	.027
Female	1	.474(d)	.225	.163	2.21230	.225	3.671	.000
	2	.490(e)	.240	.135	2.25002	.016	.368	.898
	3	.538(f)	.290	.135	2.24970	.049	1.004	.433

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	.297	.191		1.557	.122		
	attdrinkmc	-.399	.108	-.311	-3.704	.000	.615	1.625
	snpdrink18mc	.007	.027	.028	.275	.784	.416	2.404
	snfdrink18mc	-.085	.034	-.258	-2.481	.014	.400	2.498
	sntdrink18mc	-.063	.035	-.208	-1.790	.076	.319	3.132
	sncdrink18mc	.040	.035	.155	1.164	.247	.244	4.106
	IAattdrink18p	.008	.013	.061	.622	.535	.444	2.254
	IAattdrink18f	.002	.019	.011	.127	.899	.609	1.643
	IAattdrink18t	-.019	.015	-.120	-1.254	.212	.473	2.114
	IAattdrink18c	-.002	.014	-.015	-.169	.866	.519	1.927
	sportinginvolvementmc	-.247	.159	-.142	-1.557	.122	.522	1.917
	IAattdrinks	-.190	.087	-.202	-2.184	.031	.506	1.975
	IASnpdrink18si	-.002	.019	-.008	-.092	.927	.511	1.956
	IASnfdrink18si	.019	.021	.094	.942	.348	.438	2.286
	IASntdrink18si	.008	.019	.039	.395	.693	.456	2.195
	IASncdrink18si	-.004	.018	-.028	-.232	.817	.303	3.297
	awareness	-.117	.106	-.089	-1.111	.269	.676	1.480
	IAawareness Attdrink	-.214	.067	-.277	-3.177	.002	.569	1.758
	IAawareness SI	-.070	.088	-.065	-.794	.429	.655	1.526
	IAawareness pdrink18	.033	.016	.215	2.011	.046	.379	2.635
IAawarenessf drink18	.011	.020	.055	.533	.595	.404	2.475	
IAawarenessst drink18	.022	.021	.118	1.038	.301	.334	2.993	
IAawarenessc drink18	-.021	.017	-.144	-1.208	.229	.306	3.270	



gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	-.102	.284		-.361	.719		
	attdrinkmc	-.652	.174	-.438	-3.752	.000	.517	1.934
	snpdrink18mc	.008	.037	.027	.230	.819	.501	1.996
	snfdrink18mc	-.010	.054	-.025	-.179	.858	.358	2.791
	sntdrink18mc	-.033	.046	-.093	-.729	.467	.428	2.334
	sncdrink18mc	-.003	.048	-.006	-.054	.957	.624	1.602
	IAattdrink18p	.005	.020	.029	.241	.810	.502	1.991
	IAattdrink18f	-.004	.027	-.018	-.137	.892	.395	2.531
	IAattdrink18t	.013	.021	.063	.600	.550	.644	1.553
	IAattdrink18c	.031	.030	.126	1.039	.301	.480	2.081
	sportinginvolvementmc	-.082	.243	-.035	-.338	.736	.672	1.489
	IAattdrinks	.120	.160	.099	.748	.456	.404	2.477
	IASnpdrink18si	.005	.033	.018	.136	.892	.426	2.347
	IASnfdrink18si	-.056	.055	-.159	-1.031	.305	.297	3.365
	IASntdrink18si	.045	.038	.159	1.175	.243	.382	2.616
	IASncdrink18si	.064	.047	.134	1.368	.174	.731	1.368
	awareness	-.011	.176	-.007	-.062	.951	.513	1.949
	IAawareness	-.199	.106	-.251	-1.869	.065	.388	2.574
	Attdrink	-.104	.166	-.096	-.629	.531	.302	3.310
	IAawareness							
	pdrink18	.008	.023	.037	.336	.738	.569	1.758
	IAawarenessf							
	drink18	.049	.034	.191	1.465	.146	.413	2.424
IAawarenesst								
drink18	.010	.028	.040	.370	.713	.594	1.683	
IAawarenessc								
drink18	-.055	.034	-.160	-1.615	.109	.720	1.388	

a Dependent Variable: intdrinkwendmc

# Likelihood of getting drunk tonight

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.615(a)	.378	.337	.94210	.378	9.196	.000
	2	.654(b)	.427	.361	.92474	.049	1.859	.093
	3	.674(c)	.455	.357	.92770	.027	.882	.523
Female	1	.409(d)	.167	.100	1.45263	.167	2.498	.012
	2	.490(e)	.240	.132	1.42656	.073	1.688	.131
	3	.523(f)	.274	.113	1.44254	.034	.666	.700

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	-.267	.101		-2.649	.009		
	attdrunkmc	.031	.050	.055	.629	.531	.590	1.696
	snpdrunk2nite mc	.031	.017	.204	1.788	.076	.340	2.944
	snfdrunk2nite mc	.003	.015	.024	.230	.818	.425	2.355
	sntdrunk2nite mc	.035	.022	.218	1.601	.112	.238	4.197
	sncdrunk2nite mc	.012	.020	.078	.600	.550	.264	3.790
	IAattdrunk2nit ep	.018	.007	.267	2.388	.018	.355	2.816
	IAattdrunk2nit ef	.005	.007	.066	.785	.434	.621	1.611
	IAattdrunk2nit et	.015	.008	.205	1.956	.053	.403	2.479
	IAattdrunk2nit ec	-.009	.006	-.143	-1.500	.136	.491	2.039
	sportinginvolvementmc	.040	.079	.043	.509	.612	.613	1.631
	IAattdrunksi	-.016	.045	-.037	-.343	.732	.384	2.602
	IASnpdrunk2nitesi	-.032	.013	-.324	-2.464	.015	.256	3.913
	IASnfdrunk2nitesi	-.002	.012	-.014	-.136	.892	.394	2.540
	IASntdrunk2nitesi	.017	.014	.141	1.243	.216	.342	2.922
	IASncdrunk2nitesi	.014	.013	.154	1.131	.260	.239	4.186
	awareness	.090	.055	.129	1.642	.103	.718	1.394
	IAawarenessAttdrunk	.033	.029	.105	1.138	.257	.519	1.928
	IAawarenessS	-.030	.046	-.052	-.665	.507	.715	1.398
	IAawarenesspdrunk2nite	-.001	.011	-.006	-.047	.963	.280	3.574
	IAawarenessfdrunk2nite	.003	.009	.029	.285	.776	.431	2.318
	IAawarenesstdrunk2nite	-.007	.012	-.073	-.561	.576	.262	3.812
	IAawarenesscdrunk2nite	.008	.010	.095	.789	.431	.308	3.252

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	-.114	.188		-.607	.545		
	attdrunkmc	.279	.097	.359	2.875	.005	.469	2.131
	snpdrunk2nite	-.012	.030	-.054	-.385	.701	.378	2.643
	mc							
	snfdrunk2nite	.011	.028	.055	.388	.699	.361	2.767
	mc							
	sntdrunk2nite	-.016	.037	-.052	-.433	.666	.510	1.959
	mc							
	sncdrunk2nite	-.023	.037	-.071	-.619	.537	.556	1.800
	mc							
	IAattdrunk2nit	.007	.012	.064	.607	.545	.653	1.530
	ep							
	IAattdrunk2nit	.001	.010	.008	.081	.935	.744	1.344
	ef							
	IAattdrunk2nit	-.025	.019	-.138	-1.309	.194	.662	1.512
	et							
	IAattdrunk2nit	-.013	.022	-.068	-.586	.559	.552	1.810
	ec							
	sportinginvolve	-.264	.166	-.175	-1.587	.116	.602	1.660
	mentmc							
	IAattdrunksi	.035	.084	.053	.422	.674	.472	2.118
	IAsnpdrunk2nit	-.040	.026	-.214	-1.533	.128	.377	2.651
	tes							
	IAsnfdrunk2nit	-.036	.025	-.179	-1.445	.152	.478	2.092
	esi							
	IASntdrunk2nit	.018	.028	.075	.651	.516	.555	1.801
	esi							
	IASncdrunk2nit	.025	.030	.088	.837	.405	.668	1.496
tes								
awareness	.071	.107	.075	.666	.507	.580	1.725	
IAawarenessA	.045	.050	.104	.911	.365	.561	1.781	
ttdrunk								
IAawarenessS	.038	.092	.056	.414	.680	.407	2.458	
l								
IAawarenessp	-.016	.016	-.110	-.978	.331	.581	1.720	
drunk2nite								
IAawarenessf	.013	.016	.095	.764	.447	.471	2.125	
drunk2nite								
IAawarenessst	.032	.026	.141	1.254	.213	.580	1.723	
drunk2nite								
IAawarenesssc	-.028	.030	-.114	-.916	.362	.476	2.101	
drunk2nite								

a Dependent Variable: drunk2nitemcrev

# Likelihood of getting drunk this weekend

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.649(a)	.421	.382	1.54125	.421	10.837	.000
	2	.689(b)	.475	.414	1.50159	.054	2.195	.048
	3	.714(c)	.510	.421	1.49192	.035	1.238	.287
Female	1	.605(d)	.366	.316	1.96872	.366	7.325	.000
	2	.629(e)	.396	.312	1.97552	.029	.869	.520
	3	.668(f)	.446	.326	1.95510	.051	1.324	.247

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	-.646	.177		-3.640	.000		
	attdrunkmc	.241	.097	.247	2.492	.014	.411	2.432
	snpdrunkwendmc	.049	.023	.209	2.122	.036	.418	2.394
	snfdrunkwendmc	.025	.023	.103	1.117	.266	.472	2.118
	sntdrunkwendmc	.026	.031	.099	.837	.404	.287	3.485
	sncdrunkwendmc	.037	.030	.151	1.226	.223	.268	3.736
	lAattdrunkwendp	.006	.010	.054	.592	.555	.486	2.056
	lAattdrunkwendf	.005	.011	.037	.449	.654	.597	1.675
	lAattdrunkwendt	.007	.012	.054	.574	.567	.461	2.171
	lAattdrunkwendc	-.006	.009	-.056	-.664	.508	.560	1.786
	sportinginvolvementmc	.233	.127	.146	1.826	.070	.633	1.579
	lAattdrunksi	.143	.081	.198	1.778	.078	.326	3.067
	lAsnpdrunkwendsi	-.008	.021	-.046	-.403	.687	.305	3.276
	lAsnfdrunkwendsi	-.003	.018	-.015	-.145	.885	.361	2.772
	lAsntdrunkwendsi	.005	.022	.028	.248	.805	.308	3.246
	lAsncdrunkwendsi	-.031	.019	-.204	-1.642	.103	.263	3.809
	awareness	.197	.087	.166	2.268	.025	.755	1.325
	lAawarenessAttdrunk	.005	.051	.009	.090	.928	.443	2.258
	lAawarenessS	.027	.072	.027	.369	.713	.732	1.366
	lAawarenesspdrunkwend	.004	.016	.030	.264	.792	.321	3.115
	lAawarenessfdrunkwend	-.008	.013	-.058	-.620	.536	.469	2.134
	lAawarenessstdrunkwend	.004	.020	.024	.193	.847	.261	3.836
	lAawarenesscdrunkwend	.011	.016	.080	.668	.505	.284	3.520

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	.480	.262		1.830	.070		
	attdrunkmc	.567	.142	.475	3.998	.000	.388	2.575
	snpdrunkwend mc	.061	.032	.206	1.906	.060	.470	2.126
	snfdrunkwend mc	.034	.040	.104	.859	.393	.373	2.677
	sntdrunkwend mc	-.019	.058	-.037	-.338	.736	.450	2.224
	sncdrunkwend mc	-.010	.046	-.021	-.222	.824	.598	1.673
	IAattdrunkwen dp	.001	.016	.007	.079	.937	.627	1.595
	IAattdrunkwen df	.002	.014	.009	.111	.912	.755	1.325
	IAattdrunkwen dt	.015	.025	.054	.616	.539	.725	1.379
	IAattdrunkwen dc	-.040	.023	-.159	-1.752	.083	.666	1.500
	sportinginvolv ementmc	.105	.218	.045	.480	.632	.637	1.571
	IAattdrunksi	.115	.125	.110	.923	.358	.389	2.571
	IAasnpdrunkwe ndsi	-.003	.029	-.011	-.099	.921	.413	2.420
	IAasndrunkwen dsi	.010	.036	.030	.273	.785	.441	2.268
	IAasntdrunkwen dsi	-.068	.042	-.171	-1.600	.113	.482	2.074
	IAasncdrunkwe ndsi	.042	.039	.095	1.087	.280	.715	1.400
	awareness	.191	.151	.130	1.263	.210	.519	1.925
	IAawarenessA ttdrunk	.122	.070	.181	1.735	.086	.503	1.990
	IAawarenessS 	.209	.131	.195	1.601	.112	.368	2.717
	IAawarenessp drunkwend	-.007	.018	-.034	-.359	.720	.597	1.674
	IAawarenessfd runkwend	-.043	.024	-.185	-1.824	.071	.534	1.871
	IAawarenessstd runkwend	.017	.038	.042	.433	.666	.589	1.698
	IAawarenessc drunkwend	.033	.036	.088	.911	.364	.585	1.708

a Dependent Variable: drunkwendmcrev

# Intention of getting drunk at age 18

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.561(a)	.315	.270	1.87481	.315	7.088	.000
	2	.602(b)	.363	.291	1.84815	.048	1.673	.132
	3	.632(c)	.400	.295	1.84306	.037	1.105	.364
Female	1	.571(d)	.327	.273	2.06976	.327	6.089	.000
	2	.612(e)	.374	.287	2.05023	.048	1.361	.237
	3	.625(f)	.391	.256	2.09310	.016	.380	.912

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	.310	.203		1.525	.130		
	attdrunkmc	-.404	.100	-.366	-4.051	.000	.583	1.716
	snpdrunk18mc	.000	.025	.001	.011	.991	.391	2.556
	snfdrunk18mc	-.071	.030	-.243	-2.361	.020	.450	2.223
	sntdrunk18mc	-.075	.038	-.258	-1.995	.048	.285	3.515
	sncdrunk18mc	.053	.034	.199	1.539	.126	.286	3.491
	IAattdrunk18p	-.007	.011	-.060	-.614	.540	.501	1.998
	IAattdrunk18f	.004	.015	.025	.273	.785	.588	1.701
	IAattdrunk18t	-.020	.014	-.137	-1.398	.165	.496	2.016
	IAattdrunk18c	.011	.011	.090	1.040	.300	.633	1.581
	sportinginvolvementmc	-.036	.162	-.020	-.223	.824	.564	1.775
	IAattdrunksi	-.093	.090	-.114	-1.023	.308	.382	2.620
	IASnpdrunk18si	.004	.019	.021	.200	.841	.436	2.292
	IASnfdrunk18si	.006	.022	.028	.259	.796	.399	2.508
	IASntdrunk18si	.030	.023	.147	1.270	.206	.356	2.805
	IASncdrunk18si	-.018	.021	-.109	-.866	.388	.300	3.332
	awareness	-.129	.110	-.097	-1.168	.245	.688	1.453
	IAawareness Attdrunk	-.048	.056	-.081	-.871	.385	.556	1.798
	IAawareness SI	-.119	.091	-.108	-1.307	.194	.700	1.428
	IAawareness pdrunk18	.009	.015	.067	.600	.549	.381	2.627
	IAawarenessf drunk18	.016	.020	.095	.842	.401	.375	2.669
	IAawarenessst drunk18	.007	.022	.037	.302	.763	.312	3.204
	IAawarenesssc drunk18	-.011	.018	-.072	-.612	.542	.342	2.927

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	-.125	.273		-.458	.648		
	attdrunkmc	-.732	.136	-.594	-5.381	.000	.501	1.997
	snpdrunk18mc	.007	.032	.026	.204	.839	.375	2.665
	snfdrunk18mc	-.015	.047	-.042	-.314	.754	.334	2.996
	sntdrunk18mc	-.049	.042	-.133	-1.165	.247	.466	2.147
	sncdrunk18mc	.018	.045	.037	.394	.695	.682	1.467
	IAattdrunk18p	-.001	.015	-.009	-.083	.934	.509	1.966
	IAattdrunk18f	.005	.018	.031	.296	.768	.562	1.779
	IAattdrunk18t	.008	.018	.041	.425	.672	.663	1.509
	IAattdrunk18c	.005	.026	.019	.193	.848	.609	1.642
	sportinginvolvementmc	.086	.233	.036	.371	.711	.640	1.563
	IAattdrunksi	-.189	.121	-.178	-1.567	.120	.472	2.120
	IASnpdrunk18si	.030	.029	.133	1.049	.297	.379	2.637
	IASnfd drunk18si	-.037	.045	-.112	-.820	.414	.326	3.067
	IASntdrunk18si	.031	.034	.106	.893	.374	.429	2.333
	IASncdrunk18si	.037	.043	.076	.865	.389	.798	1.253
	awareness	-.088	.172	-.058	-.512	.610	.471	2.125
	IAawareness Attdrunk	-.040	.075	-.057	-.529	.598	.526	1.902
	IAawareness SI	-.041	.145	-.038	-.283	.778	.341	2.933
	IAawareness pdrunk18	-.012	.019	-.074	-.656	.513	.477	2.095
IAawarenessf drunk18	.032	.025	.141	1.270	.207	.498	2.009	
IAawarenessst drunk18	.006	.027	.022	.215	.830	.581	1.721	
IAawarenessc drunk18	-.020	.033	-.054	-.610	.543	.775	1.290	

a Dependent Variable: intdrinkwendmc

## **APPENDIX 13**

# **HIERARCHICAL MULTIPLE REGRESSION MODEL WITH ADDITION OF KNOWLEDGE**



# Likelihood of drinking tonight

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.571(a)	.326	.282	1.43206	.326	7.516	.000
	2	.646(b)	.417	.352	1.36101	.091	3.500	.003
	3	.693(c)	.480	.390	1.32025	.063	2.200	.038
Female	1	.584(d)	.341	.289	1.33138	.341	6.552	.000
	2	.616(e)	.380	.293	1.32723	.039	1.119	.356
	3	.630(f)	.397	.265	1.35342	.017	.409	.895

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	-.171	.133		-1.291	.199		
	attdrinkmc	-.046	.087	-.047	-.531	.596	.526	1.902
	snpdrink2nite mc	.063	.016	.338	3.884	.000	.541	1.848
	snfdrink2nitem c	.049	.020	.214	2.427	.017	.526	1.901
	sntdrink2nitem c	-.001	.023	-.002	-.022	.983	.435	2.300
	sncdrink2nite mc	.030	.024	.135	1.245	.215	.349	2.864
	IAattdrink2nite p	-.009	.009	-.090	-.994	.322	.497	2.012
	IAattdrink2nitef	-.012	.012	-.079	-.959	.340	.601	1.664
	IAattdrink2nitet	.027	.014	.215	1.880	.062	.314	3.184
	IAattdrink2nite c	.003	.015	.023	.204	.838	.322	3.108
	sportinginvolvementmc	.197	.104	.148	1.886	.062	.667	1.499
	IAattdrinks	.218	.069	.302	3.173	.002	.453	2.208
	IAsnpdrink2nite esi	-.017	.012	-.126	-1.417	.159	.516	1.939
	IASnfdrink2nite si	-.030	.013	-.192	-2.211	.029	.541	1.850
	IASntdrink2nite si	.036	.017	.208	2.107	.037	.422	2.370
	IASncdrink2nite esi	.001	.014	.010	.098	.922	.361	2.771
	actual_knowledge mc	.069	.034	.151	2.015	.046	.733	1.365
	IAknowledgetdrink	.010	.021	.043	.486	.628	.516	1.937
	IAknowledgesi	-.054	.028	-.154	-1.906	.059	.625	1.601
	IAknowledges npdrink2nite	.006	.005	.127	1.321	.189	.442	2.262
	IAknowledges nfdrink2nite	.002	.006	.039	.426	.671	.490	2.039
	IAknowledges ntdrink2nite	-.001	.006	-.013	-.121	.904	.368	2.717
	IAknowledges ncdrink2nite	-.016	.006	-.258	-2.919	.004	.524	1.908

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	-.244	.178		-1.369	.174		
	attdrinkmc	.424	.122	.437	3.488	.001	.381	2.622
	snpdrink2nite mc	.044	.020	.232	2.254	.026	.565	1.769
	snfdrink2nitem c	.013	.025	.058	.497	.620	.442	2.261
	sntdrink2nitem c	-.048	.036	-.144	-1.341	.183	.518	1.931
	sncdrink2nite mc	-.034	.036	-.101	-.953	.343	.529	1.892
	IAattdrink2nite p	.017	.012	.144	1.379	.171	.550	1.817
	IAattdrink2nitef	.009	.012	.077	.804	.424	.646	1.548
	IAattdrink2nitet	-.025	.019	-.132	-1.330	.187	.607	1.648
	IAattdrink2nite c	-.023	.019	-.144	-1.199	.233	.416	2.407
	sportinginvolve mentmc	-.092	.149	-.059	-.619	.537	.656	1.524
	IAattdrinks si	-.062	.090	-.078	-.687	.494	.464	2.156
	IASnpdrink2nit esi	.015	.018	.090	.844	.401	.527	1.897
	IASnfdrink2nite si	.006	.024	.028	.256	.798	.497	2.010
	IASntdrink2nite si	-.045	.026	-.175	-1.767	.080	.612	1.635
	IASncdrink2nit esi	.001	.033	.004	.037	.970	.545	1.836
	actual_knowledge gemc	.042	.043	.094	.960	.339	.623	1.606
	IAknowledg eatdrink	.026	.027	.102	.982	.329	.555	1.801
	IAknowledges si	.042	.040	.108	1.047	.298	.563	1.777
	IAknowledges npdrink2nite	.001	.005	.011	.131	.896	.785	1.274
	IAknowledges nfdrink2nite	-.001	.005	-.017	-.188	.852	.705	1.419
	IAknowledges ntdrink2nite	-.004	.009	-.043	-.475	.636	.721	1.386
	IAknowledges ncdrink2nite	-.001	.009	-.012	-.134	.893	.770	1.299

a Dependent Variable: drink2nitemcrev

# Likelihood of drinking this weekend

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.638(a)	.407	.369	1.73002	.407	10.818	.000
	2	.690(b)	.476	.418	1.66167	.069	2.987	.009
	3	.707(c)	.500	.415	1.66621	.024	.894	.513
Female	1	.556(d)	.309	.254	2.10793	.309	5.620	.000
	2	.572(e)	.328	.233	2.13694	.019	.492	.813
	3	.594(f)	.353	.211	2.16818	.025	.563	.784

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	-.455	.174		-2.610	.010		
	attdrinkmc	.195	.116	.152	1.679	.096	.474	2.109
	snpdrinkwendmc	.059	.022	.238	2.619	.010	.468	2.136
	snfdrinkwendmc	.104	.027	.346	3.844	.000	.479	2.087
	sntdrinkwendmc	.032	.029	.105	1.104	.271	.430	2.325
	sncdrinkwendmc	.003	.030	.012	.111	.912	.344	2.905
	IAattdrinkwendp	-.012	.013	-.086	-.892	.374	.416	2.401
	IAattdrinkwendf	.013	.015	.065	.861	.391	.673	1.487
	IAattdrinkwendt	.022	.017	.139	1.316	.190	.348	2.871
	IAattdrinkwendc	-.010	.017	-.065	-.609	.544	.345	2.897
	sportinginvolvementmc	.338	.130	.197	2.603	.010	.676	1.480
	IAattdrinks	.300	.088	.319	3.410	.001	.442	2.265
	IASnpdrinkwendsi	-.017	.017	-.099	-1.003	.318	.397	2.517
	IASnfdrinkwendsi	-.021	.019	-.108	-1.111	.269	.413	2.421
	IASntdrinkwendsi	.003	.022	.015	.154	.878	.388	2.578
	IASncdrinkwendsi	-.009	.018	-.051	-.480	.632	.344	2.911
	actual_knowledgegmc	.028	.046	.047	.601	.549	.634	1.576
	IAknowledgettdrink	.020	.027	.066	.758	.450	.511	1.955
	IAknowledgesi	-.020	.036	-.045	-.561	.575	.606	1.649
	IAknowledgesnpdrinkwend	.003	.006	.048	.500	.618	.426	2.348
	IAknowledgesnfdrinkwend	-.010	.007	-.130	-1.356	.177	.424	2.360
	IAknowledgesntdrinkwend	.002	.008	.028	.265	.791	.353	2.832
	IAknowledgesncdrinkwend	-.010	.007	-.132	-1.452	.149	.471	2.122

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	.220	.292		.756	.451		
	attdrinkmc	.296	.203	.196	1.456	.149	.356	2.808
	snpdrinkwendmc	.053	.028	.192	1.885	.062	.624	1.602
	snfdrinkwendmc	.087	.041	.247	2.122	.036	.477	2.095
	sntdrinkwendmc	.014	.059	.029	.236	.814	.432	2.313
	sncdrinkwendmc	-.014	.059	-.027	-.239	.812	.512	1.951
	IAattdrinkwendp	-.017	.019	-.098	-.910	.365	.554	1.805
	IAattdrinkwendf	-.001	.021	-.008	-.071	.943	.560	1.785
	IAattdrinkwendt	.016	.031	.056	.525	.601	.568	1.761
	IAattdrinkwendc	-.026	.030	-.106	-.868	.388	.437	2.289
	sportinginvolvementmc	-.012	.241	-.005	-.048	.962	.642	1.558
	IAattdrinksid	-.144	.148	-.118	-.974	.333	.441	2.267
	IASnpdrinkwendsi	.017	.026	.068	.646	.520	.586	1.708
	IASnfdrinkwendsi	.041	.040	.117	1.034	.304	.508	1.967
	IASntdrinkwendsi	-.071	.043	-.187	-1.650	.102	.505	1.982
	IASncdrinkwendsi	-.038	.050	-.078	-.751	.454	.596	1.678
	actual_knowledgegmc	-.011	.071	-.017	-.161	.872	.610	1.639
	IAknowledgesattdrink	-.043	.044	-.109	-.977	.331	.524	1.908
	IAknowledgesid	-.003	.067	-.004	-.038	.970	.512	1.953
	IAknowledgesnpdrinkwend	.012	.008	.130	1.380	.171	.726	1.378
	IAknowledgesnfdrinkwend	-.010	.011	-.094	-.920	.360	.619	1.615
	IAknowledgesntdrinkwend	-.004	.013	-.030	-.291	.771	.616	1.624
	IAknowledgesncdrinkwend	.009	.015	.058	.610	.543	.712	1.404

a Dependent Variable: drinkwendmcrev

# Intention of drinking at age 18

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.559(a)	.313	.269	1.86233	.313	7.173	.000
	2	.617(b)	.381	.313	1.80562	.069	2.510	.025
	3	.646(c)	.417	.318	1.79866	.036	1.151	.336
Female	1	.476(d)	.227	.166	2.21429	.227	3.747	.000
	2	.493(e)	.243	.138	2.25098	.016	.380	.890
	3	.549(f)	.301	.150	2.23530	.058	1.219	.299

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	.510	.185		2.760	.007		
	attdrinkmc	-.467	.110	-.363	-4.243	.000	.615	1.625
	snpdrink18mc	.018	.027	.071	.667	.506	.395	2.534
	snfdrink18mc	-.087	.036	-.266	-2.436	.016	.378	2.644
	sntdrink18mc	-.034	.028	-.111	-1.196	.234	.527	1.897
	sncdrink18mc	-.011	.030	-.042	-.365	.716	.342	2.922
	lAattdrink18p	.008	.013	.060	.611	.542	.475	2.105
	lAattdrink18f	-.009	.019	-.039	-.454	.650	.604	1.657
	lAattdrink18t	-.020	.015	-.129	-1.367	.174	.508	1.969
	lAattdrink18c	-.001	.014	-.006	-.060	.953	.510	1.959
	sportinginvolvementmc	-.420	.135	-.245	-3.103	.002	.725	1.379
	lAattdrinks	-.254	.090	-.271	-2.814	.006	.487	2.053
	lAsnpdrink18si	.021	.018	.101	1.153	.251	.586	1.707
	lAsnfdrink18si	.020	.020	.097	1.000	.319	.478	2.094
	lAsntdrink18si	.004	.019	.019	.190	.850	.461	2.171
	lAsncdrink18si	.002	.017	.014	.125	.901	.370	2.700
	actual_knowledgegemc	-.051	.047	-.086	-1.089	.278	.717	1.394
	lAknowledgettdrink	-.005	.027	-.015	-.177	.860	.609	1.642
	lAknowledgesinpdink18	.018	.036	.040	.503	.616	.717	1.394
	lAknowledgesnfdink18	-.010	.007	-.128	-1.373	.172	.521	1.918
lAknowledgesntdink18	.001	.008	.007	.073	.942	.444	2.255	
lAknowledgesncdink18	.001	.007	.018	.181	.857	.446	2.243	
lAknowledgesncdink18	.014	.006	.201	2.393	.018	.640	1.563	

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	-.024	.297		-.082	.935		
	attdrinkmc	-.472	.194	-.315	-2.435	.017	.410	2.437
	snpdrink18mc	-.014	.037	-.046	-.387	.700	.492	2.033
	snfdrink18mc	-.023	.052	-.061	-.452	.652	.380	2.629
	sntdrink18mc	-.023	.049	-.064	-.471	.639	.367	2.726
	sncdrink18mc	.024	.047	.052	.511	.611	.658	1.520
	IAattdrink18p	-.002	.019	-.013	-.118	.906	.549	1.822
	IAattdrink18f	.014	.027	.067	.502	.617	.389	2.570
	IAattdrink18t	.030	.022	.145	1.391	.167	.629	1.590
	IAattdrink18c	.006	.028	.025	.216	.829	.533	1.878
	sportinginvolve mentmc	-.045	.242	-.019	-.186	.853	.673	1.486
	IAattdrinks i	.062	.144	.050	.426	.671	.491	2.036
	IAsnpd rink18s i	.008	.032	.032	.261	.794	.450	2.222
	IAsnfd rink18s i	-.016	.047	-.045	-.345	.730	.403	2.481
	IAsntd rink18s i	.030	.036	.104	.820	.414	.424	2.361
	IAsn cdrink18 s i	.070	.048	.146	1.467	.145	.690	1.449
	actual_knowledge gemc	.040	.071	.059	.573	.568	.642	1.558
	IAknowled geattd rink	.065	.047	.162	1.394	.166	.506	1.975
	IAknowled gesi	.000	.064	.000	.002	.998	.583	1.714
	IAknowled gesnp drink18	-.015	.009	-.173	-1.732	.086	.689	1.451
	IAknowled gesn fdrink18	.014	.013	.119	1.074	.285	.561	1.784
	IAknowled gesn tdrink18	.011	.011	.120	1.016	.312	.489	2.046
	IAknowled gesn cdrink18	.004	.016	.025	.237	.813	.626	1.598

a Dependent Variable: intdrinkwendmc

# Likelihood of getting drunk tonight

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.612(a)	.375	.334	.93874	.375	9.199	.000
	2	.654(b)	.427	.362	.91869	.052	2.015	.068
	3	.689(c)	.475	.382	.90424	.047	1.608	.139
Female	1	.409(d)	.167	.101	1.44625	.167	2.524	.011
	2	.490(e)	.240	.133	1.42012	.072	1.699	.128
	3	.559(f)	.312	.161	1.39738	.072	1.502	.175

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	-.274	.097		-2.830	.005		
	attdrunkmc	.017	.051	.030	.338	.736	.538	1.859
	snpdrunk2nite mc	.011	.017	.076	.678	.499	.337	2.971
	snfdrunk2nite mc	.027	.014	.182	1.921	.057	.467	2.142
	sntdrunk2nite mc	.034	.018	.217	1.939	.055	.336	2.974
	sncdrunk2nite mc	.028	.017	.185	1.609	.110	.316	3.160
	lAattdrunk2nit ep	.012	.007	.179	1.634	.105	.349	2.869
	lAattdrunk2nit ef	.007	.006	.086	1.046	.298	.616	1.623
	lAattdrunk2nit et	.018	.008	.238	2.360	.020	.415	2.412
	lAattdrunk2nit ec	-.004	.006	-.068	-.718	.474	.464	2.157
	sportinginvolvementmc	.063	.072	.069	.869	.386	.668	1.498
	lAattdrunksi	.017	.040	.041	.431	.667	.460	2.176
	lAsnpdrunk2nitesi	-.017	.011	-.175	-1.619	.108	.360	2.776
	lAsnfdrunk2nitesi	-.009	.009	-.086	-.962	.338	.521	1.920
	lAsntdrunk2nitesi	.012	.013	.099	.927	.356	.371	2.698
	lAsncdrunk2nitesi	.010	.011	.105	.910	.364	.316	3.162
	actual_knowledgegmc	-.020	.024	-.065	-.856	.394	.732	1.366
	lAknowledgettdrunk	.004	.013	.026	.294	.769	.518	1.929
	lAknowledgesi	-.016	.019	-.067	-.828	.410	.641	1.560
	lAknowledgesnpdrunk2nite	.008	.004	.205	1.870	.064	.349	2.863
	lAknowledgesnfdrunk2nite	-.007	.004	-.192	-1.875	.063	.401	2.496
	lAknowledgesntdrunk2nite	.002	.004	.043	.474	.637	.510	1.962
	lAknowledgesncdrunk2nite	-.010	.004	-.244	-2.396	.018	.405	2.468

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	-.116	.187		-.618	.538		
	attdrunkmc	.279	.097	.360	2.865	.005	.435	2.300
	snpdrunk2nite mc	-.013	.029	-.058	-.438	.662	.391	2.557
	snfdrunk2nite mc	.023	.027	.115	.841	.402	.369	2.712
	sntdrunk2nite mc	-.024	.038	-.076	-.630	.530	.470	2.126
	sncdrunk2nite mc	-.022	.034	-.067	-.626	.532	.601	1.663
	IAattdrunk2nitep	.010	.012	.084	.826	.411	.664	1.506
	IAattdrunk2nitef	.005	.010	.045	.456	.649	.710	1.409
	IAattdrunk2nitee	-.037	.019	-.205	-1.986	.050	.643	1.554
	IAattdrunk2nitec	.008	.024	.043	.346	.730	.451	2.216
	sportinginvolvementmc	-.204	.152	-.135	-1.347	.181	.681	1.468
	IAattdrunksi	.068	.082	.102	.837	.405	.466	2.144
	IAsnpdrunk2nitesi	-.039	.025	-.210	-1.592	.114	.397	2.521
	IAsnfdrunk2nitesi	-.030	.025	-.151	-1.206	.230	.441	2.267
	IASntdrunk2nitesi	.016	.028	.067	.575	.567	.502	1.993
	IASncdrunk2nitesi	.048	.029	.164	1.645	.103	.689	1.452
	actual_knowledgegmc	.016	.046	.036	.342	.733	.607	1.648
	IAknowledgettdrunk	.032	.020	.169	1.599	.113	.614	1.629
	IAknowledgesj	.068	.042	.184	1.610	.111	.528	1.894
	IAknowledgesnpdrunk2nite	-.007	.007	-.106	-1.008	.316	.622	1.607
	IAknowledgesnfdrunk2nite	-4.836E-05	.006	-.001	-.008	.994	.537	1.863
	IAknowledgesntdrunk2nite	-.011	.009	-.116	-1.114	.268	.632	1.581
	IAknowledgesncdrunk2nite	.019	.011	.200	1.704	.091	.497	2.012

a Dependent Variable: drunk2nitemcrev



# Likelihood of getting drunk this weekend

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.651(a)	.423	.385	1.53013	.423	11.086	.000
	2	.689(b)	.475	.415	1.49273	.052	2.150	.052
	3	.705(c)	.497	.407	1.50281	.022	.752	.629
Female	1	.604(d)	.365	.315	1.98296	.365	7.334	.000
	2	.628(e)	.394	.310	1.98946	.029	.875	.516
	3	.692(f)	.478	.366	1.90766	.085	2.364	.028

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	-.571	.179		-3.195	.002		
	attdrunkmc	.268	.102	.275	2.625	.010	.374	2.676
	snpdrunkwendmc	.048	.023	.207	2.037	.044	.394	2.535
	sntdrunkwendmc	.043	.024	.177	1.774	.078	.411	2.431
	sncdrunkwendmc	.035	.027	.132	1.297	.197	.396	2.528
	sncdrunkwenddmc	.026	.027	.107	.980	.329	.344	2.910
	IAattdrunkwendndp	.000	.010	-.002	-.019	.985	.505	1.979
	IAattdrunkwendndf	.002	.011	.013	.153	.879	.540	1.852
	IAattdrunkwendndt	.020	.012	.160	1.609	.110	.416	2.406
	IAattdrunkwendndc	-.007	.009	-.070	-.809	.420	.549	1.820
	sportinginvolvementmc	.293	.124	.187	2.370	.019	.654	1.528
	IAattdrunkwendndsi	.101	.071	.141	1.427	.156	.419	2.387
	IAasnpdrunkwendndsi	-.010	.017	-.055	-.557	.579	.424	2.359
	IAasnpdrunkwendndsi	-.001	.015	-.005	-.053	.958	.469	2.134
	IAasntdrunkwendndsi	.012	.022	.060	.537	.592	.324	3.083
	IAasncdrunkwendndsi	-.021	.017	-.140	-1.230	.221	.315	3.170
	actual_knowledgegemc	-.030	.043	-.057	-.705	.482	.626	1.597
	IAknowledgeattdrunk	-.013	.023	-.051	-.562	.575	.501	1.995
	IAknowledgesi	.016	.032	.039	.486	.628	.631	1.585
	IAknowledgesnpdrunkwend	-.002	.007	-.035	-.320	.749	.343	2.912
	IAknowledgesnfdrunkwend	-.009	.007	-.138	-1.249	.214	.333	3.002
	IAknowledgesntdrunkwend	.005	.007	.071	.654	.514	.348	2.874
	IAknowledgesncdrunkwend	-.003	.006	-.050	-.520	.604	.437	2.290

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	.268	.261		1.025	.308		
	attdrunkmc	.468	.144	.389	3.242	.002	.356	2.809
	snpdrunkwen	.054	.030	.179	1.774	.079	.502	1.992
	dmc							
	snfdrunkwend	.044	.037	.133	1.186	.238	.409	2.444
	mc							
	sntdrunkwend	-.029	.059	-.055	-.495	.622	.409	2.443
	mc							
	sncdrunkwen	-.006	.045	-.013	-.137	.891	.604	1.656
	dmc							
	IAattdrunkwe	.003	.015	.018	.217	.829	.713	1.403
	ndp							
	IAattdrunkwe	.010	.014	.057	.660	.510	.678	1.475
	ndf							
	IAattdrunkwe	-.003	.025	-.009	-.104	.917	.708	1.413
	ndt							
	IAattdrunkwe	-.045	.026	-.177	-1.745	.084	.499	2.004
	ndc							
	sportinginvolv	.053	.202	.022	.264	.792	.705	1.418
	ementmc							
	IAattdrunksi	.218	.117	.206	1.858	.066	.416	2.402
	IAsnpdrunkw	-.026	.026	-.100	-.972	.333	.483	2.071
	endsi							
	IAsnfdrunkwe	-.013	.035	-.040	-.378	.706	.454	2.203
	ndsi							
	IASntdrunkwe	-.055	.044	-.136	-1.239	.218	.426	2.349
	ndsi							
	IASncdrunkwe	.048	.037	.108	1.299	.197	.743	1.346
	ndsi							
	actual_knowl	-.072	.065	-.107	-1.109	.270	.554	1.806
edgemc								
IAknowledg	-.054	.028	-.188	-1.884	.062	.514	1.945	
ttdrunk								
IAknowledges	.066	.064	.112	1.039	.301	.437	2.290	
i								
IAknowledges	-.012	.007	-.151	-1.717	.089	.657	1.522	
npdrunkwend								
IAknowledges	.011	.009	.114	1.194	.235	.563	1.776	
nfdrunkwend								
IAknowledges	.000	.013	-.002	-.023	.982	.696	1.436	
ntdrunkwend								
IAknowledges	-.004	.015	-.028	-.277	.783	.484	2.067	
ncdrunkwend								

a Dependent Variable: drunkwendmcrev

# Intention of getting drunk at age 18

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.559(a)	.313	.269	1.86882	.313	7.122	.000
	2	.604(b)	.364	.294	1.83656	.052	1.833	.097
	3	.654(c)	.428	.329	1.78981	.063	2.021	.057
Female	1	.573(d)	.329	.276	2.07076	.329	6.206	.000
	2	.614(e)	.377	.290	2.04999	.048	1.387	.226
	3	.636(f)	.404	.274	2.07330	.027	.655	.709

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	.417	.188		2.216	.028		
	attdrunkmc	-.337	.100	-.306	-3.354	.001	.538	1.859
	snpdrunk18mc	.004	.023	.016	.158	.875	.416	2.402
	snfdrunk18mc	-.091	.033	-.313	-2.741	.007	.343	2.917
	sntdrunk18mc	-.057	.030	-.194	-1.916	.058	.435	2.297
	sncdrunk18mc	.019	.029	.072	.655	.514	.374	2.673
	IAattdrunk18p	.000	.011	-.003	-.029	.977	.488	2.050
	IAattdrunk18f	.005	.014	.034	.398	.691	.609	1.642
	IAattdrunk18t	-.019	.014	-.128	-1.358	.177	.504	1.985
	IAattdrunk18c	.013	.010	.104	1.230	.221	.624	1.601
	sportinginvolvementmc	-.302	.136	-.174	-2.216	.028	.722	1.385
	IAattdrunksi	-.178	.073	-.222	-2.449	.016	.543	1.841
	IASnpdrunk18si	.009	.016	.050	.552	.582	.552	1.812
	IASnfdrunk18si	.022	.018	.113	1.220	.225	.521	1.918
	IASntdrunk18si	.024	.022	.119	1.071	.286	.363	2.757
	IASncdrunk18si	-.010	.018	-.058	-.533	.595	.379	2.639
	actual_knowledgeattdrunk	-.095	.048	-.161	-1.991	.049	.684	1.461
	IAknowledgesinpdunk18	-.002	.026	-.007	-.081	.936	.544	1.837
	IAknowledgesinpdunk18	-.005	.036	-.011	-.139	.890	.677	1.477
	IAknowledgesinpdunk18	.004	.006	.073	.760	.449	.491	2.035
	IAknowledgesinpdunk18	-.001	.008	-.017	-.148	.883	.349	2.863
IAknowledgesinpdunk18	-.015	.007	-.211	-2.157	.033	.465	2.150	
IAknowledgesinpdunk18	.017	.006	.252	2.718	.007	.522	1.915	

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	.077	.276		.278	.782		
	attdrunkmc	-.781	.140	-.631	-5.580	.000	.462	2.165
	snpdrunk18mc	.017	.031	.066	.540	.590	.391	2.558
	snfdrunk18mc	-.027	.042	-.076	-.633	.528	.406	2.465
	sntdrunk18mc	-.055	.043	-.150	-1.280	.203	.428	2.339
	sncdrunk18mc	.022	.043	.046	.504	.615	.722	1.384
	IAattdrunk18p	.008	.014	.061	.584	.560	.549	1.822
	IAattdrunk18f	-.003	.018	-.018	-.181	.857	.566	1.766
	IAattdrunk18t	.004	.018	.023	.236	.814	.617	1.622
	IAattdrunk18c	.001	.028	.006	.052	.959	.524	1.907
	sportinginvolve mentmc	.157	.217	.065	.722	.472	.724	1.381
	IAattdrunksi	-.285	.115	-.267	-2.480	.015	.510	1.962
	IASnpdrunk18 si	.030	.027	.131	1.086	.280	.404	2.478
	IASnfdrunk18s i	-.026	.042	-.077	-.610	.543	.370	2.703
	IASntdrunk18s i	.036	.033	.124	1.090	.278	.458	2.184
	IASncdrunk18 si	.041	.042	.084	.977	.331	.791	1.265
	actual_knowledge gemc	.066	.071	.096	.936	.351	.567	1.764
	IAknowledgetdrunk	.030	.030	.100	1.004	.318	.600	1.667
	IAknowledgesi	-.021	.063	-.036	-.336	.738	.520	1.924
	IAknowledges npdrunk18	-.002	.008	-.034	-.314	.754	.516	1.936
	IAknowledges nfdrunk18	-.010	.010	-.098	-.936	.351	.544	1.840
	IAknowledges ntdrunk18	-.003	.010	-.030	-.298	.766	.598	1.672
	IAknowledges ncdrunk18	-.004	.015	-.022	-.228	.820	.608	1.644

a Dependent Variable: intdrinkwendmc

## **APPENDIX 14**

### **HIERARCHICAL MULTIPLE REGRESSION MODEL WITH ADDITION OF “CHOOSE”**

(“If a brand sponsors a team I support, I will always buy it over other competing brands.”)

# Intention of drinking at age 18

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.555(a)	.308	.264	1.87373	.308	6.936	.000
	2	.614(b)	.377	.307	1.81807	.068	2.451	.028
	3	.643(c)	.413	.332	1.78479	.036	2.682	.050

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	.417	.169		2.472	.015		
	attdrinkmc	-.454	.101	-.352	-4.503	.000	.735	1.360
	snpdrink18mc	.019	.025	.073	.744	.458	.468	2.135
	snfdrink18mc	-.091	.031	-.279	-2.972	.004	.510	1.960
	sntdrink18mc	-.034	.027	-.112	-1.263	.209	.565	1.769
	sncdrink18mc	.013	.030	.052	.452	.652	.341	2.929
	IAattdrink18p	.005	.013	.038	.399	.690	.485	2.062
	IAattdrink18f	.002	.019	.008	.095	.924	.615	1.627
	IAattdrink18t	-.014	.015	-.089	-.945	.346	.505	1.980
	IAattdrink18c	.006	.014	.039	.423	.673	.515	1.941
	sportinginvolvementmc	-.399	.128	-.232	-3.128	.002	.817	1.224
	IAattdrinks	-.231	.089	-.241	-2.605	.010	.525	1.906
	IASnpdrink18si	.011	.018	.056	.648	.518	.591	1.692
	IASnfdrink18si	.032	.019	.157	1.695	.093	.524	1.908
	IASntdrink18si	.010	.019	.050	.524	.601	.488	2.051
	IASncdrink18si	-.003	.017	-.019	-.172	.864	.357	2.804
	chooserevmc	-.044	.090	-.039	-.491	.624	.725	1.380
	IAchooseAttdrink	-.125	.045	-.206	-2.756	.007	.800	1.251
	IAchooseSI	-.034	.072	-.039	-.476	.635	.673	1.485

# Intention of getting drunk at age 18

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.556(a)	.309	.264	1.87934	.309	6.910	.000
	2	.602(b)	.362	.290	1.84597	.053	1.845	.095
	3	.604(c)	.365	.277	1.86350	.002	.170	.917

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	.269	.185		1.455	.148		
	attdrunkmc	-.373	.095	-.339	-3.909	.000	.650	1.538
	snpdrunk18mc	.006	.023	.026	.247	.806	.444	2.252
	snfdrunk18mc	-.073	.027	-.250	-2.684	.008	.561	1.781
	sntdrunk18mc	-.065	.029	-.224	-2.224	.028	.482	2.073
	sncdrunk18mc	.043	.030	.163	1.440	.152	.379	2.636
	IAattdrunk18p	-.003	.011	-.028	-.282	.778	.483	2.072
	IAattdrunk18f	.002	.014	.012	.136	.892	.591	1.691
	IAattdrunk18t	-.017	.014	-.119	-1.202	.232	.499	2.006
	IAattdrunk18c	.013	.011	.105	1.205	.230	.648	1.544
	sportinginvolvementmc	-.221	.138	-.127	-1.610	.110	.782	1.279
	IAattdrunksi	-.153	.076	-.189	-2.024	.045	.559	1.790
	IASnpdrunk18si	.004	.017	.020	.213	.832	.529	1.891
	IASnfdrunk18si	.023	.018	.120	1.281	.202	.559	1.787
	IASntdrunk18si	.031	.023	.155	1.330	.186	.359	2.784
	IASncdrunk18si	-.022	.019	-.136	-1.199	.233	.378	2.643
	chooserevmc	.007	.099	.006	.068	.946	.659	1.518
	IAchooseAttdrunk	-.030	.043	-.056	-.697	.487	.751	1.332
	IAchooseSI	.002	.076	.002	.021	.983	.687	1.455

## **APPENDIX 15**

### **HIERARCHICAL MULTIPLE REGRESSION MODEL WITH ADDITION OF**

**“INF”**

(“Sponsorship influences people to buy brands or products they would not otherwise buy”)



# Likelihood of drinking this weekend

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Female	1	.556(d)	.309	.254	2.11731	.309	5.570	.000
	2	.572(e)	.328	.233	2.14698	.019	.488	.816
	3	.610(f)	.372	.262	2.10519	.044	2.417	.071

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	.300	.264		1.136	.259		
	attdrinkmc	.364	.179	.238	2.030	.045	.444	2.252
	snpdrinkwendmc	.048	.028	.171	1.724	.088	.621	1.611
	snfdrinkwendmc	.091	.039	.259	2.328	.022	.492	2.033
	sntdrinkwendmc	.017	.053	.035	.316	.753	.510	1.962
	sncdrinkwendmc	-.037	.058	-.061	-.637	.526	.673	1.487
	IAattdrinkwendp	-.023	.019	-.132	-1.198	.233	.504	1.985
	IAattdrinkwendf	.000	.022	.001	.009	.993	.475	2.105
	IAattdrinkwendt	.043	.034	.149	1.270	.207	.441	2.270
	IAattdrinkwendc	-.022	.042	-.056	-.525	.601	.536	1.864
	sportinginvolvementmc	-.109	.222	-.045	-.489	.626	.716	1.396
	IAattdrinks	-.163	.142	-.132	-1.148	.253	.462	2.167
	IASnpdrinkwendsi	.013	.026	.052	.501	.617	.561	1.784
	IASnfdrinkwendsi	.061	.039	.171	1.553	.124	.500	1.999
	IASntdrinkwendsi	-.045	.040	-.118	-1.125	.263	.555	1.802
	IASncdrinkwendsi	-.031	.050	-.056	-.634	.527	.785	1.273
	infrevmc	.101	.151	.073	.672	.503	.517	1.933
	IAInfAttdrink	-.113	.090	-.146	-1.262	.210	.456	2.191
	IAInfSI	-.251	.143	-.225	-1.763	.081	.375	2.664

a Dependent Variable: drinkwendmcrev

# Likelihood of getting drunk tonight

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.612(a)	.375	.334	.94459	.375	9.068	.000
	2	.654(b)	.427	.361	.92504	.052	1.968	.075
	3	.675(c)	.456	.379	.91196	.029	2.251	.086

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	-.279	.092		-3.023	.003		
	attdrunkmc	.029	.048	.050	.596	.552	.608	1.645
	snpdrunk2nite mc	.028	.016	.189	1.778	.078	.380	2.632
	snfdrunk2nite mc	.005	.012	.034	.404	.687	.598	1.672
	sntdrunk2nite mc	.030	.017	.192	1.775	.078	.368	2.720
	sncdrunk2nite mc	.012	.017	.077	.680	.498	.339	2.953
	IAattdrunk2nitep	.020	.007	.305	2.776	.006	.355	2.815
	IAattdrunk2nitef	.004	.007	.049	.569	.571	.576	1.735
	IAattdrunk2nitee	.017	.008	.220	2.173	.032	.418	2.394
	IAattdrunk2nitec	-.014	.006	-.209	-2.193	.030	.472	2.117
	sportinginvolvementmc	.065	.070	.071	.934	.352	.732	1.367
	IAattdrunksi	.004	.039	.009	.095	.925	.485	2.061
	IASnpdrunk2nitesi	-.029	.010	-.299	-2.887	.005	.400	2.501
	IASnfdrunk2nitesi	-.005	.010	-.045	-.485	.628	.508	1.969
	IASntdrunk2nitesi	.017	.013	.139	1.293	.198	.370	2.705
	IASncdrunk2nitesi	.017	.010	.182	1.633	.105	.345	2.899
	infrevmc	.051	.048	.078	1.066	.289	.809	1.236
	IAInfAttdrunk	.053	.022	.174	2.355	.020	.789	1.267
	IAInfSI	.013	.036	.028	.373	.710	.785	1.275

# Likelihood of getting drunk this weekend

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Female	1	.602(d)	.363	.313	1.98722	.363	7.218	.000
	2	.627(e)	.394	.309	1.99217	.031	.906	.494
	3	.648(f)	.421	.321	1.97495	.027	1.631	.187

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Female	(Constant)	.370	.271		1.366	.175		
	attdrunkmc	.593	.145	.494	4.105	.000	.380	2.629
	snpdrunkwendmc	.041	.032	.135	1.264	.209	.486	2.059
	sfnldrunkwendmc	.055	.038	.166	1.446	.151	.418	2.391
	sntdrunkwendmc	-.027	.058	-.052	-.473	.637	.450	2.224
	sncdrunkwendmc	.026	.058	.045	.444	.658	.532	1.880
	IAattdrunkwendmc	.003	.015	.015	.175	.861	.734	1.363
	IAattdrunkwendmf	-.002	.015	-.014	-.157	.876	.687	1.456
	IAattdrunkwendmt	.014	.026	.048	.538	.592	.688	1.453
	IAattdrunkwendmnc	-.038	.024	-.148	-1.573	.119	.626	1.598
	sportinginvolvementmc	-.157	.211	-.066	-.746	.457	.695	1.439
	IAattdrunkwendmncsi	.188	.121	.178	1.557	.122	.423	2.367
	IASnpdrunkwendmncsi	-.031	.028	-.120	-1.085	.280	.452	2.214
	IASfnldrunkwendmncsi	.037	.037	.113	.994	.323	.423	2.362
	IASntdrunkwendmncsi	-.063	.045	-.158	-1.419	.159	.444	2.250
	IASncdrunkwendmncsi	.022	.042	.042	.512	.610	.807	1.239
	infrevmc	-.019	.135	-.014	-.140	.889	.564	1.773
	IAInfAttdrunkwendmncsi	.022	.060	.034	.364	.717	.652	1.535
	IAInfSI	-.211	.127	-.193	-1.663	.099	.411	2.430

a Dependent Variable: drunkwendmcrev

# Intention of getting drunk at age 18

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.557(a)	.311	.266	1.88201	.311	6.959	.000
	2	.602(b)	.363	.291	1.85008	.052	1.807	.102
	3	.626(c)	.391	.307	1.82856	.029	2.050	.110

## Coefficients (final model only)

gender		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
Male	(Constant)	.287	.183		1.566	.120		
	attdrunkmc	-.388	.094	-.352	-4.133	.000	.647	1.545
	snpdrunk18mc	.006	.023	.028	.281	.779	.462	2.165
	snfdrunk18mc	-.056	.027	-.193	-2.059	.041	.535	1.870
	sntdrunk18mc	-.070	.028	-.241	-2.504	.014	.505	1.980
	sncdrunk18mc	.037	.029	.140	1.288	.200	.399	2.506
	IAattdrunk18p	-.005	.011	-.044	-.455	.650	.497	2.010
	IAattdrunk18f	.005	.014	.034	.381	.704	.582	1.719
	IAattdrunk18t	-.017	.014	-.120	-1.251	.213	.513	1.949
	IAattdrunk18c	.014	.010	.110	1.313	.192	.663	1.508
	sportinginvolvementmc	-.202	.137	-.116	-1.476	.142	.754	1.327
	IAattdrunksi	-.164	.072	-.205	-2.266	.025	.573	1.744
	IAsnpdrunk18si	.004	.016	.020	.225	.822	.571	1.752
	IAsnfdrunk18si	.019	.018	.098	1.076	.284	.567	1.763
	IASntdrunk18si	.029	.022	.146	1.327	.187	.386	2.594
	IASncdrunk18si	-.017	.018	-.103	-.948	.345	.393	2.545
	infrevmc	-.011	.094	-.009	-.121	.904	.831	1.203
	IAInfAttdrunk	-.084	.043	-.144	-1.958	.052	.860	1.163
	IAInfSI	-.090	.069	-.097	-1.305	.194	.849	1.177

**APPENDIX 16**

**RETESTS  
EXCLUDING  
YOUNG PEOPLE  
EXTREMELY UNLIKELY TO DRINK**

**(3 stage Theory of Reasoned Action models, adding  
Sporting Involvement at stage 2 and Awareness at stage 3)**

# Likelihood of drinking tonight

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.559(a)	.313	.240	1.59483	.313	4.295	.000
	2	.621(b)	.386	.270	1.56326	.074	1.578	.165
	3	.642(c)	.412	.233	1.60235	.026	.456	.863
Female	1	.556(d)	.310	.232	1.49481	.310	3.985	.000
	2	.621(e)	.386	.262	1.46555	.077	1.538	.178
	3	.657(f)	.432	.245	1.48150	.046	.773	.612

## Coefficients(a)

gender	Mo del		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Male	1	(Constant)	.287	.175		1.642	.104		
		attdrinkmc	-.021	.129	-.017	-.166	.869	.735	1.360
		snpdrink2nitemc	.051	.027	.239	1.908	.060	.514	1.946
		snfdrink2nitemc	.029	.025	.123	1.159	.250	.722	1.384
		sntdrink2nitemc	.055	.030	.212	1.871	.065	.628	1.594
		sncdrink2nitemc	.037	.024	.162	1.538	.128	.733	1.364
		IAattdrink2nitep	-.002	.016	-.014	-.092	.927	.340	2.938
		IAattdrink2nitef	.008	.019	.055	.427	.671	.493	2.028
		IAattdrink2nitet	.034	.019	.253	1.751	.084	.387	2.585
	IAattdrink2nitec	-.031	.019	-.225	-1.612	.111	.414	2.416	
	2	(Constant)	.241	.195		1.237	.220		
		attdrinkmc	-.111	.137	-.091	-.809	.421	.619	1.615
		snpdrink2nitemc	.056	.028	.265	2.001	.049	.444	2.254
		snfdrink2nitemc	.047	.027	.203	1.729	.088	.563	1.776
		sntdrink2nitemc	.039	.032	.151	1.225	.224	.511	1.958
		sncdrink2nitemc	.031	.037	.132	.826	.411	.302	3.308
		IAattdrink2nitep	-.001	.017	-.005	-.034	.973	.306	3.267
		IAattdrink2nitef	-.009	.021	-.061	-.453	.652	.423	2.363
		IAattdrink2nitet	.022	.022	.167	1.019	.311	.289	3.461
		IAattdrink2nitec	-.023	.020	-.164	-1.115	.268	.357	2.802
		sportinginvolvement mc	.109	.149	.072	.733	.466	.801	1.248
		IAattdrinks	.226	.118	.251	1.912	.060	.452	2.215
		IASnpdrink2nitesi	-.015	.020	-.102	-.772	.443	.445	2.246
		IASnfdrink2nitesi	-.034	.020	-.230	-1.708	.091	.427	2.341
		IASntdrink2nitesi	.032	.025	.177	1.281	.204	.409	2.446
	IASncdrink2nitesi	.005	.021	.039	.245	.807	.300	3.339	
	3	(Constant)	.244	.244		.999	.321		
		attdrinkmc	-.182	.162	-.149	-1.122	.265	.466	2.146
		snpdrink2nitemc	.043	.038	.203	1.144	.256	.260	3.844
		snfdrink2nitemc	.063	.041	.273	1.545	.127	.262	3.819
		sntdrink2nitemc	.050	.052	.193	.969	.336	.205	4.869
		sncdrink2nitemc	.028	.058	.122	.485	.629	.130	7.698
		IAattdrink2nitep	.007	.019	.067	.369	.713	.247	4.043
IAattdrink2nitef		-.025	.024	-.167	-1.076	.285	.338	2.958	
IAattdrink2nitet		.027	.025	.201	1.062	.292	.229	4.374	
IAattdrink2nitec		-.021	.024	-.153	-.896	.373	.281	3.559	
sportinginvolvement mc		.016	.237	.011	.067	.947	.332	3.013	
IAattdrinks		.224	.127	.249	1.767	.081	.412	2.425	
IASnpdrink2nitesi		-.027	.027	-.181	-1.011	.316	.255	3.920	
IASnfdrink2nitesi		-.041	.022	-.273	-1.823	.072	.363	2.757	
IASntdrink2nitesi		.030	.028	.163	1.062	.292	.345	2.899	
IASncdrink2nitesi		.006	.024	.045	.234	.815	.221	4.530	
awareness		-.005	.148	-.004	-.033	.974	.505	1.981	
IAawarenessAttdrink		.119	.087	.158	1.366	.176	.608	1.643	
IAawarenessSI		.085	.134	.094	.635	.528	.369	2.713	
IAawarenesssnpdrink2nite		.016	.024	.124	.655	.514	.229	4.369	
IAawarenesssnpdrink2nite		-.002	.021	-.017	-.107	.915	.331	3.026	
IAawarenesssntdrink2nite	-.004	.033	-.025	-.113	.910	.174	5.739		
IAawarenesssncdrink2nite	-.001	.031	-.004	-.018	.986	.136	7.375		

gender	Mo del		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
			B	Std. Error	Beta			Tolerance	VIF	
Female	1	(Constant)	-.148	.186		-.795	.429			
		attdrinkmc	.501	.115	.444	4.378	.000	.837	1.194	
		snpdrink2nitemc	.047	.022	.221	2.128	.036	.800	1.249	
		snfdrink2nitemc	.006	.030	.027	.215	.830	.565	1.769	
		sntdrink2nitemc	-.004	.039	-.010	-.095	.924	.765	1.308	
		sncdrink2nitemc	-.042	.043	-.124	-.977	.332	.535	1.870	
		IAattdrink2nitep	.005	.016	.035	.331	.742	.760	1.317	
		IAattdrink2nitef	.003	.017	.020	.172	.864	.614	1.629	
		IAattdrink2nitet	-.043	.026	-.180	-1.650	.103	.728	1.373	
		IAattdrink2nitec	-.014	.020	-.088	-.700	.486	.552	1.813	
		2	(Constant)	-.257	.209		-1.231	.222		
			attdrinkmc	.421	.133	.373	3.170	.002	.598	1.673
			snpdrink2nitemc	.059	.024	.277	2.480	.015	.664	1.505
			snfdrink2nitemc	.008	.032	.032	.241	.810	.475	2.104
			sntdrink2nitemc	-.015	.043	-.042	-.354	.724	.592	1.690
	sncdrink2nitemc		-.003	.047	-.009	-.062	.951	.432	2.317	
	IAattdrink2nitep		.004	.018	.025	.210	.834	.570	1.754	
	IAattdrink2nitef		.010	.018	.069	.543	.589	.511	1.957	
	IAattdrink2nitet		-.058	.027	-.243	-2.133	.036	.640	1.563	
	IAattdrink2nitec		-.037	.027	-.235	-1.394	.167	.291	3.432	
	sportinginvolvementm		.002	.181	.001	.011	.991	.668	1.498	
	c									
	IAattdrinks		-.180	.115	-.196	-1.569	.121	.530	1.887	
	IAsnpdrink2nitesi		.012	.025	.064	.500	.618	.501	1.995	
	IAsnfdrink2nitesi		.007	.031	.029	.221	.826	.495	2.021	
	IASntdrink2nitesi	-.080	.031	-.286	-2.548	.013	.656	1.524		
	IASncdrink2nitesi	-.025	.043	-.079	-.578	.565	.447	2.237		
	3	(Constant)	-.349	.218		-1.602	.114			
		attdrinkmc	.345	.145	.305	2.383	.020	.516	1.938	
		snpdrink2nitemc	.063	.025	.299	2.560	.013	.621	1.609	
		snfdrink2nitemc	-.005	.036	-.020	-.133	.895	.381	2.622	
		sntdrink2nitemc	.025	.052	.068	.481	.632	.422	2.371	
		sncdrink2nitemc	-.007	.049	-.022	-.150	.882	.410	2.439	
		IAattdrink2nitep	.004	.019	.028	.219	.827	.530	1.887	
		IAattdrink2nitef	.013	.021	.092	.626	.533	.395	2.533	
		IAattdrink2nitet	-.059	.031	-.248	-1.918	.059	.505	1.980	
IAattdrink2nitec		-.040	.028	-.256	-1.444	.153	.270	3.699		
Sportinginvolvementm		-.072	.200	-.044	-.358	.722	.555	1.802		
c										
IAattdrinks		-.355	.142	-.387	-2.509	.015	.356	2.810		
IAsnpdrink2nitesi		.021	.026	.108	.792	.431	.456	2.195		
IAsnfdrink2nitesi		.011	.035	.045	.314	.755	.408	2.454		
IASntdrink2nitesi		-.062	.040	-.223	-1.550	.126	.408	2.452		
IASncdrink2nitesi	-.027	.048	-.086	-.560	.578	.356	2.807			
awareness	.054	.140	.053	.387	.700	.451	2.218			
IAawarenessAttdrink	.168	.091	.307	1.842	.070	.306	3.268			
IAawarenessSI	.034	.124	.048	.274	.785	.282	3.552			
IAawarenesspdrink2ni	-.010	.017	-.082	-.627	.533	.499	2.004			
te										
IAawarenessfdrink2nit	-.016	.020	-.110	-.808	.422	.457	2.190			
e										
IAawarenesstdrink2nit	-.014	.035	-.052	-.393	.696	.486	2.058			
e										
IAawarenesscdrink2ni	-.003	.045	-.008	-.063	.950	.493	2.028			
te										

a Dependent Variable: drink2nitemcrev



# Likelihood of drinking this weekend

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.603(a)	.363	.297	1.46766	.363	5.512	.000
	2	.655(b)	.429	.323	1.44060	.066	1.550	.173
	3	.719(c)	.517	.374	1.38568	.088	1.935	.076
Female	1	.435(d)	.190	.097	1.87508	.190	2.053	.044
	2	.473(e)	.224	.065	1.90861	.035	.541	.775
	3	.604(f)	.365	.154	1.81537	.141	2.099	.056

## Coefficients(a)

gender	Mod el		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Male	1	(Constant)	.527	.165		3.192	.002		
		attdrinkmc	.241	.120	.203	2.010	.048	.717	1.394
		snpdrinkwendmc	.067	.025	.309	2.642	.010	.535	1.868
		snfdrinkwendmc	.043	.024	.185	1.775	.079	.671	1.491
		sntdrinkwendmc	.028	.027	.113	1.039	.302	.616	1.623
		sncdrinkwendmc	-.003	.022	-.016	-.160	.873	.754	1.327
		IAattdrinkwendp	-.022	.019	-.184	-1.171	.245	.297	3.366
		IAattdrinkwendf	.019	.016	.117	1.148	.254	.704	1.421
		IAattdrinkwendt	.032	.019	.252	1.690	.095	.329	3.043
		IAattdrinkwendc	-.022	.017	-.163	-1.298	.198	.462	2.164
		2	(Constant)	.313	.196		1.599	.114	
	attdrinkmc		.112	.136	.095	.829	.409	.540	1.852
	snpdrinkwendmc		.078	.028	.360	2.765	.007	.416	2.405
	snfdrinkwendmc		.056	.028	.240	1.980	.051	.478	2.090
	sntdrinkwendmc		.035	.029	.141	1.212	.229	.524	1.909
	sncdrinkwendmc		.010	.033	.045	.307	.760	.325	3.078
	IAattdrinkwendp		-.023	.019	-.196	-1.222	.225	.275	3.634
	IAattdrinkwendf		.017	.019	.107	.920	.360	.517	1.936
	IAattdrinkwendt		.038	.020	.300	1.937	.056	.294	3.397
	IAattdrinkwendc		-.028	.018	-.208	-1.589	.116	.413	2.421
	sportinginvolvementm c		.324	.135	.224	2.407	.018	.814	1.229
	IAattdrinks i		.202	.109	.232	1.850	.068	.449	2.227
	IAAsnpdrinkwendsi		-						
	IAAsnfdrinkwendsi		2.618E-05	.020	.000	-.001	.999	.334	2.991
	IAAsntdrinkwendsi	-.016	.021	-.117	-.766	.446	.303	3.298	
	IAAsncdrinkwendsi	-.013	.024	-.078	-.551	.583	.351	2.847	
	IAAsncdrinkwendsi	-.013	.019	-.110	-.709	.481	.293	3.410	
	3	(Constant)	.183	.229		.800	.426		
		attdrinkmc	.065	.137	.055	.473	.637	.489	2.045
		snpdrinkwendmc	.057	.035	.261	1.610	.112	.248	4.029
		snfdrinkwendmc	.105	.038	.454	2.793	.007	.247	4.046
		sntdrinkwendmc	.003	.043	.013	.075	.940	.211	4.747
		sncdrinkwendmc	.097	.050	.439	1.941	.056	.128	7.830
		IAattdrinkwendp	-.021	.020	-.173	-1.029	.307	.231	4.327
		IAattdrinkwendf	-.008	.020	-.052	-.409	.683	.403	2.479
		IAattdrinkwendt	.036	.020	.287	1.836	.070	.267	3.747
IAattdrinkwendc		-.029	.019	-.210	-1.520	.133	.341	2.930	
sportinginvolvementm c		-.037	.217	-.026	-.172	.864	.291	3.442	
IAattdrinks i		.245	.111	.282	2.218	.030	.405	2.471	
IAAsnpdrinkwendsi		.010	.025	.075	.412	.682	.199	5.034	
IAAsnfdrinkwendsi		-.020	.023	-.143	-.885	.379	.251	3.978	
IAAsntdrinkwendsi		-.012	.025	-.069	-.462	.645	.289	3.457	
IAAsncdrinkwendsi		-.016	.020	-.134	-.825	.412	.246	4.060	
awareness		.166	.139	.147	1.191	.237	.427	2.344	
IAawarenessAttdrink		.119	.075	.164	1.585	.117	.609	1.643	
IAawarenessSI		.268	.126	.310	2.132	.036	.308	3.245	
IAawarenesspdrinkwe nd	.009	.024	.066	.355	.723	.189	5.279		
IAawarenessfdrinkwe nd	-.031	.020	-.222	-1.549	.126	.317	3.154		
IAawarenesstdrinkwe nd	.021	.027	.144	.784	.436	.194	5.158		
IAawarenesscdrinkwe nd	-.049	.028	-.407	-1.785	.078	.125	7.976		

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Female	1	(Constant)	1.079	.247		4.376	.000		
		attdrinkmc	.451	.146	.344	3.094	.003	.830	1.205
		snpdrinkwendmc	.005	.028	.019	.162	.872	.777	1.286
		snfdrinkwendmc	.042	.047	.128	.881	.381	.484	2.067
		sntdrinkwendmc	.091	.054	.235	1.679	.097	.524	1.910
		sncdrinkwendmc	-.008	.057	-.020	-.137	.891	.474	2.108
		IAattdrinkwendp	-.029	.019	-.181	-1.538	.128	.744	1.344
		IAattdrinkwendf	-.011	.024	-.063	-.470	.640	.561	1.782
		IAattdrinkwendt	.013	.039	.047	.333	.740	.525	1.906
	IAattdrinkwendc	-.003	.026	-.015	-.103	.918	.503	1.989	
	2	(Constant)	1.114	.298		3.739	.000		
		attdrinkmc	.440	.181	.335	2.429	.018	.558	1.791
		snpdrinkwendmc	.007	.031	.027	.211	.833	.659	1.518
		snfdrinkwendmc	.056	.050	.171	1.112	.270	.450	2.224
		sntdrinkwendmc	.051	.062	.131	.831	.409	.425	2.354
		sncdrinkwendmc	.026	.071	.066	.362	.719	.322	3.110
		IAattdrinkwendp	-.021	.021	-.134	-1.006	.318	.600	1.667
		IAattdrinkwendf	-.014	.029	-.078	-.471	.639	.384	2.607
		IAattdrinkwendt	.002	.042	.006	.040	.969	.467	2.142
		IAattdrinkwendc	-.021	.039	-.115	-.548	.586	.239	4.178
		sportinginvolvementm c	.084	.259	.045	.324	.747	.550	1.820
		IAattdrinks	-.055	.151	-.052	-.368	.714	.530	1.887
		IASnpdrinkwendsi	.015	.028	.071	.526	.601	.587	1.704
		IASnfdrinkwendsi	.013	.045	.043	.289	.773	.476	2.101
		IASntdrinkwendsi	-.073	.042	-.238	-1.748	.085	.572	1.747
	IASncdrinkwendsi	-.020	.056	-.056	-.360	.720	.448	2.234	
	3	(Constant)	.957	.293		3.265	.002		
		attdrinkmc	.500	.175	.381	2.851	.006	.538	1.860
		snpdrinkwendmc	.008	.030	.034	.276	.783	.620	1.613
		snfdrinkwendmc	.040	.051	.124	.780	.438	.383	2.609
		sntdrinkwendmc	.023	.068	.058	.332	.741	.315	3.179
		sncdrinkwendmc	.028	.069	.073	.408	.684	.303	3.306
		IAattdrinkwendp	-.014	.021	-.085	-.640	.524	.543	1.840
IAattdrinkwendf		.000	.029	-.003	-.016	.987	.346	2.894	
IAattdrinkwendt		-.017	.043	-.061	-.396	.693	.407	2.457	
IAattdrinkwendc		-.053	.039	-.291	-1.352	.181	.208	4.811	
sportinginvolvementm c		-.028	.268	-.015	-.106	.916	.462	2.163	
IAattdrinks		-.171	.170	-.161	-1.007	.318	.378	2.646	
IASnpdrinkwendsi		.020	.030	.095	.671	.504	.478	2.093	
IASnfdrinkwendsi		.028	.048	.094	.586	.560	.375	2.666	
IASntdrinkwendsi		-.125	.055	-.407	-2.277	.026	.300	3.328	
IASncdrinkwendsi		-.079	.058	-.220	-1.376	.174	.376	2.660	
awareness		-.378	.187	-.320	-2.019	.048	.382	2.621	
IAawarenessAttdrink		.149	.105	.236	1.417	.161	.345	2.895	
IAawarenessSI		-.233	.157	-.283	-1.491	.141	.268	3.737	
IAawarenesspdrinkwe nd	-.034	.021	-.209	-1.569	.122	.539	1.855		
IAawarenessfdrinkwe nd	-.043	.034	-.166	-1.239	.220	.534	1.872		
IAawarenesssdrinkwe nd	.056	.039	.194	1.449	.152	.537	1.862		
IAawarenesscdrinkwe nd	.049	.058	.124	.835	.407	.438	2.283		

a Dependent Variable: drinkwendmcrev

# Intention of drinking at age 18

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.669(a)	.447	.390	.67368	.447	7.824	.000
	2	.745(b)	.555	.473	.62626	.108	3.279	.006
	3	.761(c)	.579	.454	.63771	.023	.588	.763
Female	1	.444(d)	.197	.106	.80410	.197	2.178	.032
	2	.606(e)	.367	.239	.74225	.170	3.315	.006
	3	.662(f)	.438	.253	.73518	.071	1.204	.313

## Coefficients(a)

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Male	1	(Constant)	.117	.076		1.536	.128		
		attdrinkmc	.284	.052	.486	5.432	.000	.793	1.260
		snpdrink18mc	-.035	.012	-.276	-2.969	.004	.735	1.360
		snfdrink18mc	.025	.011	.203	2.225	.029	.764	1.310
		sntdrink18mc	-.008	.011	-.065	-.715	.477	.769	1.301
		sncdrink18mc	.017	.008	.181	2.099	.039	.855	1.170
		IAattdrink18p	.025	.008	.285	3.121	.002	.760	1.316
		IAattdrink18f	.012	.009	.127	1.350	.181	.713	1.402
		IAattdrink18t	-.014	.007	-.197	-2.030	.045	.673	1.486
		IAattdrink18c	-.001	.007	-.011	-.113	.911	.626	1.598
	2	(Constant)	.025	.085		.294	.769		
		attdrinkmc	.226	.058	.387	3.905	.000	.559	1.788
		snpdrink18mc	-.027	.014	-.217	-1.956	.054	.447	2.239
		snfdrink18mc	.023	.014	.184	1.596	.114	.413	2.418
		sntdrink18mc	-.007	.012	-.057	-.597	.552	.609	1.643
		sncdrink18mc	.027	.012	.279	2.208	.030	.343	2.913
		IAattdrink18p	.026	.008	.296	3.352	.001	.705	1.418
		IAattdrink18f	.005	.009	.058	.634	.528	.649	1.542
		IAattdrink18t	-.016	.007	-.226	-2.330	.022	.585	1.709
		IAattdrink18c	-.003	.006	-.052	-.547	.586	.608	1.646
		sportinginvolem	.186	.061	.260	3.028	.003	.742	1.347
		entmc	.109	.046	.255	2.357	.021	.469	2.131
		IAattdrinks	-.005	.009	-.060	-.582	.562	.520	1.924
		IASnpdrink18si	.002	.008	.029	.245	.807	.394	2.538
		IASnfdrink18si	-.002	.008	-.027	-.259	.796	.500	1.998
	IASncdrink18si	-.010	.007	-.183	-1.450	.151	.346	2.888	
	3	(Constant)	.045	.092		.492	.624		
		attdrinkmc	.238	.064	.406	3.704	.000	.473	2.115
		snpdrink18mc	-.030	.016	-.237	-1.864	.066	.353	2.833
		snfdrink18mc	.025	.017	.198	1.493	.140	.322	3.103
		sntdrink18mc	.008	.021	.064	.383	.703	.202	4.957
		sncdrink18mc	.017	.018	.173	.905	.368	.156	6.431
		IAattdrink18p	.028	.008	.322	3.296	.002	.596	1.679
		IAattdrink18f	.001	.010	.016	.148	.883	.512	1.952
		IAattdrink18t	-.014	.007	-.195	-1.874	.065	.524	1.910
		IAattdrink18c	-.004	.007	-.061	-.583	.562	.527	1.899
sportinginvolem		.189	.105	.265	1.797	.076	.262	3.823	
entmc		.106	.048	.248	2.201	.031	.449	2.225	
IASnpdrink18si		-.003	.010	-.032	-.271	.787	.417	2.399	
IASnfdrink18si		-.003	.011	-.039	-.264	.792	.262	3.815	
IASntdrink18si		-.002	.009	-.030	-.258	.797	.420	2.379	
IASncdrink18si		-.010	.008	-.186	-1.288	.202	.272	3.671	
awareness		-.078	.048	-.141	-1.622	.109	.751	1.332	
IAawarenessAttdrink		-.022	.037	-.061	-.593	.555	.547	1.827	
IAawarenessSI		.027	.057	.064	.476	.635	.316	3.168	
IAawarenesspdri		-.001	.010	-.007	-.059	.953	.363	2.756	
nk18	.006	.009	.085	.633	.529	.318	3.148		
IAawarenessdrin	-.009	.013	-.126	-.737	.463	.196	5.107		
k18	.006	.011	.107	.538	.592	.145	6.896		

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
			B	Std. Error	Beta			Tolerance	VIF	
Female	1	(Constant)	.323	.100		3.240	.002			
		attdrinkmc	.177	.064	.309	2.771	.007	.809	1.236	
		snpdrink18mc	.003	.016	.020	.170	.866	.705	1.417	
		snfdrink18mc	-.001	.024	-.008	-.053	.958	.490	2.039	
		sntdrink18mc	-.009	.017	-.075	-.539	.592	.521	1.921	
		sncdrink18mc	-.009	.019	-.056	-.461	.646	.682	1.467	
		IAattdrink18p	.005	.012	.059	.467	.642	.625	1.600	
		IAattdrink18f	.019	.016	.171	1.164	.248	.463	2.160	
		IAattdrink18t	-.008	.011	-.100	-.747	.457	.555	1.801	
		IAattdrink18c	-.010	.011	-.117	-.880	.382	.568	1.759	
		2	(Constant)	.352	.108		3.264	.002		
			attdrinkmc	.181	.071	.317	2.555	.013	.555	1.801
			snpdrink18mc	.008	.015	.059	.526	.601	.682	1.465
			snfdrink18mc	-.007	.023	-.041	-.300	.765	.455	2.197
			sntdrink18mc	.006	.017	.051	.371	.712	.450	2.222
	sncdrink18mc		-.016	.019	-.102	-.819	.416	.546	1.832	
	IAattdrink18p		.025	.012	.266	2.105	.039	.535	1.868	
	IAattdrink18f		.004	.017	.037	.244	.808	.378	2.644	
	IAattdrink18t		.006	.011	.073	.535	.594	.463	2.162	
	IAattdrink18c		.000	.013	.005	.033	.974	.359	2.787	
	sportinginvolvementmc		-.092	.094	-.114	-.984	.328	.635	1.575	
	IAattdrinks		.041	.055	.085	.738	.463	.643	1.554	
	IASnpdrink18si		.039	.013	.357	2.895	.005	.561	1.782	
	IASnfdrink18si		-.035	.019	-.241	-1.865	.066	.513	1.951	
	IASntdrink18si		.036	.014	.369	2.503	.015	.393	2.543	
	IASncdrink18si		.031	.023	.183	1.338	.185	.458	2.183	
	3		(Constant)	.328	.118		2.778	.007		
			attdrinkmc	.205	.071	.358	2.886	.005	.544	1.839
		snpdrink18mc	.007	.016	.053	.442	.660	.582	1.720	
		snfdrink18mc	.005	.024	.030	.212	.833	.415	2.408	
		sntdrink18mc	-.001	.018	-.011	-.079	.938	.396	2.525	
		sncdrink18mc	-.015	.020	-.101	-.759	.450	.474	2.110	
		IAattdrink18p	.017	.012	.185	1.372	.175	.464	2.157	
IAattdrink18f		.013	.017	.120	.785	.435	.361	2.773		
IAattdrink18t		.003	.012	.043	.295	.769	.390	2.561		
IAattdrink18c		1.979 E-05	.015	.000	.001	.999	.279	3.586		
sportinginvolvementmc		-.110	.101	-.136	-1.086	.281	.536	1.865		
IAattdrinks		.057	.064	.119	.886	.379	.463	2.158		
IASnpdrink18si		.034	.014	.317	2.416	.018	.488	2.048		
IASnfdrink18si		-.013	.022	-.092	-.608	.545	.366	2.730		
IASntdrink18si		.028	.016	.285	1.777	.080	.325	3.076		
IASncdrink18si		.032	.024	.192	1.328	.189	.403	2.484		
awareness		-.093	.076	-.182	-1.217	.228	.377	2.654		
IAawarenessAttdrink		-.041	.042	-.151	-.994	.324	.365	2.740		
IAawarenessSI		-.091	.066	-.255	-1.387	.170	.248	4.038		
IAawarenesspdrink18		-.004	.011	-.052	-.369	.713	.431	2.321		
IAawarenessfdrink18		-.011	.014	-.097	-.777	.440	.537	1.864		
IAawarenesstdrink18	-.008	.012	-.088	-.625	.534	.426	2.348			
IAawarenesscdrink18	-.002	.012	-.014	-.134	.894	.767	1.303			

a Dependent Variable: intdrink18mc

# Likelihood of getting drunk tonight

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.646(a)	.418	.355	1.11478	.418	6.618	.000
	2	.692(b)	.479	.377	1.09510	.061	1.502	.189
	3	.712(c)	.507	.352	1.11683	.028	.576	.773
Female	1	.376(d)	.141	.043	1.58051	.141	1.444	.184
	2	.440(e)	.194	.028	1.59305	.053	.794	.578
	3	.475(f)	.226	-.032	1.64152	.032	.393	.903

## Coefficients(a)

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Male	1	(Constant)	-.115	.127					
		attdrunkmc	-.024	.068	-.034	-.359	.720	.761	1.314
		snpdrunk2nitemc	.011	.020	.063	.541	.590	.515	1.942
		snfdrunk2nitemc	.012	.016	.069	.725	.471	.774	1.292
		sntdrunk2nitemc	.049	.021	.258	2.365	.020	.591	1.693
		sncdrunk2nitemc	.043	.019	.245	2.246	.027	.591	1.693
		IAattdrunk2nittep	.018	.010	.245	1.744	.085	.355	2.813
		IAattdrunk2nitfef	.006	.009	.068	.662	.510	.663	1.509
		IAattdrunk2nitetet	.015	.010	.177	1.495	.139	.499	2.002
		IAattdrunk2nitetec	-.017	.009	-.227	-1.840	.069	.460	2.175
	2	(Constant)	-.126	.135					
		attdrunkmc	.023	.077	.033	.303	.763	.561	1.783
		snpdrunk2nitemc	.039	.024	.227	1.673	.098	.368	2.717
		snfdrunk2nitemc	.006	.018	.036	.338	.736	.595	1.682
		sntdrunk2nitemc	.032	.024	.168	1.329	.188	.424	2.356
		sncdrunk2nitemc	.019	.030	.108	.643	.522	.238	4.197
		IAattdrunk2nittep	.023	.011	.312	2.076	.041	.300	3.338
		IAattdrunk2nitfef	.014	.009	.157	1.474	.145	.598	1.673
		IAattdrunk2nitetet	.015	.011	.176	1.362	.177	.406	2.461
		IAattdrunk2nitetec	-.019	.009	-.264	-2.083	.041	.421	2.376
	3	sportinginvolve ntmc	.014	.105	.012	.135	.893	.808	1.237
		IAattdrunksi	-.044	.070	-.086	-.627	.532	.360	2.775
		IAAsnpdrunk2nitesi	-.034	.017	-.314	-1.973	.052	.268	3.730
		IAAsnfdrunk2nitesi	-.008	.014	-.071	-.558	.578	.423	2.363
		IAAsntdrunk2nitesi	.016	.020	.117	.811	.420	.328	3.047
		IAAsncdrunk2nitesi	.024	.017	.243	1.417	.160	.231	4.334
		(Constant)	-.056	.166					
		attdrunkmc	.001	.082	.002	.017	.987	.517	1.935
		snpdrunk2nitemc	.044	.027	.251	1.597	.115	.285	3.509
		snfdrunk2nitemc	-.007	.025	-.043	-.295	.769	.335	2.982
		sntdrunk2nitemc	.059	.038	.315	1.578	.119	.177	5.651
		sncdrunk2nitemc	-.008	.041	-.045	-.196	.845	.135	7.433
		IAattdrunk2nittep	.024	.012	.330	2.050	.044	.272	3.673
IAattdrunk2nitfef	.014	.010	.156	1.399	.166	.566	1.767		
IAattdrunk2nitetet	.012	.011	.145	1.087	.281	.394	2.536		
IAattdrunk2nitetec	-.015	.010	-.206	-1.516	.134	.382	2.619		
3	sportinginvolve ntmc	-.007	.165	-.006	-.043	.966	.341	2.934	
	IAattdrunksi	-.018	.093	-.034	-.189	.851	.213	4.698	
	IAAsnpdrunk2nitesi	-.046	.024	-.428	-1.912	.060	.141	7.117	
	IAAsnfdrunk2nitesi	-.003	.016	-.028	-.200	.842	.354	2.824	
	IAAsntdrunk2nitesi	.022	.021	.161	1.057	.294	.302	3.309	
	IAAsncdrunk2nitesi	.012	.021	.117	.561	.577	.163	6.133	
	awareness	.063	.110	.071	.573	.568	.462	2.162	
	IAawarenessAttdrunk	-.004	.056	-.011	-.072	.942	.332	3.013	
	IAawarenessSI	-.048	.090	-.069	-.534	.595	.420	2.383	
	IAawarenesspdru nk2nite	.005	.019	.055	.276	.783	.175	5.725	
IAawarenessfdrun k2nite	.005	.015	.050	.332	.741	.310	3.224		
IAawarenessstdrun k2nite	-.025	.022	-.223	-1.119	.267	.178	5.626		
IAawarenesscdrun k2nite	.030	.023	.310	1.349	.182	.133	7.507		



gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Female	1	(Constant)	.072	.193		.373	.710		
		attdrunkmc	.183	.096	.221	1.909	.060	.808	1.237
		snpdrunk2nitemc	-.019	.033	-.080	-.580	.563	.568	1.759
		snfdrunk2nitemc	.050	.030	.240	1.704	.092	.548	1.824
		sntdrunk2nitemc	-.018	.043	-.053	-.408	.684	.643	1.555
		sncdrunk2nitemc	-.003	.041	-.010	-.076	.939	.633	1.580
		IAattdrunk2nitep	.025	.017	.204	1.508	.135	.595	1.681
		IAattdrunk2nitef	-.006	.014	-.060	-.465	.643	.649	1.540
		IAattdrunk2nitete	-.011	.025	-.057	-.449	.655	.682	1.466
		IAattdrunk2nitec	-.018	.028	-.092	-.662	.510	.558	1.792
	2	(Constant)	-.093	.246		-.378	.707		
		attdrunkmc	.208	.127	.252	1.644	.105	.470	2.129
		snpdrunk2nitemc	-.034	.039	-.142	-.872	.386	.415	2.412
		snfdrunk2nitemc	.027	.038	.129	.721	.473	.343	2.913
		sntdrunk2nitemc	-.024	.052	-.071	-.451	.653	.448	2.232
		sncdrunk2nitemc	.005	.048	.015	.099	.921	.473	2.116
		IAattdrunk2nitep	.026	.017	.211	1.541	.128	.589	1.699
		IAattdrunk2nitef	.000	.014	-.004	-.029	.977	.615	1.627
		IAattdrunk2nitete	-.012	.027	-.064	-.471	.639	.602	1.661
		IAattdrunk2nitec	-.029	.031	-.144	-.913	.364	.441	2.267
		sportinginvolvementmc	-.224	.195	-.146	-1.151	.254	.683	1.464
		IAattdrunksi	.012	.111	.018	.112	.911	.448	2.231
		IASnpdrunk2nitesi	-.021	.032	-.097	-.668	.506	.523	1.913
	IASnfdrunk2nitesi	-.028	.031	-.131	-.900	.371	.520	1.921	
	IASntdrunk2nitesi	.003	.032	.011	.088	.930	.689	1.451	
	IASncdrunk2nitesi	.036	.035	.128	1.020	.311	.701	1.426	
	3	(Constant)	-.115	.274		-.419	.676		
		attdrunkmc	.242	.140	.294	1.727	.089	.406	2.464
		snpdrunk2nitemc	-.043	.043	-.181	-.993	.324	.351	2.846
		snfdrunk2nitemc	.025	.041	.117	.600	.551	.308	3.251
		sntdrunk2nitemc	-.021	.055	-.064	-.390	.698	.435	2.301
		sncdrunk2nitemc	.002	.050	.008	.048	.962	.457	2.189
		IAattdrunk2nitep	.026	.019	.210	1.364	.177	.494	2.023
IAattdrunk2nitef		-.001	.015	-.005	-.035	.972	.554	1.806	
IAattdrunk2nitete		-.011	.028	-.054	-.378	.706	.568	1.760	
IAattdrunk2nitec		-.036	.036	-.181	-1.010	.316	.365	2.741	
sportinginvolvementmc		-.277	.235	-.181	-1.181	.242	.500	2.002	
IAattdrunksi		.016	.127	.022	.124	.902	.363	2.758	
IASnpdrunk2nitesi		-.027	.036	-.124	-.770	.444	.451	2.219	
IASnfdrunk2nitesi		-.030	.032	-.142	-.927	.357	.498	2.007	
IASntdrunk2nitesi		.001	.034	.005	.036	.971	.637	1.571	
IASncdrunk2nitesi		.023	.038	.082	.601	.550	.633	1.580	
awareness		.098	.163	.101	.602	.549	.414	2.414	
IAawarenessAttdrunk		.032	.070	.068	.452	.652	.513	1.951	
IAawarenessSI		.031	.124	.046	.252	.802	.346	2.889	
IAawarenesspdrunk2nite	-.007	.025	-.044	-.262	.794	.425	2.351		
IAawarenessfnfdrunk2nite	.015	.022	.105	.686	.495	.502	1.992		
IAawarenesssntdrunk2nite	.021	.035	.090	.601	.550	.519	1.926		
IAawarenesssncdrunk2nite	-.032	.050	-.105	-.641	.524	.433	2.309		

a Dependent Variable: drunk2nitemcrev

# Likelihood of getting drunk this weekend

Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.627(a)	.394	.328	1.70781	.394	5.985	.000
	2	.671(b)	.450	.342	1.68916	.056	1.307	.264
	3	.718(c)	.516	.364	1.66148	.066	1.370	.232
Female	1	.561(d)	.315	.237	2.03285	.315	4.040	.000
	2	.592(e)	.351	.217	2.05895	.036	.668	.675
	3	.653(f)	.427	.236	2.03431	.076	1.254	.287

**Coefficients(a)**

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Male	1	(Constant)	.003	.202		.016	.987		
		attdrunkmc	.293	.115	.279	2.550	.013	.612	1.634
		snpdrunkwendmc	.059	.028	.246	2.121	.037	.544	1.840
		snfdrunkwendmc	.014	.025	.058	.573	.568	.715	1.399
		sntdrunkwendmc	.037	.028	.139	1.332	.187	.673	1.485
		sncdrunkwendmc	.020	.028	.079	.721	.473	.602	1.660
		IAattdrunkwendp	-.005	.013	-.044	-.342	.733	.452	2.213
		IAattdrunkwendf	.010	.014	.077	.707	.482	.616	1.622
		IAattdrunkwendt	.010	.014	.086	.749	.456	.551	1.816
		IAattdrunkwendc	-.007	.012	-.062	-.550	.584	.574	1.742
	2	(Constant)	-.241	.221		-1.089	.280		
		attdrunkmc	.188	.153	.179	1.228	.223	.338	2.960
		snpdrunkwendmc	.061	.030	.253	2.042	.045	.468	2.139
		snfdrunkwendmc	.018	.027	.073	.647	.519	.570	1.754
		sntdrunkwendmc	.033	.030	.122	1.079	.284	.562	1.779
		sncdrunkwendmc	.064	.042	.252	1.531	.130	.264	3.789
		IAattdrunkwendp	.000	.015	-.002	-.013	.990	.347	2.882
		IAattdrunkwendf	.007	.015	.053	.449	.655	.519	1.925
		IAattdrunkwendt	.005	.015	.040	.321	.749	.470	2.126
		IAattdrunkwendc	-.006	.012	-.056	-.494	.622	.549	1.820
		sportinginvolve ntmc	.392	.159	.227	2.468	.016	.845	1.184
		IAattdrunksi	.074	.117	.096	.630	.530	.311	3.215
		IASnpdrunkwends i	.009	.026	.050	.346	.730	.349	2.869
		IASnfdrunkwendsi	-.011	.021	-.066	-.500	.619	.408	2.449
		IASntdrunkwendsi	.004	.030	.018	.118	.906	.293	3.412
	IASncdrunkwendsi	-.031	.024	-.214	-1.295	.199	.261	3.832	
	3	(Constant)	-.380	.259		-1.465	.147		
		attdrunkmc	.146	.156	.138	.936	.353	.317	3.157
		snpdrunkwendmc	.082	.034	.339	2.426	.018	.354	2.828
		snfdrunkwendmc	.027	.032	.111	.849	.399	.404	2.474
		sntdrunkwendmc	.023	.051	.084	.444	.658	.194	5.166
		sncdrunkwendmc	.104	.059	.410	1.762	.082	.128	7.840
		IAattdrunkwendp	.000	.015	.003	.018	.986	.338	2.955
IAattdrunkwendf		.004	.015	.031	.262	.794	.493	2.028	
IAattdrunkwendt		.004	.015	.032	.260	.796	.445	2.249	
IAattdrunkwendc		-.009	.012	-.088	-.754	.454	.509	1.964	
sportinginvolve ntmc		.028	.234	.016	.121	.904	.377	2.652	
IAattdrunksi		.239	.155	.310	1.543	.127	.171	5.832	
IASnpdrunkwends i		-.021	.033	-.118	-.636	.527	.200	4.994	
IASnfdrunkwendsi		-.001	.023	-.007	-.048	.962	.339	2.953	
IASntdrunkwendsi		.004	.031	.019	.115	.909	.264	3.789	
IASncdrunkwendsi		-.049	.028	-.335	-1.739	.086	.186	5.370	
awareness		.402	.159	.296	2.528	.014	.506	1.977	
IAawarenessAttdr unk		-.105	.094	-.183	-1.126	.264	.261	3.828	
IAawarenessSI		.108	.129	.104	.834	.407	.445	2.247	
IAawarenesspdru nkwend		.019	.025	.129	.779	.439	.252	3.969	
IAawarenessfdrun kwend	-.016	.019	-.114	-.863	.391	.398	2.511		
IAawarenessstdrun kwend	-.003	.031	-.021	-.109	.914	.186	5.382		
IAawarenesscdru nkwend	.002	.036	.015	.057	.954	.107	9.331		

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Female	1	(Constant)	.832	.258		3.226	.002		
		attdrunkmc	.430	.128	.362	3.375	.001	.753	1.327
		snpdrunkwendmc	.011	.038	.036	.285	.776	.536	1.865
		snfdrunkwendmc	.088	.042	.251	2.084	.040	.600	1.667
		sntdrunkwendmc	.062	.057	.118	1.090	.279	.740	1.351
		sncdrunkwendmc	-.022	.050	-.051	-.438	.662	.645	1.550
		IAattdrunkwendp	-.010	.020	-.061	-.532	.596	.657	1.522
		IAattdrunkwendf	-.008	.019	-.047	-.415	.679	.687	1.457
		IAattdrunkwendt	-.001	.032	-.003	-.032	.975	.759	1.317
		IAattdrunkwendc	-.016	.027	-.069	-.596	.553	.647	1.545
	2	(Constant)	.890	.342		2.598	.011		
		attdrunkmc	.542	.179	.456	3.031	.003	.392	2.549
		snpdrunkwendmc	.008	.042	.028	.198	.844	.439	2.279
		snfdrunkwendmc	.084	.053	.239	1.587	.117	.392	2.550
		sntdrunkwendmc	-.014	.074	-.027	-.192	.848	.453	2.209
		sncdrunkwendmc	.010	.061	.024	.172	.864	.447	2.237
		IAattdrunkwendp	-.011	.020	-.065	-.543	.589	.619	1.615
		IAattdrunkwendf	-.009	.020	-.056	-.462	.645	.616	1.623
		IAattdrunkwendt	.015	.035	.050	.429	.669	.659	1.516
		IAattdrunkwendc	-.024	.030	-.102	-.791	.431	.534	1.874
		sportinginvolvement mc	-.084	.273	-.038	-.308	.759	.584	1.713
		IAattdrunksi	.156	.150	.154	1.046	.299	.409	2.444
		IASnpdrunkwendsi	.005	.032	.018	.146	.884	.575	1.740
		IASnfdrunkwendsi	.014	.043	.043	.323	.748	.496	2.016
		IASntdrunkwendsi	-.071	.048	-.181	-1.466	.147	.582	1.718
	IASncdrunkwendsi	.040	.043	.102	.931	.355	.736	1.359	
	3	(Constant)	.939	.342		2.744	.008		
		attdrunkmc	.562	.189	.473	2.977	.004	.344	2.908
		snpdrunkwendmc	.029	.043	.097	.666	.508	.410	2.438
		snfdrunkwendmc	.083	.054	.238	1.530	.131	.358	2.795
		sntdrunkwendmc	.012	.078	.022	.149	.882	.398	2.510
		sncdrunkwendmc	-.010	.063	-.022	-.155	.877	.413	2.420
		IAattdrunkwendp	-.015	.022	-.090	-.711	.480	.538	1.860
IAattdrunkwendf		-.012	.020	-.072	-.594	.554	.585	1.710	
IAattdrunkwendt		.005	.036	.016	.137	.891	.615	1.625	
IAattdrunkwendc		-.019	.030	-.084	-.640	.524	.502	1.994	
sportinginvolvement mc		.056	.298	.025	.188	.851	.476	2.099	
IAattdrunksi		.097	.166	.096	.584	.561	.324	3.083	
IASnpdrunkwendsi		.003	.035	.013	.095	.925	.451	2.219	
IASnfdrunkwendsi		.025	.045	.077	.552	.583	.451	2.220	
IASntdrunkwendsi		-.061	.051	-.157	-1.208	.231	.513	1.948	
IASncdrunkwendsi		.024	.045	.060	.520	.605	.656	1.525	
awareness		.056	.220	.040	.254	.801	.348	2.875	
IAawarenessAttdrun k		.133	.087	.199	1.527	.132	.511	1.958	
IAawarenessSI	.148	.165	.153	.901	.371	.302	3.307		
IAawarenesspdrunk wend	-.002	.024	-.014	-.102	.919	.483	2.068		
IAawarenessfdrun wend	-.070	.032	-.264	-2.176	.033	.588	1.700		
IAawarenesstdrunk wend	.039	.046	.102	.850	.398	.602	1.661		
IAawarenesscdrunk wend	-.011	.054	-.028	-.202	.840	.467	2.140		

a Dependent Variable: drunkwendmcrev

# Intention of getting drunk at age 18

## Model Summary

gender	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
Male	1	.679(a)	.461	.404	.72901	.461	8.073	.000
	2	.722(b)	.521	.430	.71302	.060	1.642	.146
	3	.733(c)	.538	.396	.73361	.017	.375	.914
Female	1	.563(d)	.317	.240	.76237	.317	4.130	.000
	2	.629(e)	.395	.273	.74593	.078	1.594	.161
	3	.667(f)	.445	.263	.75080	.050	.863	.540

## Coefficients(a)

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Male	1	(Constant)	.144	.085		1.700	.093		
		attdrunkmc	.168	.045	.345	3.741	.000	.746	1.340
		snldrunk18mc	.027	.010	.249	2.608	.011	.695	1.439
		snfdrunk18mc	.021	.012	.172	1.844	.069	.732	1.366
		sntdrunk18mc	.008	.012	.060	.654	.515	.744	1.345
		sncdrunk18mc	.001	.010	.010	.102	.919	.728	1.374
		IAattdrunk18p	-.009	.006	-.160	-1.594	.115	.631	1.584
		IAattdrunk18f	.015	.006	.236	2.402	.018	.654	1.528
		IAattdrunk18t	-.006	.006	-.089	-.908	.366	.667	1.500
		IAattdrunk18c	-.005	.005	-.098	-1.033	.305	.706	1.416
	2	(Constant)	.085	.099		.855	.395		
		attdrunkmc	.122	.056	.250	2.190	.031	.464	2.155
		snldrunk18mc	.030	.011	.284	2.676	.009	.540	1.853
		snfdrunk18mc	.013	.014	.107	.932	.354	.461	2.167
		sntdrunk18mc	.002	.013	.019	.188	.851	.607	1.648
		sncdrunk18mc	-.003	.014	-.025	-.192	.848	.360	2.777
		IAattdrunk18p	-.009	.006	-.162	-1.504	.137	.521	1.919
		IAattdrunk18f	.014	.007	.214	2.071	.042	.567	1.763
		IAattdrunk18t	-.009	.007	-.142	-1.323	.190	.525	1.903
		IAattdrunk18c	-.006	.005	-.114	-1.187	.239	.654	1.529
	3	sportinginvolve mentmc	.114	.075	.145	1.523	.132	.673	1.485
		IAattdrunksi	.063	.042	.178	1.479	.143	.420	2.380
		IAsnldrunk18si	-.001	.009	-.007	-.067	.947	.522	1.916
		IAsnfdrunk18si	.003	.009	.041	.342	.734	.419	2.386
		IASntdrunk18si	.005	.012	.053	.399	.691	.349	2.868
		IASncdrunk18si	.004	.009	.057	.415	.680	.326	3.070
		(Constant)	.053	.107		.499	.619		
		attdrunkmc	.125	.061	.256	2.053	.044	.413	2.423
		snldrunk18mc	.029	.015	.271	1.908	.060	.319	3.132
		snfdrunk18mc	.011	.017	.088	.630	.531	.331	3.020
sntdrunk18mc	.006	.024	.043	.238	.813	.196	5.100		
sncdrunk18mc	-.005	.023	-.043	-.197	.845	.136	7.348		
IAattdrunk18p	-.007	.007	-.125	-1.027	.308	.436	2.295		
IAattdrunk18f	.014	.007	.222	1.901	.061	.472	2.117		
IAattdrunk18t	-.011	.008	-.167	-1.450	.152	.485	2.063		
IAattdrunk18c	-.005	.005	-.112	-1.036	.304	.550	1.818		
sportinginvolve mentmc	.138	.128	.175	1.076	.286	.242	4.128		
IAattdrunksi	.064	.056	.182	1.150	.254	.256	3.899		
IAsnldrunk18si	.004	.011	.052	.379	.706	.336	2.977		
IAsnfdrunk18si	-.004	.012	-.053	-.348	.729	.281	3.560		
IASntdrunk18si	.001	.013	.009	.061	.952	.281	3.553		
IASncdrunk18si	7.860E- 05	.011	.001	.007	.994	.235	4.254		
awareness	-.054	.068	-.089	-.789	.433	.506	1.977		
IAawarenessAttd runk	.006	.035	.023	.174	.862	.366	2.729		
IAawarenessSI	.032	.065	.068	.498	.620	.340	2.940		
IAawarenesspdr unk18	-.006	.009	-.099	-.682	.497	.303	3.305		
IAawarenessfdru nk18	.010	.010	.141	.972	.334	.306	3.263		
IAawarenessdru nk18	.003	.013	.044	.258	.797	.218	4.579		
IAawarenesscdru nk18	.004	.014	.068	.301	.765	.124	8.059		

gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
			B	Std. Error	Beta			Tolerance	VIF
Female	1	(Constant)	.152	.093		1.640	.105		
		attdrunkmc	.166	.046	.369	3.611	.001	.815	1.227
		snpdrunk18mc	.016	.013	.152	1.262	.211	.585	1.709
		snfdrunk18mc	.026	.019	.186	1.410	.162	.492	2.031
		sntdrunk18mc	.019	.018	.143	1.063	.291	.474	2.112
		sncdrunk18mc	-.017	.019	-.100	-.873	.385	.655	1.528
		IAattdrunk18p	-.009	.007	-.151	-1.270	.208	.606	1.651
		IAattdrunk18f	.002	.009	.031	.245	.807	.524	1.910
		IAattdrunk18t	-.002	.009	-.028	-.212	.833	.486	2.056
		IAattdrunk18c	.006	.011	.063	.527	.600	.605	1.654
	2	(Constant)	.138	.121		1.134	.261		
		attdrunkmc	.130	.055	.290	2.349	.021	.537	1.861
		snpdrunk18mc	.023	.014	.213	1.576	.119	.445	2.246
		snfdrunk18mc	.014	.024	.096	.580	.563	.296	3.381
		sntdrunk18mc	.038	.021	.286	1.769	.081	.313	3.197
		sncdrunk18mc	-.026	.020	-.154	-1.267	.209	.552	1.811
		IAattdrunk18p	-.008	.007	-.140	-1.152	.253	.555	1.803
		IAattdrunk18f	.006	.009	.093	.719	.474	.493	2.028
		IAattdrunk18t	-.002	.009	-.032	-.233	.816	.431	2.322
		IAattdrunk18c	.006	.012	.069	.545	.588	.507	1.972
		sportinginvolvementmc	-.024	.101	-.029	-.236	.814	.553	1.809
		IAattdrunksi	-.019	.047	-.050	-.399	.691	.530	1.887
		IAAsnpdrunk18si	-.005	.012	-.053	-.433	.667	.551	1.816
	IAAsnfdrunk18si	.001	.018	.005	.037	.971	.398	2.511	
	IAAsntdrunk18si	.035	.014	.341	2.448	.017	.422	2.371	
	IAAsncdrunk18si	.012	.018	.067	.651	.517	.766	1.305	
	3	(Constant)	.141	.132		1.069	.289		
		attdrunkmc	.142	.058	.317	2.442	.017	.491	2.038
		snpdrunk18mc	.017	.015	.157	1.096	.277	.404	2.478
		snfdrunk18mc	.006	.025	.042	.243	.809	.274	3.651
		sntdrunk18mc	.047	.022	.357	2.112	.038	.289	3.459
		sncdrunk18mc	-.025	.021	-.151	-1.198	.235	.524	1.909
		IAattdrunk18p	-.007	.008	-.120	-.888	.378	.450	2.221
IAattdrunk18f		.008	.009	.125	.929	.356	.456	2.194	
IAattdrunk18t		-.006	.010	-.092	-.636	.527	.398	2.515	
IAattdrunk18c		.008	.012	.089	.669	.506	.472	2.118	
sportinginvolvementmc		-.028	.109	-.034	-.259	.796	.475	2.107	
IAattdrunksi		.016	.056	.043	.297	.767	.387	2.583	
IAAsnpdrunk18si		-.004	.014	-.037	-.273	.786	.455	2.198	
IAAsnfdrunk18si		-.006	.020	-.051	-.319	.751	.321	3.111	
IAAsntdrunk18si		.033	.015	.315	2.136	.036	.380	2.633	
IAAsncdrunk18si		.013	.019	.075	.700	.486	.732	1.367	
awareness		.007	.084	.013	.083	.934	.325	3.074	
IAawarenessAttdrunk		-.026	.031	-.103	-.851	.398	.560	1.786	
IAawarenessSI		.011	.063	.030	.173	.863	.278	3.592	
IAawarenesssnpdrunk18	.011	.009	.178	1.185	.240	.368	2.720		
IAawarenesssnfdrunk18	.020	.012	.207	1.657	.102	.530	1.888		
IAawarenesssntdrunk18	-.015	.012	-.162	-1.176	.244	.438	2.283		
IAawarenesssncdrunk18	.001	.013	.009	.093	.926	.798	1.253		

a Dependent Variable: intdrunk18mc

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**BEAUTIFUL GAME, LESS BEAUTIFUL NAME?  
INVESTIGATING YOUNG PEOPLE'S VIEWS ON THE  
APPROPRIATENESS OF SPORT SPONSORSHIPS**

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## **BEAUTIFUL GAME, LESS BEAUTIFUL NAME? INVESTIGATING YOUNG PEOPLE'S VIEWS ON THE APPROPRIATENESS OF SPORT SPONSORSHIPS**

### **Abstract**

Increased alcohol consumption among young people has led to calls for stricter regulatory measures, one of which is restriction of sports sponsorship by alcohol companies. Focus group discussions indicate that young people themselves believe such sponsorship to have negligible effect on alcohol consumption. Sponsorship featuring unhealthy products that children could easily buy is more of a concern. Effects on product perceptions are thought to be stronger when the sponsorship association is with an individual participatory sport, than with a team sport with a strong spectator culture.

**Keywords:** sport sponsorship; alcohol; young people

### **INTRODUCTION**

Since the early 1990s, the world has seen the commercialisation of sport increasing at a faster rate than ever before. The sponsorship of sport, especially sports such as the "beautiful game" of football which attract large numbers of spectators either live or on television, has played a major role in this, with the investment in UK sport sponsorship rising to over £400 million in 2000 (Mintel, 2000). While some early sponsorship activity may have stemmed from philanthropic motives or particular interests of company executives, nowadays successful sponsorships are carefully selected, with consideration of factors such as target markets, image effects, synergies or "fit" between sponsor and sponsored property, and return on investment (see e.g. Pope, 1998; Amis *et al*, 1999; Anderson and Channon, 2001). In order to strengthen their identification with their chosen sport, sponsors of high profile teams or events will often also put money into the sport at a lower level (e.g. Lloyds TSB's involvement with schools rugby and local rugby clubs, as well as their sponsorship of the 6 Nations Championship).

However, despite the evident financial benefits to sport, several concerns are being raised. Football, as the most popular and most heavily sponsored UK sport, is inevitably often the focus of concern. Andrews (1998) questions the long term impact of the expansion of televised football on the sport as a whole, while Walsh and Giulianotti (2001) raise both moral and practical issues as to where the growing commodification of football may lead. Crompton (1993) and others raise the ethical issues involved in sponsorship by tobacco and alcohol companies, especially in relation to their influence upon young people. Such concerns have led to the banning of tobacco sponsorship in most UK sports, and are behind calls by medical professionals and groups such as Alcohol Concern for regulation of alcohol sponsorship (Institute of Alcohol Studies (IAS), 2001) in line with the World Health Organisation's Charter on Alcohol, which sets out the right of children and young people "to grow up in an environment protected ... to the extent possible, from the promotion of alcoholic beverages" (IAS, 1997). This research seeks to examine young people's own opinions regarding these issues, with a view to examining the potential effectiveness of such regulation.

## **PREVIOUS RESEARCH**

Sports sponsorship is currently an under-researched area (Cornwell and Maignan, 1998), with much academic research carried out from a corporate rather than consumer perspective.

Consumer research has often focused particularly on event sponsorships (e.g. Easton and Mackie, 1998; Quester and Farrelly, 1998). Bennett (1999), interviewing London football fans, found evidence of exposure effects in the recall of sponsors' brands, and also an inflated perception of brand share - a belief that larger numbers of fellow supporters and the general public purchased the brand than was indeed the case. McDaniel and Mason (1999) investigated US public opinion on (hypothetical) tobacco and alcohol sponsorships of the Olympics, finding beer to be considered more acceptable than tobacco, but that views differed according to respondents' consumption of the products, particularly while watching televised sport, and their attitudes both to the Olympics and to advertising activities. However, UK attitudes relating to these issues have not been examined, nor has it been discovered whether views differ when sponsorship is of a team or individual rather than an event.

## **THE RESEARCH STUDY**

This is the first step in a research programme that aims to examine the attitudes and perceptions of UK young people (under 25) toward sport sponsorship, and alcohol sponsorships in particular. Concentration upon this age group is justified because of increasing concern, in UK and many other European countries, regarding increased consumption of alcohol by the under 25s, lower ages of first consumption, and more young people drinking for the primary purpose of getting drunk. The youth market is also a major target for many brands, and has grown up in a commercialised sporting environment - thus they may have different perceptions to older people who see this as a recent phenomenon. Finally, this research helps to extend the work of McDaniel and Mason (1999) to cultures outside the USA, as these authors recommend.

### **Research methodology**

Three focus groups were organised using student volunteers aged between 19 and 26 - all participated in, and were spectators of, at least one sport. Degrees of interest varied from fanatical football supporters to those who watched televised sport only on occasions such as international matches. There was a 50/50 male/female split, and two thirds identified themselves as supporters of a particular football team. Participants were invited to discuss sport sponsorship, but were not advised of the focus on alcohol sponsorships, in order to minimise any experimental effect. This was disclosed at a final debriefing session.

The script for the focus group was designed to explore, first, awareness of leading company sponsorships in major UK sports and perceived influence of sponsorships on purchase decisions. Participants were then asked to articulate any concerns they had regarding sport sponsorships, before being prompted to consider product appropriateness with the aid of visual cues - a series of pictures showing sponsored sportspersons, comprising three pairs of hypothetical sponsorships and two real ones:

- Two teenage footballers wearing shirts with brand names of a) cigarettes b) chocolate bar
- The same footballers with brand names of a) a lager b) a crisp-type snack
- The same brands as above, but on two teenage cross country runners
- A young boy (age around 10) wearing an Arsenal football shirt with the Dreamcast logo, and a baby wearing a Liverpool babysuit with the Carlsberg brand name.

## RESEARCH FINDINGS

### General perceptions

Participants showed a high level of awareness of major sponsoring companies and types of companies, but little knowledge of less high profile activities undertaken (e.g. grass roots support). Although sponsorship objectives have been broadly categorised under the themes of awareness, image, and sales (Cornwell & Maignan, 1998), it was felt that sponsorship was all about awareness – getting the name seen, particularly on television. Image effects were limited to being thought successful by association with a top club, or supportive of the local community through association with a local club. Regarding sales, it was felt that sponsorship could heighten awareness, “might bring it to the front of your mind to consider”, but actual choice would be made on product-related factors. Sponsorship, though, could be a deciding factor in choice between undifferentiated products (in a positive or negative sense, depending whether the sponsored team was liked or disliked). But it was felt that sales would be better increased by offering samples at events – the example of a football game which several had attended, where samples of a perfume had been given out, was cited: “I tried it and liked it, and I still wear it ... much more effective than just seeing the name on someone’s shirt”.

### Differences between sports

There was a marked difference in how participants viewed sponsorship of mass spectator team sports such as football (“a religion to a lot of people ... people live for football”; “a culture ... brings everybody together”), and individual sports such as running or snowboarding. Sponsorship for the former was thought to be targeted mainly at spectators, while for the latter it was targeted at actual or potential participants. This led to different views on appropriateness of sponsorships.

### Appropriateness and other concerns

Discussion on concerns regarding sponsorship was wide-ranging and covered product-level concerns, types of sponsored property, influence of sponsors, amount of sponsorship, and sponsorship’s place in the “exploitation” of children by brands.

### Product-level concerns

At product level, discussion, prompted by the pictures, commenced with consideration of tobacco and alcohol products. Initial reactions to the tobacco sponsorship were all negative (one student currently trying to give up smoking was particularly opposed) but a few people questioned this as they thought about it: “it doesn’t really have that much effect – you watch *F(ormula) 1*, see all the cigarette advertisements, it doesn’t make you want to go out and buy cigarettes – so what’s the difference?” There was little objection to the alcohol sponsorship on football shirts, even when the subject of underage drinking was brought up: “you’re not going to drink because they’re wearing it on their shirts ... but because your friends do – it’s part of the culture”; “teenagers drink whatever’s cheap”. Participants felt that teenage drinking and smoking, starting around 15 or 16, was “part of growing up”.

Regarding younger children, there was more concern with sponsorship related to products that children could easily and legally buy, than with alcohol. Based on their own memories, they believed “when a product is irrelevant to kids it doesn’t register”: one remembered that as a child “I didn’t associate the Carling Premiership with the lager”. Sponsorships by junk food products, however, could influence children to eat more of such products than they should, and sponsorship by games companies could increase “pester power”: “they see the brand name all the time, then they put pressure on their parents”. This comment, however, was a complaint against all promotion aimed at children, not sponsorship specifically. Some felt that

this would work at the brand rather than product level – “if they didn’t want Dreamcast they would want something similar”. Reactions to the “Carlsberg baby” varied considerably from “I wouldn’t be bothered – it’s just a name” to unease and even anger that such clothes are designed, anger targeted more at the “abuse of the child” and the idea of “saying the baby is the same as an advertising hoarding” than that a particular product is featured.

### ***Sponsored property - team or individual?***

There was more objection to both alcohol and junk food products being shown on runners’ shirts, because running was perceived as primarily a participatory rather than a spectator sport, with a target audience who were themselves runners. The sponsorships seemed incongruous – “(crisps) are fattening, runners are thin”; “runners are not known for drinking” – and were seen as a greater endorsement of the sponsored product than a team sponsorship, implying use of the product and thus giving children the wrong idea about what a serious sportsperson should eat and drink - “if you see the name and the shirt they’re trying to put a healthy influence”. One participant in a minority, individual sport also stated that he would be very unhappy if a large corporate (“like Coca-Cola”) moved into sponsorship of his sport, because it would give a “big business” image to a sport which was strongly individualistic.

### ***Influence of sponsors***

The pressure on a sportsperson to conform to the desired image was also thought to be greater for individuals (Michael Jackson being dropped from Coca-Cola’s advertising was cited as a parallel, while certain footballers’ drunken and/or violent behaviour away from the pitch had not even led them to being dropped from the team). The paradox was raised that, if a sponsor puts pressure on a team to drop a player who has behaved badly, this sends a responsible message (good) but is interference (bad) - there was agreement that team sponsors should not influence internal matters such as choice of team, e.g. the rumour that Nike forced Brazil to play a sponsored player when unfit.

### ***Extent of sponsorship***

It was also considered that the extent of football sponsorship had become excessive. Perimeter advertising was thought to be useless as there was so much “clutter” that people did not notice any particular names, or if they did, the presence of e.g., a blue chip company’s name next to that for a fast food chain, was likely to have a negative impact on image. Wimbledon Lawn Tennis Championship, in contrast, was approved of because of its lack of perimeter advertising – its associations with companies were more subtle.

### ***Branding as exploitation***

Finally, many participants saw sponsorship as a major part of the “exploitation” of children by brands. It was thought brand awareness could begin as early as five, reached its peak around the start of secondary school when peer group acceptance was most important, and declined after GCSE and school leaving age, as people became more independent. Because, in a school setting, sporting interests or abilities are often key to gaining status and/or acceptance with one’s peers (“(at my school) unless you were sporty you might as well not be alive”), it was felt that a sporting association could give brands a highly desirable image among children and teenagers, leading to excessive spending on these brands by children and associated adults.

## CONCLUSIONS AND IMPLICATIONS

In the context of football, alcohol sponsorship is not a problem for these young people. Alcohol is an accepted part of the football culture for both players and spectators. They do not believe that sponsorship, or indeed any alcohol promotion, encourages underage drinking, only brand trial, as drinking is something most young people do as a matter of course. However, they perceive this to happen in mid-teens, while statistics show 21% of 11-15 year-olds drinking at least once a week, and “consuming on average almost 10 units a week” (Alcohol Concern, 2000). The discrepancy in perceptions could be due to social background, and/or to trends toward younger drinking age since participants were in that age group. But the indication from this exploratory research is that, in UK, alcohol is still strongly connected with team and spectator sports (football in particular) – and these connections do not have their roots in sponsorship. Sociological research records the links between sport and alcohol, and their role in social bonding (see Fulcher and Scott (1999) for a historical perspective, Eastman and Land (1997) for a more modern one). Increased medical knowledge, and the well-documented problems of football violence and excess alcohol consumption of some young footballers, may make it highly desirable to weaken the links – but great cultural change is required, and sponsorship restriction by itself could make at most a minimal contribution. Furthermore, restriction could be perceived negatively by young people as unnecessary regulatory interference, as they see no need for it. However, if the Alcohol Concern lobby and regulators were to take a more positive stance on the issue, focusing on promoting good practice rather than lobbying for or imposing restriction, then they could use the interest in, and perceived status of, sport among young people to their advantage. Appropriate high profile sports people could be chosen as role models to promote abstinence or sensible drinking, and guidance could be provided, from the early years of sport participation, on diet and fitness issues, which would include advice regarding alcohol. The perceived distinctions among young people between types of sport, and the emergence of increasing numbers of minority sports, indicates the possibility of other channels than football through which the desirability of abstinence and/or sensible drinking may be effectively promoted.

As attitudes to alcohol are often formed at an early age, further research is needed to test to what extent the perceptions of this student group regarding teenagers and younger children hold good. Ownership and consumption of age-appropriate sponsoring brands should be researched, as should awareness of, and attitude to, alcohol products, and the extent to which sponsorship is regarded as an endorsement, by club or player, of a sponsored product. Possible correlations with interest in sport and team preferences should also be investigated.

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