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## **Defining and changing binge drinking**

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## **Defining and changing binge drinking**

If media reports are to be believed binge drinking is an increasingly popular past time of the British public, particularly amongst teenagers and young adult, but how prevalent actually is it? Figures from such studies as the General Household Survey of 2003 suggest that approximately 35% of males and 28% of females aged between 16 – 24 binge drink at least once a week. The corresponding rates for the entire adult population are lower but not negligible, at 20% and 10% for males and females respectively (Office of National Statistics 2005). Prime Minister Tony Blair has gone so far to say that binge drinking risks becoming the ‘new British disease’ (Hetherington and Bowers 2005). This comment has been met with some scepticism, with several researchers questioning if it really is anything new, is an especially British problem or in fact qualifies as a disease (e.g. Plant and Plant 2006). Despite the somewhat alarmist reporting there is growing evidence that a binge drinking pattern of consumption can be harmful, over and above the total amount of alcohol consumed. In addition to the often cited problems of crime and increased risk of accidents, recent research has also for example noted long term neuropsychological problems such as abnormal brain development (Monti et al. 2005) and cognitive impairment (Hartley et al. 2004). One of the key characteristics of binge drinking which separates it from other types of alcohol problem is just how widespread a behaviour it appears to be in the general population. Any organisation which has a large number of people – be it an educational establishment or a workplace – is likely to include a sizeable number of ‘binge drinkers’ in it’s ranks. If these individuals are indeed at a greater risk of a range of health and social problems then this could have larger scale implications on issues such as productivity or academic achievement. This underlines the need to more fully understand the behaviour, the effects it has and how it can be changed.

There are however some challenges in researching binge drinking behaviour. There remains surprisingly little consensus of what the criteria for it should be, although the most common definitions tend to be couched in terms of the quantity of alcohol consumed. In the USA the most widely used criteria to date is what is termed the 5+ measure, which defines binge drinking as consuming five or more alcoholic drinks in one session (Gmel et al. 2003). The definition has entered popular use and has been used in numerous research publications, in addition to being endorsed by organisations such as the National Institute of Alcohol and Alcohol Abuse in the USA. This use of this definition has been criticised and is strongly opposed by certain alcohol researchers, such as DeJong (2003). Arguing that it is a largely arbitrary cut off point he noted for example that the estimated blood alcohol concentrations of 37% of ‘binge drinkers’ studied using the 5+ measure did not exceed the 0.08%. This is the level which is used in many states of the USA and the UK as the legal drink driving limit.

In the UK a slightly different approach has often been taken, particularly in government based research. Rather than solely using a criteria based on the number of drinks the measures used in the UK also take account of the type and strength of alcohol consumed. This is done through calculating the actual number of alcohol units contained in each beverage consumed. To put this into context a typical pint of premium lager will contain about 2.8 alcohol units whereas a bottle of wine will contain about 9 units. Criteria for binge drinking in the UK are set at 8 or more units

of alcohol for a man or 6 or more units for a woman, although it has to be noted that this definition has often been applied inconsistently (McAlaney and McMahon 2006), which undermines the validity of current UK binge drinking figures. The unit based approach also suffers the main critique as the number of drinks method – it does not take into account factors such as duration of drinking session and as such cannot reliably predict blood alcohol level and intoxication. Such is the overall controversy over the phrase ‘binge drinking’ that one of the leading journals in the field, the *Journal of Studies on Alcohol and Drugs*, will not accept articles that use the phrase in this way. An alternative term which is occasionally used in the literature is ‘heavy episodic drinking’. This term is an improvement in that it captures two of the key components of this type of alcohol consumption, namely that it is non-continuous or sporadic consumption of large amounts of alcohol in a short time. However the phrase ‘binge drinking’ has become so entrenched in academia, the media and the public mindset that it could be argued that to attempt a re-labelling of the behaviour at present would be futile and possibly counterproductive. The problem perhaps is not so much with the use of the term ‘binge drinking’ itself but rather on how the concept is operationalised and measured, an issue which not be resolved by calling it by another name. In addition to including the key components of duration of and frequency of drinking sessions several researchers have also suggested that measures of binge drinking acknowledged the individual’s feelings of drunkenness. This is based on studies such as the work of Midanik (1999) who noted that how drunk an individual feels is often a more accurate predictor of health and social outcomes than the actual amount of alcohol consumed. It is important that these issues are addressed. Not only does a lack of consensus hinder research progress but, as shall be discussed, it may also indirectly contribute to rates of binge drinking.

### *Binge drinking interventions in the UK*

There have been a range of approaches suggested to reduce binge drinking and the consequent harm in the UK, such as changes to taxation, changes to alcohol licensing legislation and the use of safety glass (for a review see Plant and Plant 2006). Amongst these varied responses to concern about binge drinking have been public health interventions, such as the recent ‘Alcohol: Know Your Limits’ campaign from the NHS and the Home Office ([www.knowyourlimits.gov.uk](http://www.knowyourlimits.gov.uk)). These campaigns are an example of the growing movement in alcohol related harm reduction from educating people about units of alcohol and safe levels of consumption to challenging attitudes and behaviour (Measham 2006). Campaigns based solely on presenting information about alcohol units and health problems have not been found to be effective (Foxcroft et al. 2003). The newer range of campaigns take a different approach by attempting to alter the underlying processes which cause a person to binge drink in the first place. As such campaigns are increasingly based on psychological research, although it should be noted that much of this research has been on alcohol consumption in general rather than binge drinking specifically.

It could be argued that alcohol expectancy research has been particularly influential in the design of some of the newer binge drinking campaigns. Alcohol expectancies are what we think will happen when we drink alcohol, and can be split into those which are positive and those which are negative. Positive expectancies, such as an expectation that intoxication will lead to tension reduction or increased attractiveness, will encourage alcohol consumption despite being erroneous. Negative expectancies

on the other hand, such as an expectancy that intoxication will result in a hangover, discourage alcohol consumption. An example of a campaign incorporating expectancy can be seen on the 'Alcohol: Know Your Limits' website which is currently being promoted through television adverts. The website contains an interactive section which allows people to simulate a night out in a pub. For instance, one of the scenarios depicts a man on a night out with his friends. As more alcohol is consumed the man becomes increasingly confident, to the point where he approaches a young woman who he believes finds him attractive. Unfortunately in his drunken state he has misread the situation and is slapped, rejected and thrown out of the pub only to then be beaten up by a gang of youths outside. As such the scenario challenges positive expectancies about drinking alcohol such as 'It makes me better at talking to woman' and 'It is fun'. Similarly negative expectancies such as 'I get into fights' and 'I feel ashamed of myself' are reinforced.

These newer style of binge drinking campaigns are innovative and it is a positive step that interventions designed specifically for binge drinking are being introduced. However, the evidence for the efficacy of campaigns based on alcohol expectancy is mixed. Kraus et al. (1994) for example achieved a significant change in expectancies following an expectancy challenge programme similar to the one above with school children. This was evident at 4 week follow up, although subsequent similar work with a 3 year follow up by Corvo and Persse (1998) noted that significant change was not maintained in the longer term. Furthermore research suggests that expectancy challenge is only really effective in those with the heaviest alcohol consumption (Dunn et al. 2000). This could mean that interventions based on expectancy may only prompt change in the most extreme cases of those within the population who drink sufficiently heavily to have an actual alcohol problem. As Weitzman and Nelson (2004) comment in discussing the 'prevention paradox' while it is important that the heaviest cases of binge drinking are addressed such individuals make up the minority of the population. The bulk of binge drinking related harm actually originates from the lower level or less frequent binge drinkers since there are far more people in this category.

### *Normative beliefs*

There is though an additional cognitive process which has been gaining research interest as a factor underlying binge drinking behaviour, namely normative beliefs. Put simply these refer to what an individual believes to be the normal, prevailing behaviours or attitude within a group. It has long been established that these beliefs are important determinants of an individual's behaviour. Some recent and interesting research from the American college system has suggested that these perceptions are almost invariably incorrect, with individuals typically overestimating how common and acceptable binge drinking is. Although the strength of this misperception has been demonstrated to vary from one group to another, the volume of evidence for these misperceptions is impressive. Research on normative misperceptions has become the basis of a binge drinking intervention which is frequently conducted in the United States, known amongst other names as a social norms intervention. The premise of this approach is straightforward, i.e. that individuals binge drink because they are driven to match an overestimated perception of how normal it is to do so. Correcting this misperception should therefore lessen the individual's drive to binge drink, which in turn results in a reduction of the binge drinking behaviour. Unlike public binge

drinking intervention campaigns in the UK, which are still in their infancy, this intervention has become an established approach in the USA and evolved specifically to tackle binge drinking. Since its introduction in the mid 1990s its popularity has risen markedly, having now been successfully applied to numerous college campuses and being named 'Idea of the Year' in 2001 by New York Time Magazine (Frauenfelder 2001).

There are several variations on this approach. Global social norms interventions operate by firstly measuring rates of alcohol consumption in a population and then presenting that information back to the population. The assumption is that for the majority of the student body these 'average' figures will be much lower than individuals expect them to be, thus correcting the individual's over inflated normative perception. Another form of the approach is personalised social norms marketing, which as the name suggests provides individuals with personal feedback on how their individual alcohol consumption compares with the average for the group. As such it operates on the same principles as global approach but has greater personal relevancy to the individual. An example of this is a study by Neighbors et al (2004) in which college students were assigned to either a personalised normative feedback treatment or a no treatment control group. After answering questions by computer on their own alcohol consumption and their perceptions of alcohol use in other students participants in the treatment group were presented with onscreen personalised normative feedback. As with the majority of normative feedback interventions this information was fairly brief and simple, reiterating to the participant how much they drank, how much they thought others drank and then revealing what the actual averages of drinking behaviour in the college were. This resulted in significant reductions of binge drinking behaviour, an effect which was maintained at 3 and 6 month follow up. This study also demonstrates the potential of using web page based approaches since it allows for easily accessed and instant personalised normative feedback, as discussed recently by Raskin - White (2006).

The efficacy of the social norm approaches have been strongly defended in the literature with articles reporting a failure to find a normative misperception or change in behaviour following a normative intervention often being met with swift rebuttals. Despite this there are valid concerns about normative misperceptions and the associated interventions, particularly if they are ever to be applied to a setting outside the American college system. Firstly, they are based on the assumption that a misperception exists. Whilst the overwhelming majority of studies have found such a misperception to exist these studies have almost exclusively been conducted in American college students (Perkins et al. 2005). As such the research to date is based on a relatively small section of the American population. Secondly it has been noted that the degree of misperception increases as does the individual's social distance from the group in question. For instance, it would be expected that someone's misperception about rates of binge drinking in their friends would be much smaller than their misperception about the more abstract and distant group of other students at their university. It is believed that this happens because the individual has less direct experience with the distant group than they do with those close to them. In the UK such distant groups may not in fact be so distant, either physically or socially. Scottish students have for instance been found to have more permissive attitudes to alcohol use and drunkenness than their American counterparts (Delk and Meilman 1996). There is also a difference in the legal drinking ages between the USA and UK (21 and 18

respectively) meaning that in the UK the majority of university aged students can legally drink in pubs and clubs whereas the majority of students in America cannot. The results of these differences could be that individuals attending university in the UK see their fellow students as being less socially distant than their American counterparts, at least in terms of alcohol consumption. If this were the case then it could be expected the degree of misperception would be less as the students would have more direct contact with their peers in alcohol related settings. Since social norms interventions operate on this misperception the efficacy of the interventions could therefore also be less when conducted in a UK setting.

However the application of social norms interventions does appear to be a promising method of reducing binge drinking behaviour, provided that these normative misperception processes do in fact occur in populations other than American college students. Preliminary research by ourselves with a student sample suggests that this may indeed be the case, with the students overestimating rates of binge drinking within the university to a degree consistent with the American studies (McAlaney and McMahon, in press). Further planned research will more fully investigate these processes.

This research on normative beliefs also raises a few further questions about how we discuss binge drinking and the effects this has. As commented at the beginning of the article the criteria for being a binge drinker are not particularly exact, lacking key components which determine whether or not an individual actually becomes intoxicated. Those who exceed the 8/6 units limit infrequently are included alongside those who do so frequently; neither of whom may have necessarily become intoxicated from their 'binge' sessions. As such there are arguably many people included in the binge drinking figures of the UK who most researchers would agree are not in fact 'binge drinkers' in the way the term is intended. By reporting binge drinking figures to be higher than they actually are such figures and associated media reports may themselves be contributing towards a misperception as to how normal the behaviour is. In addition, media health campaigns such as the one discussed previously based on expectancy research may inadvertently reinforce this misperception as being the normative behaviour within society by including images of binge drinking. It is interesting to note that in even in the most heavily binge drinking group in the population – the aforementioned males aged 16 to 24 – regular binge drinking is not in fact the majority behaviour. This is not to say that binge drinking campaigns should not be conducted for fear of inadvertently promoting the behaviour, but it is important to keep the scale of the issue in perspective and to avoid making it seem more prevalent than it actually is.

### *Conclusion and directions for the future*

If concern about binge drinking rates in the UK is to be translated into action then are several issues which must be taken into consideration. To bring about wide scale behaviour change we firstly need to reach a consensus on how the behaviour should be defined, if in fact a simple but accurate classification system is even possible. We also need to further clarify the health and social outcomes which are associated with a binge drinking pattern of consumption. Most importantly however, in terms of behaviour change, is to begin to use interventions which are evidence based. Media campaigns for example about binge drinking may look engaging but this does not

necessarily translate into long term behaviour change. Extensive media campaigns and reports about binge drinking may in fact indirectly contribute to the perception in certain groups (e.g. young adults) that binge drinking is the norm, fuelling normative misperceptions. It would be of interest to further explore the potential use of applying social norms interventions to UK settings, given their apparent successes in the USA. Until such further research is available we must be cautious about both rhetoric which presents binge drinking as an established, major issue in British society and health campaigns which claim to be able to tackle it.

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