

**DENTAL AND MEDICAL STUDENT PERCEPTIONS OF ALCOHOL AS PART OF
UNIVERSITY LIFE: AN INVESTIGATION USING Q-METHODOLOGY**

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Submitted in accordance with the requirements for the degree of
Doctor of Clinical Psychology (D. Clin. Psychol.)
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July 2014

The candidate confirms that the work submitted is his/her own and that appropriate credit has been given where reference has been made to the work of others

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ACKNOWLEDGEMENTS

My gratitude goes to my two research supervisors for their time over the past two years. I am grateful to Bridgette Bewick for her guidance and support and to Louise Bryant for her encouragement and expertise knowledge. I would also like to thank all staff at the University of Leeds that have helped me along the way.

I would like to thank my boyfriend Andrew for keeping me smiling, my cat Tigger for always being by my side and my Mum and Dad for their belief in me. I would like to give a special thank you to my baby boy Jamie for giving me inspiration and hope.

Finally I would like to offer thanks to all the participants at the University of Leeds for their time and effort without which this thesis would not be possible.

ABSTRACT

Background: Research has shown that University students' alcohol consumption and drinking behaviour is influenced by their perceptions of 'the norm'; but that these perceptions are often inaccurate. Social norm interventions correct misperceptions of the norm by displaying messages regarding the actual reported norm within the campus environment, thus eliminating the pressure for students to fit an inaccurately perceived norm. Research has shown mixed outcomes for these interventions. Previous research has mostly been quantitative and norms focused upon a limited number of simple, distinct, beliefs about drinking. It is likely that the normative perceptions are more complex.

Aims:

- 1) To identify the beliefs held by students regarding alcohol and university life
- 2) To explore how these beliefs link together to form normative perceptions
- 3) To explore how normative perceptions cluster together and hence how norms are conceptualised by students.

Method: Q-methodology was used due to its ability to identify a range of subjective viewpoints on a socially debated topic.

Sample: 205 medical and dental students within years one, three and five completed an online survey outlining their demographic information and alcohol consumption. From the respondents 31 participants were recruited to the Q-sort interview.

Results: Four distinct viewpoints were identified:

1. Most students drink and do so to fit in at university
2. Alcohol is not important at university and most students that drink, drink sensibly
3. Most students drink excessively and are irresponsible when drunk
4. Most students enjoy drinking and do it for fun

Discussion: Results demonstrated that normative perceptions consist of beliefs regarding alcohol consumption, drinking behaviours, reasons for student drinking and a perceived evaluation of this behaviour by other students. Norms can be conceptualised according to the meaning given to student drinking i.e. to fit in, for social status or for enjoyment. The findings demonstrate the complexity and multiplicity of normative beliefs held by students regarding alcohol and university life and should inform future social norms research and interventions.

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CHAPTER ONE: INTRODUCTION AND LITERATURE REVIEW

1.1 Introduction

Student alcohol consumption continues to be a major concern within the UK (Royal College of Psychiatrists, 2011). The current chapter will introduce the topic of alcohol consumption within the student population by outlining the consequences of alcohol misuse, reporting prevalence rates of alcohol use by students, and by describing potential reasons for alcohol use. Theoretical models that have used norms to understand student alcohol consumption will then be outlined. Of particular interest is the social norms approach which theorises that individual alcohol consumption is influenced by perceptions of 'the norm' (Clapp and McDonnell, 2000) but that such perceptions tend to be inaccurate (Prentice and Miller, 1993). A review of the information social norms research has used to measure students' perceptions of the 'norm' in relation to student drinking will be reported and an understanding of how these norms are conceptualised discussed, before specific aims of the current study are introduced.

1.2 Consequences of alcohol

Studies have shown that regularly drinking over the UK recommended guidelines of four units a day for males and three units a day for females (Department of Health, 2008) increases the risk of health difficulties (Norman, Bennett and Lewis, 1998). Binge drinking (defined as drinking over six units a day for women and eight units a day for men) is associated with negative consequences such as accident, assault, criminal offences, sexually transmitted diseases and unplanned pregnancy (Department of Health, 2007). Binge drinking is therefore likely to incur significant costs in terms of healthcare and damaged property (Perkins, 2002).

1.3 Student drinking

Alcohol use among university students' within the UK has been described as a mental health concern (Royal College of Psychiatrists, 2011). Alcohol may help students to cope with difficulties such as anxiety or depression by blocking out the negative feelings associated with it (Mental Health Foundation, 2006). Although this

might be helpful in the short term, it does not address the original cause of the problem and in time may worsen symptoms or cause additional difficulties (Mental Health Foundation, 2006). In a study of alcohol consumption across seven universities within the UK forty per cent of students reported hazardous drinking, eleven per cent reported harmful drinking and ten per cent had probable dependence on alcohol (Heather et al, 2011).

A higher prevalence of binge drinking has been found among students when compared to non-students within the UK (Gill, 2002; Norman and Conner, 2006). Similarly, international studies have found students to consume higher levels of alcohol than their approximate age equivalent peers (Kypri, Cronin and Wright, 2005; Dawson, Grant, Stinson and Chou, 2004; Pickard, Bates, Dorian, Greig and Saint, 2000; Underwood and Fox, 2000). In addition research across eight American medical schools found that students reported an increase in their alcohol consumption whilst at university (Mangus, Hawkins and Miller, 1998).

A substantial amount of research regarding the prevalence rates of student alcohol consumption has been done using medical and dental students (Gill, 2002). This makes the increased prevalence rates reported within the student population of greater concern due to this population's responsibility for providing healthcare, and advice regarding sensible levels of alcohol consumption.

There are a number of inconsistencies between studies reporting student alcohol consumption that should however be considered. There is little consensus regarding the term 'binge drinking', with seven different definitions being identified in the literature (Gill, 2002). Some definitions have been criticised for being too vague, for example not specifying a time frame over which the quantity of alcohol is consumed. Alcohol consumption has been found to vary across different universities (Heather et al, 2011) suggesting that prevalence rates cannot be generalised to the student population as a whole.

In summary there is substantial evidence that students' alcohol consumption is higher than that of the general population. This is of concern due to long and short term health implications associated with alcohol, risks associated with binge drinking, cost repercussions, and the impact on the provision of healthcare provided by students.

1.4 Reasons students use alcohol

In attempt to address the problematic alcohol use of students, research has looked at the reasons why students might drink. The following section reviews this research focusing upon motivations to drink, conformity and peer pressure.

1.4.1 *Drinking motives*

Cooper (1994) proposed three drinking motives to determine alcohol use: coping motives (to reduce or avoid negative emotions); social motives (to build relationships); and enhancement motives (to increase positive emotions). All three of these motives are applicable to the student population. University is the first time away from home for many students providing the opportunity to seek out pleasurable experiences involving alcohol that may have been restricted at home (enhancement motive). It is an important time to make friends in order to build a social support network (social motives). University also has the potential to be a stressful environment in which students use alcohol to cope (to reduce or avoid negative emotions). All three of these motives have been shown to be positively related to student alcohol use (Stewart, Zeitlin and Samoluk, 1996).

Although these three motives described by Cooper (1994) may explain student drinking to some extent, the university environment itself may impact upon student alcohol consumption. This usually involves a move to a new environment and the formation of new friendships (Roche and Watt, 1999). It could be argued that when placed in this environment students' behaviour, including their drinking behaviour, is likely to be affected by a desire to conform and 'fit in' with this environment and community. Social motives are therefore predicted to be particularly important for the student population.

1.4.2 *Peer pressure*

The term 'peer pressure' is often used as a lay understanding of the influence peers have on each other's behaviour. Despite the frequency of its use, precise definitions within the literature are rare. The most common interpretation of peer pressure is for young adults that participate in certain behaviours 'in order to be accepted by the peer group' (Hansen and Graham, 1991). Although peer pressure may influence

student drinking behaviour (Borsari and Carey, 2001), it is likely that this is not the only explanation for student drinking.

1.4.3 *Conformity*

Conformity describes the act of changing beliefs or behaviours to be in line with those of others. This could be due to a desire to fit in (Asch, 1951), gain social approval (Bernheim, 1994), or avoid perceived negative consequences of being different (Jones, 1984).

The influence conformity can have upon behaviour was first demonstrated by Asch (1951) who found that the majority of individuals would prefer to conform than be seen to be different from a group. Asch (1951) set up an experiment in which participants were shown a short line, followed by three lines of differing lengths. Participants were required to verbally state in front of the other participants which of these three lines was the same length as the first line. The correct answer was made to be purposefully unambiguous, however in order to encourage conformity the other participants consisted of confederates who were instructed to give the same incorrect answer. The participant was seated so that they provided their answer last after hearing the confederates' incorrect answers. It was found that seventy five per cent of participants conformed and gave the incorrect answer on at least one occasion.

Although it was observed that participants changed their behaviour, it cannot be observed as to whether they changed their belief that the answer they provided was correct. Interview data of participants stated that they did not change their own perceptions and despite conforming knew that the confederates had given the wrong answer. This experiment therefore demonstrates that many individuals would rather conform and behave in a way that fits in with a group than state their actual beliefs and be seen to be in some way different from the group.

Conformity has been found to be related to behaviour for larger groups of populations including alcohol use by students (MacLean and Lecci, 2000; Martens, Rocha, Martin, and Scerraro, 2008). However in reality, unlike within Asch's experiment, group behaviour is complex and not always observable. A perception of what is considered to be 'normal behaviour' or 'the norm'; defined as "a generally accepted standard of behaviour within a society, community or group" (Colman, 2001, p496) must therefore be inferred. The perception of 'the norm' for student drinking is derived from both the direct observation of the behaviour of peers and indirect information from the media and 'hearsay'. It is this perception of the norm that individuals then chose whether or not to conform to.

Not all individuals however conform. The twenty five per cent of participants that did not conform in Asch's study often go unmentioned. This is a significant number of people that felt able to resist pressure to conform. There have been found to be a number of variables that affect conformity. Research suggests that feelings of ambiguity towards a group can increase the effects of norms on behaviour (Cialdini, 1993; Rice, 1993) and that the more an individual identifies with a group, the more likely they are to conform to that group (Wilder and Shapiro, 1984). It could be therefore that the answers were too obvious to induce ambiguity for participants within Asch's study or that participants did not identify with the group of confederates.

Within the university environment conformity to drink alcohol may therefore depend upon students' perceptions of the norm and the extent to which they identify with the group holding the norm. A number of models have attempted to clarify the influence of 'norms' upon behaviour.

1.5 Models that have used norms to understand behaviour:

1.5.1 *Theory of planned behaviour*

The theory of planned behaviour (TPB) is a social-cognitive theory that incorporates norms as one of a number of influences upon behaviour. The theory proposes that an individuals' behaviour depends upon their intention to carry out the behaviour, which in turn is influenced by three evaluations. The first evaluation is regarding whether the behaviour is viewed to be positive or negative. The second is regarding the individual's confidence in their ability to carry out the behaviour (also known as self-efficacy, Bandura, 1977) and their perceived control over it (Ajzen, 2002). The third evaluation is regarding how approving important others would be of the behaviour (Huchting, Lac and LaBrie, 2008) and is referred to as the 'subjective norm'. Who constitutes as the 'important other' can change over time. For example, a parent's evaluation of drinking behaviour is likely to become less important for a student moving to university, and the evaluations of their peers more important.

The TPB has been well established within health psychology (Godin & Kok, 1996) for understanding the antecedents of health behaviours (Ajzen, 1991). Although the TPB has been found to predict alcohol consumption for students (Conner, Warren, Close, and Sparks, 1999; Glindermann, Geller, and Ludwig 1996), it does not attempt to explain changes in behaviour and therefore cannot inform future alcohol reduction interventions (Sharma, 2007). Little support has also been

found for the specific effect of the subjective norm component of the TPB upon behaviour (Conner & Sparks, 2005) and it has been suggested that further exploration of normative influences may be beneficial (Zimmermann and Sieverding, 2010).

The subjective norm described within this theory refers to an individuals' perception of another person's view; the theory however does not take into account the accuracy of this perception or what the individual observes around them, for example what they observe to be 'normal' within their peer group. These concepts are considered important within the social norms approach; an alternative model of normative influences.

1.5.2 The social norms approach

'Social norms' are the values, beliefs, attitudes and behaviours considered to be acceptable by a society, group or population. The 'social norms approach' was first suggested by Berkowitz and Perkins (1987) and is based upon theoretical studies regarding group processes such as conformity (Sherif, 1936). More specifically the social norms approach focuses on the influence of social norms on behaviour and how norms are conceptualised within populations. The social norms theory extends research on conformity and the TPB by stipulating that perceived social norms which influence behaviour are inaccurate (Prentice and Miller, 1993).

Misperceptions of the norm (descriptive and injunctive norms)

The inaccurate perceptions of the 'norm' have been typically described in the literature to be regarding behaviour (descriptive norms) or attitudes (injunctive norms), (Borsari and Carey 2003; Larimer, Turner, Mallett and Geisner, 2004). Descriptive norms refer to the perception of how common a behaviour is within a specific group, for example whether it is normal for students to drive when over the legal drink-drive limit (Thombs, 1999). Injunctive norms refer to the perception of how common an attitude is within a specific group, usually in terms of how acceptable something is; for example whether it is perceived acceptable to drive when over the legal drink-drive limit. Both descriptive and injunctive misperceptions of the norm have the potential to create a pressure within individuals to conform to the perceived norm and hence influence behaviour.

If a student believes for example that the average student consumes thirty five units of alcohol per week, this is the quantity that they will also aspire to drink in attempt to fit in with this perceived norm (Borsari and Caery, 2001). By increasing their own alcohol consumption not only is the student drinking more than they would

perhaps like, but serving to maintain the original misperception that heavy alcohol use is 'normal' and acceptable. Group norms therefore not only characterise the group, but influence group members actions, which serves to maintain the norm (Perkins, 2002b). Social norms research has therefore attempted to understand what misperceptions exist regarding student drinking, how misperceptions develop, and the influence these have on student alcohol use. This research is summarised below.

Evidence of misperceptions

Social norms research explores the difference between perceived and actual norms by asking students to estimate their peers alcohol consumption and attitudes towards student drinking (descriptive and injunctive norms), and then to report their own alcohol consumption and attitudes towards student drinking. The actual and perceived statistics can then be compared for similarity.

It has been found that students frequently overestimate descriptive norms such as their peers' alcohol consumption and frequency of drinking (Baer and Carney, 1993; Perkins, Haines and Rice, 2005; Perkins, Meilman, Leichliter, Cashin and Presley, 1999; Perkins 2002a; McAlaney and McMahon, 2007; Broadwater, Curtin, Martz and Zrull, 2006). The majority of research into social norms and student alcohol use has focused upon descriptive rather than injunctive norms, perhaps because they are more readily observable and so easier to define. Although there has been less research looking at misperceptions of injunctive norms, it has been found that students perceive their peers to feel more comfortable with alcohol use (Prentice and Miller, 1993) and be more approving (Perkins and Berkowitz, 1986a, 1986b) of it than they actually are.

Most social norms research has taken place within America however these findings have now been replicated in England (Bewick, Trusler, Mulhern, Barkham and Hill, 2008), Scotland (McAlaney and McMahon, 2007), France (Franca, Dautzenberg & Reynaud, 2010) and New Zealand (Kypri and Langley, 2003). National reviews have shown that overestimations of student alcohol consumption can be found in private and public schools of all sizes, and across a variety of subpopulations such as gender and ethnicity (Perkins and Wechsler, 1996; Perkins, Haines and Rice 2005).

Although reviews and meta-analyses support the finding that students typically overestimate their peers' alcohol use (Perkins, 2002b; Borsari and Carey, 2003; Berkowitz, 2004), there have been studies with opposing findings. In a national survey by Wechsler and Kuo (2000) the majority of students either accurately estimated or underestimated the prevalence rates of binge drinking for

other students. The results of this survey were however questioned because the amount of alcohol believed to constitute a 'binge' was inaccurate. Many students believed that a 'binge' consisted of a higher volume of alcohol than it actually does. Therefore binge drinking students are likely to have been overlooked when estimating prevalence rates within this study.

Male Greek students perceived themselves to consume more alcohol than their peers (Larimer, Irvine, Kilmer and Marlatt, 1997). These students were however known for being heavy drinkers (Larimer et al, 1997) and so their perception may have been accurate. This does not contradict the social norms approach because it is the perception of the overall student drinking norm that is important for social norms research. Despite perceiving themselves to drink more than others the Greek students might still inaccurately perceive heavy drinking to be the norm among all students for example. Misperceptions can therefore occur for students regardless of their own drinking behaviour. This is acknowledged by social norms research. It is also recognised that some students will have accurate perceptions of the norm. This understanding of normative perceptions is outlined through audience segmentation. This is referred to later in this chapter in relation to social norm interventions.

Why misperceptions occur?

Social norms can be created through observation of others, direct or indirect communication, and through personal attitudes and behaviours (Miller and Prentice, 1996). It has been identified that errors can occur within each of these mechanisms, for example through attribution errors, observations bias or cognitive biases.

i) Attribution error

In the direct observation of others attribution errors have been found to occur. This means that the individual makes incorrect assumptions about what they are observing (Ross 1977). For example, students might perceive an intoxicated peer to be a typical behaviour for that individual, and then generalise this behaviour to other students. This incorrect interpretation then influences the perception of the norm.

ii) Observation bias

Observation bias within the student population due to intoxicated students being more readily observable and memorable than sober students means that attribution errors in the direction of perceiving alcohol use to be the norm, are likely. The sharing of these observations with peers through conversations, along with the

messages provided within the media, reinforce and maintain misperceptions regarding students and drinking (Perkins, 1997). Direct and indirect methods of communication regarding student drinking are also prone to error, either intentionally through exaggeration or through misunderstandings for example (Borsari and Carey 2003).

iii) Cognitive bias

Finally personal beliefs, attitudes and behaviours may lead to misperceptions regarding the norm through two types of cognitive bias; pluralistic ignorance and false consensus. Pluralistic ignorance (Prentice and Miller, 1993) describes a common misjudgement in our comparison of ourselves to others. It specifically describes occasions when individuals privately disapprove but publically approve of a behaviour due to their misperception that acceptance of this behaviour is the norm, when it is not (Schroeder and Prentice, 1998). For example students' who disapprove of heavy drinking might portray that they believe it to be acceptable in attempt to fit in with their perception that acceptability of heavy drinking is the norm, when in reality it is not and their peers are not accepting of heavy drinking either.

False consensus (Marks and Miller, 1987; Neighbors, Dillard, Lewis, Bergstrom and Neil, 2006) describes the opposite effect to pluralistic ignorance in which individuals wrongly perceive that their attitudes and behaviours reflect the norm, when in fact they are in the minority. This occurs for heavy drinkers who approve of high alcohol consumption and wrongly assume this to be the norm.

In summary there are a range of possible mechanisms to explain misperceptions of the norm, all of which are likely to influence student drinking behaviour, regardless of alcohol consumption.

Evidence for the influence of perceptions of the norm on student drinking behaviour

Correlational studies have typically been used to explore relationships between students' perceptions of drinking norms and actual drinking behaviour. Recent research has repeatedly shown perceptions of the norm to be related to alcohol consumption (Franca, Dautzenberg and Reynaud, 2010; Cho, 2006; Larimer, Turner, Mallett and Geisner, 2004; Lewis et al 2010). Perceptions of norms have also been found to better predict alcohol consumption than variables such as demographics, society membership, expectancies regarding outcome, and drinking motives (Franca, Dautzenberg and Reynaud, 2010; Neighbors, Lee, Lewis, Fossos and Larimer, 2007; Perkins, 1997; Perkins, Haines and Rice, 2005). In addition

Thombs (1999) found that perceptions of drinking norms were the greatest predictor of driving over the limit and of driving with another individual when over the limit.

A study by Broadwater, Curtin, Martz and Zrull (2006) found that a desire to increase alcohol consumption did not lead to an actual increase in alcohol consumption one month later; however there were a number of problems with this study. One month is a relatively short period of time in which to capture an increase in alcohol consumption. The sample also consisted mostly of first year students within their first semester at university. The first semester is likely to include higher than average levels of alcohol consumption due to freshers week (Gill, Donaghy, Guise and Warner, 2007), and so it could be argued that this was not the most accurate measure to use as a baseline. Finally the social norms approach does not claim that intention leads to behaviour, more specifically it claims that it is the comparison of one's own beliefs and behaviours to the perception of the norm that influences behaviour.

In summary it appears that students' normative perceptions regarding their peers' alcohol use influences their alcohol consumption and drinking behaviour. An understanding of what student drinking norms consist of is therefore necessary to further understand this influence.

1.6 Social norms' current understanding of student drinking norms

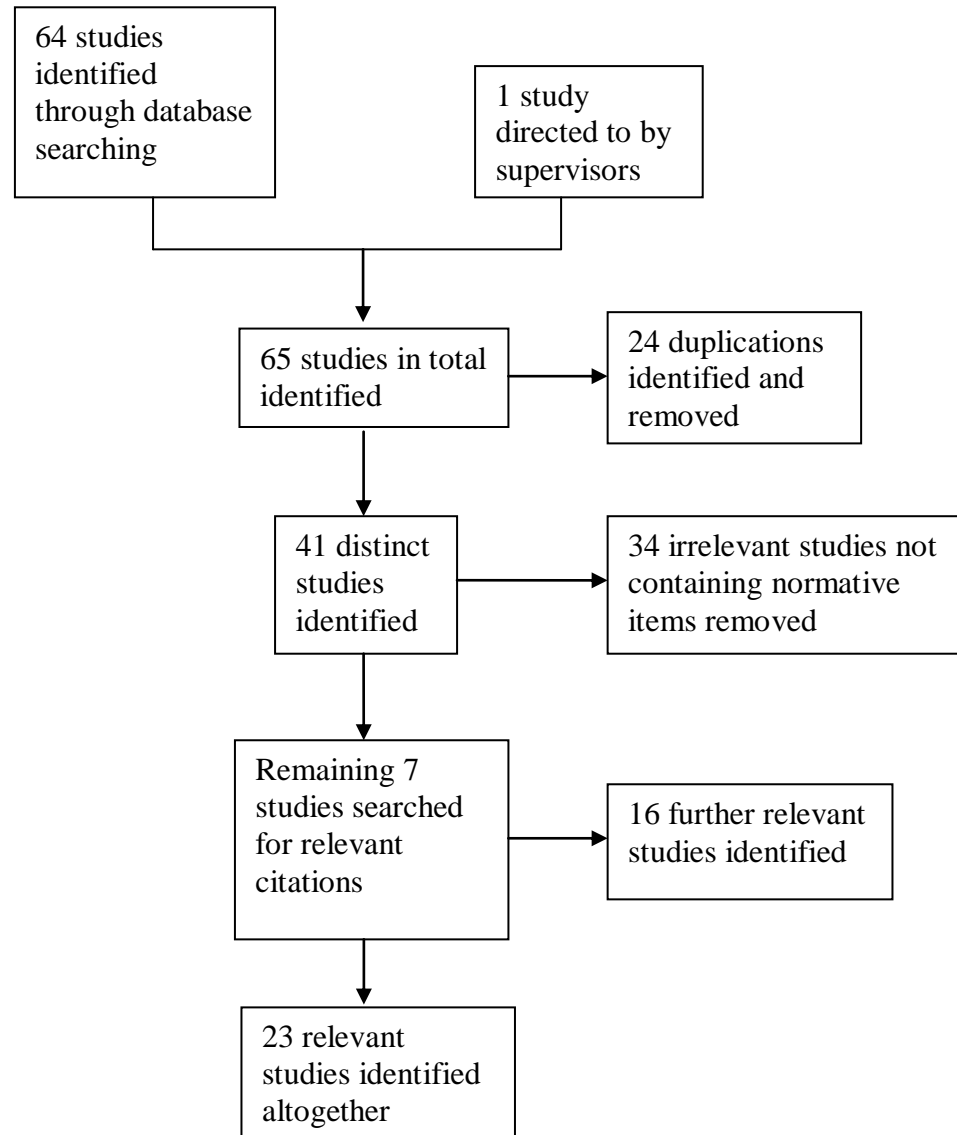
1.6.1 *Review of 'student drinking norms' within the literature*

In attempt to gain an understanding of how social norms are conceptualised within the social norms approach literature to date, this section provides a review of the items used to represent norms within this literature over the previous decade. Papers were selected from the previous ten years because normative beliefs are likely to change over time and hence the more recent the research the more relevant it is likely to be today. This time period also provided enough papers for the purposes of the current study. See Berkowitz (2004) for a review of the social norms literature up until 2003.

The electronic databases 'PsychINFO'; 'Ovid MEDLINE (R)'; 'Leeds University Library's Journals@Ovid (full text)' and 'Global Health' were used to search for articles published between 2003 and 2013. The following words were entered into the 'title' search engine: ['social norm*'] AND ['student*' OR 'University' OR 'College'] AND ['alcohol' OR 'drinking']. Seventy papers were identified of which

seven were found to be relevant. The process for finding and selecting relevant papers is outlined in the Figure 1 below.

Figure 1. Study flow diagram to show the process of identifying relevant studies



The items used to represent norms within these twenty three studies is summarised in Table 1 below.

Table 1. Items used to represent actual and perceived norms used within social norms approach research

Item	Authors																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Descriptive norms																						
Quantity of alcohol drunk	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
Frequency of alcohol consumption	X	X	X	X	X																	
Percentage of drinkers																				X	X	
Frequency of heavy episodic drinking																						X
Frequency of vomiting																						X
Injunctive norms (approval of)																						
Drinking enough to pass out														X	X	X	X	X				
Driving when intoxicated														X	X	X	X	X				
Frequency of alcohol consumption															X	X	X	X				
Deciding not to drink												X			X							
Becoming intoxicated at a party												X										
Missing lectures due to alcohol												X										
Becoming intoxicated on a week night												X										
Quantity of alcohol drunk													X							X		
Playing drinking games															X							
Drinking shots															X							
Drinking to meet people															X							
Drinking to have fun															X							
Drinking to get drunk															X							
Drinking with friends															X							
Drinking to blow off steam															X							
Drinking alone															X							

Note.

1. Perkins, Haines, & Rice (2005); 2. Broadwater et al (2006); 3. Neighbors et al (2006); 4. McAlaney & McMahon (2007); 5. Page & Hegarty (2006); Perkins (2007); 6. Neighbors et al (2007); 7. Dams-O'Connor et al (2007); 8. Larimer et al (2009); 9. Neighbors et al (2010); 10. Perkins and Craig (2012); 11. LaBrie et al (2012); 12. Larimer, et al (2004); 13. Franca et al (2010); 14. Neighbours et al (2007); 15. Lewis et al (2010); 16. Neighbors et al (2011); 17. LaBrie et al (2010); 18. Reed et al (2007); 19. Park, Smith & Klein (2011); 20. Chauvin (2012); 21. Park, Smith, Klein & Martell (2011); 22. Kypri & Langley (2003).

As can be seen in Table 1 descriptive norms are more commonly used within the research than injunctive norms. This is perhaps because descriptive norms are more easily measurable, and less subjective than injunctive norms due to them being more easily observed. It is therefore easier to measure and compare changes in descriptive norms than it is for injunctive norms.

Despite descriptive norms referring to any alcohol related behaviour, for example how sensibly students drink, research has been limited to the measurement of quantities of alcohol consumption only. Although an earlier study that used an alternative descriptive norm was identified, this used a specific measurement of behaviour involving driving whilst under the influence of alcohol (Thombs, 1999). Behaviours such as downing alcoholic drinks or partaking in drinking games are just a few examples of descriptive norms which have not been measured within the literature. The measurement of only a few perceptions regarding norms limits the potential for research to identify how beliefs fit together to provide a more comprehensive understanding of students perceptions of the norm regarding university and alcohol.

Research using injunctive norms messages has consisted of a wider variety of measures than descriptive norms. Most studies have measured perceptions of the acceptability of three or more distinct behaviours, including behaviours other than regarding alcohol consumption. However the measures used have varied between studies making results difficult to compare. In addition some studies have used inappropriate measures for injunctive norms. For example Rimal and Real (2003) measured students' perceptions of society's approval of student drinking, rather than their peers' perceptions. The authors did acknowledge this error with retrospect.

Most studies assess injunctive norms by obtaining information regarding the approval of behaviours which include alcohol use. Larimer, Turner, Mallett and Geisner (2004) extended the measurement of injunctive norms to include perceived acceptability of choosing not to drink, using a reverse score for this item. This study highlights that injunctive norms are likely to consist of perceived acceptability of a range of drinking behaviours and choices, including choices to drink sensibly or remain abstinent, as well as decisions to engage in alcohol related behaviours.

The most comprehensive measurement of injunctive norms found was in a study by Lewis et al (2010). In this study the perceived acceptability of both positive and negative drinking behaviours which varied in severity were obtained (for example drinking to meet people and drinking enough alcohol to pass out). This study also included perceptions of acceptability of abstinence i.e. 'never drinking'. It is difficult to determine whether this more comprehensive account of injunctive norms showed a greater effect for outcome because this study used a number of other variables to account for outcome, making it difficult to compare with other studies.

Table 1 shows that studies tend to include more measures of injunctive norms than descriptive norms; however injunctive norms are still relatively restricted. Most studies use only a small number of injunctive norms and do not seek to identify how these beliefs might be linked together. It is likely that perceptions include both descriptive and injunctive norms, however few studies have measured both and none have been identified that seek to understand how descriptive and injunctive norms might be related.

In summary the (descriptive and injunctive) normative beliefs of students have been analysed to date through the measurement of a small number of simple and discrete attitudes and behaviours. These attitudes and behaviours are limited in terms of the type of information they cover. There is also limited research identified that attempts to understand how these attitudes and beliefs might be linked together to form more complex and realistic perceptions of the norm. This may be a result of the quantitative design of the research which has intended to measure the discrepancies between perceived and actual norms.

1.6.2 Social norms interventions

A growing body of research has set out to understand how norms are conceptualised by looking at characteristics that affect the impact of social norm interventions. Social norms interventions aim to correct inaccurate and unhealthy perceptions of the norm, and as a result reduce unhealthy behaviour. Perceptions of the norm are corrected by displaying the actual reported norms to the group of individuals that they were taken from. Social norm interventions target students with a range of alcohol consumption and a range of perceptions of the norm. The correction messages therefore need to take into account the perceptions of the norm that are held and how these compare to the actual reported norm. The ways in which target populations vary according to both their perceptions of the norm and their actual drinking behaviour is understood through audience segmentation.

Audience segmentation

Audience segmentation is a useful way of breaking down the target population to better understand how they are likely to be affected by the intervention and ensure that the most helpful messages are provided (Smith, 2006). For social norms interventions the target population can be divided according to how a person's own alcohol consumption compares to their perception of their peers' alcohol consumption.

The largest proportion of students are likely to be low risk drinkers who presume that their peers drink more than their peers actually do, and that peers are more accepting of alcohol than they actually are (Perkins, Haines and Rice, 2005). These students are likely to feel pressure to drink more and so will benefit from social norm interventions that correct this and inform these students that their drinking behaviour reflects the majority of students and not the minority (Lintonen and Konu, 2004). High risk drinkers who presume their peers drink more than their peers actually do and that their peers are more accepting of alcohol than they are in reality, are likely to justify their behaviour to be the norm. For example those that are aware that they drink a lot do not question this because they believe other students drink more, and are more accepting of alcohol than they are themselves. This group is therefore likely to benefit from social norm interventions that correct this information and inform these students that their drinking behaviour is within the minority. It is theorised that this realisation will prompt students to re-evaluate and potentially reduce their alcohol consumption as a result.

There is often concern about the effect of social norms interventions for those that believe that others drink less than they actually do (Wechsler and Kuo, 2000). This is where social norms interventions need to be careful about the messages displayed to ensure they do not use unhelpful correction messages that might encourage individuals to drink more to fit in with the norm. There is also likely to be a small proportion of students both high and low risk drinkers that accurately perceive the norm. Interventions are likely to have little effect for these high risk drinkers since the belief that they are within the minority has not previously had an impact, it might however reassure low risk drinkers that they are correct to perceive themselves to be within the majority.

In summary social norms interventions have acknowledged that students will vary according to how much alcohol they drink, and their perceptions regarding the acceptability of, and drinking behaviour of other students. There has however been no research identified to date that has provided an understanding of how perceptions of the norm differ for these categories. A better understanding of how norms are conceptualised according to actual and perceived drinking behaviour and approval would help to target these populations more specifically.

Outcomes of social norm interventions according to target audience

Correction messages can be presented to either a mass audience, for example using posters, student newspapers, e-mails or publicity events, with the aim to reach as many of the target audience as possible, or to individuals, usually via the internet. Results of social norms interventions for student drinking provide information regarding the effectiveness of normative correction messages on the beliefs and behaviours of students. From these findings assumptions have been made regarding how perceived norms are conceptualised by individuals.

Social norms marketing approaches (Large numbers targeted)

Social norms marketing approaches have shown a reduction in student alcohol consumption compared to a baseline (Glider, Midyett, Mills-Novoa, Johannessen and Collins, 2001; Gomberg, Schneider and DeJong, 2001; Mattern and Neighbors, 2004; Perkins and Craig, 2006; Walters and Neighbors, 2005; DeJong et al, 2006; Neighbors, Jenson, Tidwell, Walter, Fossos and Lewis, 2011; Wolf, Dana, Wolf and Petrela, 2012) and control group (Perkins, Haines and Rice, 2005). However evidence has been mixed and not all research has shown a reduction in student alcohol consumption (DeJong et al 2009; Clapp, Lange, Russell, Shillington and Voas, 2003; Wechsler, Nelson, Lee, Seibring, Lewis and Keeling, 2003) or in perceptions (Thombs, Dotterer, Olds, Sharp and Raub, 2004) following social norms marketing interventions. This could be because there has not been enough time allowed for behaviour change. Research shows that misperceptions change first and that behaviour change follows and that significant behaviour change takes years of social norms campaigning (McAlanay, Bewick and Hughes, 2011).

Personalised normative feedback (Individualised)

Reviews of the literature have however consistently found personalised normative feedback approaches to be effective for reducing alcohol consumption for students (Lewis and Neighbors, 2006; Moreira, Smith and Foxcroft, 2009; Carey, Scott-Sheldon, Elliott, Bolles and Carey, 2009; Lewis, Neighbors, Oster-Aaland, Kirkeby and Larimer, 2007; Bewick, Trusler, Mulhern, Barkham and Hill, 2008).

Personalised normative feedback appears therefore to be more effective than social marketing approaches, suggesting that interventions tend to be more effective when they correct messages that are more personal for students. For example a female student would receive feedback regarding the student population on campus within a social marketing intervention but feedback regarding other female students within a personalised feedback intervention. This more personal feedback may enable individuals to identify more with correction messages and hence have more of an

impact upon the individual. This reflects the complexity of the perceptions held regarding the norm and implies that perceptions of the norm may differ according to specific characteristics of the individual.

Feedback according to referent group

Within the social norms literature the term 'referent or reference group' is used to describe a group of people with whom an individual might compare themselves to and within social norm interventions the referent group refers to the group of individuals that the intervention focuses on, for example the entire university population or one hall of residence.

The effectiveness of the social norms interventions have been found to vary according to referent group with more proximal groups having a bigger effect on behaviour. Research has found that the more proximal the referent groups the stronger the relationship between misperceptions and drinking behaviour. This has been found for gender (Lewis and Neighbors, 2004, 2007; Thombs, Ray-Tomasek, Osborn and Olds, 2005; Perkins and Craig, 2012), year of study (Pederson, Neighbors and LaBrie, 2010), ethnicity (Rice, 2007; Larimer et al 2009), sorority groups (Bartholow, Sher and Krull, 2003), and for those living in close proximity (Bourgeois and Bowen, 2001).

This research appears to demonstrate that the more salient the referent group for students, the greater the impact of the correction message. It is however argued that students' normative beliefs are unlikely to neatly group according to one specific referent group (Larimer, Neighbors, LaBrie et al, 2011); they are likely to be much more complex than this. Demographic characteristics of students are likely to have some impact but do not solely determine their perceptions or beliefs. Beliefs are more likely to vary according to the referent groups students chose to identify with. Female students for example will vary in the extent to which they identify with other female students. They might identify more strongly with their year group than of females in general for example.

Research has in fact found that there is a stronger relationship between perceived norms and alcohol consumption for students who identify more strongly with a specific referent group (Hummer, LaBrie and Pederson, 2012; Neighbors et al 2010). Targeting specific referent groups is therefore only going to increase the saliency of the correction messages for those students that identify with that referent group; and so is unlikely to be as effective an approach as it might appear. In addition research has also found that the misperceptions within referent groups are smaller than those of the wider student population, suggesting that they will result in smaller changes in

behaviour (Borsari and Carey, 2003). Research might therefore benefit from changing its approach and exploring how best to target the wider student population.

In summary although personalised correction messages for specific referent groups appear more effective than general messages intended for larger populations, it is still not understood how norms differ according to referent groups. It is also unlikely that norms differ according to simple referent groups such as by age or gender; it is likely that norms are much more complex than this. There is also a risk that if correction messages are targeted to only very specific referent groups there will be fewer misperceptions to correct and for fewer students. It has been argued that there is now sufficient evidence that misperceptions of student drinking norms exist and that research now needs to focus on how to better understand these norms (Larimer, Turner, Mallett and Geisner, 2004) in a 'richer, more detailed and context-specific way' (McAlaney, Bewick, and Hughes, 2011, p86).

1.7 Overall summary

The social norms approach is an effective way to intervene and reduce student drinking behaviour. There is a lack of research regarding students' holistic representation of the perceived norms related to student drinking. As a result social norms research has typically looked at the effects of descriptive or injunctive norms separately and interventions have typically targeted only one or two drinking evaluations or behaviours. It is however unlikely that behaviours and attitudes occur in isolation and the social norms held by students regarding their peers drinking behaviours are likely to be complex and consist of numerous interrelated patterns of both descriptive and injunctive norms.

For the social norms approach to take a holistic view of norms we need to understand how norms come together to represent an overall experience of alcohol use whilst at university. It is proposed that if we better understand how social norms are conceptualised in to a coherent whole, this would better inform social norm interventions by asking students groups of salient questions about perceived norms and enabling more salient and holistic normative corrections.

1.8 Current study

1.8.1 *Justification for the use of medical and dental students*

Medical and dental students were of particular interest due to their influence with regards to public health. It has been found that many doctors do not take patients drinking histories and struggle to help patients change excessive drinking behaviours (Ritson, 1990). This may be due to physicians' personal beliefs regarding alcohol, which in turn may be based on their own alcohol use. Research has in fact indicated concerns regarding physicians' alcohol use. Cirrhosis of the liver has found to be more prevalent in doctors than other professions (Granville-Chapman, Yu and White, 2001), and approximately 15% of physicians were found to suffer drug, alcohol or mental health problems at some point in their career (Midtgaard, Ekeberg, Vaglum and Tyssen, 2008).

The medical and dental professions are important for the early detection and prevention of alcohol related diseases potentially leading to death. Their perceptions regarding acceptable levels of alcohol consumption and behaviour are likely to affect their practice and the care the public receive. For this reason medical and dental students were chosen as the target population for the current study.

1.8.2 *Aims*

The aims of the current study were to gain a better understanding of the constituents of student drinking norms and how they are conceptualised and fit together in attempt to gain a more holistic understanding of student drinking norms. More specifically:

- iv) To explore descriptive and injunctive normative perceptions regarding student drinking, by looking at what students say about alcohol and university life
- v) To understand the complexity of students' perceptions of the norm including how the many viewpoints (including descriptive and injunctive norms) held by an individual might fit together
- vi) To explore how perceptions of the norms vary across students, i.e. how they cluster together to form distinct perceptions and what these perceptions have in common and how they differ
- vii) To hypothesise about whether normative beliefs appear to vary according to specific referent groups

CHAPTER 2: Q METHODOLOGICAL INVESTIGATION

Q methodology was chosen because this methodology was believed to appropriately meet the aims of the current study to better understand medical and dental students' perceptions of alcohol and university life. Justification for this choice of methodology over others is provided later in this chapter. The research aimed to study the range of perceptions held by students with a variety of demographic backgrounds and with a range of drinking behaviours, i.e. drinkers and non-drinkers.

The current study consisted of two stages. The first stage included an online recruitment survey in which information regarding demographics and alcohol consumption of undergraduate medical and dental students was collected. Participants were then purposively selected from this first stage based upon demographic information and alcohol consumption to be invited to stage two; the Q study. This helped ensure as wide variety of participants as possible within the Q study. Both of these stages received ethical approval from the Medicine and Dentistry Educational Research Ethics Committee (reference: EDREC/11/031) (see Appendix 1) and both methodologies are described within this chapter.

Stage one: Online Survey

2.1 Design

A cross-sectional survey design was used to deliver a structured, self-report questionnaire consisting of closed questions regarding participants' demographic information and alcohol consumption.

2.2 Participants

Convenience sampling was used for recruitment. All medical and dental students from years one, three and five (academic year 2012-2013) were invited to take part in stage one of the study. This was in attempt to capture a range of viewpoints across the duration of time spent at university. For example views of freshers (i.e. Year 1) as well as views of students close to qualification (i.e. Year 5). By inviting all students within

these years the aim was to gain representation from both males and females, with a wide range of drinking behaviours for both schools of study.

2.3 Procedure

2.3.1 Recruitment

Participants were sent an invitation e-mail (see Appendix 2) containing a brief description of the online survey and an embedded url which navigated directly to the survey. The invitation e-mail also contained a prize draw incentive in which one participant within each year for both medical and dental schools would win £50 worth of Boots or Amazon vouchers. All students were sent a reminder e-mail after one week in attempt to maximise participation.

Posters advertising the recruitment of year one, three and five medical and dental students for a study regarding students' perceptions of alcohol were displayed throughout medical and dental school buildings. The poster highlighted the prize draw as an incentive to take part and contained tear off strips detailing the researchers e-mail address and the url of the survey to directly take part. (See Appendix 3 for an example poster.)

2.3.2 Method: The online survey

Bristol Online Survey (BOS) was used to create the survey to be delivered to participants. This programme was used because of its easy to use features and availability through the University of Leeds. See Appendix 4 for the exact contents of the survey. A summary of the survey contents is presented in Table 2 below.

Table 2. A summary of contents of the online survey

Page number and summary	Details of the page
1: Welcome	Welcomed participants to the survey and instructed them to click the 'continue' button at the bottom of the page to navigate through the survey.
2: Study information	Contained further information about the study, in particular the survey and the questions they would be asked.
3: Consent	Details the 'terms' by which participants are agreeing to by taking part. Participants who accept these terms continued to the survey by clicking the continue button.
4: Survey questions	<p>Demographic information ^a</p> <p>Alcohol consumption</p> <ul style="list-style-type: none"> -The Alcohol Use Disorders Identification Test (Babor, Higgins-Biddle, Saunders and Monteiro, 2001) - Retrospective 7-day drinking diary (tick drinks for each day from list) <p>Participants were finally asked if they wanted to be contacted regarding stage two of the study, if they would like to receive a summary of the results of the study and if they would like to be entered into the prize draw.</p>
5: Thank you	Participants thanked for their time

^a Under 'demographic information' participants were asked to provide their age, gender, school and year of study. In addition they were asked to indicate whether they were an international or home UK student, and whether they were a postgraduate or undergraduate student.

Although it was not anticipated that this study would cause distress to participants, the telephone numbers and websites of agencies designed to provide advice and support regarding alcohol were provided on the information sheet and final page of the survey.

2.3.2 Data extraction

Medical and dental students survey data were combined and extracted from BOS to an excel database in order to name variables, before importing into SPSS. Within SPSS labels were added and variables defined before being recoded to be more meaningful. For example the label '4' which was assigned by SPSS for 'year 3' students was recoded and labelled '3' to match the year it represents. The labels given for individual AUDIT questions were recoded to represent their respective scores and the frequency of specific drinks consumed per day was recoded to show the total units of alcohol consumed per day.

A total AUDIT score was calculated for each participant by totalling the scores for each AUDIT question. The units of alcohol consumed each day were totalled to provide units of alcohol consumed per week for each participant. This information was then used to calculate the number of binges each participant engaged in per week. A 'binge' was defined as consuming more than six units a day for females and more than eight units a day for males (Institute of Alcohol Studies, 2006).

Demographic information (school of study, year of study and gender) along with information regarding 'binges' were used to guide the selection of participants with a range of demographic backgrounds and alcohol consumption for invitation to take part in stage two of the study. This selection process is described in more detail within the next stage.

Stage two: Q Methodology

This section will introduce the Q study. A rationale will be provided for the use of Q methodology to address the research aims and its strengths and limitations discussed. The standard procedures to be followed within Q methodology will be introduced and then described for the current study.

2.4 Background to Q Methodology

Q methodology was developed by William Stephenson (1935) as a way to explore subjectivity in viewpoints (Brown, 1980). The aim of the methodology is to represent and make the range of views held on a particular topic observable.

It has been described as a qualiqantological approach (Stenner and Stainton Rogers, 2004), because it combines both qualitative and quantitative methods. Although it is a structured approach that uses factor analysis to analyse data, it is also a broadly qualitative approach (Stenner, Watts and Worrell, 2008). It is used to help inform theory and generate hypotheses rather than to prove or disprove them. It therefore does not use the hypothetico-deductive methods associated with quantitative research but rather adopts an exploratory abductive approach. Results are, therefore, not intended to be generalizable to the wider population in the statistical sense but to describe the constituents of socially observable opinions regarding a particular topic. It is thought that there are a limited number of distinct shared viewpoints regarding specific topics within a particular society or population, and a Q method study carried out thoroughly and systematically can reveal these (Brown, 1980).

Q methodology has been used to study health and illness (Eccleston, Williams & Stainton Rogers, 1997) to explore subjective perceptions regarding health, for example perceived causes of irritable bowel syndrome (Stenner, Dancey and Watts, 2000) and smoking identities (Farrimond, Joffe and Stenner, 2010). The results of these studies contribute to evidence based practice through gaining a better understanding of patients' shared and distinct viewpoints regarding their health and health behaviours, and hence informs practitioners about how to better meet their needs.

There has been no research found to date using Q methodology to study subjective perceptions regarding alcohol use; however this would be a suitable subject matter for Q methodology due to the likelihood of their being a number of shared and distinct viewpoints held by students regarding alcohol use at university.

2.5 Description of the Q methodology procedure

This section describes the procedures within a Q methodology study. A glossary of the terminology used within Q methodology is provided in Table 3 below.

Table 3. A glossary of Q methodology terminology

Term	Explanation
Concourse	A collection of everything 'sayable' about the topic of interest, for example what is written or said about student drinking
Q set	The final set of discrete opinions that broadly represent the concourse and that participants will rank according to how strongly they agree or disagree with them
Statement	An individual opinion gathered from the concourse
Quasi-normal distribution grid	The grid onto which statements are rated. The shape of the grid represents the shape of a normal distribution curve
P set	The participants within the study
Q sorting	The task of ordering the statements into the quasi-normal distribution grid according to how strongly participants agree or disagree with them
Q sort	The recorded order of ranked statements

2.5.1 The research question

Before Q methodology procedures can begin an exploratory research question that seeks to understand subjective points of view needs to be identified. See section 2.8.1 for the research questions for this study.

2.5.2 Sampling the concourse

The first stage within Q methodology is to collect statements broadly representative of the concourse on the research topic. The concourse is everything that has been previously written or said about the topic area by the population of interest. In order to claim to be broadly representative, sampling is carried out carefully and systematically with as many viewpoints being collected from the concourse regarding the topic area as possible (Amin, 2000). This often involves an extensive search of the academic and grey literature as well as a variety of sources where the topic area might have been

discussed, for example television programmes, magazines and newspapers. Focus groups and interviews are sometimes arranged to gather further viewpoints about the topic area. Where possible the researcher uses their cultural experience to guide the search for relevant information about the topic area (Stainton Rogers, 1995). On average several hundred statements are collected at this initial stage.

As information is collected it is categorised into themes. This can be done using bottom-up approaches such as Grounded Theory or Thematic analysis (Strauss and Corbin, 1990; Braun and Clarke, 2006), or top-down approaches driven by theory. This iterative process of collecting information and categorising it helps the researcher to manage information and decide when to stop collecting data; typically when no new information is being discovered. It could be argued that no matter how thorough data collection, there is always potential for information to be missed, or something new to be said. This cannot be avoided, however the Q set needs only to contain a “representative condensation of information” (Watts and Stenner, 2005, p75).

2.5.3 Constructing the Q-set

The next stage is to select a sample of items that are representative of the discourse. This sample of items is named the Q-set. Each item in the Q-set aims to represent a different rateable viewpoint regarding the topic area. A good statement is one that will generate a range of different subjective responses, i.e. which will help discriminate between viewpoints. The Q-set can consist of pictures and objects but most research tends to use short statements. For example, “It is normal for students to use alcohol to relieve stress”.

The process of constructing the Q-set begins by selecting distinct items within each of the themes identified. Items are worded so that they capture the viewpoint in a way which is both accurate and concise. Items are then checked for repetitions or ambiguous items, which are subsequently removed. It has been recommended that the final Q-sort consists of between forty and eighty statements (Curt, 1994; Stainton Rogers, 1995; Watts and Stenner, 2012). It is considered that less than forty statements would be unlikely to adequately cover the topic area and more than eighty and it is likely that concepts would begin to be duplicated, and the sorting process could become too cumbersome and time consuming (Watts and Stenner, 2012).

A pilot study should be carried out to gain feedback about statements, in terms of their clarity, comprehension and coverage. This is to ensure that the final Q set

consists of statements that are clear, relevant and as representative of the topic area as possible.

2.5.4 Selection of participants

Participants are specifically selected for the Q-study to represent diversity within the population of interest according to variables which may help discriminate between viewpoints, for example selection may take place according to gender, age or religion. The selection criteria are chosen by the researcher based upon their knowledge of the topic area and so is likened to purposive sampling. As data is collected the researcher monitors it to see if certain opinions might be lacking, if so the researcher should invite further participants likely to hold such opinions. If for example the research suggests that male and female students hold different opinions about alcohol, but mostly female participants have taken part in the Q-study, it would be important to identify further male participants.

Sample sizes in a Q study need to reflect the diversity of the population from which they are drawn and be large enough to apply the statistical procedures to appropriately, however, there is no defined acceptable sample size. Samples of forty to sixty participants are typically viewed as a sufficient sample size within Q methodology (Stainton Rogers, 1995) although good studies are done using fewer (Stephenson, 1953; Watts and Stenner, 2012). Sample size depends, for example, upon the topic of interest and the range of views perceived to be held regarding it. Within the analysis of data in Q-methodology only two similarly rated Q-sets can be considered to constitute a 'shared viewpoint' (Watts and Stenner, 2012), and so numbers do not need to be as large as for quantitative research.

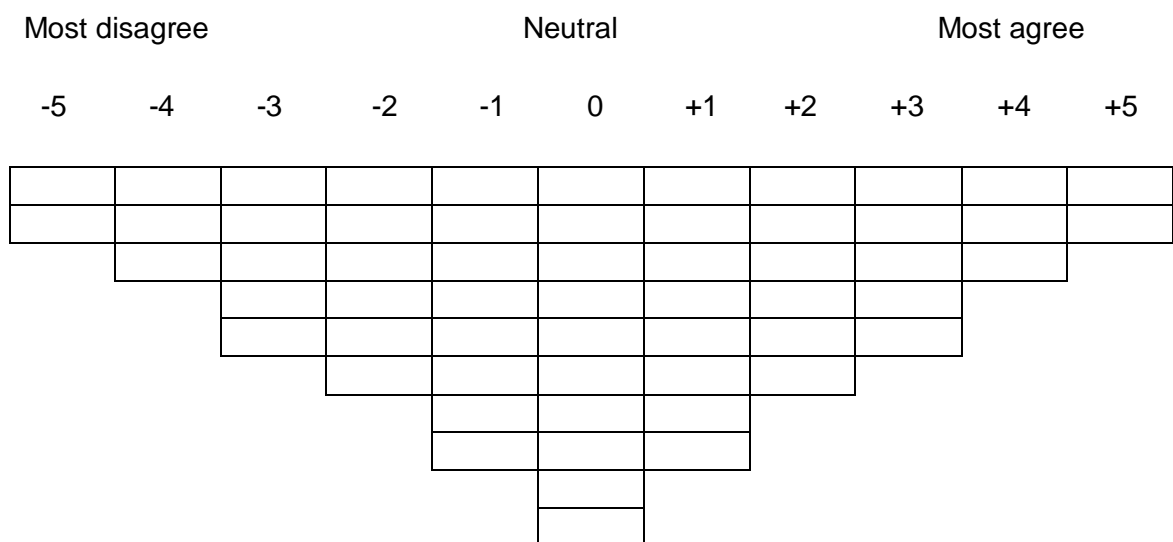
2.5.5 Q-sorting

This involves the task of ranking statements within the Q-set against each other to demonstrate a participant's subjective viewpoint. Participants are given a 'condition of instruction' against which they are to rank statements along a predefined dimension. For example participants might be presented with the following instruction "Here are some things that have been said regarding X, rate how strongly you agree or disagree with these statements". The ranking of statements according to this instruction is guided by a grid (see Figure 1) onto which statements are to be placed.

The grid is usually in the shape of a normal distribution with more room for statements towards the middle and less towards the ends. The ends of the grid are for statements that are most strongly agreed and disagreed with. Neutral statements are to be placed in the middle of the grid. The grid contains enough space for each statement, and hence ranking is limited to the spaces provided within the grid. The size of the grid is determined by the number of statements to fit onto it. The shape of the grid in terms of its 'steepness' is determined by the researchers' predictions regarding the participants' knowledge of the topic area. Steeper distributions, allowing more room for neutral rankings, are better suited to participants thought to be unfamiliar with the topic area; shallower distributions are more useful for participants believed to be knowledgeable on a topic area because they require stronger opinions (Watts and Stenner, 2012).

Q-sorting refers to the process of fitting statements onto the grid. This process is unlike the rating of statements on a Likert scale because statements need to be rated in relation to each other, i.e. an ipsative technique, forcing participants to interact with the items as a whole rather than as independent items. In order to fit statements onto the quasi-normal distribution grid they need to be prioritised, determining the 'psychological significance' of each statement (Burt and Stephenson, 1939). The final Q-sort provides a visual representation of a participant's subjective viewpoint known as the data set or units of analysis.

Figure 2. Example of a Quasi-Normal distribution grid used for Q-sorting



2.5.6 Factor analysis

Factor analysis was originally used in psychology as an objective mathematical approach to help explain which mental abilities and skills go together, and which are different. Factor analysis has therefore frequently been used for the development of psychological tests and questionnaires to measure personality or attitude. In Q methodology factor analysis is used differently in order to identify patterns across people's points of view, in particular how they are similar and different from one another.

Pair-wise Pearson r correlations are first calculated between all Q-sorts to produce a correlation matrix highlighting the degree of similarity and difference between individual Q sorts. A by-person factor analysis (Watts and Stenner, 2012) is then carried out to identify factors to extract from the correlation matrix. This is typically done using either Centroid Factor Analysis or Principal Component Analysis (PCA). Centroid factor analysis allows the researcher to determine analysis using their theoretical judgement; however PCA automatically calculates the best mathematical solution. Although these methods use different techniques both have been reported to produce similar results (Watts and Stenner, 2012).

Once complete the factor analysis reveals a number of extracted factors each represented by highly loading Q sorts. A table displaying the correlation between each Q sort with each factor demonstrates how strongly Q sorts load onto each of the factors and in which direction (positive or negative). The analysis reveals how much of the variance within the correlation matrix each factor explains (eigen value) and the proportion of the variance explained by each factor. The first factor extracted tends to explain the most variance within the data and this amount tends to decline with subsequent factors.

The number of factors to be retained is then decided using both data produced by the software based on factor loadings and subjective theoretical knowledge. Eigen values can be used to guide decision making; for example the Kaiser-Guttman criterion (Guttman, 1954; Kaiser, 1960, 1970) in which factors with eigen values over one are retained. Alternatively or additionally a screeplot (Cattell, 1966) can be used in which the eigenvalues are plotted as a line graph and the number of factors to be retained is suggested to be the number of factors before the line levels out. Factor loadings can also be used to guide the number of factors selected; it is suggested that only factors with more than two significant factor loadings be kept (Brown, 1980).

The factors retained are then subject to factor rotation. This is the process of rotating factors until loadings are at their most significant, for example load highly and significantly onto only one factor. Factor rotation is carried out using either computer software such as Varimax, or manually using theoretical knowledge. Once the factors have been rotated the results are interpreted by assessing the factor loadings. Q sorts that do not load significantly at the required level onto any factors and those that load significantly onto more than one (confounding) are removed from further analysis (Watts and Stenner, 2012).

Q sorts that load significantly onto one factor only are 'flagged' as 'factor exemplars' as they demonstrate a good representation of that factor. Exemplars on one factor therefore represent participants with viewpoints that are similar to one another and distinct from viewpoints of other factors. A weighted average of all factor exemplars is then calculated to create a 'best estimate' of the configuration of items for each factor. This is called the 'factor array' and is presented as an idealised or average Q sort for a factor and hence used for interpretation of the factor.

2.5.7 Factor interpretation

Interpretation is guided by the information you have regarding each individual factor but also how each factor compares to the other factors. The constituents of the factor arrays are used to understand the viewpoints of each factor and how they are similar to and different from other factors. Typically the statements at the extreme ends of the factor array are used to understand the viewpoint a specific factor represents. Statements that are rated significantly different on one factor compared to the others are called distinguishing statements and are used to help determine what makes the viewpoint of that factor different from the others. The factors in which statements are ranked the highest and lowest scores of all factors are also used to help understand the individual viewpoints of each factor. Statements that are ranked similarly across all factors are called consensus items and are used to identify where views are shared between factors.

Qualitative information that participants have recorded about statements is used to provide evidence for interpretation of factors and viewpoints. This can also highlight whether participants interpret statements differently, which also helps interpretation. Relevant information such as demographics regarding the participants exemplifying each factor is usually obtained to determine whether specific viewpoints are associated with specific populations of people. Interviews are sometimes carried out for

participants representing significant factors in order to help expand upon understanding of factors and hence increase the validity of the results. Finally the literature and the researcher's cultural knowledge help to interpret the information obtained and the implications of the results.

2.6 Critique of Q methodology

2.6.1 *Methodological critique*

The association of Q methodology with factor analysis may discourage qualitative researchers from its use due to their incorrect assumption that it is a quantitative approach. It is in fact far from the hypothetico-deductive methods associated with quantitative methodology. Stephenson himself argued that "we should be making discoveries rather than testing our reasoning" (Stephenson, 1953, p151); affiliating Q methodology more closely with qualitative than quantitative methods.

The ranking of predetermined statements within Q methodology causes concern for some researchers who accuse Q methodology of being 'non-naturalistic'. For example it may be argued that the range of viewpoints that can be made observable is limited by the number of statements that are generated by the researcher. However if the generation of statements within the Q study is done thoroughly enough this should not be a problem. The process of creating Q sets could be argued to be more rigorous and thorough than the creation of interview scripts or questionnaires within other qualitative methodologies. Q sorts may therefore have the potential to reveal a wider range of viewpoints than other qualitative methods in which participants answers are directed by predetermined questions based upon the researcher's particular ideas and interests.

Qualitative information obtained in addition to the Q sort allows participants to voice additional relevant information that may have been missed by the Q sort, or expand upon it. This minimises the risk of viewpoints being limited by the Q set and allows the researcher to critique the coverage of the Q set developed. Improvements can then be made to the Q set in future Q methodological research within this topic area if required.

Q methodology provides only a snapshot account of viewpoints held at a particular time; it cannot capture how participants' viewpoints have altered or changed

over time. However Q methodology does not aim to explore changes in viewpoints but rather to find out what is being said about a topic area 'now' (Watts and Stenner, 2012).

Some researchers have concerns that the 'forced distribution' restricts participants' choices in their ranking of statements. 'Free distributions' in which the placing of statements is not determined by a grid can be used within Q methodology however these have been found to reveal the same factors as the forced distribution (Brown, 1980). The 'forced distribution' is therefore often chosen as guidance for the sorter (Watts and Stenner, 2005).

As with all self-report data Q methodology is subject to demand characteristics in which participants give their answers based upon what they perceive to be more socially desirable responses rather than their true beliefs (Cross, 2005). However Q methodology might help to reduce socially desirable responding through being non-verbal. Social desirability is likely to have a bigger effect when providing viewpoints verbally and directly to a researcher. The non-verbal nature of Q methodology is likely to help participants feel more anonymous.

2.6.2 *Misunderstandings*

Q methodology is not used as widely as many other methodologies, and so misunderstandings can go uncorrected, and cause unnecessary scepticism. The Q-sort in Q methodology is sometimes confused with the Q-sort used by Carl Rogers to measure changes in personality constructs before and after therapy. The Q-sort used by Rogers required participants to read the personality constructs and place them on piles according to how much it was like, or not like them. The ranking of items in Q-methodology onto a quasi-normal distribution grid requires an interactive process by which each statements is rated in relation to the others; it is not a passive process in which items are merely placed into piles. This confusion can lead to the misunderstanding of Q methodology been viewed as a way to gain objective measures rather than subjective viewpoints.

The use of factor analysis by Q methodology is typically misunderstood by some researchers to mean that Q methodology is reductionist when in fact it can be used within a post-modern and social constructionist framework. Factor analysis typically requires finding correlations between variables such as age and weight for a sample of participants, whereas Q methodology involves finding correlations between participants from a sample of Q sorts, making participants the variables.

2.7 Rationale for choice of method

Previous social norms research has tended to measure the frequency of singular viewpoints assumed to be held by students regarding alcohol and university life. No research to date has attempted to understand the complexity of students' perceptions of the norm including how the many viewpoints held by an individual might fit together. The current study aims to discover the perceptions held by students regarding alcohol and university life and how these perceptions group together. Q methodology meets this aim because it serves to discover, explore and describe viewpoints regarding a specific topic area.

This method differs from other qualitative research in its approach to identify and understand viewpoints. Qualitative research tends to rely on participants disclosure of information relevant to the topic area and so results depend on how much the participant is willing to discuss and share. For example certain viewpoints might be avoided or dismissed by participants. In Q methodology the ranking of predetermined statements which represent existing and varied viewpoints on a topic area means that topics cannot be avoided or dismissed. This also helps to reduce socially desirable responding.

Another advantage of Q methodology over other qualitative methods is that in some methods participants are less able to be non-committal in their views regarding the topic area. For example within questionnaires or interviews participants can remain 'on the fence' about certain issues and refrain from providing strong opinions. In Q methodology the fixed amount of space for positive and negative ratings on the quasi-normal distribution grid means that approximately half of the statements are ranked on one continuum (e.g. agree) and half on the other (e.g. disagree) and so 'forces' a viewpoint. The strength of the viewpoints to be gained can also be determined by changing the shape of the quasi-normal distribution grid.

Q methodology combines qualitative approaches with mathematical factor analysis of the data. This enables the researcher to explore the ways in which viewpoints held by participants group together and how these viewpoints are similar and different from one another. This analysis fits well with the aims of the current study and will help further understand what the normative perceptions of students regarding alcohol and university life look like and how they are conceptualised together.

2.8 Methodological Investigation

This section describes the use of Q methodology within the current study

2.8.1 *The research questions*

- 1) To identify the subjective viewpoints of medical and dental students regarding what is considered to be 'normal' in relation to drinking alcohol as part of university life
- 2) To understand how the many viewpoints held by an individual might fit together to form distinct perceptions of the norms regarding alcohol as part of university life
- 3) To explore how these viewpoints cluster together, what they have in common and how they differ
- 4) To hypothesise whether viewpoints are held by specific groups of students, for example regarding their demographic background or alcohol consumption

2.8.2 *Sampling the concourse*

The current study used a bottom up approach to sample the concourse. This was used rather than a top down approach due to there being limited research to date that has used theory to understand student perceptions of alcohol as part of university life.

The aim of the study was to identify the range of perceptions held by students regarding what constitutes a 'typical' or normative opinion or behaviour in relation to alcohol and university life. The resources consulted in attempt to uncover the perceptions held were:

- The academic literature (research journals and unpublished material) that described the attitudes and behaviours of students in relation to alcohol and university life.
- European symposium on substance use and abuse (ESSUS) conference at Bradford University. Research highlighting attitudes or behaviours of students regarding alcohol and university life during this conference was identified.
- Newspaper and magazine articles on the internet regarding what might be viewed as typical attitudes or behaviours of students with regards to alcohol and

university life were searched. Students' responses to the articles were found to be very relevant and consist of views from both drinkers and non-drinkers.

- The World Wide Web. Google searches for 'student drinking' and 'student non-drinkers' brought about some relevant websites, articles, blogs, youtube clips and documentaries.
- The television programme 'Booze Britain' was watched, with particular attention paid to comments by students regarding student drinking and what was considered to be normal.
- The researchers own views and opinions through previous experience of being an undergraduate and postgraduate student were used to identify potential missing viewpoints.

The researcher was careful when consulting resources to identify the viewpoints of non-drinkers as well as from drinkers so that viewpoints about what was considered to be 'normal' were representative of the wider student population. It was found that comments by students on newspaper articles regarding student drinking often held a broad range of viewpoints from both drinkers and non-drinkers. Following discussion with the researcher's supervisor who has expertise within this topic area it was suggested that saturation of viewpoints had been reached, and that seeking individual viewpoints through interviews was unlikely to add new information. Interviews were therefore not carried out and it was considered that sufficient material had been collected from the above resources.

2.8.3 Developing the Q-set

As information was collected it was categorised using the step by step guidelines provided by Braun and Clarke (2006) for thematic analysis. A summary of these steps and a description of how they were followed to develop the Q set for the current study are provided below:

1. Familiarisation with the data: involves immersing yourself within the data by repeatedly reading through it.

Relevant information found regarding what was perceived to be normal attitudes or behaviours by students about alcohol and university life was printed

out where possible or transcribed by the researcher so that it could be easily accessible and manipulated into categories and themes. The researcher could then immerse themselves within the data by re-reading it as frequently as was needed.

2. Generation of initial codes: involves identifying meaningful aspects in the data and coding them.

As information was collected it was coded by being given a name which consisted of a short description of what the information was regarding (See Appendix 5; the texts at the end of the spider legs are the codes). It was ensured that the original reference for each code remained traceable using a number reference system within word. Data was collected and coded until there was a substantial amount of data constituting each code, and no new codes could be found.

3. Organising data into themes: involves categorising the codes identified in the previous step into broader themes.

The codes identified in step one were organised into themes that described chunks of items. For example a number of codes were represented by the theme 'drunken behaviour'. The themes were then drawn out manually as forty eight mini spider diagrams organised according to drinking behaviour, attitudes regarding drinking, and motives to drink. This provided a visual representation of themes and codes within each theme (See Appendix 5; themes are circled with codes attached).

4. Reviewing themes: involves a refinement of themes.

The forty eight themes described in step three were then refined into six themes that were believed to accurately summarise the data collected; external pressure, consequences of alcohol, drinking behaviours, importance of alcohol, whether alcohol was integral to university, and motives. (See Appendix 6 for a spider diagram showing refined themes).

5. Defining themes: involves the identification of sub themes within themes and naming them.

Fifty subthemes were identified for the six themes described in step four. The essence of the subtheme was captured by a word or a couple of words to describe it (subthemes are shown in the spider diagram in Appendix 6). Statements for the Q set were then developed by capturing the essence of each

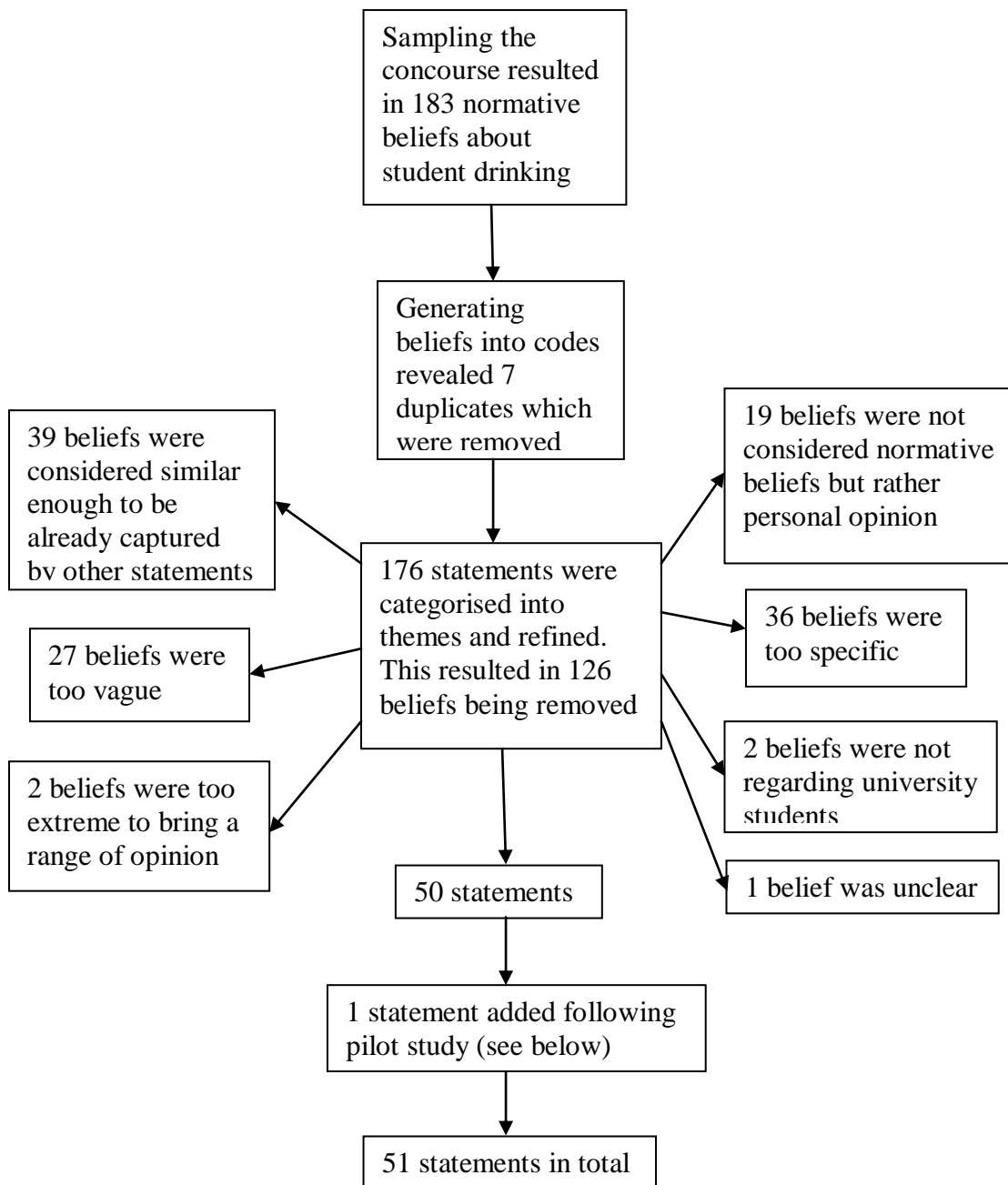
subtheme. For example under the theme 'Importance of alcohol', one of the subthemes was captured in the statement 'Can't have fun without alcohol'.

The original wording or quotes that had given rise to the subthemes were kept where possible, however many were refined to ensure that they were concise. Each sub theme therefore consisted of a statement that captured something new within the data (See Appendix 7 for the statements created from each sub theme and Appendix 8 for the original source of this subtheme).

Within stage five, statements were then checked for clarity, duplications were removed and ambiguous statements were reworded. Themes, sub themes and statements were checked by the researcher's two supervisors over a number of meetings providing quality checks on the data and their categorisation. The researcher was mindful throughout the process about themes that might be missing from the information collected and directed their search accordingly. For example the researcher was aware that information regarding students drinking would be more accessible than information regarding students that do not drink. Searches were therefore made to specifically identify this information. Statements were finally checked to ensure that it was clear that they were regarding perceptions of students in general (the norm) and not about what the participant did themselves as a student.

A summary of how statements were generated is provided in Figure 3 below.

Figure 3. A study flow diagram to show development of statements



Pilot study

Once the researcher had finished amending statements a pilot study was carried out. The purpose of this study was to check that statements were clear, concise and understandable. It was also to check the coverage of statements and identify areas or topics missed by statements (see Appendix 7 for the statements used within the pilot study). The pilot study consisted of the researcher explaining the Q sort task to

participants and remaining in the room whilst participants completed the task. The same instructions and materials were used as in the main study (described later in this chapter).

Six female postgraduate university students, aged between 26 and 29 individually completed the pilot study. Post graduate students were chosen for the pilot study due to their experience of at least three years being a student themselves. It was hoped that this would provide a range of insight into what students might perceive to be normal in relation to alcohol and university life and hence result in valuable feedback regarding the statements. Participants were asked for feedback regarding the Q sort task, their understanding of the statements, suggestions for improvement and potential viewpoints or topics missed by the statements. Participants were asked for feedback regarding the process of the Q sort however there were no problems or suggestions for improvement as a result of this.

The pilot study provided two valuable suggestions to improve the Q set. One participant identified a perception that was missing from the Q set; that it is considered 'normal' to down alcoholic drinks at university in order to become intoxicated. This highlighted a viewpoint missed by the search for relevant information from the concourse. Once highlighted the researcher also recognised this as a potential normative perception among students and as a result the following statement was added to the Q set: 'It is normal to see students "downing their drinks" in attempt to maximise the effects of alcohol'.

A second participant commented that they found the following statement difficult to rate: 'The lack of inhibitions caused by alcohol is viewed as a good thing by students'. The participant described that they struggled to imagine what a 'lack of inhibitions' meant and why this might be viewed positively by students, and as a result had to spend longer thinking about this statement than the others before being able to rate it. As a result the researcher changed this statement in attempt to make it less ambiguous. It was thought that a 'lowering of inhibitions' would be easier to imagine than a 'lack of inhibitions' and so this wording was changed. Also a concrete example of why this might be viewed positively by students was provided. This resulted in the above statement being replaced by the following: 'Students like the fact that alcohol lowers their inhibitions and enables them to do things they wouldn't normally'.

The final Q set provided in Table 4 below.

Table 4. The Q set

No	Statement
1	Needing a friend to help you walk due to alcohol intoxication is part of a typical student night out
2	It is normal for students to use alcohol to relieve stress
3	It can be expected that as a student you will feel pressure from your peers to drink heavily
4	Drinking at home before going out (preloading) is a normal part of university life
5	Being unable to remember parts of a night out due to alcohol is an expected part of the university experience
6	Students' are more interested in partying than studying
7	Trying to stop students getting drunk is like trying to stop the tide coming in, it is not possible
8	After a typical student night out it is expected that there will be at least one regret the next day
9	Drinking is something students feel like they're expected to do at university
10	The way students typically behave when drunk is disgusting
11	Most students that prefer not to drink find it is easy to avoid alcohol at university
12	Behaving like an idiot when drunk is seen as a normal behaviour at university
13	Drinking excessively has always been part of university life
14	Students don't care if they leave a trail of destruction behind them when drunk
15	A lot of conversations at university revolve around alcohol and drinking
16	It is expected that university work will be affected at some point due to the consequences of alcohol
17	It is not a student party unless there is alcohol involved
18	Students that drink the most, are often viewed as the most cool
19	It is harder for students that do not drink to fit into university life
20	Students view hangovers as a sign of a good night out
21	Students can't have fun without alcohol being involved
22	Students that don't drink are all work and no play
23	It is easier for students that drink alcohol to make friends
24	Students live in the moment they don't think about long term effects of alcohol on their bodies
25	Students enjoy staying in with friends and not drinking, just as much as getting drunk
26	Part of being a student is learning how much alcohol you can handle
27	It is expected that students can hold their drink; it is viewed unacceptable to be a lightweight

28	For most students the enjoyment of alcohol overrides the fear of negative consequences
29	Students get sick and tired of social events being based around drinking
30	Students often drink so that they can fit in with everyone else
31	Students like the fact that alcohol lowers their inhibitions and enables them to do things they wouldn't normally
32	Most students drink sensibly or not at all; student drinking is exaggerated
33	Freshers week is typically all about getting drunk
34	Drinking alcohol is a strategy used to gain confidence by many students
35	Getting drunk with friends is viewed as a positive social event by students
36	Excessive student drinking rarely causes any problems; it is the minority that give students a bad name
37	An important part of the university experience is having the freedom to choose what you drink and when
38	Students view university as best time to drink alcohol because they have less responsibilities
39	Drunken nights out provide some of the best memories of student life
40	Students care more about being healthy these days and so the amount they drink is reducing
41	Students live for going out and getting drunk
42	Students think using alcohol blocks out negative emotions
43	Most students are good at knowing when to stop drinking so that they don't get too drunk
44	Students find it easy to admit that they do not like drinking
45	Students are thoughtful about when to drink, taking university obligations such as essays or exams into account
46	Drinking games are a valued part of the student drinking experience
47	A night out drinking is often viewed by students as a well-deserved blow out for working hard
48	At university it is normal to go out and not want to get drunk
49	Students that choose not to drink are viewed negatively
50	Students' spend too much money on alcohol rather than on practical items like food or university books
51	It is normal to see students downing their drinks in attempt to maximise the effects of the alcohol

2.8.4 Sample (Person Set)

Q-methodology requires a sample of participants that is likely to represent the diversity of viewpoints held on the topic under investigation. In the current study year of study, school of study, gender, and alcohol consumption were identified as variables that required sufficient representation. Purposeful sampling was therefore used to select

participants representing these variables. To enable purposeful sampling undergraduate student participants that had agreed to be contacted regarding stage two of the study were organised into twelve categories according to their demographic background information. Participants from each of these categories were then selected according to their alcohol consumption. In attempt to provide adequate representation of variables within the final sample a total of four to five participants per category was aimed for; giving a total of between forty eight to sixty participants. This is demonstrated in Table 5 below.

Table 5. The optimal number of participants per category/ cell

	BCHD & MChD (Dentistry)		MBChB (Medicine)	
	Male	Female	Male	Female
Year 1	1 (n= 4 to 5)	4 (n= 4 to 5)	7 (n= 4 to 5)	10 (n= 4 to 5)
Year 3	2 (n= 4 to 5)	5 (n= 4 to 5)	8 (n= 4 to 5)	11 (n= 4 to 5)
Year 5	3 (n= 4 to 5)	6 (n= 4 to 5)	9 (n= 4 to 5)	12 (n= 4 to 5)

The total number of binges per week obtained from participants drinking diaries were used to select participants within each category above in attempt to gain participants with a range of alcohol consumption. For example if category one contained a total of twenty participants to select from; five that did not binge in the previous week, five that binged once, five that binged twice, and five that binged three times, one participant would be randomly selected from each of these four groups of binge categories and then one randomly selected from the remaining participants.

E-mail addresses were obtained for selected individuals from the online survey and an invite sent regarding stage two of the study; the Q study. The invitation e-mail thanked participants for taking part in stage one of the study and for agreeing to be contacted regarding stage two. An incentive to take part in stage two was highlighted (a choice of either a five pound Costa coffee gift card or five pounds worth of printer credits for every participant), and a brief description of the study provided; to rate a series of statements regarding student drinking according to how strongly they agreed or disagreed with them. Participants were advised to read the information sheet (see Appendix 9) attached to the e-mail for further information about the study. A list of dates and times was then offered for participation.

As data was collected the spread of participants with regards to these twelve categories and their alcohol consumption was checked to see whether the criteria had been met. If further recruitment was necessary, participants matching the required criteria were invited.

2.8.5 Data collection: the Q sort

Materials

All materials were provided on a desk with a chair and a pen

i) Quasi normal distribution grid

The quasi normal distribution grid was printed onto A3 size white card and laminated. This was then blue tacked to the desk to prevent it moving during the Q sort task.

ii) Statements

Statements were printed onto a cream coloured card (4.3cm by 3.1cm) so that they were identifiable against the quasi normal distribution grid and were placed in a pile at the side of the grid.

iii) The condition of instruction

The condition of instruction was printed onto A4 sized card and laminated. The instruction provided read: "Here are some things that have been said about student drinking as part of the university experience. Rate how strongly you agree/ disagree with these statements". This was placed above the quasi normal distribution grid as a reminder to participants about how to rank statements.

iv) Sorting boxes (see Appendix 10)

Participants were provided with three sets of 'sorting boxes' to make the process of ranking statements more manageable. One A4 piece of laminated card contained three boxes labelled 'agree' 'neutral' and 'disagree'. A second piece of laminated card contained three boxes on each side. On one side the boxes were labelled 'slightly agree', 'quite strongly agree' and 'strongly agree' from left to right and on the other they were labelled 'strongly disagree' 'quite strongly disagree' and 'slightly disagree' from left to right. (See Appendix 11 for a completed Q sort that might help to better visualise how these materials were used.)

v) Statement booklet

A document printed onto A4 paper and folded in half to create an A5 booklet (see Appendix 12) was provided for participants to comment upon statements, provide reasons for their ranking of statements or highlight statements they found difficult to place and why. Instructions for use of the booklet were provided on the front page and all 51 statements were numbered and provided inside with space to comment next to them.

vi) Explanation form

The explanation form was printed onto A4 paper and contained space for participants to provide an explanation or justification for the placing the three statements they most strongly agreed and disagreed with (see Appendix 13).

vii) Information sheet (See Appendix 9)

The information sheet provided within the invitation e-mail was printed onto A4 card and laminated. This was provided to ensure participants were fully informed about the study before giving consent.

viii) Consent forms

Two consent forms were placed on the desk, one for the researcher and one for the participant to keep.

ix) Demographics checklist

This consisted of an A4 sheet of paper requiring participants to indicate their gender, school and year of study and ethnicity. This was completed as a check that data was being collected from the intended demographic categories and also to provide a description of the ethnic background of the final sample of students.

Instructions

University rooms close to the medical and dental schools were booked for convenience and privacy during data collection. Participants were shown to a desk containing the materials for the Q sort. Participants were asked to re-read the information sheet if necessary and sign both consent forms if they wanted to proceed with the study. The researcher then signed the consent forms and gave one to the participant to keep. The researcher gave verbal instructions as to how to complete the task before allowing the

participant to begin. The researcher checked the participant understood each stage before moving to the next one. The instructions provided were as follows:

- 1) The condition of instruction statement was highlighted as the main instruction for participants to follow and was read out.
- 2) Participants were advised to use the sorting boxes provided to assist them with ranking statements. Participants were asked to read each statement and rate it by placing it into either the agree, disagree or neutral boxes provided. The neutral box was explained to be for statements that participants were undecided about and wanted to come back to, or statements that they felt neutral towards.
- 3) Participants were then advised to take the statements from the 'agree' pile and further sort them according to whether they strongly agreed, quite strongly agreed or slightly agreed with them. It was described that these statements were then to be placed onto the larger grid labelled from 'most agree' on the far right to 'most disagree' on the far left, with neutral in the middle, to guide the positioning of statements. It was advised to fill in the extreme ends of the grid first and work inwards using their pre-sorted statements.
- 4) Participants were then advised to repeat step three with their 'disagree' pile before adding the remaining neutral pile to the grid.
- 5) Participants were then informed that the ranking of statements was from left to right (or right to left) and not from top to bottom; that statements could not be placed outside the grid and that one statement must fit into each space on the grid. It was also commented that participants might want to move statements around on the grid until satisfied with their positioning.
- 6) Participants were informed about the statement booklet and read the instructions on its first page. It was advised that this be used alongside the task as and when it felt necessary.
- 7) A final check was made regarding understanding of the task before participants were asked to begin and let the researcher know when they had finished, or if they had any questions. The researcher sat away from the participant in attempt to reduce any social desirability affects.
- 8) Once participants indicated that they had completed the task they were given the 'explanation form' and asked to provide a brief explanation for their positioning of the three statements on the extreme ends of the grid (i.e. the three they most strongly agreed and disagreed with).

- 9) Finally participants were asked how they found the task and if they had any further questions. Participants were then thanked for their time and given their Costa coffee gift card or informed that their printer credits would be added that evening.

Once the participant had left the room the numbers of each statement were copied onto an A4 printed copy of the quasi normal distribution grid. A picture of the grid was also taken to refer to should there be any errors in copying down the number of statements. Q sorts were then transferred onto a computer software package 'PQMethod' Version 2.11 (Schmolck and Atkinson, 2002).

2.8.6 Interpretation of results

The qualitative information provided within the 'statements booklet' and 'explanation form' was used to help later interpretation of factors. This process is described within the results section.

2.8.7 Ethical considerations

Informed consent was gained from all participants for both stages of the study. Confidentiality was reiterated at every stage of the study. Participants were informed that they could leave or withdraw their results from the study at any time. An exception to this was that BOS data could not be retracted once submitted due to the anonymity of the survey. This exception was made clear to participants.

The researcher kept a list of alcohol self-help contacts available to give to participants. Although it was not anticipated that the study should distress participants, this could not be guaranteed hence the researcher ensured that they knew where the student counselling centre was in case a participant required immediate support.

CHAPTER THREE: RESULTS

Stage one: Online questionnaire (Recruitment process)

3.1 Participant background information

In total 205 participants completed the online survey. Ten participants were removed from the data set for failing to meet the required criteria (n=1 unrequired school of study, n=2 unrequired year group, n=1 did not specify gender, n=2 did not specify year of study, n=1 did not specify age and n= 3 did not specify required information regarding alcohol consumption). This provided a sample of 195 (66% (n=129) medical and 34% (n=66) dental) participants that met the required criteria.

The mean age of the sample was 21.42 (SD = 3.31) with an age range between 18 and 44 years. Of the 195 who met the required criteria 176 (90%) were UK home participants, 14 (7%) were international students, 4 (2%) were EU students and 1 (1%) was of unknown origin. (See Table 6 for a summary of the samples demographic characteristics).

3.2 Alcohol consumption and drinking behaviour data

A total of 156 (80%) drinkers (111 female, 45 male) and 39 (20%) non-drinkers (27 female, 12 male) completed the survey. The overall mean alcohol consumption was 8.28 (SD=10.47) units per week. The mean alcohol consumption for males was 11.05 (SD=12.57) units per week, and for females 7.13 (SD=9.29) units per week. (See Table 6 for a summary of the samples AUDIT and drinking diary scores).

Table 6. Demographics and alcohol consumption for participants completing the online survey by school of study

	Medicine (n=129)	Dentistry (n=66)	Total (n=195)
Gender	n(%)	n(%)	N(%)
Male	33 (17)	24 (12)	57 (29)
Female	96 (49)	42 (22)	138 (71)
Year			
Year 1	41 (21)	22 (11)	63 (32)
Year 3	47 (24)	20 (10)	67 (34)
Year 5	41 (21)	24 (12)	65 (33)
AUDIT Score ^a			
Low risk	78 (40)	46 (24)	124 (64)
Medium	48 (25)	19 (9)	67 (34)
High	1 (0.5)	1 (0.5)	2 (1)
Dependent	2 (1)	0 (0)	2 (1)
Units per week			
Sensible ^b	95 (49)	61 (31)	156 (80)
Hazardous ^c	31 (16)	5 (3)	36 (18)
Harmful ^d	3 (2)	0 (0)	3 (2)
Binges per week ^e			
0	72 (37)	48 (25)	120 (62)
1	35 (18)	16 (8)	51 (26)
2	12 (6)	2 (1)	14 (7)
3	9 (5)	0 (0)	9 (5)
4	1 (0.5)	0 (0)	1 (0.5)

Note.

^a AUDIT score: Low risk of alcohol problems 0-7, Medium level of alcohol problems 8-15, High levels of alcohol problems 16-19, and possible dependence 20-40

^b Units per week: Sensible (females 0-14, males 0-21)

^c Hazardous (females 15-35, males 22- 49)

^d Harmful (females 36+, males 50+) (Royal College of Physicians, 2010-2012)

^e Binge: female = >6 units, male = >8 units in one day (Institute of Alcohol Studies, 2006).

3.3 The spread of participants according to demographic background

Participants completing the survey were diverse in terms of their year group, however there were more medical than dental, and more female than male participants. Approximately half of the participants within each category agreed to be contacted regarding stage two of the study. (See Table 7 for the number of participants that a) completed the survey, b) agreed to be contacted regarding stage two of the study, and c) were interviewed at stage two, according to the twelve demographic categories outlined within the method section).

Table 7. The spread of participants across the twelve demographic categories

		Medicine		Dentistry		Total
		Male	Female	Male	Female	
Year 1	Survey ^a	7	34	8	14	63
	Agree ^b	4	26	4	7	41
	Interview ^c	2	4	1	1	8
Year 3	Survey	15	32	12	8	67
	Agree	8	17	7	5	37
	Interview	2	3	3	3	11
Year 5	Survey	11	30	4	20	65
	Agree	6	11	3	12	32
	Interview	1	4	2	5	12
Total	Survey	33	96	24	42	195
	Agree	18	54	10	24	106
	Interview	5	11	6	9	31

Note

^{a.} Total number of participants completing the survey by school, gender and year

^{b.} Total number of participants completing the survey and agreeing to be contacted regarding stage two of the study by school, gender and year

^{c.} Total number of participants interviewed at stage two by school, gender and year

Stage two: Q methodology

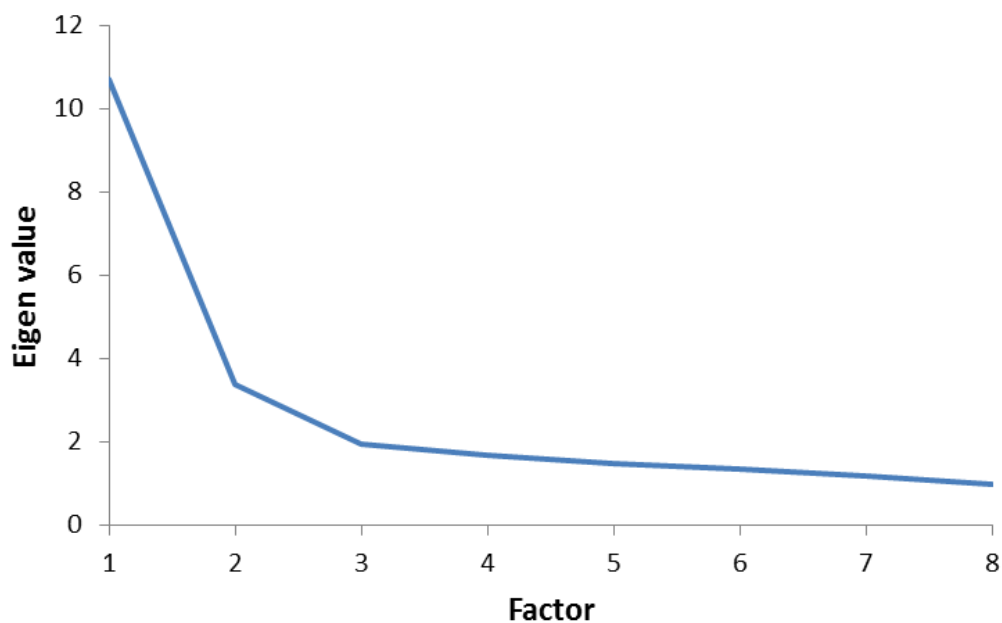
3.4 Factor Analysis

The software package PQ Method Version 2.11 (Schmolck and Atkinson, 2002) was used to carry out the Q methodological analysis. Pairwise correlations were first carried out between all items for all participants to produce a 31 by 31 correlation matrix. Principle Components Analysis (PCA) was then chosen to extract factors. This method was chosen due to it being offered within PQ Method and expert guidance on this method being available to the researcher.

3.5 Selection of factors for rotation

Seven factors had an eigen value over one, however the screeplot (Cattell, 1996) suggested a possible three factors for extraction (see Figure 2). Together this indicated between three to seven factors to be optimal for extraction. However as suggested by Watts and Stenner (2012) the 'substantive meaning and significance of a factor' must always be considered. The ultimate decision regarding how many factors to retain for rotation was therefore based upon theoretical knowledge regarding interpretable factors.

Figure 4. Screeplot



A three factor solution could have been initially tried; however it is paramount to identify as many interpretable factors as possible so that viewpoints are not missed. Screeplots have the potential to exclude factors because they only account for a small amount of the variance, however this does not distract from their potential importance. For this reason a four factor solution was initially attempted. This was deemed to provide four significant and interpretable viewpoints. To check that further interpretable viewpoints were not being hidden within a four factor solution, a five factor solution was attempted. Although this provided four interpretable and significant factors the fifth factor contained only two bipolar exemplars. This indicates two opposing positions and essentially one exemplar with two single viewpoints. For this reason four factors explaining a total of 57 per cent of the variance were chosen to be extracted for rotation.

3.6 Factor rotation

Varimax rotation was used to maximize the significance of loadings upon and between factors. Varimax rotation was used as this was available for use within PQMethod and is deemed a “good general approach” recommended for those less experienced in conducting factor analysis (Field, 2000, p449). PQ Method automatically flagged ‘exemplar’ Q sorts that loaded significantly ($p < 0.05$) onto only one factor. Exemplar Q sorts were manually checked using a more stringent significance level of $p < 0.01$, using the following equation: $2.58 (1 / \sqrt{\text{no. of items in Q set}})$ as suggested by Brown (1980, p222-223). This resulted in a factor loading of ± 0.4 reaching the desired significance level ($p < 0.01$), matching the level suggested by Watts and Stenner (2005). As a result one factor exemplar no longer met the criteria and was de-flagged. Table 8 shows the loadings of each Q sort onto each rotated factor; exemplars are highlighted with an ‘X’.

Table 8. Rotated factor loadings and exemplars for factors 1 to 4

Q Sort	Factors			
	1	2	3	4
1	0.4964 X	0.2188	0.1013	0.3490
2	0.4573	-0.0023	0.0463	0.6214
3	0.2042	0.4084	-0.0978	0.6861 X
4	0.3476	0.4409	0.1526	0.2077
5	0.6392 X	0.2404	0.3011	0.3099
6	0.1045	0.2801	0.7265 X	0.0933
7	-0.0183	0.1764	0.4077	0.7527 X
8	0.5527	0.0806	0.0126	0.6729
9	0.7323 X	0.0180	0.3340	-0.0020
10	0.4899 X	0.0149	0.0575	0.1917
11	0.6958 X	-0.1677	-0.0080	0.2731
12	0.1684	0.2122	0.5531	0.4732
13	0.1567	0.7481	0.4100	0.0491
14	-0.1695	0.5751 X	0.3189	0.3007
15	0.2445	0.0964	0.5585 X	0.0412
16	0.2360	-0.0116	0.4989	0.6245
17	0.4255	0.2115	0.2165	0.3155
18	0.6740 X	0.1015	0.0867	0.1471
19	0.1195	0.7022 X	-0.0954	0.3773
20	0.6251 X	0.4065	-0.0159	0.2099
21	-0.2056	0.6245 X	0.1985	0.1413
22	0.3873	0.0033	0.5574 X	0.2678
23	0.5357 X	-0.2295	0.4087	0.0035
24	0.4004	0.2602	0.2540	0.5049 X
25	0.1324	0.1186	0.1683	0.6513 X
26	0.3478	0.4940 X	0.1481	0.2684
27	0.5501 X	0.2306	0.3460	0.0776
28	0.3345	0.6677 X	0.1793	0.2974
29	0.6349	-0.0524	0.4830	0.0245
30	-0.0348	0.7430 X	-0.1201	-0.1759
31	0.2769	0.5046	-0.1232	0.6460
% explained variance	18	14	10	15

Note: X indicates an exemplar Q sort for the factor

3.7 Factor Arrays

Using PQ Method the exemplifying sorts were merged to create factor arrays for each factor. This was calculated using a weighted average of exemplar sorts for each factor (Spearman, 1927). Factor arrays are presented in Table 9 below.

Table 9. Factor arrays for factors one to four

No	Statement	F1	F2	F3	F4
1	Needing a friend to help you walk due to alcohol intoxication is part of a typical student night out	-1	-3	1	-1
2	It is normal for students to use alcohol to relieve stress	1	1	-1	0
3	It can be expected that as a student you will feel pressure from your peers to drink heavily	3	1	2	1
4	Drinking at home before going out (preloading) is a normal part of university life	3	4	4	4
5	Being unable to remember parts of a night out due to alcohol is an expected part of the university experience	0	-1	1	3
6	Students' are more interested in partying than studying	-1	-3	1	-1
7	Trying to stop students getting drunk is like trying to stop the tide coming in, it is not possible	1	-1	-1	1
8	After a typical student night out it is expected that there will be at least one regret the next day	-1	-2	-2	-1
9	Drinking is something students feel like they're expected to do at university	4	2	0	2
10	The way students typically behave when drunk is disgusting	-1	-1	2	-2
11	Most students that prefer not to drink find it is easy to avoid alcohol at university	-4	3	-2	0
12	Behaving like an idiot when drunk is seen as a normal behaviour at university	2	-3	3	-4
13	Drinking excessively has always been part of university life	-2	1	3	2
14	Students don't care if they leave a trail of destruction behind them when drunk	-2	-4	0	-3
15	A lot of conversations at university revolve around alcohol and drinking	2	1	-2	0
16	It is expected that university work will be affected at some point due to the consequences of alcohol	0	-2	1	-1
17	It is not a student party unless there is alcohol involved	0	0	3	4
18	Students that drink the most, are often viewed as the most cool	-2	-3	3	-2
19	It is harder for students that do not drink to fit into university life	2	-2	0	2
20	Students view hangovers as a sign of a good night out	0	1	0	1
21	Students can't have fun without alcohol being involved	-3	-4	-4	-2
22	Students that don't drink are all work and no play	-2	-4	-4	-3
23	It is easier for students that drink alcohol to make friends	2	-1	0	2
24	Students live in the moment they don't think about long	0	2	2	2

	term effects of alcohol on their bodies				
25	Students enjoy staying in with friends and not drinking, just as much as getting drunk	1	4	0	-1
26	Part of being a student is learning how much alcohol you can handle	1	-2	-1	-2
27	It is expected that students can hold their drink; it is viewed unacceptable to be a lightweight	-2	-1	3	-4
28	For most students the enjoyment of alcohol overrides the fear of negative consequences	1	-2	0	2
29	Students get sick and tired of social events being based around drinking	1	0	-3	-1
30	Students often drink so that they can fit in with everyone else	4	3	-1	1
31	Students like the fact that alcohol lowers their inhibitions and enables them to do things they wouldn't normally	4	0	0	0
32	Most students drink sensibly or not at all; student drinking is exaggerated	-3	0	-3	-2
33	Freshers week is typically all about getting drunk	3	3	4	1
34	Drinking alcohol is a strategy used to gain confidence by many students	3	3	1	1
35	Getting drunk with friends is viewed as a positive social event by students	3	2	1	3
36	Excessive student drinking rarely causes any problems; it is the minority that give students a bad name	-3	4	-2	0
37	An important part of the university experience is having the freedom to choose what you drink and when	0	0	1	0
38	Students view university as best time to drink alcohol because they have less responsibilities	0	2	2	0
39	Drunken nights out provide some of the best memories of student life	-1	0	-2	3
40	Students care more about being healthy these days and so the amount they drink is reducing	-3	-1	-3	-3
41	Students live for going out and getting drunk	-2	-2	-1	0
42	Students think using alcohol blocks out negative emotions	0	0	-1	-3
43	Most students are good at knowing when to stop drinking so that they don't get too drunk	-4	2	-4	0
44	Students find it easy to admit that they do not like drinking	-4	-1	-2	-1
45	Students are thoughtful about when to drink, taking university obligations such as essays or exams into account	-1	1	0	3
46	Drinking games are a valued part of the student drinking experience	2	2	2	3
47	A night out drinking is often viewed by students as a well-deserved blow out for working hard	0	3	4	4
48	At university it is normal to go out and not want to get drunk	-3	0	-3	-4
49	Students that choose not to drink are viewed negatively	-1	-3	-3	-2
50	Students' spend too much money on alcohol rather than on practical items like food or university books	2	1	-1	-3
51	It is normal to see students downing their drinks in attempt to maximise the effects of the alcohol	1	0	2	1

3.8 Process of understanding the factors/ viewpoints

Factor arrays were recreated as Q sorts to provide a pictorial representation of each viewpoint. Distinguishing statements ($p < 0.01$) identified by PQ Method and those given the singular highest or lowest rank score were highlighted on the Q sorts. This provided a visual representation containing all relevant information needed to aid understanding for each viewpoint.

Crib sheets were then created for each factor in which qualitative information (from the statement booklets and explanation sheets) for exemplar Q sorts was transcribed. Particular attention was paid to comments made regarding the statements at the extreme ends of the factor array (± 4), distinguishing, consensus and the singular highest and lowest ranked statements.

Finally demographic and alcohol consumption data was summarized for each factor. A description of the four factors using the above information is summarized below. An interpretation of these factors in relation to the aims of the study is provided within Chapter 4.

3.9 Description of the four factors

The four factors found are described below as 'viewpoints'. Statements are referred to as follows: (rank position, number of statement) this provides the reader with the rating of the statement and enables them to be easily found on the visual factor array provided for each factor. For distinguishing statements this is written in bold text. For example **(+4, 14)** indicates that statement 14 was ranked at +4 and is a distinguishing statement.

A summary of all four viewpoints with the number of exemplars and variance they account for is provided in Table 10 below.

Table 10. Summary of the four factors

Factor name	Factor description	Number of exemplars	Variance accounted for
1. Most students drink and do so to fit in at university	Typical students are under pressure to drink alcohol; it is unavoidable at university. They drink to fit in and make friends but would like to feel less pressured to drink alcohol.	9	18%
2. Alcohol is not important at university and most students that drink, drink sensibly	Typical students can resist social pressure and do not drink excessively. They manage their drinking well and have other ways to enjoy their time at university.	6	14%
3. Most students drink excessively and are irresponsible when drunk	Typical students drink excessively, behave poorly when drunk and negative consequences of alcohol are to be expected at university. Those that drink the most are viewed as the most cool	3	10%
4. Students typically enjoy drinking and do it to have fun	Students often drink to get drunk for enjoyment and as a way to have fun at university. They are typically sensible about drinking, although some negative consequences of alcohol are viewed as part of the fun	4	15%

Viewpoint one: Most students drink and do so to fit in at university

Demographic data

There were more females than males within this group of participants but approximately equal numbers of medical and dental students within each year (see Table 11 for an overview of the spread of participants over the twelve demographic categories). The group was ethnically diverse consisting of four British, two Indian, two Pakistani and one Belgian student.

Table 11. Factor one participants by demographic background

	Medicine (n=5)		Dentistry (n=4)		Total
	Male	Female	Male	Female	
Year 1	0	2	0	0	2
Year 3	0	2	1	1	4
Year 5	0	1	0	2	3
Total	0	5	1	3	9

Alcohol consumption and drinking behaviour data

Participants exemplifying this factor consisted of eight drinkers and one non-drinker. In the previous week only one drinker reported binge drinking (defined as drinking over six units a day for women and eight units a day for men). The AUDIT scores for drinkers within this group ranged from 1 – 12, with a median score of 4.5.

Description of viewpoint

The factor array is summarised in Figure 3 below by statement number.

Figure 5. Factor array for viewpoint one

	-4	-3	-2	-1	0	+1	+2	+3	+4
11 ↓	21	41	1	5	2	23	3↑	9 ↑	
43	48	18	6	16	7	12	4	30 ↑	
44 ↓	36↓	14	8	24 ↓	26 ↑	15↑	33	31 ↑	
	40	13 ↓	10	17	25	50↑	34		
	32	22↑	39	42	29↑	19	35		
		27	45↓	38	28	46			
			49 ↑	47 ↓	51				
				20					
				37					

Note

Distinguishing statements are highlighted in bold and those ranked as higher or lower than in any other factor are indicated using ↑ for higher and ↓ for lower

Within this viewpoint it is perceived that students typically do not drink sensibly and that problems typically occur as a result of excessive drinking. This perception is shown through disagreement with the following statements:

- Most students drink sensibly or not at all; student drinking is exaggerated (-3, 32)
- Most students are good at knowing when to stop drinking so that they don't get too drunk (-4, 43)
- Excessive student drinking rarely causes any problems; it is the minority that give students a bad name (-3, 36)

Exemplars expressed a view that typical students do not always prioritise university work over their drinking, suggesting that alcohol is of greater importance for students than studying. This view was evidenced by the responses to two statements regarding time management and money:

- Students are thoughtful about when to drink, taking university obligations such as essays or exams into account (-1, 45)
- Students spend too much money on alcohol rather than on practical items like food or university books (+2, 50)

One student's comment in response to statement 50 supported the view that alcohol was of more importance for students than studying, and suggested that students also prioritised money for alcohol over food:

"Students would rather have money for a night out than to get required books/ food"

It was perceived that students feel a lot of pressure to drink heavily (+3, 3). This pressure was expressed through a number of themes (described below).

(i) Alcohol is unavoidable at university

There was strong disagreement with statement that alcohol is easy to avoid at university (-4, 11). Qualitative information provided by exemplars of this factor supported this. One student wrote that *"It is almost impossible to avoid alcohol completely at uni."* Three comments explained the unavoidability of alcohol to be due to university events typically involving alcohol and so resulting in pressure to drink:

- *"Social events within friendship groups and societies revolve around alcohol and going out."*
- *"[Alcohol] seems to be the focus of every night"*
- *"Very few people would go to a club and not drink. The atmosphere is not nice for sober people"*

Supporting this perception was relatively strong agreement that the university event 'freshers week' was all about getting drunk (+3, 33). Also the unavoidability of alcohol

was not only perceived to be limited to social events, it was agreed that a lot of conversations at university revolve around alcohol and drinking (+2, 15).

(ii) Students feel they are expected to drink alcohol

Students exemplifying this factor strongly agreed that students feel like they are expected to drink alcohol (+4, 9). One student commented in response to this statement that there *“Does seem to be some sort of cultural expectation of drinking at university”* suggesting a perceived pressure regarding what is expected of them. Another student wrote that there is *“Always pressure to drink at clubs.”*

Also contributing to this view was the perception that getting drunk is an integral part of the university experience. For example there was some agreement that learning how much alcohol you can handle is part of being a student **(+1, 26)** and that it was perceived as abnormal to go out at university without the intention of getting drunk (-3, 48).

(iii) Non drinking students are viewed less positively

Exemplifiers appeared to suggest that non-drinkers are perceived less positively than those that drink. The statement claiming that students who do not drink are viewed negatively was disagreed with least by exemplifiers of this factor **(-1, 49)** compared to within the other three factors. The statement describing non drinking students as all work and no play (-2, 22), was also disagreed with the least within this factor. In addition a general comment was made by a student within this factor that:

“Students who do not drink can be considered to be being self-righteous and contemptuous of those who do, even when this isn’t the case.”

Another student commented that if you admit you do not like drinking **(-4, 44)** *“People presume you are no fun.”*

There is a belief within this factor that students use alcohol as a conscious strategy in order to help them to fit in with their environment and make friends. As well as strongly agreeing that ‘students often drink so that they can fit in with everyone else’ **(+4, 30)** many of these exemplifiers comments reiterated that students drank to ‘fit in’. Drinking to fit in is likely to be linked to the perception that there is a felt pressure by students to drink at university which they feel they must conform to in order to fit in. In line with this is the strong association of alcohol with being sociable and making friends at university. The ranking of two statements support this interpretation:

- ‘Getting drunk with friends is viewed as positive social event’ (+3, 35)
- ‘It is easier for students that drink alcohol to make friends’ (+2, 23)

Two comments made regarding statements (0, 17) and (+2, 23) confirm the perceived association between alcohol, sociability and making friends at university:

- *“You would never have a party without alcohol. Everyone would be a lot more awkward, it wouldn’t be as friendly, less would dance, less would talk to people they didn’t know”*
- *“The students that are always out at bars and clubs are seen as sociable, meet new people and ... can talk about nights out”*

Findings suggest that exemplifiers of this factor believe that the side effects of alcohol help students to be more sociable and hence increase the chance of making friends. This perception was concluded due to agreement with statements suggesting that ‘drinking alcohol is a strategy used to gain confidence by many students’ (+3, 34), and students like that alcohol ‘lowers their inhibitions and enables them to do things they wouldn’t normally’ (+4, 31). Comments regarding these statements related the side effects of alcohol to increased sociability:

- *“Become more social and more outgoing”*
- *“The main reason to drink alcohol is the increased confidence – not the taste - become more social”*

One student’s comment in relation to statement 34 regarding confidence provided a clear link between the strategic use of alcohol for increased confidence, in attempt to fit in and make friends at university:

“I do think it really is one of the main reasons to drink – it’s hard meeting new people and fitting in and drink certainly helps with confidence”

An alternative understanding regarding the perception that students drink to fit in was suggested within one comment that

“I know lots of people who drink the amount they do simply because they get dragged with the crowd.”

This comment implies that drinking to fit in is less of a planned conscious process made by students to be sociable, and rather due to conformity with the behaviour of peers.

Despite the apparent benefits of alcohol in helping students to make friends students exemplifying this factor ranked the statement that ‘students get sick and tired of social events being based around drinking’ (+1, 29) higher than in any other factor. This appears to be a contradiction within the current factor. It could be explained that although students believe alcohol has its benefits for making friends, it is also the

perception that students would prefer social events to not all be based around drinking alcohol. This interpretation was supported by the following comment:

"[I] often find friends saying they wish they didn't have to go out but feel they should... [I] know ... very talented [people] not in uni teams (sports, music etc) as [they] don't like [the] alcohol expectations"

This interpretation also fits with the strong disagreement that 'Students find it easy to admit that they do not like drinking' (-4, 44). Explanations of why it would be difficult to admit were provided in response to this statement and seem to relate back to the current understanding of this factor as a whole; that student drinking is viewed to be the norm at university and important socially, resulting in pressure for students to drink to fit in with the university environment. Comments summarising this perception are provided below:

- *"Because everyone else seems to enjoy drinking and its effects, in an attempt to once again fit in, students will not share not enjoying drinking"*
- *"Sometimes it can feel as though you have to justify [not drinking] with something else e.g. religion, medical condition"*
- *"All social events revolve around drinking so admitting you do not like it would exclude you socially. Also would be met with the response of 'go on try it anyway'"*

Summary of factor one

In summary factor one was characterized by the view that the typical student drinks to fit in and make friends at university. Students are not generally seen to be sensible with their drinking and it is thought that problems typically occur as a result of excessive drinking. The problems thought to occur were not made apparent within this viewpoint and so are difficult to interpret further. Students are thought to feel pressured to drink heavily and find it difficult to express if they do not enjoy drinking. It is suggested that students would like there to be less of a focus on alcohol at university and would like to feel less pressure to drink.

Viewpoint two: Alcohol is not important at university, and most students that do drink, drink sensibly

This factor was most different from factor one indicated by the lowest correlation being between these factors (0.28).

Demographic data

There were more medical than dental, and more year 5 students exemplifying this factor. There were however an approximately equal number of males and females (see Table 12 for an overview of the spread of participants over the twelve demographic categories). The ethnic origin of participants was three British, one Indian and one Malaysian student.

Table 12. Factor two participants by demographic background

	Medicine (n=5)		Dentistry (n=1)		
	Male	Female	Male	Female	Total
Year 1	0	1	0	0	1
Year 3	1	0	0	0	1
Year 5	1	2	0	1	4
Total	2	3	0	1	6

Alcohol consumption and drinking behaviour data

Participants exemplifying this factor consisted of five drinkers and one non-drinker. In the previous week four students reported to have engaged in binge drinking (defined as drinking over six units a day for women and eight units a day for men). The AUDIT scores of drinkers for this group ranged from 4 – 12, with a median score of 4.

Description of viewpoint

The factor array is summarised in Figure 4 below by statement number.

Figure 6. Factor array for viewpoint two

-4	-3	-2	-1	0	+1	+2	+3	+4
14↓	1↓	8	44	39	2	43↑	34	4
21	12	16↓	23↓	32↑	3	24	11↑	36↑
22	18↓	19↓	27	29	20	35	30	25↑
	6↓	26	5↓	17	50	38	33	
	49	41	40↑	37	15	46	47	
		28↓	7	31	13	9		
			10	42	45			
				51				
				48↑				

Note

Distinguishing statements are highlighted in bold and those ranked as higher or lower than in any other factor are indicated using ↑ for higher and ↓ for lower

Unlike factor one exemplars within this viewpoint perceived students to drink sensibly and there was the belief that drinking rarely causes problems at university. Students within this factor strongly agreed that ‘excessive student drinking rarely causes problems’ and that it is ‘the minority that give students a bad name’ (**+4, 36**).

Supporting this was the perception that specific negative consequences of alcohol such as needing help to walk on a night out (-3, 1), being unable to recall parts of a night out (-1, 5) and university work suffering as a result of alcohol (-2, 16) were not typical or expected occurrences at university. Additionally the statement that ‘Most students drink sensibly or not at all; student drinking is exaggerated’ (0, 32), received a significantly higher ranking than in other factors, although within the zero column. In response to this statement one student commented that

“Most students are sensible on a night out and look out for each other, and are respectful – it is only the minority that have no respect for others”

In opposition to factor one alcohol was not thought to affect university work within this viewpoint. This was evidenced by responses to two statements regarding the potential impact of drinking on university work:

- Students are more interesting in partying than studying (-3, 6)
- It is expected that university work will be affected at some point due to the consequences of alcohol (-2, 16)

In response to statement 6 one exemplifier wrote that this is “*Not the case for medics but I agree for others*”. This suggests that this student perceives medical students to

care more about studying than alcohol but that this was perhaps not the case for other students.

It is the perception within this factor that students are able to remain in control of their drinking. This view was drawn from agreement with the statement suggesting that students are good at knowing when to stop drinking in order to prevent becoming too drunk (**+2, 43**) and disagreement with the statement that the enjoyment of alcohol overrides the fear of negative consequences (-2, 28). Being in control of drinking is necessary in order to drink sensibly and so fits with the perception of students as sensible drinkers. It appears that there is a view within this factor that students are aware of possible negative consequences of alcohol and are able to adjust their drinking accordingly.

Disagreement with the statement 'students don't care if they leave a trail of destruction behind them when drunk' (-4, 14↓) could either be interpreted that students do not generally behave badly when drunk, or that should students cause problems when drunk, they would care about it. One comment supported the interpretation that students do care and further suggested that they care more about their behaviour than other populations: *"Often regret things more than the general public."* Another exemplifier commented in response to this statement that *"As medics this is among the greatest fears as it could impact on the 'fit to practice' code."*

This supports the viewpoint within this factor that students are aware of the potential consequences of alcohol and demonstrates an awareness of potential long term implications. It also suggests that medical students in particular need to be aware of potential negative consequences of drinking, and able to control their drinking because otherwise this could have serious negative implications for their careers.

Drinking alcohol was not an important part of university life within this factor. This was inferred from a number of specific beliefs. Alcohol was not perceived to be associated with having a good time at university; rather it was believed that students had a good time, or even better time without alcohol. This perception was concluded from agreement that students enjoy staying in and not drinking just as much as going out and getting drunk (**+4, 25**) and disagreement that 'Students don't have fun without alcohol being involved' (-4, 21). Comments regarding these statements described nights in not drinking to be better than going out drinking. For example, staying in was described to be *"more fun than a night out"* because *"you can actually hear each other*

and have a good conversation” also nights in were described to be “more memorable than wasted nights [out].”

The statement that ‘At university it is normal to go out and not want to get drunk’ (0, 48), although rated as neutral was ranked higher than in other factors suggesting that it is perceived to be more normal to go out and not want to get drunk within this factor compared to the others. In support of this perception were comments suggesting that it was also perceived normal to go out and not drink at all within this factor. One student offered her own experience: *“If I have uni the next day I don’t drink and just go for a dance.”* Another student described her observation of peers: *“I know plenty of people who don’t drink and they still come out and have a great time.”*

Alcohol was not perceived to be important for fitting in or making friends as was described in factor one. This view was demonstrated through disagreement with the statements suggesting that ‘It is easier for students that drink alcohol to make friends’ (-1, 23) and that ‘It is harder for students that do not drink to fit into university life’ (-2, 19). The perceived lack of importance of alcohol for students fit with the perception that for students that prefer not to drink alcohol is easy to avoid at university (**+3, 11**). It was explained that students could always *“find [other] non-drinkers”* and that *“There are ... clubs and societies for everyone that does or doesn’t like the alcohol culture.”* This indicates a perception that university events cater for both drinkers and non-drinkers, providing students with an option to avoid alcohol.

It is the perception within this factor that students are judged for drinking too much, rather than for choosing not to drink. It was disagreed that non-drinkers are viewed negatively (-3, 49) at university. This was supported through strong disagreement with the statement that ‘students that don’t drink are all work and no play’ (-4, 22). With regards to those that drink a lot, it was disagreed that these students are perceived to be the most cool (**-3, 18**) and suggested that these students were the ones that were viewed negatively:

“Often the students who drink so much they lose control/ become ill/ do stupid things are thought of as annoying for ruining everyone else’s night”

Summary of factor two

In summary this factor was characterised by the view that students do drink alcohol but do so sensibly. It is perceived that students are aware of the potential negative consequences of alcohol to both their health and their university work and so adjust their drinking accordingly. This is the only viewpoint in which alcohol is not perceived

to have specific positive benefits at university. Students are perceived to enjoy an active social life without needing to get drunk, in fact it is heavy drinking students that are likely to be viewed negatively within this factor. Drinking alcohol is therefore not considered to be an important part of university life for students and hence is perceived to be easily avoidable. This viewpoint therefore perceives students to easily resist normative pressures to drink alcohol which is an opposite view to that held in factor one.

Comments by two separate exemplars within this factor referred to medical students as different to 'other students'; this viewpoint may therefore represent one of medical students in particular, rather than of students in general.

Viewpoint three: Students drink excessively and are irresponsible when drunk

Demographic data

Due to their being only three exemplifying participants within this factor it was impossible to have representation from all demographic backgrounds. There was an exemplar for both medical and dental school, male and female students and for years 3 and 5; but no exemplar from year 1 (see Table 13 for an overview of the spread of participants over the twelve demographic categories). The ethnic origin of participants was one British, one Indian and one Pakistani.

Table 13. Factor three participants by demographic background

	Medicine		Dentistry		Total
	Male	Female	Male	Female	
Year 1	0	0	0	0	0
Year 3	0	0	1	1	2
Year 5	0	1	0	0	1
Total	0	1	1	1	3

Alcohol consumption and drinking behaviour data

Participants defining this factor consisted of one drinker and two non-drinkers. There were no binges reported the previous week (defined as drinking over six units a day for women and eight units a day for men). The AUDIT score for the only drinker within this group was 5.

Description of viewpoint

The factor array is summarised in Figure 5 below by statement number.

Figure 7. Factor array for viewpoint three

	-4	-3	-2	-1	0	+1	+2	+3	+4
21		32	8	2↓	9↓	5	3	13↑	4
22		40	11	7	14↑	6↑	10↑	12↑	33↑
43		29↓	44	42	19	1↑	24	17	47
		48	39↓	50	20	16↑	51	27↑	
		49	15↓	26	23	35↓	38	18↑	
			36	30↓	31	34	46		
				41	25	37			
					45				
					28				

Note

Distinguishing statements are highlighted in bold and those ranked as higher or lower than in any other factor are indicated using ↑ for higher and ↓ for lower

This factor represented a typical view of students as excessive drinkers. Students within this factor agreed that drinking excessively has always been part of university life (+3, 13). It was strongly agreed that freshers week is typically about getting drunk (+4, 33) and that students are not good at knowing when to stop drinking in order to prevent becoming too drunk (-4, 43). A comment made by one exemplifier summarises the perception that students often drink excessively, however the comment also expresses this student's dissatisfaction with this behaviour: *"I just think it is a shame how much of a norm it has become to go out and get really drunk."* This comment was made by a non-drinking student and so demonstrates that this student views themselves as separate from their perception of the norm.

Negative consequences of alcohol are perceived to be normal and expected at university within this factor. Students are perceived to not drink sensibly (-3, 32) and poor behaviour and attitudes are thought to be typical of intoxicated students. This perception was deduced from the ranking of the following statements.

- 'Behaving like an idiot when drunk is seen as a normal behaviour at university' (+3, 12)
- 'It is expected that university work will be affected at some point due to the consequences of alcohol' (+1, 16)

- ‘Needing a friend to help you walk due to alcohol intoxication is part of a typical student night out’ (+1, 1)
- ‘The way students typically behave when drunk is disgusting’ **(+2, 10)**
- ‘Students don’t care if they leave a trail of destruction behind them when drunk’ (0, 14)

Two comments suggested that negative consequences as a result of alcohol were due to students being so drunk that they become *“Unaware of their actions and what they are doing”*. In addition to the list above two comments suggested that more serious consequences of alcohol were also common at university. One student commented that when intoxicated students were *“a danger to themselves and others around them.”* Also disagreement with the statement that ‘Drunken nights out provide some of the best memories of student life’ **(-2, 39)** was explained to be due to the negative consequences associated with drinking:

“This is because there have been many incidents where accidents have happened, and when people are drunk, they usually don’t remember anything afterwards”

Despite the negative consequences described above it was perceived within this factor that students like to drink at university. This perception was derived from the ranking of two statements which suggest that going out drinking is important for students and not something they would wish to change about the university experience:

- ‘Students are more interested in partying than studying’ (+2, 6)
- ‘Students get sick and tired of social events being based around drinking’ (-3, 29)

Although statement six does not mention alcohol, this is implied through agreement that ‘It is not a student party unless there is alcohol involved’ (+3, 17)

It was perceived that students that drink excessively were viewed positively by their peers within this factor. This view was deduced from agreement with two statements regarding the judgement of students according to how much they drink:

- ‘It is expected that students can hold their drink; it is viewed unacceptable to be a lightweight’ **(+3, 27)**
- ‘Students that drink the most, are often viewed as the most cool **(+3, 18)**.

This judgement of students was explained through those drinking the most tending to be society reps who gain popularity through the alcohol related socials they go on: *“Society reps often promote drinking, gain popularity on nights out and have boozy socials.”*

Interestingly there was a strong perception within this factor that students do not need alcohol to have fun. This view was deduced from strong disagreement with two statements regarding not drinking:

- ‘Students can’t have fun without alcohol being involved (-4, 21)
- ‘Students that don’t drink are all work and no play’ (-4, 22).

Due to the exemplars of this factor being mainly non drinking students it is likely that their perceptions when ranking these statements shifted from being about the typical student to how they perceived themselves, or would like to think others perceive them as non-drinkers.

There was finally a viewpoint within this factor that not drinking is associated with religion. This perception is evidenced by the two comments regarding religion below:

- “*Most non-alcoholic events are religious*”
- “To admit you don’t like drinking without a religious reason is almost impossible”

It is not known however whether exemplars of this factor themselves are religious and so are speaking from their own personal experience, or that they are not religious but perceive most other non-drinking students to be religious.

Summary of factor three

In summary this factor was characterised by the view that excessive drinking and negative consequences are a typical part of university life. Students were perceived to drink more and be more irresponsible with regards to alcohol within this factor compared to in factor one or two. It was not perceived that students felt pressure to drink as in factor one, but rather heavy drinkers such as heads of sports clubs and societies are viewed to have a higher status by other students. This is an opposing view to that held within factor two in which heavy drinkers were viewed negatively.

This view was held mainly by non-drinking students. One student described their perceived behaviour of other students to be a ‘shame’ which suggests this student at least did not consider themselves part of their perception of the norm. There was also the perception within this viewpoint that not-drinking at university tends to be related to religion.

Viewpoint four: Students enjoy getting drunk at university; it is fun

Demographic data

There were very few exemplifying participants within this factor and so it was difficult to have representation from all demographic backgrounds. There was an exemplar for both medical and dental school, male and female students and for years 3 and 5; but

no exemplar from year 1 (see Table 14 for an overview of the spread of participants over the twelve demographic categories). The ethnic origin of participants was three British and one Pakistani.

Table 14. Factor four participants by demographic background

	Medicine		Dentistry		Total
	Male	Female	Male	Female	
Year 1	0	0	0	0	0
Year 3	0	1	1	0	2
Year 5	0	0	1	1	2
Total	0	1	2	1	4

Alcohol consumption and drinking behaviour data

Participants defining this factor consisted of four drinkers and no non-drinkers. One of the participants reported binge drinking in the previous week (defined as drinking over six units a day for women and eight units a day for men). The AUDIT scores for this group ranged from 7-11, with a medium score of 7.5.

Description of viewpoint

The factor array is summarised in Figure 6 below by statement number.

Figure 8. Factor array for viewpoint four

	-4	-3	-2	-1	0	+1	+2	+3	+4
12↓	22	18	44	2	3	23	5↑	17↑	
48↓	42↓	10↓	6	11	30	13	39↑	47	
27↓	50↓	21↑	25↓	15	33↓	24	45↑	4	
	40	26	16	31	34	28↑	46		
	14	32	29	36	51	9	35		
		49	8	37	20	19			
			1	38	7				
				41					
				43					

Note

Distinguishing statements are highlighted in bold and those ranked as higher or lower than in any other factor are indicated using ↑ for higher and ↓ for lower

Alcohol is perceived to be closely related to university life within this factor. It was viewed to be unusual to go out and not want to get drunk (-4, 48) and it was strongly agreed that 'it is not a student party unless there is alcohol involved' (+4, 17). One student summarised this view describing that getting drunk was perceived to be the norm at university: *"Most students get drunk at least a few times on nights out as it's seen as the norm."* The statement 'most students are good at knowing when to stop drinking so that they don't get too drunk' (**0, 43**) although neutral was a distinguishing statement within this factor. It could also be interpreted that knowing when to stop drinking to prevent from becoming too drunk is a difficult concept to rate within this factor because it is perceived that students drink with the aim of becoming drunk.

Strong disagreement with the statement 'It is expected that students can hold their drink; it is viewed unacceptable to be a lightweight' (**-4, 27**) appears to suggest that it is perceived to be ok to become drunk easily and that there is not pressure on students to drink a lot. However one student's comment regarding this statement offers a different interpretation that fits with the perception that getting drunk is part of university life. The student commented that *"A lot of students can't hold their drink, that's how they get drunk"*. This suggests that it is not expected that students can hold their drink because this is not necessary to get drunk, and that it is not unacceptable to be a lightweight because this means that you can become drunk more quickly. For this reason being a lightweight might be viewed as an advantage within this factor.

Despite drinking to get drunk students were perceived to be sensible with regards to their drinking at university. Behaving disgustingly (-2, 10) or like an idiot when drunk was not perceived as normal behaviour (-4, 12). Students were perceived to be thoughtful about when to drink and to take into account university obligations (**+3, 45**); they were also perceived to be careful with their money and to not 'spend too much money on alcohol' (-3, 50). One student explained that students *"Will avoid nights out if money is tight... [and] prioritise when to go out."*

It was perceived that alcohol is more closely linked to enjoyment and having fun at university within this factor than in others. This perception was made clear through the ranking of two statements regarding enjoyment of alcohol:

- 'Students enjoy staying in with friends and not drinking, just as much as getting drunk' (-1, 25)
- 'For most students the enjoyment of alcohol overrides the fear of negative consequences' (+2, 28).

The statement that 'students can't have fun without alcohol being involved' (-2, 21↑), was disagreed with less so than within other factors. Also supporting this perception was the view that drunken nights out 'provide some of the best memories of student life' (+3, 39). One student explained that drunken nights were most likely to provide *"Funny anecdotes/ stories."*

Strong agreement with the statement that 'A night out drinking is often viewed by students as a well-deserved blow out for working hard' (+4, 47) can also be interpreted to support the viewpoint that alcohol is associated with enjoyment due to it suggesting that alcohol is used as a reward by students. One student explained that: *"When there are assignments in or exams to do and students feel stressed, generally the relief is from a night out drinking. It is seen as the party is earned."*

The association between alcohol and enjoyment was perceived to be so important for students that potential negative consequences of alcohol were minimised. This interpretation was derived from agreement that 'For most students the enjoyment of alcohol overrides the fear of negative consequences' (+2, 28↑). Also a comment regarding the statement that memory loss as a result of alcohol was expected at university (+3, 5↑) explained that this was viewed as comical rather than something to be taken seriously: *"Some students see it as funny if they don't remember things."*

Finally there was the suggestion within this factor that drinking differs between genders. Two participants exemplifying this factor commented that male students experience more pressure to drink than females:

- *"Drinking is very different between genders – boys often expected to down drinks and drink more. It is more acceptable for girls to be more sensible and say no"*
- *"Generally pressure is more amongst male students to drink more than female students"*

And in response to the statement suggesting that students find it easy to admit that they do not like drinking (-1, 44) one participant wrote that this was *"Not so much with male students."*

Summary of factor four

In summary this factor was characterised by the view that students drink alcohol and get drunk at university for enjoyment and as a way to have fun. Like factor two, students are believed to be sensible with regards to their drinking; however it was only within this factor that some negative consequences of alcohol were described to be

part of the fun. There is also the suggestion that males experience more pressure to drink than females at university within this viewpoint.

Consensus statements

PQ Method identified six consensus statements that did not distinguish significantly between scores by factors. These statements were therefore only considered for interpretation of factors when the supporting qualitative information provided further useful information regarding the interpretation of the statements. The six consensus statements found are summarised below.

1. Statement 37 'An important part of the university experience is having the freedom to choose what you drink and when.'

This statement was ranked similarly across all four factors (0, 0, 0 and +1). There were no comments made regarding this statement to help interpretation. It is possible that freedom to drink at university is not perceived to be important by students, or that this statement was of lesser importance when compared to the others in the Q set.

It was agreed that drinking behaviours such as preloading, drinking games and downing drinks (see statements two, three and four below) were perceived to be normal behaviours at university:

2. Statement 4 'Drinking at home before going out (preloading) is a normal part of university life.'

This statement was strongly agreed with across factors (+3, +4, +4, +4). This indicates a strong agreement across factors that preloading is perceived to be a normal behaviour at university. Qualitative comments suggested that preloading was perceived to be important for different reasons. Within factor two and four it was viewed as an important way to save money. Within factor one however it was described to be important to "get everyone in the mood" and was hence possibly related to the social aspect of drinking important within this factor. Within factor three it was described that "A lot of the time people stay at home because they are too drunk to go out." This fits with the view of students drinking excessively within this factor.

3. Statement 46 'Drinking games are a valued part of the student drinking experience.'

There was moderate to strong agreement with this statement across factors (+2, +2, +2, +3). Inspection of supporting qualitative information suggests that within all factors

this was perceived to be a valued behaviour because it helps students to bond and get to know one another better.

4. Statements 51 'It is normal to see students downing their drinks in attempt to maximise the effects of the alcohol'

This statement was generally agreed with (+1, 0, +2, +1) suggesting that downing drinks is perceived to be a normal behaviour at university. Qualitative comments regarding factors one and four suggest that the importance of drinking games at university were interpreted differently between these factors. A participant from factor one interpreted that students "Often down drinks out of peer pressure" fitting with the perceived pressure students feel to drink within this factor. Within factor four however it was perceived that students "See this as fun," fitting with the importance of alcohol for having fun within this factor. This interpretation of downing drinks as fun also fits with the minimisation of potential negative consequences of alcohol within this factor.

For statements five and six below broad negative generalisations regarding the motives for drinking and the consequence of drinking were disagreed with; this was perhaps due to the wording of the statements:

5. Statement 41 'Students live for going out and getting drunk.'

This statement was generally disagreed with (-2, -2, -2, 0) suggesting that there is a general consensus between factors that this is an inaccurate perception of students. It is possible that the words 'live for' made this statement too extreme and so difficult to agree with. There was little supporting qualitative information to help interpretation of this statement between factors.

6. Statement 8 'After a typical student night out it is expected that there will be at least one regret the next day.'

There was an overall mild disagreement with this statement across factors (-1, -2, -2, -1) suggesting that feeling regret is not perceived to be a normal consequence of a night out at university, within any of the factors. To expect at least one regret after a night out may have been too extreme an expectation and hence it may have been difficult to agree with this statement. Or the concept of 'regret' might be too vague making it difficult to form an opinion regarding it. There was no relevant qualitative information available to further interpret this perception.

CHAPTER FOUR: DISCUSSION

This chapter summarises the findings and discusses them to relevant research and implications for policy and practice. A summary of the findings in relation to the aims of the study is then provided before implications for practise can be discussed. A critical reflection of the study and suggestions for future research are offered before a summary and conclusions are presented.

a. Summary of normative viewpoints found

Student drinking was typically perceived to be the norm, and alcohol was perceived to be important at university across all factors except factor two. Within factor one it was viewed that alcohol helps students to become more sociable, make friends and fit in at university. It was believed in factor two that students that drunk heavily were seen to have the highest social status and within factor four alcohol was believed to be important for enjoyment and having fun. It was only in factor two that students were viewed to have active social lives that did not require alcohol. Qualitative comments for this factor suggested that some exemplifiers saw the norm for medical students to be different to that of other students.

Factors one and two were similar in terms of the exemplifying participants' having a variety of demographic backgrounds and a range of reported alcohol consumption. Despite this similarity these viewpoints were the most distinct with factor one perceiving students to conform to the student drinking norm in attempt to fit in at university and factor two perceiving alcohol to not be important at university and that students find it easy to avoid. The viewpoints held by exemplifiers with more specific drinking behaviours did not appear to match as might be expected. The factor represented by the most non-drinking participants' was that in which students were perceived to drink the most and behave the worst and the factor with the heaviest drinking exemplifiers was the one that perceived students to drink for enjoyment, but to do so thoughtfully and sensibly.

4.2 Discussion of viewpoints in relation to social norms research

There were two general beliefs that were common across three of the four factors. These were regarding student drinking being the norm at university and the

acceptability of alcohol by students. These perceptions represent the descriptive and injunctive norms described within social norms research, and used within the social norms approach. This finding therefore supports the importance and use of both descriptive and injunctive norms within the social norms literature. According to the actual drinking behaviour of students reported within this study this finding supports research suggesting that perceptions of the norm tend to be inaccurate (Prentice and Miller, 1993). Most factors contained a belief that it is normal for students to drink a lot, however the majority of students reported drinking sensibly.

Within this study four distinct viewpoints were identified suggesting that norms regarding alcohol and university life are conceptualised differently by students in at least four ways. A closer look at the viewpoints within each factor and how these fit together, as well as the participants holding the beliefs offers a unique interpretation and understanding of these norms. This understanding demonstrates that participants vary according to where they perceive themselves in relation to the norm, and provides guidance for the types of social norms messages that would be useful at intervention stage. This interpretation is summarised for each factor below. For brief clarity regarding the descriptive and injunctive norms held within each viewpoint these are very briefly summarised under each factor title.

Factor one: Most students drink and do so to fit in at university

Descriptive norm: student drinking is the norm at university; students are not sensible with regards to alcohol

Injunctive norm: the majority of students are accepting of student drinking and view it to be helpful in order to fit in and make friends

The majority of participants surveyed within this study reported not binge drinking in the previous week and were categorised as 'low risk' on the AUDIT questionnaire and as 'sensible drinkers' according to their drinking diaries. This suggests that this view represents a misperception of the norm. This viewpoint is therefore consistent with the social norms approach that suggests that overestimation of the drinking norm (Prentice and Miller, 1993) leads to a felt pressure to drink and that this in turn is associated with drinking more heavily (Clapp and McDonnell, 2000), in an attempt to fit with a perception of the norm. This fits with the view within this factor that students feel pressure to drink alcohol at university and that it is difficult to admit not liking drinking alcohol. This interpretation was supported by an exemplar of factor one who wrote that

they “Often find friends saying that they wish they didn’t have to go out [drinking] but feel they should.”

This viewpoint appears to be synonymous with the cognitive bias pluralistic ignorance found to be associated with misperceptions of the norm (Prentice and Miller, 1993). Although it is perceived within this viewpoint that students are accepting of alcohol at university, it is suggestive that they privately disapprove of this but fear admitting so because they do not want to be seen to be different from the norm. As is the case within pluralistic ignorance it is likely that the viewpoint they are covering is a more realistic representation of the norm, and in actual fact most students disapprove and would prefer to drink less. This desire to fit in with a perception of the norm, and hiding true feelings as a result of a wish to not be seen as different from it also fits with the findings of Asch regarding conformity (1951).

Due to the misperceptions held, the pressure felt to fit in with a perception of the norm, a potential desire to reduce alcohol intake and the apparent openness to alternative perspectives, this factor represents a viewpoint that is ideal for social norms interventions. The pressure felt to drink by these students is likely to be reduced through two correction messages. One stating that their perception of the student drinking norm is inaccurate, and that most students drink sensibly; and the second that their private feelings of disapproval of alcohol were normal. This is likely to enable these participants to be more honest about their true feelings towards alcohol and drinking.

Factor two: Alcohol is not important at university and most students that drink, drink sensibly

Descriptive norm: Most students drink sensibly or not at all; student drinking is exaggerated. Students enjoy an active social life that does not involve alcohol.

Injunctive norm: Not drinking is accepted by students and heavy drinkers are sometimes viewed negatively.

This viewpoint represents an accurate perception of the norm and hence students holding this view should feel less pressure to drink. This interpretation is supported by the belief that alcohol was easily avoidable for non-drinkers at university and that pressure to drink was not reported within this viewpoint. Depending upon the long term outcomes of social norm interventions, this viewpoint might be more common within the University of Leeds due to the social norms intervention work already done at this University (Bewick, Trusler, Mulhern, Barkham and Hill, 2008).

Despite alcohol being perceived to be of little importance for this group it still contained students with a low to medium level risk of drinking problems according to their AUDIT questionnaire scores. Audience segmentation within the social norms approach acknowledges that some drinkers will have accurate perceptions of the norm however still advocates social norms interventions for these populations in order to confirm, maintain and perhaps expand upon their view of the norm. This means that the participants contributing to this viewpoint would also be appropriate targets for social norms interventions.

Factor three: Students drink excessively and are irresponsible when drunk

Descriptive norm: Students drink excessively and behave poorly when drunk, negative consequences of alcohol are to be expected

Injunctive norm: The heaviest drinkers are viewed the most positively by other students

Again since the majority of participants surveyed within this study reported not binge drinking in the previous week, were categorised as 'low risk' on the AUDIT questionnaire and as 'sensible drinkers' according to drinking diaries it can be concluded that this is an inaccurate perception of the norm. The distinction between viewpoints held and these participants actual drinking behaviour contradicts research suggesting that misperceptions of the norm are related to drinking behaviour (Franca, Dautzenberg and Reynaud, 2010; Cho, 2006; Larimer, Turner, Mallett and Geisner, 2004; Lewis et al 2010), for non-drinking students at least.

Since this group consists mainly of non-drinkers it is suspected that their perception of the norm has either been gained through one of two means; biased sources of information, or through attribution error (Ross, 1977). If participants contributing to this factor typically avoid alcohol, then their perceptions of student drinking would tend to come from second hand information such as overheard conversations or the media; both of which are prone to over exaggeration (Borsari and Carey, 2008). This could explain the negative perceptions of intoxicated students held by these participants. An alternative explanation could be that when these participants do observe intoxicated students they assume this behaviour to be typical for that individual and then generalise this behaviour to other students. This behaviour could however have been unusual for this student. This generalisation is referred to as attribution error (Ross, 1977) and could explain how these participants might perceive excessive student drinking to be the norm.

Despite this group containing a majority of non-drinkers the social norms approach would argue that this viewpoint is important for social norms interventions to target due to the misperceptions held. It is important to challenge all inaccurate views as they could maintain or perpetuate already inaccurate perceptions of the norm (Perkins, 1997) and hence increase the pressure felt by students to drink.

Factor four: Students enjoy drinking and do it to have fun

Descriptive norm: Students drink a lot but are sensible with regards to alcohol

Injunctive norm: Students enjoy drinking and getting drunk

The knowledge that this factor represents participants that are drinking more than in any other factor fits with the perception that getting drunk is an important part of university life. The perception that the enjoyment of alcohol overrides fear of negative consequences and the description of memory loss as a result of alcohol as “funny,” suggests that these students might be in denial about the serious consequences of alcohol. Due to alcohol being so important for enjoyment and having fun within this viewpoint the participants within it might be quite defensive regarding the use of alcohol. This may explain, to some extent, the importance of perceiving students to be sensible and thoughtful with regards to alcohol within this factor.

The participants contributing to this viewpoint would be suspected to be vulnerable to the cognitive bias false consensus (Marks and Miller, 1987; Neighbors, Dillard, Lewis, Bergstrom and Neil, 2006) in which individuals perceive their behaviour to be within the norm when it is not. Social norms interventions would therefore correct this misperception by informing these individuals that their behaviour was within the minority; the intention being to create discomfort and hence promote change. There are perceptions within this viewpoint that could be targeted, particularly regarding actual drinking norms and alternative ways that students have fun at university. However due to the importance of alcohol for these participants and likelihood that they are in denial regarding its negative consequences it is likely that this group would not be susceptible to social norms messages regarding actual drinking norms. Also due to these participants perceiving students to be thoughtful and sensible with regards to alcohol, messages regarding most students drinking sensibly are likely to be interpreted as confirmation of their original perceptions, rather than result in them questioning their position as outside of this norm.

4.3 Discussion of findings in relation to the aims of the study

Aim 1: To explore descriptive and injunctive normative perceptions regarding student drinking, by looking at what students say about alcohol and university life

The process of sampling the concourse, required by Q methodology to provide a representative Q set, resulted in 51 distinct beliefs typically held by students regarding alcohol and university life. These beliefs could be categorised into six broader themes: external pressure to drink, consequences of alcohol, drinking behaviours, importance of alcohol, motives, and whether alcohol was integral to university life. The majority of beliefs were regarding descriptive norms (what was believed to be the norm with regards to student drinking). Injunctive norms (how acceptable this norm was perceived to be) were obtained through an interpretation of how students ranked statements, for example the more important and integral they perceived alcohol to be at university the more likely they perceived it to be acceptable. This information was however combined with qualitative comments regarding 'acceptability' i.e. *"It is the best way to have fun at university"*. This study therefore demonstrates a large number of beliefs in comparison to those used within current social norms research (see Table 1, section 1.6.1).

Aim 2. To understand the complexity of students' perceptions of the norm including how the many viewpoints (including descriptive and injunctive norms) held by an individual might fit together

Individuals' perceptions of the norm included both descriptive and injunctive norms (i.e. what they perceived to be the norm and how acceptable they perceived this to be by students). Within all factors that perceived drinking to be the norm at university, it was also believed that this was mainly accepted by students. This could be interpreted that what an individual perceives to be the norm, is also perceived to be acceptable. This interpretation also fits for factor two in which it was perceived that drinking a lot was not the norm and not drinking was perceived to be accepted by students. This suggests that individuals make assumptions regarding what is typical behaviour (through observations, the media or hearsay) and then automatically presume this to be accepted by others.

The findings of this study demonstrate that many, but not all individuals' perceptions of the norm reflected their own behaviour and beliefs. Within factor three exemplifiers perceived the typical behaviour and attitudes of students regarding alcohol

to be very different to their own. For the other three factors this was less easy to interpret. Qualitative comments for factors one and two suggested many spoke from personal experience; of feeling pressure within factor one and of finding it easy to avoid alcohol for factor two. The perceived attitudes and behaviours within factor four could also be interpreted to reflect exemplifiers due to this group describing alcohol as important, drinking the most compared to other factors and being quite defensive with regards to alcohol. This interpretation suggests that many but not all exemplifiers viewed themselves to be included within their perceptions of the norm. This demonstrates that individuals perceive the norm to be acceptable by other students, regardless of their own behaviours or opinions.

Aim 3. To explore how perceptions of the norms vary across students, i.e. how they cluster together to form distinct perceptions; to explore what these perceptions have in common and how they differ

Although factors three and four appeared to be exemplified by non-drinking students and more heavy drinking students respectively, it cannot be concluded that norms conceptualised according to the views of these types of drinkers because factors one and two held opposing views yet contained a range of drinking and non-drinking students. The most obvious difference between the four factors found within this study was according to meaning people gave to drinking. For factor one it was perceived that students drink because of normative pressure and a desire to fit in and make friends; for factor three it was for social status and for factor four it was for enjoyment. A meaning for drinking was not obvious within the viewpoint held for factor four; however as drinking was not perceived to be important it follows that it would not need to be justified with a meaning.

Although it is difficult to comment on where this meaning originated, it may be that it is influenced by personal experiences. For example it may be that exemplifiers of factor one felt pressure to drink in attempt to fit in and make friends, whereas exemplifiers of factor two may be resilient to this pressure and have sought out non-drinking peers to socialise with. It may be that exemplifiers of factor four themselves drank alcohol for enjoyment and hence derived this interpretation from their own experiences. The non-drinking students overrepresented in factor three may have derived their perception of students relating heavy drinking to high social status according to the conversations they over hear in which students perhaps exaggerate or through advertisements regarding drinking social events throughout the university premises.

Aim 4. To hypothesise about the individuals that hold distinct perceptions and whether these appear to vary according to specific referent groups

It is difficult to interpret from this study whether normative perceptions tend to be held by participants according to their demographical background or alcohol consumption due to the relatively small number of participants contributing to each factor. Interpretations can be made regarding the sample used within this study, but this is not generalizable to the wider student population.

Factor memberships did not appear to differ according to the ethnic background. Factors one and two contained participants from every year group, gender and school and reported a variety of alcohol consumption. Therefore within this study viewpoints regarding how much students drink at university, the importance of drinking at university and the pressure felt to drink, did not vary according to demographical background (Year, age, gender, school of study or ethnicity) or of alcohol consumption. Participant comments suggested that within factor two the norm may be perceived differently for medical students compared to other students, however further research would be needed to clarify this interpretation.

There were differences in alcohol consumption found within factors three and four. It could be hypothesised that the view represented by factor three that students drink excessively and behave poorly when drunk may be a view suggestive of those that do not drink and that the view represented by factor four that students drink for enjoyment and to have fun may be a view suggestive of heavier drinkers. These factors did therefore appear to represent the viewpoints of non-drinkers and more heavy drinkers more specifically.

Due to the first factor representing a view which appeared to be held by students that were influenced by their perception of the norm, had misperceptions to correct, drinking behaviour to reduce, and finally were likely to be receptive to social norms interventions, it could be concluded that these participants represent ideal candidates for social norm interventions. Due to the exemplars of this factor having a range of demographic backgrounds as well as reporting a range of alcohol consumption it could therefore be argued that targeting specific populations of students according to these variables is unhelpful; rather populations should be targeted according to the perceptions they hold.

However even though the first two factors were exemplified by participants with a range of demographical backgrounds and alcohol consumption this does not mean that they had no characteristic in common. It may have been that these participants

were similar according to variables this study did not measure, for example according to friendship group or religious beliefs.

Additional finding

One of the benefits of a Q study is that participants bring their own interpretations to the statements, which can reveal unanticipated insights. For example 'downing drinks' was perceived to be due to peer pressure for factor one and due to fun for factor four. These different interpretations of these behaviours fit in with the general pattern within these factors. This suggests that social norm messages could also be interpreted differently depending on the original viewpoints held. A better understanding of how messages are interpreted by different viewpoints will help to target misperceptions more accurately. For example to target the misperception that 'downing drinks' is a normal behaviour at university, social norms interventions might want to include messages regarding students refusing to down drinks for factor one and messages regarding alternative ways students have fun at university for factor four.

4.4 Implications for social norms research and practice

Generally the results of this study suggest that social norms research would benefit from taking a more complex view of normative perceptions and hence a different approach to measuring perceptions of the norm with regards to student drinking. More specifically the results demonstrate that there are different perceptions of the norm regarding student drinking. A wide range of students who hold the viewpoints found within this study have potential to benefit from social norms interventions through either the maintenance of accurate perceptions, or correcting inaccurate ones. Due to the differences in perceptions held between these viewpoints however it is suggested that they would be better targeted separately by using messages that were specific and relevant to that viewpoint.

The results of this study also demonstrate how perceptions of student drinking norms are conceptualised by students; normative perceptions are complex and contain many separate yet related perceptions regarding what is considered to be normal. It is suggested therefore that social norms interventions tailor their correction messages to fit this complexity by using a combinations of related messages. In other words although the typical messages used previously within social norm interventions for student drinking regarding the frequency and acceptability of alcohol consumption

(descriptive and injunctive norms) would successfully target the perceptions held within factor one, the messages could target the perceptions held within this viewpoint more specifically. For example the messages might state that most students would prefer alternative ways of socialising that did not involve alcohol and then highlight the things described by students within factor two e.g. staying in and eating pizza. The message might also outline the benefits described of these activities such as being able to have conversations. Finally the message might highlight the number of students that would prefer to drink less but feel unable to say this. All of these messages would specifically target the perceptions held within factor one and hence be more likely to be effective than messages regarding frequency and acceptability of alcohol consumption.

This research suggests that there are common misperceptions across different viewpoints regarding the normality of specific drinking behaviours such as preloading, drinking games and downing drinks a university. It would therefore be beneficial for social norm interventions to target these perceptions because they would challenge a wide range of different viewpoints. It is however pointed out that these messages may be interpreted differently according to specific viewpoints and so might need to be tailored as suggested above.

The exemplifying participants for the four viewpoints found within this study suggest that normative perceptions do not conceptualise according to specific referent groups, such as demographic background or alcohol consumption, as has been suggested by previous research (Hummer, LaBrie and Pederson, 2012; Neighbors et al 2010). The viewpoint considered ideal for social norms interventions (factor one) was contributed to by participants with range of demographic backgrounds and drinking behaviours. Factors three and four appeared to be contributed to by participants with more specific drinking behaviours (non-drinkers and heavy drinkers respectively), nevertheless it was the viewpoints these participants held that were important because factors one and two were also contributed to by participants with both of these specific drinking behaviours (non-drinkers and heavy drinkers). It is therefore suggested that social norm interventions aim to target specific beliefs held within viewpoints, for example through challenging the numerous descriptive norms regarding actual drinking methods and behaviours of students and injunctive norms regarding acceptability, rather than targeting specific populations of students.

The results of this study highlight the importance of including non-drinkers within social norms research. Non-drinkers contributed to all viewpoints except those regarding alcohol being used for fun (factor four) within this study. Not only does this show that non-drinkers hold different misperceptions and so should not be treated as a homogenous group, but the viewpoints within factor three contributed to

by mainly non-drinkers suggests they have negative perceptions regarding students behaviour when drinking. These viewpoints are therefore important to correct to prevent them from spreading and maintaining inaccurate perceptions.

4.5 Critical Reflections

This study provides an original piece of work attempting to better understand how social norms are conceptualised regarding alcohol and university life. The strengths and limitations of this study are described below.

4.5.1 *Strengths of the current study*

This study demonstrates an original piece of work that contributes to the current understanding of social norms research in relation to student drinking. Findings provide a novel understanding of students' perceptions of the norm relating to student drinking. It can be seen that normative beliefs consist of numerous and related descriptive and injunctive norms. Interpretations as to how norms are conceptualised are provided and as a result suggestions regarding implications for social norms research and practise are offered.

The study demonstrated attempts to be academically rigorous throughout each stage. Significant efforts were made to recruit a representative sample in terms of demographic background and alcohol consumption through the inclusion of a separate stage to the study, and steps taken to ensure there was at least one participant representing each of the twelve demographic backgrounds identified.

Careful consideration was given to the development of the Q set in terms of its coverage and the resources consulted for information. The steps taken to develop the Q set were outlined in attempt to be transparent about any decisions made and measures were taken in attempt to reduce reflexivity within the research by regular use of supervision throughout. Finally the method chosen to analyse results was well suited to the research questions. A rationale for using Q methodology was provided within section 2.7 and limitations discussed within section 2.6.

4.5.2 *Limitations of the current study*

Subjectivity of the concourse and Q set

The process of gathering information from the concourse regarding the topic area holds the potential for the researcher's subjectivity to influence this process. It is possible that the researcher's own experiences or perceptions as a student themselves affected the type of information selected, or influenced the wording of statements to fit better with their perceptions of the norm. The researcher did however make significant attempts to be objective in their search through purposefully seeking out a range of viewpoints, particularly those less familiar within the literature, such as those of non-drinking students. A wide range of resources were consulted over a period of four months in attempt to gather a variety of viewpoints. The researcher recognised the potential for subjectivity in this process and hence regularly sought feedback from two supervisors regarding the diversity of viewpoints collected. A pilot study of the Q set was also carried out in attempt to identify any relevant missing information.

P set

The purpose of having two stages to this study was to gain as representative a P set as possible in terms of demographic background and alcohol consumption. Although this will have resulted in a more representative P set than if this selection procedure had not been adhered to, there were still categories that were less represented than others within the final P set. Male and Year 1 students were underrepresented in the P set, and there was not at least three participants within every demographic category as were originally aimed for. Steps were however taken during recruitment to gain at least one participant within each of the twelve demographic categories. For example when all Year one dental students had been invited to stage two with no participants agreeing to take part, an additional invitation e-mail was sent to just these students for further recruitment. It was from this new sample of participants that a male, dental participant then agreed to take part.

The P set contained an over representation of drinkers, compared to non-drinkers and so despite it being made clear that this study intended to hear perceptions of both drinkers and non-drinkers it is possible that drinkers were more interested in research involving alcohol than non-drinkers. There was a good range regarding alcohol consumption over the previous year, demonstrated by a range of AUDIT scores. Data relating to the previous week demonstrated that the majority of participants did not binge drink and the maximum amount of alcohol consumed was by one participant who binge drank on three separate days in the previous week. It is difficult to determine how representative this is in terms of the general population of students; however it

does support findings suggesting the majority of students drink sensibly (get ref from intro) and also demonstrates that a range of drinking behaviour was captured.

The P set contained a majority of British students, although there was some cultural and ethnic diversity. It is difficult to comment on how representative the sample was of the wider student population as the researcher did not have access to this data.

Finally the P set represents a self-referred sample. The P set may therefore represent a certain type of student and as a result lack breadth of opinion. For example it may be that only students that had time to complete this study agreed to take part, in which case the sample may represent viewpoints held particularly by less stressed students.

Data collection

The self-report data for alcohol consumption is prone to error due to students' memory regarding alcohol consumption and difficulties regarding measurements, particularly when drinking at home (Perkins, DeJong and Linkenbach, 2002). Drinking will also vary according to time of year due to particular months being more important for exams and deadlines at university (Ward, 2011). The time period data was collected over may therefore have impacted upon the alcohol consumption reported by students.

Nevertheless it has been argued that self-reports of alcohol consumption can be considered to be reliable and valid (Wechsler, Lee, Kuo, Seibring, Nelson, Lee, 2002).

There is the potential that participants provided responses to the Q sort according to demand characteristics such as social desirability. It is possible that participants' ranking of statements was affected by their perception of what the researcher viewed to be socially acceptable or according to their perception of the researcher as a drinker or non-drinker. The researcher attempted to minimise this by sitting at the opposite side of the room during data collection, hence increasing the anonymity felt by participants.

Materials

Q set

One participant was not familiar with the word 'lightweight' (statement 27) and asked the researcher to explain this to them during the Q sort. The presumption of the researcher that participants would understand this description is possibly representative of the researcher's cultural context in which the term 'lightweight' is frequently used to describe those that are perceived to become intoxicated easily or quickly.

There were also a number of comments provided within the statement booklet regarding ambiguity within statements for words such as when referring to the

avoidance of alcohol does the statement refer to avoiding using it, or the presence of it and that the statement referring to going out without the intention of getting drunk, refers to going to bars and clubs.

Factor interpretation

There is potential for researcher subjectivity to influence the interpretation of factors. The researcher's own perceptions of the norms regarding alcohol and university life will have framed the interpretation of factors to some degree. It is also possible that the researcher interpreted the four factors according to the literature they had read regarding social norms theory. The influence of subjectivity is minimised more in Q methodology than in standard qualitative analysis as the factor arrays are mathematically selected. In addition, all the interpretations were discussed with supervisors and the results section provides sufficient detail to allow others to judge the interpretation. The researcher also had a lot of qualitative information available for each factor to guide interpretation. It would have been beneficial to have been able to interview students who exemplified each factor in order to check the accuracy of interpretation and further add to it; however this was not possible within the current study due to time constraints.

4.5.3 Summary

The researcher has acknowledged limitations of the study in attempt to allow the reader to make a fair interpretation of the findings presented. However whilst there was potential for bias within this study, the research was conducted rigorously throughout to reduce this where possible and to enhance the quality of the research findings. It is therefore concluded that the findings of the current study make a valid contribution to the social norms research literature regarding the understanding of how normative perceptions of alcohol and university life are conceptualised.

4.6 Directions for future research

4.6.1 Replication of the current study

Some of the limitations identified above could be addressed by repeating this research using a more diverse sample. It would also be beneficial to repeat this study with students other than medical or dental students, or with students from another university to see how results compare. Increasing the diversity of the sample would further add to the understanding of how norms conceptualise through potentially revealing

additional viewpoints and demonstrating the similarities and differences in viewpoints between different populations of students. Future replication of this study should extend to interviewing exemplifying participants in order to provide some validation of the interpretation of viewpoints and expand upon them to further understand how norms are conceptualised by students regarding alcohol and university life.

4.6.2 New research directions using Q methodology

The findings have particular implications for social norms research and intervention studies. These suggestions were regarding the complexity of social norms relating to alcohol and university life; and this being better reflected within literature. Due to the good fit between this topic area and methodology as well as the minimal stress caused by Q sorts to participants Q methodology may be usefully applied to assess changes in misperceptions that may take place following a social norms intervention. This would also then better capture messages that had been successful and those that needed further work.

4.6.3 New research directions using other methods

Q methodological research is intended to be exploratory and so future research would benefit from expanding upon the findings of the current study. It is also possible that there are viewpoints held by specific groups of students that are not captured within this study, for example for more dependent drinkers, those with strong religious or cultural beliefs relating to alcohol, or students from countries with less obvious profiles of student drinking. Qualitative research such as interview or questionnaires could be used to further explore the viewpoints found within the current study and how these might relate to specific populations of students.

4.7 Final summary and conclusion

The current study aimed to understand what beliefs students held about alcohol and university life, how these beliefs linked together to form perceptions regarding the norm and how such norms clustered together to form distinct viewpoints. It was also of interest whether specific viewpoints represented specific demographic groups or students with specific drinking behaviours. Q methodology was used to gain medical and dental students' perceptions of the norm regarding alcohol and university life.

Four separate viewpoints were identified and discussed. Viewpoints were found to contain numerous beliefs regarding typical student drinking behaviour (descriptive

norms) and the acceptability of alcohol by students (injunctive norms). These beliefs appeared to be based on students own experiences and observations as well as through second hand information such as the media. Normative perceptions appeared to be conceptualised according to the meaning students gave to the drinking behaviour when it was perceived to be the norm, for example whether it was in attempt to fit in at university, for social status or for enjoyment. There was only one viewpoint which represented a more accurate perception of the norm, in which students were not perceived to need alcohol to fit in, be accepted or to have fun.

Consideration was given to whether distinct viewpoints may be associated with specific demographic backgrounds or specific drinking behaviour of students. Differences between these groups in terms of the demographical backgrounds of students were not identified, but the sample size and non-independence of the data means that conclusions about these associations cannot be drawn. However one viewpoint (factor three) appeared to be more representative of a view of non-drinkers and factor four appeared to be more representative of students who consume more alcohol than the average student.

This study therefore proposes that perceptions of the student drinking norm are more complex than they have been portrayed within the social norms literature. Findings suggest that norms held by students regarding alcohol and university life consist of complex and related beliefs regarding numerous attitudes and behaviours. These findings have important research and practise implications in terms of how these results may be used to inform social norms interventions aiming to correct misperceptions regarding the norm by making messages more specific, relevant and by containing multiple linked messages. It is hoped that as a result messages will be more effective in correcting misperceptions of the norm and hence be more effective at reducing student drinking.

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APPENDIX

Appendix 1: Ethical Clearance Letter

Faculty of Medicine and Health
Research Office

Room 10.110, Level 10
Worsley Building
Clarendon Way
Leeds LS2 9NL

T (General Enquiries) +44 (0) 113 343 4361
F +44 (0) 113 343 4373



UNIVERSITY OF LEEDS

Miss Rebecca Yule
Psychologist in Clinical Training
Clinical Psychology Department
Charles Thackrah Building
101 Clarendon Road
Leeds LS2 9LJ

28 June 2012

Dear Rebecca

Ref no: EDREC/11/031

Title: Student perceptions of alcohol as part of university life: a Q-methodological investigation

I am pleased to inform you that the above research application has been reviewed by the EdREC committee and I can confirm a favourable ethical opinion on the basis described in the application form, protocol and supporting documentation.

Please notify the committee if you intend to make any amendments to the original research as submitted at date of this approval. This includes recruitment methodology and all changes must be ethically approved prior to implementation. Please contact the Faculty Research Ethics and Governance Administrator for further information (fmhuniethics@leeds.ac.uk)

Ethical approval does not infer you have the right of access to any member of staff or student or documents and the premises of the University of Leeds. Nor does it imply any right of access to the premises of any other organisation, including clinical areas. The committee takes no responsibility for you gaining access to staff, students and/or premises prior to, during or following your research activities.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited.

It is our policy to remind everyone that it is your responsibility to comply with Health and Safety, Data Protection and any other legal and/or professional guidelines there may be.

I wish you every success with the project.

Yours sincerely

A handwritten signature in black ink, appearing to be 'J Sandars'.

Dr John Sandars
Chair, EdREC

Appendix 2: Invitation e-mail to stage one

Dear BChD / MChD Students,

Are you a first, third or fifth year medical/dental student?

Yes?

Are you interested in winning one of six £50 Boots or Amazon vouchers?

Yes?

Can you spare 10 minutes to answer a short survey on your own consumption of alcohol? (You do not need to drink alcohol to complete the survey and be eligible to enter the prize draw).

Yes?

We are looking for volunteers to take part in a study, the aim of which is to explore students' perceptions of alcohol and university life.

<https://www.survey.leeds.ac.uk/URL>

If you are a medical/ dental student in year one, three or five and are interested in taking part please click on the link above to complete the brief survey. The survey asks about your recent alcohol use and should not take longer than 10 minutes to complete.

Everyone who completes the survey will be included in a prize draw in which six students will each win £50 of Boots or Amazon vouchers. There will be one winner chosen from each of the six year groups taking part (Years 1, 3 and 5 for both dental and medical courses).

This study is being carried out by the Leeds Institute of Health Sciences and received approval by the Medicine and Dentistry Educational Research Ethics Committee (reference : EDREC/11/031).

If you have any questions regarding this study please contact Rebecca Yule at umrly@leeds.ac.uk.

Thank you in anticipation

Kind regards
Rebecca Yule

Dental students wanted (Years 1, 3 & 5)

to take part in a doctorate research study looking at both drinking and non-drinking...

“student perceptions of alcohol”

Everyone who takes part will be entered into a prize draw.

Six students will each win **£50** worth of Amazon or Boots vouchers



For further information email me umrly@leeds.ac.uk or to take part go to (www.survey.leeds.ac.uk/alcohol-dent)

This study has received approval by the Medicine and Dentistry Educational Research Ethics Committee (reference: EDREC/11/031)

Student perceptions of alcohol Visit the survey at: www.survey.leeds.ac.uk/alcohol-dent E-mail: Rebecca Yule (umrly@leeds.ac.uk)
Student perceptions of alcohol Visit the survey at: www.survey.leeds.ac.uk/alcohol-dent E-mail: Rebecca Yule (umrly@leeds.ac.uk)
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Appendix 4: Bristol Online Survey Questions

Please bear in mind that the format does not transfer neatly into this word document. However all the information provided within the survey is provided below.

Page 1

Welcome: Survey of students' perceptions of alcohol

This short survey asks for some basic demographic information, and about your alcohol consumption.

The survey will form part of a thesis carried out by myself Rebecca Yule, for a doctorate course in Clinical Psychology here at Leeds University.

Everyone who completes this survey has the option of entering a prize draw in which six people will win £50 of Boots or Amazon vouchers.

Further information about this study is provided on the next page. This will help you to decide whether you would like to continue and complete this survey.

Please note that once you have clicked on the CONTINUE button at the bottom of each page you cannot return to review or amend that page.

Page 2

Study Information

Please take time to read the following information carefully to help decide whether or not you would like to continue and complete this survey. If you are happy to continue, go to the next page and submit the consent form by pressing continue.

What is the purpose of the study?

The aim of the study is to explore student (drinker and non-drinker) perceptions of alcohol. It is hoped that a better understanding of students' perceptions will help inform future alcohol reduction strategies.

Why have I been invited to take part in the study?

I am particularly interested in medical and dental students' perceptions because they are future health professionals.

What will be involved in the study?

The study involves two stages, this being the first stage. This stage involves completion of the questions within this survey regarding basic demographic information and alcohol consumption (again from drinkers and non-drinkers). This will take approximately 5-10 minutes.

After completing stage 1 you will be asked if you are happy to be contacted regarding stage 2. There is more information about stage 2 later in the survey.

Are the results confidential?

Any data obtained in the study will be treated as confidential and stored securely as is required under the Data Protection Act. Any contact details you provide will be stored separately from your survey responses and will be link-anonymised. This means that if

you agree to take part in stage 2 a number will be used to identify your responses. Only the researchers will know who the number relates to.

Do I have to take part in the study?

Taking part in this study is voluntary. You can withdraw from this stage of the study at any time by shutting down this screen. Once the survey has been sent you cannot withdraw this information, however it will remain confidential. Withdrawing from the study will not affect your studies at the University of Leeds in any way.

What will happen to the results of the study?

The information from the study will be used in a doctoral thesis. Part of the research may also be presented at conferences, workshops and published in academic journals. At the end of the online survey you will be given the option to receive a brief summary of the results of the study once they become available.

All students who complete the online survey and provide a valid contact email address have the option to be entered into the prize draw. This is regardless of whether or not they consent to further participation in the study and regardless of whether or not they drink alcohol.

This study has been reviewed by the Institute of Health Sciences Ethics Committee, University of Leeds.

How do I take part?

You can take part in the study by completing the consent form on the following page and continuing with this short online survey.

Support information

If you have been affected by any part of this information, or would like to find out more about safe drinking guidelines, you might find the following agencies and websites helpful:

Leeds Student Medical Practise: 0113 295 4488

Leeds University Nightline Listening: 0113 380 1381

Leeds Student Counselling Centre: 0113 343 4107

<http://www.leeds.ac.uk/studentcounselling/>

Unitcheck: <http://www.unitcheck.co.uk>

Drinkline (confidential national alcohol helpline): 0800917 8282

Thank you for reading this information.

If you have any questions please contact Rebecca Yule at umrly@leeds.ac.uk

Please note that once you have clicked on the CONTINUE button at the bottom of each page you cannot return to review or amend that page

Page 3

Consent Form

I confirm that I have read and understood the information on the previous page about the study.

I understand that my responses will remain confidential.

I understand that my participation is voluntary and that I am free to withdraw from the study at any time by clicking the red arrow in the top right corner.

I understand that once I have submitted the survey I will be unable to withdraw this data, but that it will remain confidential.

I understand that taking part in this study will not have any effect on my studies at the University of Leeds.

I agree to take part in the first stage of the study.

If you understand the information provided and agree to take part in the first stage of the study please click on the continue button.

Page 4

Survey Questions

This short survey asks for basic demographic details and about your personal alcohol consumption.

We know that not all students drink alcohol. You do not need to drink alcohol to complete this survey and be entered into our prize draw.

Personal Details

1. Age in years

2. Gender

Male Female

3. Are you

An international student A home UK student

4. Please select your course

Medicine Dentistry

5. Current year of study

Year 1 Year 2 Year 3 Year 4 Year 5

Your Alcohol Consumption (audit questionnaire)

Please select the answer that is correct for you

6. How often do you have a drink containing alcohol?

Never (Go to section headed "prize draw")

Monthly or less

2-4 times a month

2-3 times a week

4 or more times a week

7. How many standard drinks containing alcohol do you have on a typical day when drinking? (Optional)

8. How often do you have six or more drinks on one occasion? (Optional)

9. During the past year, how often have you found that you were not able to stop drinking once you had started? (Optional)

10. During the past year, how often have you failed to do what was normally expected of you because of drinking? (Optional)

11. During the past year, how often have you needed a drink in the morning to get yourself going after a heavy drinking session? (Optional)

12. During the past year, how often have you had a feeling of guilt or remorse after drinking? (Optional)

13. During the past year, have you been unable to remember what happened the night before because you had been drinking? (Optional)

14. Have you or someone else been injured as a result of your drinking? (Optional)

15. Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested you cut down? (Optional)

Your alcohol consumption over the last week (drinking diary)

16. Have you consumed any alcohol in the last week?

Yes No (If "no" please go to the section headed "Price Draw")

17. How many alcoholic drinks have you consumed over the last week? Please specify how many of the following you have consumed on each day of the week. If the answer is 0, you can leave it blank. To record half pints please put 0.5.

Monday Tuesday Wednesday Thursday Friday Saturday Sunday

a. Pint(s) of ordinary strength lager (e.g. Carling Black label, Fosters)

b. Pint(s) of strong lager (e.g. Stella Artois, Kronenbourg 1664)

c. 330ml bottles of premium lager (e.g. Beck's Corona)

- d. Pint(s) of bitter (e.g. John Smiths, Boddingtons)
- e. Pint(s) of premium bitter (e.g. Fuller's ESB, Young's Special)
- f. Pint(s) of stout (e.g. Guinness, Murphey's)
- g. Pint(s) of ordinary strength cider (e.g. Woodpecker)
- h. Pint(s) of strong cider (e.g. Dry Blackthorne, Strongbow)
- i. 175ml glass of red, white or rose wine
- j. 250ml glass of red, white or rose wine
- k. Single pub measure(s) of spirits (25ml)
- l. Alcopop(s) (e.g. Smirnoff Ice, Bicardi Breezer, WKD, Reef)

Prize Draw

If you would like to be entered into a prize draw please provide a valid e-mail address below so we can notify you if you win.

The prize is £50 worth of vouchers. You can choose between Boots or Amazon vouchers. One person from each year group within each speciality (Medicine and Dentistry) will be selected randomly to win this prize.

Please note, when submitted for the prize draw, your email address will not be linked to your survey responses.

18. I would like to be entered into the prize draw

Yes, please use the email address provided below

No, please do not contact me regarding the prize draw

If yes, please enter your email address in the box below: (Optional)

i. To ensure we have the correct email address please re-enter your email address in the box below: (Optional)

Future Research Opportunity

You are now coming towards the end of part 1 of a two part study. If you are interested in taking part in the second part of this study please read this information and mark the appropriate box below.

The second stage of the study involves rating how strongly you agree or disagree with a list of statements about student drinking.

Everyone who participates in the second stage of the study will receive £5 worth of Costa Coffee vouchers or printer credits (110 pages).

If you are selected to participate in part 2 of the study the researcher will contact you at the email address provided below. The researcher will use a number to link your responses to this email address. Only the researchers will know who the numbers relate to.

Not everyone who consents to take part in the second stage of the study will be contacted due to a limited number of participants being needed for this stage.

If you would like to be considered for part 2 of the study please answer YES below. This does not mean that you have committed to take part, only that you have agreed to be contacted via email with more information about part 2 of the study.

19. Part 2 of the study

Yes, I am interested in participating in part 2 of the study. Please contact me at the email address provided above for the prize draw

No, I would not like to participate in part 2 of the study

Yes, I am interested in participating in part 2 of the study. Please contact me at the email address provided below

Alternative email address: (Optional)

20. If you would like to receive a summary of the results from this study please select YES and state the email address you would like this to go to below.

No, I do not want to receive a summary

Yes, please send a summary to the email address below

Email address for summary to be sent to (Optional)

Please note that once you have clicked on the CONTINUE button at the bottom of each page you cannot return to review or amend that page

Page 5

Thank You

Thank you for completing this questionnaire. Your views are important to us.

You will be contacted via email if you have been successful for the prize draw.

You will not be contacted following this study except for invitation into the second part of this study. If you have been affected by any of the issues raised in this questionnaire, or would like to find out more information about safe drinking guidelines, you may want to print out and/ or contact the agencies and websites on the following page.

Please note that once you have clicked on the CONTINUE button at the bottom of each page you cannot return to review or amend that page

Page 6 (Final Page)

Resources

Services for students only

Leeds Student Medical Practice
0113 295 4488
<http://www.leeds.ac.uk/lsmpr>

Leeds University Unions Nightline Listening
This service is run by students
0113 380 1381

Leeds Student Counselling Centre
Confidential service independent of the university.
0113 343 4107
<http://www.leeds.ac.uk/studentcounselling/>

University Chaplain service
0113 343 5071
<http://www.leeds.ac.uk/chaplaincy/>

Academic Sub-Deans
<http://www.medicine.leeds.ac.uk/medstaff/staffgroup.aspx?GroupID=5>

General services

Drinkline
Confidential national helpline
0800 917 8282

UNITCHECK
Allows you to check how much you are drinking
<http://www.unitcheck.co.uk>

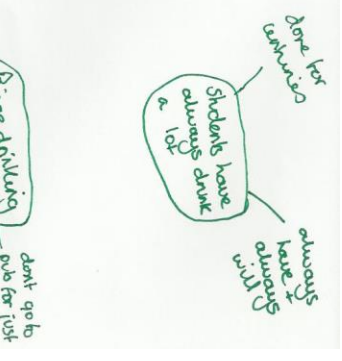
Leeds Alcohol & Drug Service
0113 247 01111
<http://alcoholanddrugservices.org.uk/centres/leeds.html>

Leeds Sexual Health
<http://www.leedssexualhealth.com/>

The Samaritans
08457 90 90 90

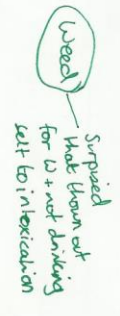
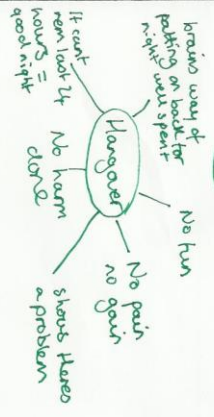
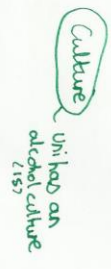
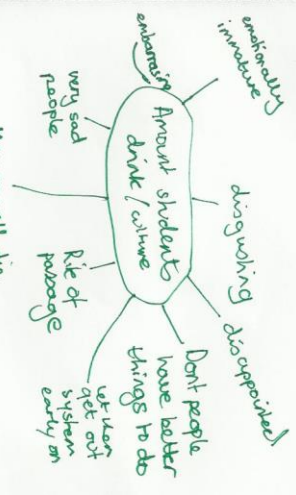
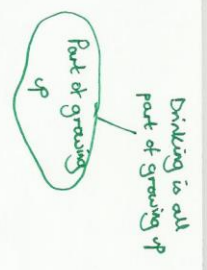
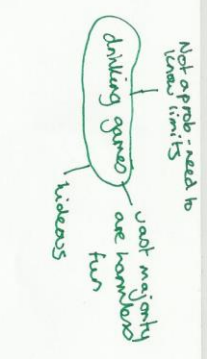
NHS Direct
0845 4647
<http://www.nhsdirect.nhs.uk/>

Attitudes

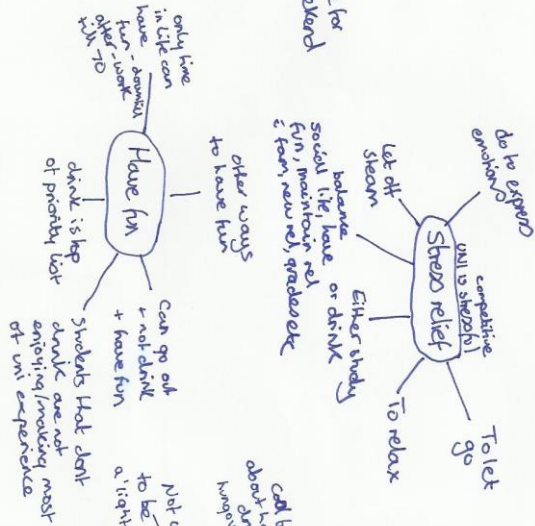
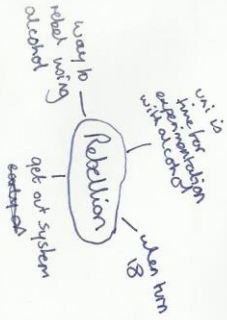
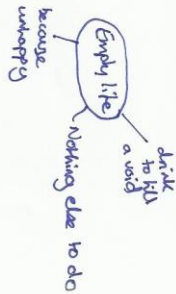
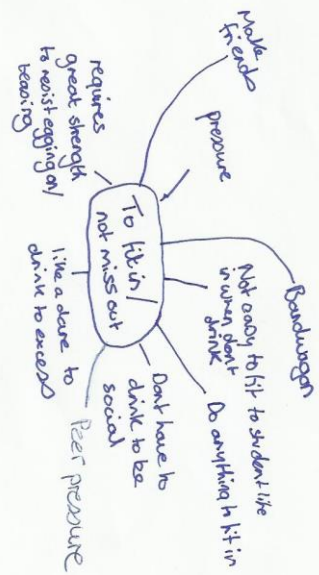
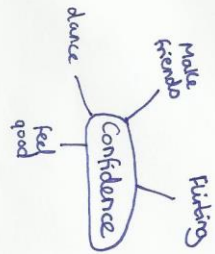




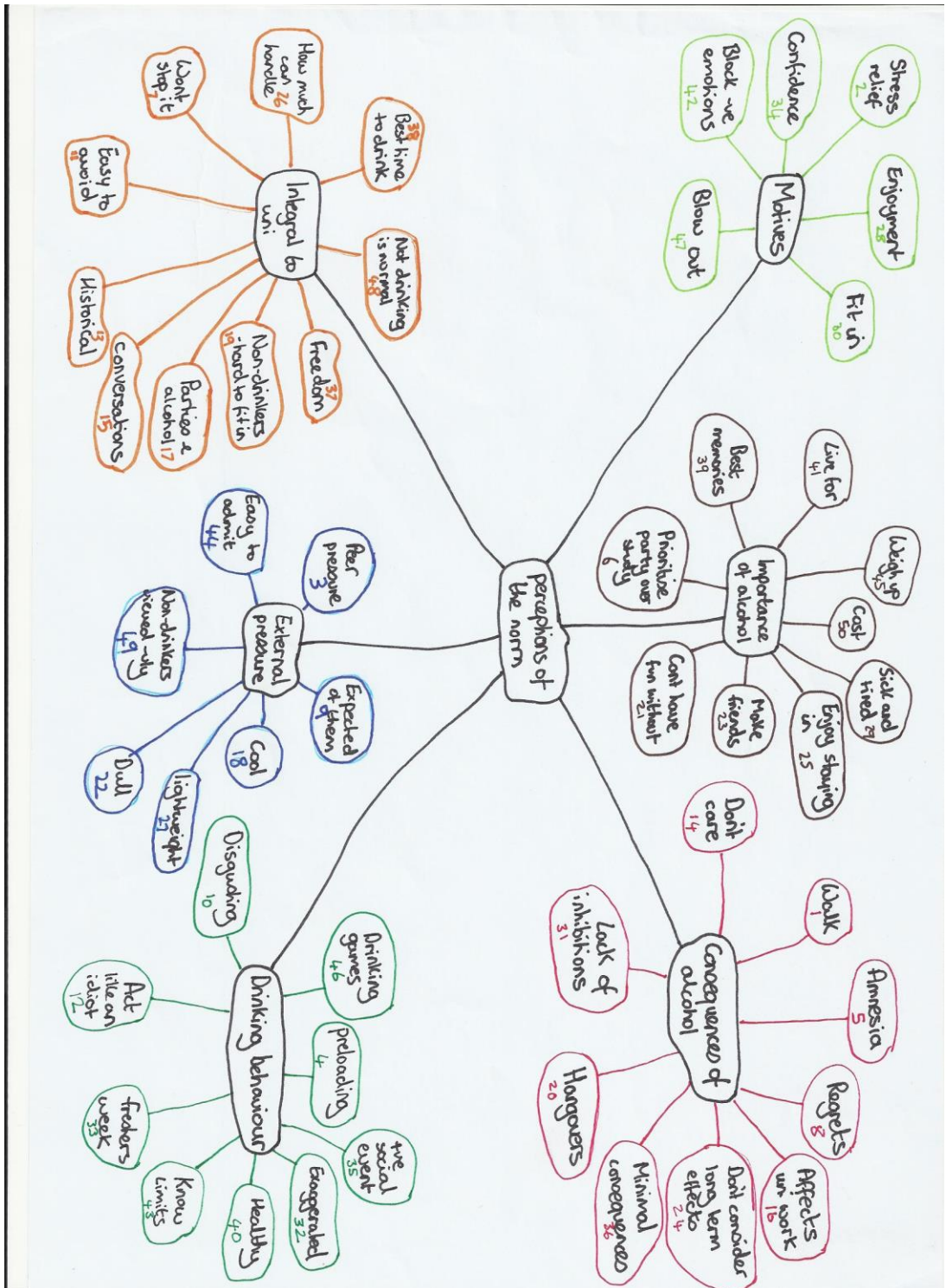
Attitudes



Motives



Appendix 6: Refined Themes



Appendix 7: Pilot Q set

Statement number	Statement	Theme	Source theme first found in
1	Needing a friend to help you walk due to alcohol intoxication is part of a typical student night out	Consequences of alcohol	31
2	It is normal for students to use alcohol to relieve stress	Motive	9
3	It can be expected that as a student you will feel pressure from your peers to drink heavily	External pressure	3
4	Drinking at home before going out (preloading) is a normal part of university life	Drinking behaviour	32
5	Being unable to remember parts of a night out due to alcohol is an expected part of the university experience	Consequences of alcohol	7
6	Students' are more interested in partying than studying	Importance of alcohol	16
7	Trying to stop students getting drunk is like trying to stop the tide coming in, it is not possible	Integral to university	18
8	After a typical student night out it is expected that there will be at least one regret the next day	Consequences of alcohol	33
9	Drinking is something students' feel like they're expected to do at university	External pressure	16
10	The way students typically behave when drunk is disgusting	Drinking behaviour	13
11	Most students that prefer not to drink find it is easy to avoid alcohol at university	Integral to university	30
12	Behaving like an idiot when drunk is seen as a normal behaviour at university	Drinking behaviour	14
13	Drinking excessively has always been part of university life	Integral to university	8
14	Students don't care if they leave	Consequences of alcohol	18

	a trail of destruction behind them when drunk		
15	A lot of conversations at university revolve around alcohol and drinking	Integral to university	13
16	It is expected that university work will be affected at some point due to the consequences of alcohol	Consequences of alcohol	16
17	It is not a student party unless there is alcohol involved	Integral to university	16
18	Students that drink the most, are often viewed as the most cool	External pressure	29
19	It is harder for students that do not drink to fit into university life	Integral to university	13
20	Students view hangovers as a sign of a good night out	Consequences of alcohol	14
21	Students' can't have fun without alcohol being involved	Importance of alcohol	27
22	Students that are all work and no play and so don't drink, are considered dull	External pressure	16
23	It is easier for students that drink alcohol to make friends	Importance of alcohol	16
24	Students live in the moment they don't think about long term effects of alcohol on their bodies	Consequences of alcohol	28
25	Students enjoy staying in with friends and not drinking, just as much as getting drunk	Importance of alcohol	16
26	Part of being a student is learning how much alcohol you can handle	Integral to university	20
27	It is expected that students can hold their drink, it is viewed unacceptable to be a lightweight	External pressure	15
28	For most students the enjoyment of alcohol overrides the fear of negative consequences	Motive	3
29	Students get sick and tired of everything being based around drinking	Importance of alcohol	16

30	Students often drink so that they can fit in with everyone else	Motive	9
31	The lack of inhibitions caused by alcohol is viewed as a good thing by students	Consequences of alcohol	34
32	Student drinking is exaggerated, most students drink sensibly or not at all	Drinking behaviour	30
33	Freshers week is typically all about getting drunk	Freshers week	18
34	Drinking alcohol is a strategy used to gain confidence by many students	Motive	10
35	Students view getting drunk with friends as a positive social event	Drinking behaviour	16
36	Excessive student drinking rarely causes any problems, it is the minority that give students a bad name	Consequences of alcohol	10
37	An important part of the university experience is having the freedom to choose what you drink and when	Integral to university	12
38	Student's view university as best time to drink alcohol due to there being less responsibility	Integral to university	2
39	Drunken nights out provide some of the best memories of student life	Importance of alcohol	29
40	Students care more about being healthy these days and so the amount they drink is reducing	Drinking behaviour	35
41	Students live for going out and getting drunk	Importance of alcohol	3
42	Students think using alcohol blocks out negative emotions	Motive	36
43	Most students are good at knowing when to stop drinking and do so to prevent becoming too drunk	Drinking behaviour	18
44	Students find it easy to admit that they do not like drinking	External pressure	10

45	Students are thoughtful about when to drink, taking university obligations such as essays or exams into account	Importance of alcohol	30
46	Drinking games are an important part of university life	Drinking behaviour	15
47	A night out drinking is often viewed by students as a well-deserved blow out for working hard	Motive	21
48	At university it is normal to go out and not want to get drunk	Integral	30
49	Students' that choose not to drink are viewed negatively	External pressure	18
50	Students' spend too much money on alcohol rather than on practical items like food or university books	Importance	37

Appendix 8: List of Resources Used

1. <http://www.thesun.co.uk/sol/homepage/news/2163482/Third-of-Brits-binge-drink-once-a-week.html>
Third of Brits binge drink once a week EMMA MORTON
Health Editor
Published: 23 Jan 2009
The Sun Newspaper, health risks (liver disease) for drinkers.
Date viewed 10.08.11.
2. <http://www.thesun.co.uk/sol/homepage/news/2086079/Boozy-Britains-big-night-out.html>
Boozy Britain's big night out LEON WATSON
Published: 01 Jan 2009
The Sun newspaper, with pictures of people drunk passed out and covered in blood.
Date viewed 10.08.11
3. <http://www.thesun.co.uk/sol/homepage/news/2064508/Campaign-warns-of-dangers-of-binge-drinking.html>
Drink 'n' droop ad campaign
Published: 23 Dec 2008
The Sun Newspaper, about an advert highlighting negative effects of drinking
Date viewed 10.08.11
4. <http://www.thesun.co.uk/sol/homepage/news/1977336/Heart-risk-for-binge-drinkers.html>
Heart risk for binge drinkers
Published: 27 Nov 2008
The Sun Newspaper, about risks of drinking
Date viewed 10.08.11
5. <http://www.heraldsun.com.au/news/teens-in-grip-of-the-grog/story-e6frf7jo-1225729914269>
Date viewed 10.08.11
6. <http://www.teenspot.com/spotlight/why-do-teens-drink-alcohol/>
Date viewed 10.08.11

7. <http://www.dailymail.co.uk/news/article-1281865/Alcohol-fuelled-violence-plague-modern-life-says-judge-jailing-high-flying-female-student.html>
Daily mail
Date viewed 29.08.11
8. <http://www.dailymail.co.uk/news/article-1365365/Binge-Britain-Students-race-to-end-hospital.html>
Race to hospital: Students down lethal amounts of alcohol in deadly game where aim is to be the first in A&E
Daily mail
Date viewed 29.08.11
9. <http://answers.yahoo.com/question/index?qid=20100101174455AAHvOJ1>
Date viewed 29.08.11
Yahoo questions
10. www.collegedrinkingprevention.gov/supportingresearch/student1.aspx
The Student Perspective On College Drinking
Peggy Eastman
April 2002
Date viewed 29.08.11
11. <http://www.dailymail.co.uk/news/article-1343184/Pass-sick-bag-The-antics-Imperial-College-medical-students-worry-all.html>
Pass the sick bag: The antics of these Imperial College medical students should worry us all
By Neil Sears and Paul Bentley
Date viewed 01.09.11
12. <http://www.bbc.co.uk/news/uk-england-south-yorkshire-16225748>
Student injured after drinking at union in Sheffield (reduced drinks)
Date viewed 15.01.2012
13. http://www.bbc.co.uk/leeds/content/articles/2005/10/24/student_diary_eloise_2005_10_02_feature.shtml
BBC website
Students opinion on drinking
Viewed 15.01.2012
14. <http://www.thestudentroom.co.uk/showthread.php?t=1893489>

blog on student drinking

Viewed 15.01.1012

15. www.guardian.co.uk/education/2010/mar/31/students-alcohol-initiation-rites-ban

The truth about student drinking games

Laura Barnett

Wednesday 31 March 2010 20.00 BST

Viewed 06.03.2012

16. Osberg, T.M., Atkins, L., Buchholz, L., Shirshova, V., Swiantek, A., Whitley, J., Hartman, S., & Oquendo (2010). Development and validation of the college life alcohol salience scale: A measure of beliefs about the role of alcohol in college life. *Psychology of addictive behaviors, 24(1)*, 1-12.

17. Leeds student

<http://www.leedsstudent.org/2012-02-20/lowdown/hairofthedogmyars>

Hair of the dog my arse

Viewed 12.03.12

18. The guardian online

<http://www.guardian.co.uk/discussion/search/comments?q=student+drinking§ion=search-contributions>

'Don't cut freshers' week we need it' and comments on other articles

Viewed 14.03.12

19. The guardian online

<http://www.guardian.co.uk/education/2008/oct/02/students.highereducation?INTCMP=SRCH>

university to investigate drinking initiation ceremonies

Anthea Lipsett

guardian.co.uk, Thursday 2 October 2008 11.51 BST

Article history

Viewed 14 march 2012

20. The guardian online

<http://www.guardian.co.uk/education/2008/dec/16/how-to-be-a-student?INTCMP=SRCH>

The art of drinking

Harriet Swain

The Guardian, Tuesday 16 December 2008

Article history

Viewed 14.03.12

21. The guardian online

<http://www.guardian.co.uk/education/2005/jul/12/students.uk?INTCMP=SRCH>

Drink in the atmosphere

Sarah Turner

The Guardian, Tuesday 12 July 2005 01.05 BST

Article history

Viewed 14.03.12

22. The guardian online

<http://www.guardian.co.uk/society/2005/may/17/mentalhealth.education?INTCMP=SRCH>

Not drinking, drowning

Polly Curtis

The Guardian, Tuesday 17 May 2005

Article history

Viewed 14.03.12

23. The guardian online

<http://www.guardian.co.uk/education/2001/nov/16/medicalsecience.research?INTCMP=SRCH>

more women turning to drink

Joe Plomin

guardian.co.uk, Friday 16 November 2001 12.16 GMT

Article history

Viewed 14.03.12

24. Guardian online

<http://www.guardian.co.uk/education/mortarboard/2012/jan/18/drink-worse-than-fees?INTCMP=SRCH>

drink, not fees is the biggest problem at university

viewed 14.03.12

25. Guardian online

<http://www.guardian.co.uk/education/2008/mar/18/students.news?INTCMP=SRCH>

the art of holding a student house party

Harriet Swain

The Guardian, Tuesday 18 March 2008

Article history

viewed 14.03.12

26. BBC website

http://news.bbc.co.uk/local/lincolnshire/hi/people_and_places/newsid_9405000/9405048.stm

Police tackling drunken behaviour

viewed 14.03.12

27. <http://isitnormal.com/story/is-it-normal-to-be-a-student-and-never-drink-alcohol-71375/>

Is it normal to be a student and never drink alcohol?

Viewed 14.03.2012

28. Daily mail

<http://www.dailymail.co.uk/news/article-1278583/Young-people-drinking-neat-vodka-EYE-quick-buzz.html>

'Drinking' neat vodka through your EYE for a quick buzz? It sounds insane, but countless young people are risking their sight in this new craze

By Barbara Davies

UPDATED: 01:20, 15 May 2010

Viewed 14.03.12

29. The student (Scottish newspaper of the year)

'Just one more'

<http://www.studentnewspaper.org/features/1396-just-one-more>

Viewed 02.04.12

30. UW-River Falls Student Alcohol Consumption Opinions Focus Group Report

Denise Parks & David Trechter

Survey Research Center Report – 2005/#7, May 2005

UW EXTENSION, UWRF

31. <http://newsflavor.com/alternative/secret-commando-and-flashing-society-exposed-at-cambridge-university/>

Secret Commando and Flashing Society Exposed at Cambridge University

Published by Humperdinky on May 22, 2011 in Alternative

Viewed 30.04.12

32. <http://www.dailymail.co.uk/news/article-1351613/Binge-drinking-Paralytic-girls-hooked-speed-drinking.html>

Cocktails in plant pots, spirits snorted through straws and paralytic before they even go out, the girls hooked on speed-drinking

By Steve Boggan

Viewed 30.04.12

33. <http://answers.yahoo.com/question/index?qid=20081226095226AAyi1nj>

Yahoo answers

Viewed 30.04.12

34. <http://www.rehabplace.com/blog/scary-facts-regarding-impact-alcohol-abuse-on-college-students/>

8 Scary Facts Regarding the Impact of Alcohol Abuse on College Students

November 3, 2011 By Joanna

Viewed 30.04.12

35. <http://www.acenet.edu/AM/Template.cfm?Section=Home&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=45232>

Student Drinking Is an Intractable Problem

By Jonathan C. Gibraltar

Viewed 30.04.12

36. <http://www.fare.org.au/wp-content/uploads/2011/07/Final-Report-Young-Womens-Drinking-Experiences-in-Public-Drinking-Venues.pdf>

Young womens drinking experiences in public drinking venues

Kerry Armstrong

Viewed 30.04.12

37. <http://www.guardian.co.uk/money/2004/aug/23/business.highereducation>

Students set to spend £1bn on alcohol

Polly Curtis, education correspondent

guardian.co.uk, Monday 23 August 2004 12.57 BST

viewed 30.04.12

Information Sheet: Stage 2
‘Student perceptions of alcohol as part of university life’

This sheet provides information about the study to help you decide whether you are interested in participating. Contact me at the e-mail address provided below if you would like any further information.

What will be involved in the study?

You are being invited to an interview during which you will be asked to rate how strongly you agree or disagree with statements about student drinking by placing them onto a grid pre-prepared grid. You will be provided with a sheet to record your comments about the statements. This will take approximately 30 minutes and be carried out at the University of Leeds at a time and place that is convenient for you. **To say thank you for participating you will receive £5.00 of Costa Coffee vouchers or printer credits.**

Do I have to take part in the study?

Taking part in the research is entirely voluntary. Declining to agree to participate will not result in a penalty of any kind. If you decide to take part you will be asked to read and sign a consent form. You can withdraw from the study at any time and do not need to give a reason for doing so. If you choose to withdraw you can request information collected that is identifiable to you to be removed from the study up until 1 December, 2012 when data analysis is expected to begin.

Are the results confidential?

Any data obtained in the study will be treated as confidential and stored securely as is required under the Data Protection Act. Any written information regarding the statements might be used as quotes in the write up of this study in order to help interpret results. These quotes will be kept anonymous at all times. Your contact details will be stored separately from your survey responses and a non-identifiable number used to link your data in stage 1 and 2 of the study. You will not be personally identified in any reports or publications that may follow from this study. The University of Leeds Code of Ethics will be fully adhered to.

What will happen to the results of the study?

The data will form part of my doctoral thesis to be submitted, in May 2013. The results may also be submitted for publication (journal, conference presentation).

The University of Leeds is organising and funding this research.
This study has received approval by the Medicine and Dentistry Educational Research Ethics Committee (reference: EDREC/11/031)
Please do not hesitate to contact me for further information: Rebecca Yule
(umrly@leeds.ac.uk)

Thank you for taking the time to read through this information

Appendix 10: Sorting boxes

Disagree	Neutral	Agree
<input type="text"/>	<input type="text"/>	<input type="text"/>

Strongly disagree	Quite strongly Disagree	Slightly disagree
<input type="text"/>	<input type="text"/>	<input type="text"/>

Slightly agree	Quite strongly Agree	Strongly agree
<input type="text"/>	<input type="text"/>	<input type="text"/>

Appendix 11: Completed Q sort

	-4	-3	-2	-1	0	+1	+2	+3	+4
Very High	[Card]	[Card]	[Card]	[Card]	[Card]	[Card]	[Card]	[Card]	[Card]
	[Card]	[Card]	[Card]	[Card]	[Card]	[Card]	[Card]	[Card]	[Card]
		[Card]	[Card]	[Card]	[Card]	[Card]	[Card]	[Card]	[Card]
			[Card]	[Card]	[Card]	[Card]	[Card]	[Card]	[Card]
				[Card]	[Card]	[Card]	[Card]	[Card]	[Card]
					[Card]	[Card]	[Card]	[Card]	[Card]
						[Card]	[Card]	[Card]	[Card]
Very Low							[Card]	[Card]	[Card]

Appendix 12: Example of Statement Booklet

47. A night out drinking is often viewed by students as a well-deserved blow out for working hard	
48. At university it is normal to go out and not want to get drunk	
49. Students' that choose not to drink are viewed negatively	
50. Students' spend too much money on alcohol rather than on practical items like food or university books	
51. It is normal to see students downing their drinks in attempt to maximise the effects of the alcohol	

Thank you

Participant ID: ██████████

Statement Booklet

This booklet is provided for you to write any comments you have regarding the statements. Please write your comment next to the number that corresponds to that statement.

You may use the space within this booklet to:

- Provide explanation for where you placed statements
- Provide your thoughts or views regarding statements
- Highlight ambiguous statements you find difficult to place

Statement	Comment
1. Needing a friend to help you walk due to alcohol intoxication is part of a typical student night out	
2. It is normal for students to use alcohol to relieve stress	
3. It can be expected that as a student you will feel pressure from your peers to drink heavily	
4. Drinking at home before going out (preloading) is a normal part of university life	

19. It is harder for students that do not drink to fit into university life	
20. Students view hangovers as a sign of a good night out	
21. Students' can't have fun without alcohol being involved	
22. Students that are all work and no play and so don't drink, are considered dull	
23. It is easier for students that drink alcohol to make friends	
24. Students live in the moment they don't think about long term effects of alcohol on their bodies	
25. Students enjoy staying in with friends and not drinking, just as much as getting drunk	

26. Part of being a student is learning how much alcohol you can handle	
27. It is expected that students can hold their drink, it is viewed unacceptable to be a lightweight	
28. For most students the enjoyment of alcohol overrides the fear of negative consequences	
29. Students get sick and tired of everything being based around drinking	
30. Students often drink so that they can fit in with everyone else	
31. Students like the fact that alcohol lowers their inhibitions and enables them to do things they wouldn't normally	
32. Student drinking is exaggerated, most students drink sensibly or not at all	

Appendix 13: Information Sheet

Participant ID:

Finally please could you comment on the statements you most strongly agreed and disagreed with below:

Please write the numbers of the statements you most strongly **agreed** with and why in the table below.

No.	Reason

Please write the numbers of the statements you most strongly **disagreed** with and why in the table below.

No.	Reason

If there is anything you think has not been captured within these statements but is important for what is considered to be normal regarding alcohol and university life, please let me know below:

Thank you for your time