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Non-drinkers and Non-drinking: A Mixed Methods Research Programme to Promote Safer Student Alcohol Consumption

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Dissertation submitted for the degree of Doctor of Philosophy
July 2014

Declaration

I hereby declare that this dissertation has not been, and will not be, submitted in whole or part to another University for the award of any other degree.

Signature.....

Acknowledgements

Thank you to Richard de Visser for guidance and support throughout my research. I am also very grateful to Rod Bond, Donna Jessop and Paul Sparks for consistent support and feedback throughout my research. Thank you to Daniel Hyndman and Andy Clews for technical support. Thank you all members of the Applied and Social Research Group for indispensable critical feedback at key stages of my research programme. Thank you Debbie and Josie for being there throughout my PhD research.

UNIVERSITY OF SUSSEX

DOMINIC CONROY Dissertation submitted for the degree of Doctor of Philosophy
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Safer Student Alcohol Consumption

Summary

This dissertation is about perceptions of non-drinkers and the social experiences of university students who do not drink alcohol. Chapter One provides a comprehensive literature review. Chapter Two outlines relevant methodological issues. Chapter Three reports findings from a cross-sectional study. Alcohol prototype measures were used to compute a sociability prototype differences variable (i.e., sociability prototypes for regular drinkers minus sociability prototypes for non-drinkers), which was associated with student drinking. Chapter Four reports a moderating effect of sociability prototype differences: beliefs about high levels of peer drinking were associated with less health-adherent drinking intention among students with less favourable evaluations of non-drinkers. Quantitative findings are summarised in Chapter Five. Chapters Six and Seven present findings from an interpretative phenomenological analysis of interviews with non-drinkers. Chapter Six suggests different strategies involved in non-drinking during social occasions, while Chapter Seven describes how authenticity is involved in deciding not to drink and within conversations about non-drinking. Chapters Eight and Nine summarise qualitative study findings and outline an intervention study, respectively. Chapter Ten reports intervention study findings. Students were asked to imagine possible benefits or anticipated strategic requirements engaged in safer drinking behaviour at four week follow-up compared with students who completed a drinks diary. Chapter Eleven summarises findings, discusses applied and theoretical implications, acknowledges programme limitations and proposes research extensions.

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Chapter 1

Introduction

1.1 Problems and prevalence of heavy alcohol consumption

1.1.1 Heavy alcohol use: economic, social and health costs

Alcohol's contradictory role as social enabler and source of social harm has long roots in British cultural history (Hailwood, 2010). In contemporary British society, alcohol is used in a wide variety of leisure time activities for people. Recent survey data illustrates this: nine of every ten men and women aged 16+ had consumed alcohol in the previous year (Robinson & Harris, 2011). However, although alcohol consumption fulfils a wide range of social functions and brings pleasure to individuals and communities, heavy consumption levels are associated with a range of economic, social and health problems.

Policy documents and systematic reviews have recently estimated the economic burden of alcohol to NHS services to be £2.7 billion per annum in terms of direct treatment costs attributable to heavy alcohol use (Scarborough, Bhatnagar, Wickramasinghe, Allender, Foster, & Rayner, 2011). However, the financial burden of alcohol is greatly magnified when the broader social and economic costs of high levels of alcohol consumption are also accounted for. An estimated £55 billion per year is spent on alcohol-related harm including the costs of alcohol misuse to individuals and families, costs to employees, and costs measured in reduced quality of life (Information Centre for Health and Social Care, 2009). For example, alcohol-related criminal and anti-social behaviour carry distinct economic costs including measures required to prevent property damage (e.g., security investment). Alcohol-related social and financial costs include dealing with the impact of heavy alcohol consumption on others through victim services. To give some sense of the financial burden involved with

alcohol misuse, it has recently been estimated that alcohol-related problems run to costs equivalent to 1% GDP in most high income countries (Mohapatra, Patra, Popova, Duhig, & Rehm 2010).

High levels of alcohol use are associated with wide-ranging social issues. For example, heavy alcohol use is well-established to have a negative impact in family, community, educational and occupational settings (Maffli, 2001; Mohapatra et al., 2010; Rehm & Rossow, 2001). Evidence consistently indicates that alcohol can have a detrimental effect on family life across varied outcomes relevant to well-being. A UK government report recently drew attention to the close associations between alcohol addiction and misuse, family breakdown and financial hardship (Centre for Social Justice, 2013). For example, report findings indicate that 1.5 million adults are affected by a relative's heavy alcohol use, and that only 18% of individuals receiving addiction-related treatment were in employment. The social impact of heavy drinking within families has clear negative implications for children across a range of health and well-being outcomes. For example, evidence suggests that children of alcoholic parents are more likely to experience a lower quality of parent-child interactions (Eiden, Chavez, & Leonard, 1999; Velleman & Templeton, 2007) and are more likely to suffer from depression in adult life (Anda et al., 2002). Evidence discussed in this section indicates that there are far-reaching economic and social benefits of promoting safer levels of alcohol consumption in the broader population.

In absolute terms, the number of alcohol-attributable deaths in the UK increased by 3,147 in the period 2000-2008, and in 2011, accounted for 1.5% of deaths in England and Wales. Relative to other European Member States, the UK has among the highest levels of alcohol-attributable cancer, liver cirrhosis and cardiomyopathy (World Health Organisation, 2013). Alcohol use has also been closely implicated in a wide range of

mental health issues among young people including elevated levels of depression, increased occurrence of co-morbid psychiatric diagnosis and lower levels of self-esteem (Armstrong & Costello, 2002; Groves, Stanley, & Sher, 2007). Evidence suggests that 16-45% of suicides have some connection with excessive alcohol consumption, and it has been identified as a key co-morbidity of completed suicide (Galaif, Sussman, Newcomb, & Locke, 2007). Although under-examination of causal or temporal pathways makes this literature difficult to interpret (Newbury-Birch et al., 2009), evidence suggests links between increased levels of alcohol use and an increased incidence of mental health difficulties, particularly among young people.

Further to this, consuming high volumes of alcohol within a specific episode or 'binge drinking' carry specific health risks. Given the ambiguous and therefore unsatisfactory nature of the term binge drinking (McAlaney & McMahon, 2006; Szmigin, Griffin, Mistral, Bengry-Howell, Weale, & Hackley, 2008), the term heavy episodic drinking (HED) is used instead throughout this dissertation. HED refers to drinking in excess of either six alcohol units (for women) or eight alcohol units (for men) during a single occasion (e.g., McAlaney & McMahon, 2007). It has been estimated that 5.9 million adults in the UK regularly engage in HED, and its incidence has nearly doubled among women in the previous twenty years (Cabinet Office, 2004; Smith & Foxcroft, 2009). Understood within the context of drinking behaviour more broadly, HED is an important behaviour to consider in light of evidence that it may nullify any potential health advantages of a lifestyle involving moderate levels of alcohol consumption (Roerecke & Rehm, 2010). Furthermore, HED is linked to an increased risk of accident, poisoning or susceptibility to being a victim of violence (Boles & Miotto, 2003; Cherpitel, Bond, Ye, Borges, MacDonald, & Giesbrecht, 2003; Nicholls, 2010). The incidence of HED is high among young people (Kuntsche, Rehm,

& Gmel, 2004; Measham & Brain, 2005) and university students (Karam, Kypri, & Salamoun, 2007).

It is evident from the above discussion that there are wide-ranging economic, social and health factors relevant to harmful alcohol consumption and promoting safer patterns of drinking behaviour during young adulthood is therefore an important area of health psychology and health promotion interest.

1.1.2 Changing trends in drinking

Alcohol consumption among young people over the last 30 years has been in a state of flux. Increases in drinking during the 1990s have been attributed to aggressive and successful marketing by the alcohol industry to broaden alcohol's appeal by reducing prices, diversifying alcoholic products, and feminising drinking environments to increase the social acceptability and appeal of regular alcohol use among women (Neve, Lemmens, & Drop, 1997; Measham, 2008). Over the last decade, despite increased consumption levels among adolescents, alcohol consumption has declined in popularity among 16-24 year olds of both sexes (Office for National Statistics, 2009; Smith & Foxcroft, 2009). This trend may be interpreted in various ways. For instance, this decline may reflect, in part, the growth in non-drinking behaviour among 11-16 year olds and associated socio-demographic changes and increases in the number of individuals from ethnic minority backgrounds where non-drinking might hold links with religious beliefs (Goddard, 2006). Despite a downward trend in overall consumption levels, harmful effects of heavy drinking mean that it has remained a priority area within health policy and promotion frameworks (Howat, Sleet, Maycock, & Elder, 2007; Seaman & Ikegwuonu, 2010). However, evidence of a downward trend in consumption patterns is encouraging in one sense in that it suggests some individuals or

communities are likely to have chosen to eschew regular drinking or heavy drinking part of their leisure time activities, to some extent at least.

A fuller appreciation of why non-drinkers choose not to drink and how being a non-drinker influences their lives is an interesting independent research question, but the findings have much broader applicability to drinking behaviour among students more generally. Understanding non-drinking as something done either episodically or for shorter- or longer-term periods, is relevant to all individuals regardless of their alcohol consumption status. Further understanding of non-drinking would also provide a way of realising current government health recommendations to have two alcohol-free days per week (National Health Service, 2013). Before these issues are considered in greater depth, drinking behaviour among the sample of interest for this dissertation – 18-25 year old university students – should first be considered.

1.1.3 Implications and incidence of alcohol consumption among university students

Both UK and international research points to associations between wide-ranging negative short-term and long-term consequences with high levels of alcohol consumption among students. In terms of short-term health-related implications, negative consequences of heavy drinking include injuries requiring medical attention (Hingson, Ralph, Zha, & Weitzman, 2007) and evidence of an association between higher levels of alcohol use and an increased likelihood of high risk sexual behaviour (Cooper, 2002; Scott-Sheldon, 2010). Other studies have consistently pointed to close links between heavy alcohol use and an increased risk of sexual assault among university students (e.g., Abbey, 2002; Testa & Livingston, 2009). One study has highlighted the reciprocal relationship of these factors, with heavy alcohol use implicated in both increased vulnerability to sexual assault and as behaviour adopted in

response to the experience of sexual assault (Kaysen, Neighbors, Martell, Fossos, & Larimer, 2006). Longer-term occupational implications of high levels of alcohol use during university life are implied by correlations between the frequency and/or intensity of student alcohol use and impeded academic performance (Mustaine & Tewksbury, 2005; Perkins, 2002; Pickard, Bates, Dorian, Greig, & Saint, 2000). One way in which research in this area has been taken forward is to explore the impact of alcohol use on student's engagement levels during their time at university. For example, one study has demonstrated a connection between increased HED and lower student engagement levels with faculty staff (Porter & Pryor, 2007).

Aside from these varied short-term and long-term negative implications of student drinking, health promotion efforts to reduce harmful levels of alcohol consumption among students holds the possibility of encouraging more moderate use of alcohol during a pivotal time in young adult life when habitual behavioural patterns may become established. Prospective research exploring connections between drinking at earlier and later time-points suggests that, for both men and women, HED during young adulthood is a modest but significant predictor of likelihood to engage in HED during early middle age (Jefferis, Power, & Manor, 2005). Addressing harmful drinking among individuals during their time as university students therefore poses an important opportunity to cultivate more moderate patterns of alcohol consumption at later life stages.

It is well documented that high levels of alcohol consumption and harmful types of drinking behaviour are established cultural features of the UK university student experience (Plant & Plant, 2006; Webb, Ashton, Kelly, & Kamali, 1996). To illustrate, one study documents that first year UK university students consume 18.9 alcohol units per week on average (Bewick, Trusler, Mulhern, Barkham, & Hill, 2008a) which, put in

perspective, exceeds lower limit consumption recommendations for female students (14 units per week) and approaches lower limit consumption recommendations for male students (21 units per week). Furthermore, UK-based studies have consistently indicated that around half of participants self-report at least one HED episode in the previous seven days (e.g., Dodd, Al-Nakeeb, Nevill, & Forshaw, 2010; Webb, Ashton, Kelly, & Kamali, 1997). There is also evidence that the majority of students engage in HED on a weekly basis (Cooke, Sniehotta, & Schüz, 2007; Norman & Conner, 2006). To put this in context, it has been noted that the frequency of HED is greater among UK university students than among young people in the broader UK population and of students at universities in the US (Gill, 2002; Kypri, Cronin, & Wright, 2005). Patterns of drinking mean that students are more likely than other young people to experience the alcohol-related harms described above. This evidence provides a clear rationale for pursuing health promotion strategies to reduce levels of student alcohol consumption. However, it is suggested that an informed understanding of the diverse beneficial implications of regular and heavy levels of alcohol consumption need to be fully appreciated for drinking behaviour to be addressed via an intelligent and responsive health promotion approach. For this reason, reported benefits of drinking alcohol among students will be considered in the next section.

1.1.4 Benefits of drinking alcohol for university students

Although the literature relating to problems arising from heavy drinking behaviour among students is well-established, evidence relating to benefits or positive functions of drinking behaviour among young people and university students is relatively under-developed. Indeed, predominant focus on the physical and psychosocial dangers of drinking has led to a literature which arguably fails to acknowledge alcohol

consumption's varied social and subjective benefits (Heath, 2007). Developing an understanding of how excessive alcohol consumption is experienced in positive ways such as increasing students' sense of belongingness when socialising is important if these associations are to be meaningfully challenged or problematized.

Several studies have investigated the specific benefits of different kinds of drinking behaviour among university students. Heavy drinking has been described as an integral mechanism for peer bonding, increased sociability and of having a sense of participation and belonging among 18-25 year old young adults in the UK (Newbury-Birch et al., 2009; Seaman & Ikegwuonu, 2010). For example, a recent exploration of drinking behaviour among UK young adults (including students) suggested that alcohol consumption helps to provide 'bonding capital' with social groups via shared stories and common values in connection with occasions involving heavy drinking (Seaman & Ikegwuonu, 2010). Scandinavian research looking at older adolescents has highlighted links between alcohol consumption and having both a greater number of friendships but also a higher quality of friendships (Hoel, Eriksen, Breidablik, & Meland, 2004). It is notable that even potentially demanding aspects of drinking behaviour including caring for drunken friends or dealing with hangovers have been reported by young people as important opportunities for forging peer bonds (de Visser, Wheeler, Abraham, & Smith, 2013). When alcohol is recognised to provide these positive social functions it can be more clearly understood why efforts to influence drinking behaviour which purely focus on drawing attention to its negative effects or implications may be unsuccessful in their health promotion aims.

Several recent studies have suggested that social- and image-based concerns carry greater influence than health concerns in determining drinking behaviour (Brown & Gregg, 2012; Ridout, Campbell, & Ellis, 2012; de Visser et al., 2013). For example,

findings from a recent exploration of how social networking sites are involved in the construction of drinking behaviours illustrated the importance of presenting oneself as ‘a drinker’ as a socially desirable feature of identity (Ridout et al., 2012). An important implication of this research is that health promotion messages orientated toward imparting health-based consequences of heavy alcohol consumption are unlikely to be successful among many students. Evidence from a recent systematic review suggests that although over-reliance on alcohol for cultivating supportive peer relationships among young people should be discouraged, excessive criticism of drinking behaviour may be more harmful than protective (Newbury-Birch et al., 2009). Specifically, previous evidence has suggested that an optimal level of environmental control and supportive education are important factors involved in efforts to encourage more moderate drinking behaviour (Foxcroft & Lowe, 1991). This relatively small collection of studies draws attention to the range of social benefits involved in drinking alcohol within university settings.

Several studies report both personal and social advantages of drinking behaviours among young adults and adolescents. For example, regular alcohol consumption is linked to increased contact with and acceptance by peers among adolescents (Goldberg, Halpern-Felsher, & Millstein, 2002; Thombs, Beck, & Mahoney, 1993) and increased levels of peer support (Borsari & Carey, 2006). Given these findings, it is unsurprising that facilitating social interactions is a primary motivation for drinking alcohol among young people (Cooper, 1994; Read, Wood, Kahler, Maddock, & Palfai, 2003). Other research has suggested that alcohol may be particularly relevant to social fulfilment among young men (Murphy, McDevitt-Murphy, & Barnett, 2005; Rahav, Wilsnack, Bloomfield, Gmel, & Kuntsche, 2006). For example, in a study of drinking behaviour and life satisfaction among male US college students it was demonstrated that increased

alcohol consumption was associated with higher levels of social satisfaction (Murphy et al., 2005). Beyond opportunities for socialising and interacting with same-age peers, there is substantial evidence that alcohol places an important role in facilitating positive subjective experiences and fulfilling physical needs. Among other positive effects reported in the student drinking literature, evidence points to alcohol's role in relieving stress (Vander Ven, 2011; Gilles, Turk, & Fresco, 2006) and its specific social function for meeting sexual partners or overcoming social shyness (Gilles et al., 2006; Goldberg et al., 2002). Evidence also points to the role of both HED and regular drinking in promoting increased intimacy (Bradley, Carman, & Petree, 1991; Nezlek, Pilkington, & Bilbrom, 1994).

Evidence reported in this section concerning the positive implications of drinking behaviour is important to consider in the context of the current research programme given that non-drinkers have (temporarily at least) relinquished the opportunity to experience these benefits. It would be of empirical and applied interest to understand why it is that the pros of non-drinking outweigh the likely psychosocial advantages of moderate drinking for some individuals. Relatedly, these studies also suggest that health promotion efforts might be geared toward challenging alcohol as an essential ingredient of enjoyable and sociable interactions among young people. Similarly, understanding how social needs including belonging and intimacy are attended to among young people who do not drink alcohol would also be useful to understand more fully.

1.2 Predictors of student alcohol consumption

Many dispositional and social cognitive factors have been studied in the context of student drinking behaviour. Usefully, research here has provided a basis by which

students at most risk of harmful drinking can be ‘screened out’. Work in this area has also identified mechanisms which, if successfully modified, might promote successful behaviour change. Some of the most frequently researched correlates of harmful student drinking behaviour are summarised in this section.

1.2.1 Dispositional factors

A range of dispositional factors have been considered in the context of student alcohol consumption. For example, several studies have reported how increased student drinking is predicted by increased levels of sensation seeking impulsivity (Cyders, Flory, Rainer, & Smith, 2009; McAdams & Donnellan, 2009; Watten & Watten, 2010), high levels of extraversion (Hong & Paunonen, 2009; Raynor & Levine, 2009) or high levels of neuroticism (Vollrath & Torgersen, 2002). These associations have been demonstrated to pose practical implications for drink-specific behaviours. For example, students who score highly on a sensation seeking impulsivity scale may be more likely to pour large measures of alcohol (de Visser & Birch, 2012). Other personality research suggests how lower conscientiousness or lower agreeableness are predictive of higher levels of student drinking (Atwell, Abraham, & Duka, 2011; Clark, Tran, Weiss, Caselli, Nikčević, & Spada 2012; Lemos-Giráldez & Fidalgo-Aliste, 1997). The inter-relationship between supposedly fixed, enduring dispositions and more modifiable factors has also been investigated. For example some studies have described how personality factors are themselves mediated by other factors such as holding coping motivations to drink alcohol (Stewart, Loughlin, & Rhyno., 2001), and perceived normative drinking behaviour among peers (Kahler, Read, Wood, & Palfai, 2003). This research has been useful in identifying which students are likely to be most at risk of harmful patterns of alcohol consumption, as well as those students likely to be more

protected from such behavioural tendencies. As noted, these findings are of practical value given their potential application in campus-based screening programmes designed to promote healthy drinking behaviour. Personality constructs have been conventionally conceptualised as enduring dispositions (e.g., McCrae & Costa, 1997). This given, evidence concerning personality-based correlates of student drinking behaviour may be less useful from an interventional viewpoint as personality factors would not be expected to be modifiable in the same way as belief-based or perception-based variables.

1.2.2 Belief-based factors

Two psychological constructs derived from Bandura's (1977) Social Learning Theory concern the importance of self-perceived competency specific to drinking behaviour (drink refusal self-efficacy, DRSE), and expected positive or negative outcomes relating to drinking behaviour (alcohol outcome expectancies, AOE). Given that Social Learning Theory is a common theoretical framework linking both concepts, these are discussed together in the section below.

1.2.2.1 Drink refusal self-efficacy and alcohol outcome expectancies

Different domains of DRSE have been conceptualised, each relevant to a different context: skill in refusing alcohol under conditions of social pressure, skill in refusing alcohol where there are opportunities to drink, and skill in refusing alcohol when under particular emotional strain to have a drink (de Visser, Hart, Abraham, Graber, Scanlon, & Memon, 2014; Young, Oei, & Crook, 1991). Several US-based studies have demonstrated links between these distinct variables and different aspects of student drinking behaviour (e.g., Gilles et al., 2006; Oei & Jardim, 2007). For example, students

of both sexes with self-reported lower opportunistic DRSE and lower refusal under social pressure DRSE were demonstrated to drink more frequently than other students (Baldwin, Oei, & Young, 1993). The relevance of DRSE as an explanatory factor in the context of student drinking has also recently been highlighted in a sample of Australian undergraduates where DRSE accounted for unique predictive variance in drinking frequency, drinking quantity and alcohol dependence severity (Young, Connor, Ricciardelli, & Saunders, 2006). Evidence summarised in this paragraph suggests that it is not just important to explore how students might be encouraged to refuse alcoholic drinks effectively, but also that it might be useful to assess DRSE in terms of its distinct conceptual subcomponents.

Alcohol outcome expectancies are beliefs about the likelihood of either positive or negative outcomes following alcohol consumption. Given their shared origins in Social Learning Theory, many studies have explored the combined or distinct influences of DRSE and AOE in the context of harmful drinking behaviour among students. For example, one study which explored drinking behaviour among socially anxious students suggested that harmful consumption levels were a greater problem among students with low levels of DRSE and high levels of positive AOE (Gilles et al., 2006). Australian research has suggested differential influences of DRSE and AOE based on ethnicity (Oei & Jardim, 2007). Although DRSE/AOE were both implicated in Caucasian students' drinking behaviour, only lower levels of DRSE were predictive of increased harmful drinking behaviour among Asian students. An overarching cognitive account of drinking behaviour has suggested that the behaviour of different drinker types (e.g., 'regular', 'binge', 'alcoholic') can be explained in terms of their position on two intersecting spectrums of high/low AOE and high/low DRSE (Oei & Morawska, 2004). In the context of student alcohol consumption, these variables have provided a

useful framework for identifying individuals with particularly low levels of alcohol-specific self-efficacy and, similarly, those individuals with particularly positive or insufficiently negative expectancies of alcohol's effects.

1.2.2.2 Drinking motives

Another major area in the broader antecedents of student alcohol consumption literature concerns research looking at drinking motives. Drinking motives have been discussed to have particular theoretical and applied relevance to student alcohol consumption partly given their hypothesised mediating role in the relationship between other psychological processes and drinking behaviour (Cooper, 1994). Based on a comprehensive review of 82 studies describing drinking motives research among young adults, four categories of drinking motives drawing on individual-based and social-based factors have been described including drinking motives to enhance positive mood, to obtain social rewards, to process negative emotions, and to avoid social rejection (Kuntsche, Knibbe, Gmel, & Engels, 2005). Research in this area has particularly focussed on the interactions between these drink motive sub-components and other psychological predictors of harmful student alcohol consumption. For example, cross-sectional research based on 229 US college students has indicated that the relationship between beliefs about the proportion of friends who drink and their approval of drinking behaviour and drinking behaviour itself is conditional on the presence of social drinking motives (Halim, Hasking, & Allen, 2012). Other research has displayed links between personality domains and drinking motives such that increased motivations to drink to cope with feelings of depression and anxiety were associated with being more neurotic, and increased motivations to drink for feelings of enhancement were associated with being more extraverted and less conscientious (Mezquita, Stewart, & Ruipérez, 2010).

A recent exploration of drinking motives among older adolescents in 13 European countries has confirmed considerable cross-cultural similarity in the links between stronger social drinking motives and an increased frequency of drunkenness among young people (Kuntsche et al., 2014).

1.2.2.3 Subjective norms

Subjective norms are an individual's beliefs about normative and/or expected behaviour associated with referents who would be expected to hold some importance in an individual's life (e.g., family, friends, peers), and their motivation to comply with these beliefs (Fishbein & Ajzen, 1975). From a health promotion perspective, social norms are of particular relevance to alcohol consumption among university students for several reasons. First, heavy drinking is an important behaviour within university communities where individuals may feel pressure to learn specific codes of conduct or community rituals (Rimal & Real, 2003). Second, unlike a home background environment where social rules are more likely to be clearly defined and boundaried, the social climate for individuals in university settings is relatively ambiguous and open to interpretation. This may amplify the effects of normative influences so that they are stronger than they would have been in pre-university social contexts (Reno, Cialdini, & Kallgren, 1993). Third, empirical evidence has recently suggested that perceived peer norms are among the strongest independent predictors of both binge drinking intention and binge drinking itself among university students (French & Cooke, 2012). Finally, addressing subjective norms related to drinking behaviour during early adulthood arguably provides an important opportunity to challenge, re-frame and modify beliefs relating to the drinking behaviour of same-age others at a crucial developmental time-point.

Links between perceptions of non-drinkers and subjective norms can be rationalised as follows. If non-drinkers are perceived in a negative light, one would expect this to both inform, and be informed by, beliefs relating to the relative frequency and intensity of peer drinking and its permissibility among peers. Theoretical and applied evidence from the subjective norms literature will now be considered.

Typically, subjective norms refer to either beliefs relating to frequency of peer drinking (i.e., descriptive norms) or how drinking behaviour is viewed among peers (i.e., injunctive norms). Interventions using both descriptive and injunctive norms have proven successful in reducing student drinking, for example by providing false or exaggerated notions of peer consumption levels (Borsari & Carey, 2001; Lewis & Neighbors, 2006; Prince & Carey, 2010; Walters, Bennett, & Noto, 2000). Social norms interventions are increasingly delivered via web-based interventions; of interest given their cost effectiveness and ability to reach a large number of students across university departments (Bewick et al., 2008b). Normative influence has formed the conceptual basis of personalized normative feedback interventions, designed to address misperceptions about the intensity or frequency of peer drinking. Some evidence supports their efficacy for both modifying normative beliefs and reducing alcohol consumption (Lewis, Neighbors, Oster-Aaland, Kirkeby, & Larimer, 2007; Neighbors, Larimer, & Lewis, 2004). However, other evidence has suggested that these effects are conditional on the interventional format (Dumas, Workman, Smith, & Navarro, 2011); has opposed the durability of their long-term impact on drinking behaviour (Collins, Carey, & Sliwinski, 2002), or has refuted their efficacy entirely (Moreira, Oskrochi, & Foxcroft, 2012). Although evidence to fully support their lasting efficacy is mixed, data suggests, on balance, that further exploration of interventions that address normative beliefs as a mechanism for behaviour change is warranted.

An important aspect of normative influence, extensively demonstrated to be highly predictive of drinking behaviour among university students, is misperceptions (overestimations) of both the quantity and frequency of alcohol consumed in campus settings (Perkins, 2002). For example, one large US study ($n = 76,000$) revealed that overestimations of drinking among student peers emerged as a stronger predictor of drinking behaviour than demographic factors and, importantly, *actual* campus norms (Perkins, Haines, & Rice, 2005). Other research has demonstrated a sex-specific pattern in how perceptions of drinking norms influence drinking behaviour. Here evidence has suggested that perceived same-sex drinking norms are stronger predictors of alcohol consumption for women than for men (Lewis & Neighbors, 2004). A meta-analytic review of predictors of normative misperceptions about drinking among US students has demonstrated that discrepancies between perceived and actual norms are greatest for perceived normative approval, distal reference groups (e.g., “most students”) more than proximal reference groups (e.g., “my best friend”), and estimates made by women (Borsari & Carey, 2003).

There has been ongoing debate about whether the well-documented ‘misperception gap’ reflects a valid phenomenon or whether it could equally be interpreted as a methodological artefact (Melson, Davies, & Martinus, 2011; Wechsler & Kuo, 2000). Counter-arguments have defended the phenomenon, on the grounds of that normative misperceptions have been evidenced to reduce alcohol consumption levels among students and, as such, provide a powerful clinical tool (Perkins, 2012). Social norm marketing interventions involve steering students towards the perception that alcohol is typically consumed to moderate levels among peers. These interventions have either been ‘broadcast’ via preventative health promotion messages aimed at the broader student body (Keeling, 2000), as well as in more individually-focussed contexts among

target groups or by practitioners (Borsari & Carey, 2000; Kypri et al., 2009). However, systematic reviews have not always provided support for the efficacy of social norm marketing interventions as devices for decreasing alcohol-related behaviour (Wechsler et al., 2003).

Personalised normative feedback (PNF) provides another framework through which over-estimations of peer drinking might be successfully addressed. Such approaches involve the provision of feedback relating to personal drinking alongside same-age peer consumption levels.

The UK literature on PNF interventions will be discussed first. A Cochrane systematic review of PNF based on 22 studies suggested that web-based feedback is effective in reducing short- and medium-term consumption levels, the episode-level intensity of alcohol use and the occurrence of alcohol-related problems (Moreira, Smith & Foxcroft, 2010). However, subsequent research has not provided evidence of significant effects of PNF for any aspect of alcohol-related behaviour (Moreira, Oskrochi, & Foxcroft, 2012). Other research has displayed more promising PNF intervention effects, with one study showing, relative to baseline, significantly lower per-episode follow-up consumption rates despite no changes in overall consumption or scores relating to the susceptibility to alcohol-related disorders (Bewick et al., 2008a).

The majority of PNF research has been conducted among students in the US rather than in the UK. There, PNF interventions have been demonstrated as successful in reducing drinking and drink-related problems. In a literature review, 11 of 13 PNF intervention studies were found to significantly reduce alcohol consumption among students, and this was true of web- and mail-based (but not counselling-based) delivery modes (Walters & Neighbors, 2005). Several studies have helped identify conditional effects of PNF interventions. For example, research suggests that computer-delivered

PNF interventions may be particularly effective at reducing the negative consequences of heavy drinking behaviour among individuals higher in controlled orientation (Neighbors, Lewis, Bergstrom, & Larimer, 2006). Evidence from a mail-out PNF intervention targeting students who drink heavily found that HED frequency was found to be effective in reducing intake at six week follow-up but not at six month follow-up (Neighbors et al., 2004). However, the enduring efficacy of PNF interventions in reducing alcohol consumption has only received modest supported in recent longitudinal research. Specifically, PNFs have not been demonstrated to be any more efficacious in modifying drink-related behaviour than more general screening intervention assessments not based on social norms (LaBrie et al., 2013; Neighbors et al., 2010). In a study of social norm messages among UK students, it was found that although perceived social norms were associated with patterns of drinking behaviour, norm-based health promotion messages did not influence students' intention to drink less harmfully and were not always considered credible by students (Robinson, Jones, Christiansen, & Field, 2014). To summarise; mixed evidence is available to support social norm interventions and the vast majority of published studies are based on US college samples. Therefore it would be useful to better establish the specific conditions under which social norms may be implicated in patterns of drinking behaviour among students at English universities.

Relevant to this research programme, items relating to perceptions of non-drinkers have consistently been present in measures of perceived peer norms relating to drinking behaviour. This is apparent in Turrissi's (1999) college student research which included the item "*my friends will think I am strange if I don't drink*" as one of their normative measure items. Another study which explicitly measured peer evaluations of non-drinkers is Perkins and Wechsler's (1996) measure of perceived campus norms which

included the item “*students here admire non-drinkers*”. In addition, Werner, Walker, & Greene (1996) found that respondents’ ‘best friend’s’ alcohol consumption status (comprising: non-drinker, light, moderate, social, heavy) was a significant predictor of personal consumption both at baseline and follow-up. Findings here indicate how the influence of perceptions of non-drinkers, although not an explicit focus of research in the social norm literature, have for some time been of implicit relevance to measures of norm-related influence in the context of student drinking behaviour. Evidence here provides some basis for investigating perceptions of particular ‘drinker types’ held among students as a distinct norm-related variable. Relatively negative perceptions of the prototypical non-drinker have recently been discussed as reflecting the need to shore up credentials with peer group members by demonstrating commitment to a normatively approved behaviour such as regular, or heavy, alcohol consumption (Regan & Morrison, 2013). Although this connection makes sense intuitively, the association between subjective norms and perceptions of prototypical drinker types has not been formally reported in the literature.

1.3 Non-drinkers and non-drinking

The discussion of subjective norms in the previous section has suggested that perceptions of drinkers and non-drinkers may be important to a broader understanding of how perceived peer norms influence drinking behaviour among students. The aim of the current section is to discuss literature relevant to an understanding of perceptions of non-drinkers, experiences of students and young people who are non-drinkers, and reasons for non-drinking among those who (i) do not drink as a lifestyle choice and (ii) those who decide not to drink for the duration of a social occasion. Implicit within this synthesis is the argument that these previously unrelated areas of empirical study can be

meaningfully considered integratively, given that all refer in some way to non-drinking as a social behaviour which may hold distinct implications for self and others.

1.3.1 Perceptions of non-drinking individuals

Research has consistently demonstrated that negative evaluations of non-drinkers predicts increased levels of alcohol consumption among students (Gerrard, Gibbons, Reis-Bergan, Trudeau, Vande Lune, & Buunk, 2002; Regan & Morrison, 2011; Zimmermann & Sieverding, 2010). However, there is some conceptual diversity within this literature reflecting differing understandings about what underlies these negative evaluations. In the section below, research associated with perceptions of drinker types, with a particular focus on perceptions of non-drinkers, is summarised and discussed.

The Prototype Willingness Model (PWM) provides an important theoretical starting point for assessing previous literature relevant to perceptions of non-drinkers. The PWM was originally specified to provide a theoretical framework for explaining seemingly irrational drinking behaviour among adolescents. The model proposes that individuals' willingness to engage in high risk behaviours is partly determined by the kinds of images they associate with particular types of behaviour such as regular drinking or non-drinking (Gibbons, Gerrard, Blanton, & Russell, 1998; Ravis, Sheeran, & Armitage, 2006). Consistent empirical support, including corroboration from a recent meta-analysis of 81 PWM studies, has been provided for this central hypothesis (Gerrard et al., 2002; Ravis et al., 2006; Todd, Kothe, Mullan, & Monds, In press). Prototypes are typically measured via a series of adjectival word pairs linked to rating scales (e.g., 1=extremely open;7=extremely reserved) which respondents are asked to use to make ratings of, for example, "the typical person your age who regularly drinks alcohol" (regular drinker prototypes) or "the typical person your age who does not drink

alcohol” (non-drinker prototypes). Recent studies have expanded the basic tenets of PWM research in various directions. One study assessed dimensional aspects of alcohol-related prototype perceptions and described ‘responsibility’ and ‘sociability’ constructs (Zimmermann & Sieverding, 2011). Regression analyses here demonstrated that increased perceptions of drinker sociability were associated with increased intention and willingness to drink harmfully, while decreased perceptions of non-drinker sociability were predictive of increased willingness to drink harmfully. These findings usefully suggest that it may only be a particular configuration of prototype perceptions (i.e., those grouped in terms of a sociability dimension) which are predictive of drinking intention and willingness. Other authors have provided focus group validation of PWM scales based on an adolescent sample, producing findings which offer construct validity in support of the clarity and integrity of the traditional scale’s adjective terms as descriptors of prototypical drinker types (Davies, Martin, & Foxcroft, 2013). Some research has also pointed to the possibilities of specifying a more diverse range of drinker prototypes, including moderate, heavy, tipsy, and drunk prototypical drinker types alongside the traditional ‘regular drinker’ and ‘non-drinker’ prototypes (van Lettow, Vermunt, de Vries, Burdorf, & Empelen, 2012). Encouragingly, this research has suggested that different aspects of prototypes require attention if they are to be employed successfully within health-promoting interventions. For example, one paper indicates that both unrealistic perceived similarity and perceived desirability to a target prototype (e.g., to drunk prototypes) could usefully be exploited as modifiable interventional targets in health promotions aimed at students (van Lettow, de Vries, Burdorf, Norman, & van Empelen, 2013). Another paper, demonstrating that stable prototype similarity perceptions were more predictive of drinking intention than unstable prototype similarity, suggests that the temporal stability of prototypes should

be considered when exploring their influence on drinking behaviour (van Lettow, de Vries, Burdorf, Conner, & Empelen, 2014).

One limitation of the PWM is that prototypical images of non-drinkers and regular drinkers are assumed to reflect evaluations of, respectively, health-based and risk-based behaviour, as represented by prototypical exemplars of each behavioural type (e.g., non-drinker prototypes, moderate drinker prototypes). This risk-based formulation of what perceptions of non-drinkers represents at a conceptual level arguably restricts a more sophisticated account of how perceptions of non-drinkers are implicated in student drinking behaviour. Conceptualising perceptions of prototypical actors/non-actors of an often socially-located behaviour such as alcohol consumption in a manner that ignores the normative dimension of these perceptions may provide a limited account of how to understand and interpret their effects.

Two recent studies have explored the notion of perceptions of non-drinkers in conceptual terms which reach beyond perceptions of the prototypical non-drinker and are framed at a purely risk-based theoretical focus. Research here has provided initial support for an Attitudes Toward Non-drinkers (RANDS) psychometric measure among 18-25 year old young adults and adolescents (Regan & Morrison, 2011; Regan & Morrison, 2013). For example, sound reliability for the RANDS has been demonstrated (95% CI $\alpha = 0.82-0.88$). Other evidence, demonstrating that non-drinkers were evaluated more negatively in association with stronger perceptions of peer pressure and stronger need to belong has provided support for the RAND's concurrent validity (Regan & Morrison, 2011). Despite the utility of having a measure which conceptually foregrounds the notion of perceptions of non-drinkers, this scale can be criticized on the grounds that it arguably conflates diverse conceptual items. For example, items include: non-drinking as an imagined personal behaviour (e.g., "I would find it very hard to

enjoy my social life if I were a non-drinker”); the impact of an individual’s non-drinking behaviour on the quality of a social occasion (e.g., “An evening with a non-drinker tends to be predictable”) alongside items which more clearly relate to attitudes held towards non-drinking individuals (e.g., “Non-drinkers tend to be repressed”). This is important given that effects of perceptions of prototypical individuals (e.g., drinkers, non-drinkers) would be distinct from perceptions of particular behaviours (e.g., drinking, non-drinking). For example, someone may hold negative evaluations of ‘the typical non-drinker’, yet may hold a favourable view of non-drinking as a lifestyle choice or as a behaviour practised within social occasions. Despite initial evidence supporting its unidimensional structure, the RANDS might be understood to be at risk of misrepresenting the effects of distinct beliefs and experience-based perceptions concerning non-drinkers as individuals and non-drinking as a social behaviour.

Recent focus group data has indicated how the social presence of *actual* non-drinkers rather than *prototypical* non-drinkers may influence drinking behaviour (Brown, Koelsch, & Yufik, 2010). Findings from this study demonstrated that while non-drinkers who attended student parties involving heavy drinking were likely to face some degree of stigma or peer scrutiny, they were principally tolerated and understood as an exception to the normative rule in that social context. Other qualitative research has highlighted the complexity of how non-drinkers can be viewed within peer groups (Conroy & de Visser, 2013). Findings here involved contradictory construals of non-drinkers as less sociable for not joining in with peers who are drinking, yet in some ways *more* sociable than alcohol-consuming peers on the basis that they do not appear to be reliant on alcohol for feeling more socially at ease.

Research presented in Section 1.3.1 has demonstrated that perceptions of non-drinkers have been explored in varied forms including PWM’s ‘risk images’ approach

and in more enduring attitudinal terms with the RANDS measure. This illustrates the conceptual and operational options for how research in this field could be taken forward. Important considerations here seem to be maintaining conceptually coherent and well-validated measures while also recognising that an important feature of perceptions of non-drinkers involves evaluation in relation to a relevant perceptual counter-point. With this in mind, exploring discrepancies between perceptions of the prototypical regular drinker in relation to the prototypical person who does not drink at all would arguably provide a valuable indicator of whether and how alcohol's perceived social benefits (represented by the perceived difference between prototypical drinker 'types') moderate drinking behaviour. In the context of the broader literature concerning psychological determinants of student drinking behaviour, this would provide an original contribution to an understanding of how the influence of dispositional factors or normative beliefs on student drinking behaviour may be moderated by perceptions of non-drinkers.

1.3.2 Experiences of non-drinkers

One additional aspect of normative misperception not covered at an earlier point in this chapter, is its impact on university students who are non-drinkers. For example, previous survey research has demonstrated that misperceptions of drinking norms can contribute to an alienated social experience on campus for university students who are non-drinkers or light drinkers (Perkins, 2007). Understanding the social experiences of student non-drinkers in greater detail is of particular interest from a health promotion perspective given that these individuals would have experience in managing peer pressure to drink alcohol and an understanding of how to compose oneself subjectively and engage oneself socially without using alcohol. For example, several recent

qualitative studies have recently explored how non-drinking is managed by young people in situations where their peers are drinking alcohol (Herring, Bayley, & Hurcombe 2014; Nairn, Higgins, Thompson, Anderson, & Fu, 2006; Piacentini & Banister, 2008; Piacentini & Banister, 2009; Piacentini & Banister, 2012; Seaman & Ikegwuonu, 2010). Collectively, the evidence suggests that being a non-drinker is a type of identity which requires strategic management in social settings. For example, some studies have indicated that non-drinkers are under pressure to negotiate their way through stereotypical impressions of non-drinkers as boring or no fun (Piacentini & Banister, 2009; Seaman & Ikegwuonu, 2010). Other research has pointed to the different kinds of legitimate alternative subject positions constructed in conversations about non-drinking including sporty or healthy identities or by reconstituting social drinking as an abject behaviour (Nairn et al., 2006). Both quantitative and qualitative studies have reported the lengths that non-drinkers will go to in order to have a reasonably stress-free social life including ‘passing as drinkers’ during social occasions by being either claiming to be drinking alcohol and/or by being seen in possession of an alcoholic drink (Herman-Kinney & Kinney, 2013; Nairn et al., 2006). For example, recent interview evidence demonstrates how student non-drinkers resist deviant labelling of their non-drinking by passing as drinkers (Herman-Kinney & Kinney, 2013). Data from this study suggested how strategies changed during time at university, progressing from concealment strategies (e.g., using medical disclaimers such as ‘I’m diabetic’) to preventive disclosure strategies (e.g., sharing genuine reasons with trustworthy others) to varying degrees of success in terms of refracting peer scrutiny. Another study has provided evidence of sex-specific patterns in the coping strategies employed to socially manage non-drinking as a lifestyle choice. Evidence here suggests that mutually-supportive coping strategies (e.g., seeking support from other non-

drinking others) are employed to resist the social stigma of non-drinking particularly among women (Piacentini & Banister, 2009).

To the author's awareness, research has not been conducted to explore experiences of socialising with alcohol-consuming others while remaining sober themselves. Findings from an anecdotal source interestingly highlight that researchers who are required to remain sober for long time periods in drinking environments while completing club-based health behaviour research have described the extremely tedious nature of the experience (Measham, personal communication, November 15, 2012). It would therefore be useful from a health promotion viewpoint to understand whether this is also the experience of individuals who do not drink as a lifestyle choice during similar social occasions and, if not, how potential boredom or frustration in such environments is coped with.

Further research relating to the experiences of non-drinkers is important for several different reasons. Understanding how not drinking during some social occasions might be more successfully and comfortably achieved would provide a useful way of thinking about how non-drinking might be encouraged among young people and students during occasions where peers and friends are drinking. Outstanding research questions stemming from the extant literature concerning experiences of non-drinkers include understanding whether non-drinkers can reveal particular positives or benefits relating to social experiences that do not involve alcohol consumption. For example, learning how social opportunities are limited or enhanced among non-drinkers, by virtue of not drinking alcohol in contexts where most other peers are, would be useful. This would provide one way in which the ambitions of health promotion messages designed to assist students to drink more moderately might be practically realised, by providing individuals with the suggestion and skills that not drinking during some social occasions

might hold some advantages and might be achieved more successfully than is anticipated or feared. This would also be consistent with current government advice encouraging individuals to uphold two days where no alcohol is consumed during a single week (National Health Service, 2014a). Such recommendations highlight the importance of teaching individuals not to drink during social occasions even when they want to and when other people are drinking alcohol. In this way, developing an understanding of possible advantages of non-drinking during social occasions, and better understanding for how non-drinking is carried out with minimum levels of peer pressure to drink alcohol, holds relevance for any student who might be encouraged or supported in their decision not to drink during certain social occasions.

1.3.3 Reasons for non-drinking

Motivations for non-drinking have been explored among students who may sometimes decide not to drink alcohol during a social occasions and, to a lesser degree, among non-drinking students who have chosen not to drink alcohol as a lifestyle choice (e.g., Epler, Sher, & Piasecki, 2009). Understanding motivations for not drinking have been studied in cross-sectional studies based on adolescent (Stritzke & Butt, 2001) and university student samples (Huang, DeJong, Schneider, & Towvim, 2011). Reasons for not drinking or for limited alcohol consumption have been investigated in longitudinal research among US college students. Here, changes in the reasons for non-drinking between adolescence and becoming a university student were explored both among students who sometimes do not drink and among students who do not drink as a lifestyle choice (Epler et al., 2009; Maggs & Schulenberg, 1998). For example, one study revealed a complex and reciprocal relationship between drinking behaviour and reasons for abstained or limited drinking, with reasons for non-drinking involving

perceived or experienced negative consequences of alcohol consumption associated with greater subsequent alcohol consumption (Epler et al., 2009). These studies have produced some useful evidence for considering how holding different kinds of reasons for non-drinking may differentially influence the alcohol status of adolescents or university students. For example, one study found that increased fear of negative consequences was the only reason for non-drinking to be associated with lower levels of HED among adolescent drinkers (Strizke & Butt, 2001). Another study demonstrated differences between drinkers' and non-drinkers' reasons for non-drinking. These suggested that a greater number of more personal reasons (e.g., not wanting the image of a drinker; beliefs about alcohol's effect on behaviour) were endorsed by non-drinkers; while situational or pragmatic reasons for non-drinking (e.g., having to drive later; concern about weight gain) were more likely to be endorsed by drinkers (Huang et al., 2011). Longitudinal research has also demonstrated that psychologically informed alcohol interventions may help sustain the presence of compelling reasons not to drink during the transition from adolescence to young adulthood (Maggs & Schulenberg, 1998).

Several important limitations of this small literature should be considered. First, different measures of reasons for non-drinking were used in each of these studies, but only one used focus groups to produce a list of reasons (Huang et al., 2011). This has meant that, in most cases, participants have only been given the opportunity to endorse reasons generated by researchers rather than given the freedom to identify their own reasons for not drinking. It would be useful to develop a more in-depth understanding of reasons for non-drinking held by non-drinkers and drinkers (alike and separately) via appropriate qualitative data collection methods (e.g., interviews; focus groups). This approach would also benefit from not assuming from the outset that motivations for

non-drinking should be inevitably understood as inverted versions of motivations for drinking. Research designed to investigate alcohol consumption in a demographically diverse sample of young men has demonstrated that most individuals simultaneously hold reasons for and against drinking. Findings here demonstrated that even among individuals who might be thought more likely to drink to excess (e.g., young men) various pre-existing motivations not to drink alcohol during certain social occasions are found (de Visser & Smith, 2007a). Second, some reasons for non-drinking described in the studies presented in this section often bear close conceptual similarity to items from other psychological constructs. For example, ‘fear of negative consequences’ adopted in three of the studies cannot be conceptually distinguished from similar, more widely adopted constructs such as alcohol expectancies (e.g., Jones, Corbin, & Fromme, 2001). Although it has been useful to explore reasons or motivations for non-drinking among lifelong non-drinkers and individuals who do drink alcohol within large samples, it is suggested that an *etic*, locally focused, investigative approach could make a valuable contribution to this field. Rather than exploring reasons for non-drinking using a pre-ordained list of categories, it would also be useful to ask lifelong student non-drinkers and students who have given up drinking alcohol about their personal reasons for non-drinking.

1.3.4 Varied definitions of non-drinking

Difficulties with both the definitional meaning of the term “non-drinker” together with varied approaches to study inclusion criteria have produced a somewhat heterogeneous literature relating to the experiences of student non-drinkers. Arguably, researching non-drinkers as a homogenous group, regardless of the motivation for not drinking, restricts opportunities to address coherent health promotion research questions. This can be

explained as follows. One direct application of research relating to the experiences of non-drinkers to a broader student population is understanding the kinds of skills and tactical approach that students might employ so as to be more successful in an effort not to drink alcohol during social occasions. However, from a peer tolerance viewpoint, the experiences of a non-drinker who has limited choice and/or robust cultural support for not drinking socially (e.g., reason for non-drinking = religious or health condition) cannot reasonably be understood as the same as the experiences of a non-drinker who has considerable choice and/or weak cultural support for not drinking socially (e.g., reason for non-drinking = dislikes alcohol's effect on self or others). This understood, it is suggested that the experiences of the latter group would provide a more useful focus of health promotion attention, given their greater applicability to any student intending not to drink during a social occasion or life period, yet without a culturally acceptable account for that decision.

Research reporting experiences of non-drinkers has historically included varied inclusion criteria reflecting different understandings of what is termed 'a non-drinker'. For example, the term 'non-drinker' has been understood to refer to both light-drinkers and individuals who do not drink at all (Nairn et al., 2006). Other researchers have studied non-drinkers under broader headings, evident in Piacentini and Banister's (2009) research concerning 'anti-consumers', or, individuals who enact different kinds of counter-normative behaviour including non-drinking. Herring et al (2014) distinguished between individuals whose non-drinking reflects a consistently practiced lifestyle decision ('consistent'), the end-point behaviour following gradual decreases in alcohol consumption ('transitional') and individuals who choose not to drink following a particular experience or pre-meditated decision ('turning point'). Two studies have excluded individuals who do not drink primarily for religious reasons (Herring et al.,

2014; Seaman & Ikegwuonu, 2010). This sampling decision was supported in different ways by each study. For example, Herring et al (2014) were explicitly interested in clarifying the breadth of reasons for not drinking among different kinds of non-drinker and drinker and this is reflected in their sample of never drinkers, current light drinkers, former drinkers, and individuals who both had and had not previously experienced getting drunk. However, in other research (e.g., Seaman & Ikegwuonu, 2010), no explicit sampling rationalisation has been provided. Distinctions between lifelong non-drinkers and former drinkers have also been made. For example, one study referred to lifelong non-drinking and former drinking individuals as abstainers and desistors, respectively (Herman-Kinney & Kinney, 2013). The divergent sampling approaches favoured by these authors reflects the variety of research questions addressed in this domain. However, it also draws attention to the possible utility of a more clearly defined conceptual rationale underpinning inclusion/exclusion criteria for research investigating non-drinkers.

1.4 Non-drinking as a subject of health promotion interest

Efforts to promote more moderate drinking behaviour among young people have traditionally been orientated towards educating individuals with regard government recommended levels of alcohol consumption. There is some scientific evidence that this population-focused health promotion rationale is valid (Kreitman, 1986). Formal notions of ‘sensible drinking’ can be dated to 1987 with the introduction of the UK alcohol unit system (1 unit = 10mL/8g pure ethyl alcohol), used as the basis for drinking guidelines concerning recommended weekly intake maxima for men (21 units) and women (14 units). These guidelines were later supplemented with information concerning daily intake maxima for men (>4 units) and women (>3 units), which were

introduced in the 1995 Sensible Drinking report (UK Parliament, 2012). This health promotion approach remains evident in the recent ‘Know your limits’ campaign and the current ‘Change4life’ campaign which have encouraged people to develop improved understanding of moderate drinking guidelines and to monitor their weekly alcohol intake to remain closer to recommended consumption levels. The Change4Life campaign also contains the explicit suggestion to take two ‘dry days’ off per week from drinking any alcohol (National Health Service, 2014a). A recent review of UK government alcohol guidelines has noted that health promotion initiatives tend to emphasise the importance of reducing overall consumption levels rather than addressing how frequently alcohol is consumed as a distinct outcome with disease-indexed benefits (Royal College of Physicians, 2011). This supports the view that it is important to develop ways of encouraging individuals to take drink-free days, given that these may play an important role both in facilitating more moderate approaches to drinking behaviour, but may also as a direct means of protecting physiological health. No studies to date have explored how ‘dry days’ behaviour might be achieved or supported most effectively. Recent research has also drawn attention to the difficulties involved in communicating clear, universally recognised definitions of moderate or low risk drinking behaviour (Dufour, 1999; Furtwängler & de Visser, 2013). For example, a review of alcohol guidelines in 57 countries revealed considerable inconsistency in standardised unit systems and has drawn attention to the absence of recommended weekly maxima for consumption in the UK (Furtwängler & de Visser, 2013).

Furthermore, it has recently been suggested that lack of knowledge about drinking guidelines may lead to inaccurate self-monitoring of alcohol consumption among young people (de Visser & Birch, 2012). From a health psychology perspective, this presents a theoretical and interventional challenge to consider ways in which moderate drinking

can be successfully instilled in the drinking behaviour of young people and students. This research programme adopts the position that studying non-drinkers and non-drinking provides one route toward supporting more moderate alcohol consumption within the student population.

1.5 Understanding causal relationships

The quantitative research relating to prototypes reported in this dissertation reflects a conventional view of assumed causal relationships. It would be instructive to consider these assumptions before the research programme is described. PWM studies have tended to assume that prototypes are proximal *to*, and exert influence uni-laterally *on*, behaviour itself. Arguably, this provides a greatly simplified account of causal mechanisms where the reciprocal influence of behaviour, the sociocultural context, or any other variables onto prototypical images is ignored.

This is reflected in broader trends in social cognitive research, where investigation into one-way causal relationships between psychological characteristics and subsequent behaviour are typical. To illustrate, Theory of Planned Behaviour studies place great emphasis on determining the strength, in varied contexts, of the attitude-behaviour relationship (Ajzen, 1991; Armitage & Connor, 2001). Assumed cognition-action causal relations are also clearly present in the Protection Motivation Theory literature, where the distal influence of threat/ coping appraisals on behaviour have been explored in many settings (Maddux & Rogers, 1983). These trends in psychological research reflect a strong bias toward *the rational actor* in an understanding of how causal agency should be conceived and studied (Pfeffer, 1982). Closely linked to this is a growing interest in theoretical parsimony and taxonomical approaches to the science of behaviour change (e.g., Abraham & Michie, 2008). In this context, the cause-effect relationship between

prototypes and behaviour defined in PWM studies reflects broader theoretical and empirical conventions. Indeed, it has been anticipated that research into the heuristic, automated influence of prototype perceptions will provide insights into the “perception-behaviour expressway”, offering greater accuracy in predicting behaviour (Dijksterhuis & Bargh, 2001; Hukkelberg & Dykstra, 2009; Ravis & Sheeran, 2003).

More complicated ways of framing causal relationships are somewhat rare in the alcohol-related social cognition literature. One example includes longitudinal research which has demonstrated a reciprocal relationship between cognitions and behaviour, such that increases in high risk drinking behaviour increased in close association with increased levels of perceived vulnerability, health concerns and descriptive norms (Gerrard, Gibbons, Benthin, & Hessling, 1996). Equivalent or similar research exploring whether behaviour leads to changes in prototype perceptions has, to the candidate’s knowledge, not been explicitly modelled in the empirical literature. Intuitively however, there is no compelling reason why health psychology theories should not routinely specify reciprocal relations between prototype perceptions and behaviour. For example, understanding how an individual’s habitual drinking behaviour may shape and maintain how prototypical drinkers and prototypical non-drinkers are perceived seems likely to be of both theoretical and applied interest from a longitudinal perspective.

Despite the variety of possible options involving more complex causal pathways, the conventional ‘prototype-behaviour’ causal pathway was favoured in this dissertation over the exploration of more complex theoretical and temporal relationships between variables. While somewhat simplistic, the assumed prototype-behaviour causal relationship is acknowledged to provide a clear basis for exploring a clearly defined theoretical pathway that implies that modification of one thing may lead to behaviour

change. In this way, this research programme is consistent with the focus and objectives of current behaviour change initiatives (e.g., Michie, Johnston, Francis, Hardeman, & Eccles, 2008; Michie, 2014). This approach is also suited to the pragmatic approach described elsewhere in this dissertation (see Section 2.1.3). Within the confines of this research programme, alcohol-related prototypes were viewed in two ways. First, as potentially useful markers for identifying students at risk of excessive drinking (Study One, see Section 2.5.1). Second, as targets in themselves which might have a mechanistic role (e.g., as moderators or mediators) over the potential influence of intervention effects on student drinking behaviour (Study Three, see Section 2.5.3).

1.6 Research programme focus and overview

The research presented in this dissertation is intended to integrate and extend two distinct areas of empirical interest: one relating to perceptions of non-drinkers among university students and another relating to experiences of student non-drinkers.

Furthermore, this research programme is intended to provide some integration of these previously unrelated areas of health-related research. Accordingly, the broad areas of enquiry in this research programme are as follows: (1) to explore perceptions of non-drinkers using a modified PWM measure and establish how this may relate to normative influence; (2) to investigate the social and subjective experiences of students who do not drink alcohol (further defined and discussed as ‘culturally unsanctioned non-drinkers’ in Section 6.2.1); and (3) to use study findings to this point to develop an intervention designed to reduce student drinking levels.

1.7 Summary of research questions

Five over-arching research questions are explored across the empirical chapters in this dissertation:

- (1) How might perceptions of non-drinkers be usefully conceptualised and operationalized?
- (2) What associations are there between perceptions of non-drinkers and established dispositional and belief-based predictors of student drinking behaviour?
- (3) What are the positive features of not drinking during social occasions as a lifestyle choice?
- (4) How are social encounters involving non-drinking most successfully managed by students who do not drink as a lifestyle choice?
- (5) How might evidence from the perceptions of non-drinkers and experiences of non-drinkers literatures be usefully integrated within an intervention designed to promote behaviour change among students?

Chapter 2

Methodological Overview

2.1 Methodological issues

This dissertation presents research questions concerning perceptions of non-drinkers and experiences of non-drinkers and is also intended to produce some synthesis of these previously unconnected areas of research in the form of a health promotion intervention. Given the variety of research questions presented at the end of Chapter One, it follows that varied research methods of data collection (interviews, surveys and exercises) using both qualitative and quantitative data analytic methods are applicable to this research programme. This chapter is included to provide a discussion of: (i) the methodological issues involved in an integrated mixed methods research programme, (ii) the possible analytic approaches available for the qualitative data analysis, (iii) issues relating to methodological quality and research ethics and (iv) study-specific methodological issues relating to sampling, data collection and data analysis.

2.1.1 Mixed methods research

Mixed methods research has been defined in various ways in the literature. Indeed, some authors have suggested that mixed methods research programmes are paradigms in their own right (Greene, 2008). However the extent to which different research methods, each with its own epistemological position, can be integrated within the same research programme can polarise authors (Creswell, 2011). For example, some authors adopting a purist stance claim that two versions of reality nested in the same research programme presents a fundamental problem of contradictory incompatibility for mixed methods researchers (e.g., Holmes, 2006). Other authors have taken a more optimistic

view of the possibilities for mixing distinct methodological paradigms in the same research programme. For example, Greene and Caracelli (1997) suggest how useful tensions can emerge from the presence of opposing ontological paradigms in the same research programme. Taking the view that a mixed methods programme is composed of multiple phases of research design (each with their own paradigmatic orientation) has provided an additional way for responding to purist criticism of mixed methods research (Creswell & Plano Clark, 2007).

The decision to adopt a mixed methods research approach was based on several factors. First, common to most health psychology research, studies in this dissertation stem from real world research issues and therefore required methodological flexibility if sufficient breadth of understanding was to be reached (Robson, 2002). Second, following a strict epistemological rationale rather than choosing the most suitable methodological tools suited to distinct features of research enquiry was arguably not conducive to producing progressive and subject-sensitive research. In this dissertation, the range of topic areas meant that measuring phenomena from an outsider perspective as well as trying to understand things from an insider perspective both were relevant - the former and latter representing positivist and interpretative paradigms respectively (Smith & Heshusius, 1986). This is clear when one considers the nature of the overarching research questions. Specifically, when thinking about perceptions of non-drinkers, issues of measurement are inevitably involved. For example, quantification is needed if it is to be understood whether negative perceptions of non-drinkers are linked with higher levels of alcohol consumption, among whom this association may be strongest, and whether perceptions can be influenced to become more favourable in response to a health promotion intervention. By contrast, when thinking about experiences of student non-drinkers, issues of meaning and understanding are

important. For example, fine grain exploration of a qualitative data set would be required if the reasons for non-drinking, strategies involved in non-drinking and possible negative and positive aspects of non-drinking are to be well understood.

The following two sections cover, respectively, issues relevant to mixed methods programmes generally and the rationale underpinning the current research programme's mixed methods approach.

2.1.2 Ontological, epistemological and methodological assumptions

Integration of mixed methods research may present difficulties given that different studies may be based on different epistemological foundations. This dissertation includes quantitative methods associated with positivist paradigms including between-participant comparisons (e.g., ANOVAs, Chapter Three), moderation analyses (Chapter Four), factor analytic procedures (e.g., exploratory factor analysis, Chapter Three) and longitudinal structural equation models (e.g., latent growth analysis, Chapter Ten). However this dissertation also includes qualitative methods in the form of two thematic branches from an interpretative phenomenological analysis (presented in Chapters Six and Seven), which embraces some degree of relativism in its epistemological stance.

Qualitative and quantitative approaches are concerned with, respectively, focus on words versus a focus on numbers; a focus on meanings versus behaviour; the rejection or adoption of natural science as a dominant epistemological paradigm, and an emphasis on cultural patterns versus establishing universal laws (Hammersley, 1992). This means there are inherent tensions involved in a research programme where positivist and interpretivist epistemological positions are mixed and differing ontological understandings of the social world are implied. Indeed, the decision to adopt a particular psychological research method reflects a chain of paradigmatic assumptions relating to

assumptions about existential reality (i.e., ontological assumptions), the status of knowledge (i.e., epistemological assumptions) and practices or principles concerning methods (i.e., methodological assumptions). In this way, it is important to acknowledge that a given method is inseparable from its associated philosophical framework. This presents a problem for mixed methods researchers as different research methods will reflect different philosophical assumptions about the nature of reality. Also, positivist researchers adopt the position that the world can be viewed objectively, theorised in universalistic terms and measured accordingly. Broadly speaking, researchers adopting an interpretivist position would suggest that knowledge is always relative and that therefore the research process should focus on identifying patterns of meaning making and acknowledging the interpretive preference of both the researcher and researched in making sense of social phenomena. These positions can also be thought of in terms of an epistemological spectrum ranging from naïve realism, through to contextual relativist and radical relativist epistemological positions (Madill, Jordan, & Shirley, 2000), along which possibilities for concrete meanings are progressively challenged, with greater emphasis increasingly placed on how understanding is conditional on relational and situated features of the data collection process (Madill et al., 2000).

With a range of differing epistemologies having been acknowledged, it can now be better understood how including multiple methods, each with a differing starting point, within the same research programme, raises questions on epistemological grounds. Differing ways in which mixed methods research might be meaningfully approached and ways in which epistemological tensions might be understood (if not resolved) have been presented by some authors. For example, it has been suggested that adopting a multi-dimensional mixed methods approach in which the integrity of different perspectives is maintained within the same narrative might produce a useful creative

tension between methods (Mason, 2006). Similarly, it has been suggested that complete synthesis needs not be core within a mixed methods approach, where epistemological tensions can themselves be an element involved in creating meaning (Dellinger & Leech, 2007). In this dissertation, though real world concerns presented a rationale for mixed methods research, an iterative sequence of study stages involving distinct methodological approaches was not adopted, consistent with the recommendations of several authors (Dures, Rumsey, Morris, & Gleeson, 2011; Tashakkori & Creswell, 2007). Instead, different phenomena (e.g., perceptions of non-drinkers; experiences of non-drinkers) were explored via different ontological approaches (e.g., positivism; relativism) and using distinct research methods (e.g., inferential statistics; phenomenological analysis), on the basis of their relevance to each research question.

2.1.3 A pragmatic approach to mixed methods

Although these issues are clearly of concern within a traditional programme of psychological research involving a methodologically purist perspective, this is not of concern from a pragmatic perspective where the appropriate matching of methods to research programme questions is given greatest priority. In the spirit of pragmatism, alternative ways of conceiving a basis for qualitative research which manages to be rigorous yet flexible have recently been provided by several authors (Howe, 2003; Yardley & Bishop, 2007). For example, researchers working from differing epistemological positions have been encouraged to engage in ‘paradigm dialogue’, referring to a willingness to engage collaboratively on issues relating to knowledge accumulation, values and politics which may underscore the research process.

This has led to recent discussion supporting the adoption of mixed methods on a *pragmatic* basis. For example, it has been suggested that mixed methods research might

be more usefully understood as a set of epistemological tools to address real world issues rather than an epistemological position in its own right (Biesta, 2010). Similarly, Denzin (2010) has suggested that mixed methods research provides a powerful way of orientating social science research towards more utilitarian applications. Therefore, it could be argued that for social research to be most useful, then exchanges and interactions between paradigms may be essential.

In this context, Mason's (2011) notion of *facet methodology* is also useful. Facet methodology encourages varied enquiry lines and ways of understanding such that strict boundaries between methods and epistemologies are abandoned for a more fluid analytic approach privileging data complexity and a more collaborative, dialogical and creative approach to methodology. From this position, fundamental dissimilarities in opinion about what kinds of knowledge should be privileged in social science research (epistemological differences) and alternative beliefs about social reality (ontological differences) in the same research programme are easily overcome, as the contributions of each distinct research question offers creative scope for understanding a research topic area (Mason, personal communication, July 3, 2012).

In the spirit of facet methodology, contributions of quantitative and qualitative approaches in the current research programme is to cast them as *problem-focussed* and *solution-focussed*, respectively. With respect to the *problem-focussed* component, understanding how perceptions of non-drinkers are linked to consumption-related patterns may provide a novel basis for screening a target group among whom such perceptions or attitudes might be challenged or modified. With respect to the *solution-focussed* component, understanding experiences of non-drinkers are anticipated to provide important insights into how students might be supported in the decision not to drink during social occasions, and how such a decision might be presented more

favourably. Accordingly, research in this dissertation first explores the relationship between perceptions of non-drinkers and alcohol consumption patterns (Chapters Three and Four), followed by a detailed account of the social experiences of five non-drinkers (Chapters Six and Seven), and concludes with a synthesis of dissertation data in a final empirical study describing an intervention to reduce student alcohol consumption (Chapter Ten).

2.2 Qualitative research options

Using research concerning the experiences of non-drinkers provides one route toward thinking about how moderate drinking might be successfully promoted within the broader student population. This provides an alternative route to more conventional alcohol health promotion approaches which might be more likely to focus on identifying and modifying possible social-cognitive causes of harmful drinking behaviour. Although some previous studies of the experiences of non-drinkers have adopted a clearly-defined methodological framework, for example in the case in Nairn et al's (2006) discursive exploration of self-rationalising subject positions assumed by non-drinkers, other qualitative studies of non-drinkers' experiences have not. Given the broad spectrum of perspectives and analytic methods within the qualitative research tradition, it will be instructive to briefly consider the differing methodological contributions that each approach would have to offer in the context of the current research programme. By identifying a clearly defined methodological framework, both possibilities and boundaries for understanding the experiences of student non-drinkers will have been established.

2.2.1 Grounded theory

Grounded theory emerged in response to critiques of what were felt to have become increasingly abstract theoretical explanations of social phenomena during the 1960s. Grounded theory provided a framework with which social science theories might find clearer grounding in social reality (Glaser & Strauss, 1967). Both realist and constructivist versions of grounded theory exist. These, respectively, outline prescriptive methodological steps and adhere to an interest in universal claims (Glaser, 1992), or emphasise that derived theoretical frameworks are inevitably social constructed versions of the many potential theories which might be articulated (Charmaz, 2003). By focusing on social processes, grounded theory maintains a particular interest in contextualising social phenomena, rather than necessarily privileging a distinctly psychological account of phenomena as would be the case, for example, with a phenomenological analysis (Willig, 2008). To produce a broad explanatory account of factors involved in non-drinking and the experience of non-drinking, grounded theory would be a difficult framework to work with given the heterogeneity of the individuals who make up ‘student non-drinkers’. Using grounded theory would also be at the expense of a more idiographic and experiential account in which the diversity of non-drinking experiences could be represented. For these reasons, neither realist nor constructivist grounded theory would provide the most useful methodological approach in the current research context.

2.2.2 Narrative analysis

Narratives enable individuals to establish structure and meaning to life events, yet are also dynamic and take place in relation to a changing social context (Riessman, 1993). Investigating the character, structure and diversity of different narratives provides a

framework for researchers to understand patterns linked to how identity is shaped or maintained through narrative. Narrative analysis, a family of research approaches used in the social sciences, makes use of the life story interview. This process involves identifying narratives relating to particular life experiences in terms of their varied structural features. For example, evidence of emphasis/de-emphasis, of contradiction, or whether particular aspects (e.g., relating to morality) are present would be of interest from a narrative analyst's perspective (Murray, 2003; Noblit & Dempsey, 1996). In the current research context, understanding the developmental trajectory of how non-drinking is decided upon and built into an individual's sense of self or social identity would be one useful way in which narrative analysis might be used. For example, understanding convergent/divergent features of accounts might indicate narrative devices used among non-drinkers to make sense of how their decision not to drink was reached and has been maintained. Although narrative analysis would be a powerful way of understanding how an individual might become a moderate- or non-drinker, there would be fewer opportunities for understanding experiences of what it is like to be a non-drinker in an individual's current social network. This experiential emphasis is important from a health promotion perspective in the interests of exploring ways in which students might be empowered not to drink during particular social occasions in a flexible manner rather than as a long-term lifestyle choice.

2.2.3 Discourse analysis

Discourse analysis refers to varied methods which adopt a social constructionist ontological framework for understanding phenomena. The perspective underlying the method is concerned with understanding how subjectivities are made possible via language. There are various different branches of discourse analysis, each with its own

analytic emphasis. For example, Foucauldian discourse analysis is designed to study the active use of cultural resources involving power relations within linguistic practices (Willig, 2008). By contrast, discursive psychology involves the study of social construction within social interactions and attends to the fine-grain rhetorical activities that occur within natural conversation (Potter & Wetherell, 1987). Exploring rhetorical strategies used by non-drinkers within social interactions and the subjective implications which follow would be of particular interest in the context of the current research programme. However it might be argued that understanding *how* non-drinkers engage in social interactions is of less interest from an applied perspective than explicating the broad structure and contents of what the social experience of being a student non-drinker is like.

2.2.4 Interpretative phenomenological analysis

Though interpretive phenomenology has a long history (Heidegger, 1927/1962), interpretative phenomenological analysis (IPA) was conceived to bridge the gap between positivist and discursive traditions relatively recently (Smith, 1996).

Central to IPA is the detailed examination of human lived experience. IPA is phenomenological in that it is focussed on exploring features of lived experience as they appear to individuals without referring to prior theoretical assumptions. IPA is interpretative in that it recognises that the process of phenomenological inquiry inevitably involves interpretative activity by participants as they are making sense of their lived experience, and interpretative activity on the part of the researcher making sense of the participant's sense-making. Finally, IPA is primarily idiographic in its focus – that is, it privileges the fine-detail examination of phenomena expressed in its own terms (Smith, Flowers, & Larkin, 2009). Arguably IPA's greatest contribution to

the research domain has been to provide a clear procedural approach to qualitative data analysis which privileges a complex understanding of data over more nomothetic concerns yet does not completely abandon the possibilities of understanding patterns or commonalities in a qualitative data set (Brocki & Wearden, 2006; Smith, 1996).

The origins of phenomenology lie with Husserlian phenomenology which begins with the aim of accounting for how objects or occurrences appear within consciousness. Husserl detailed a method of phenomenological reduction to do this which emphasised the importance of ‘bracketing out’ assumptions about what the world is like to permit a more focussed and impartial understanding of a particular worldview (Smith, Flowers, & Larkin, 2009). Depicting how the structure and contents of everyday lifeworld experiences can be understood has been elaborated in a modern descriptive phenomenological method (Giorgi & Giorgi, 2003). By contrast, IPA adheres to a Heideggerian phenomenology, emphasising the role of the meaning-making activities involved in the unique dynamic of human existence and of the embodied nature of human life. This approach integrates Husserl’s commitment to understanding perceptual experience but also places an emphasis on acknowledging and understanding the interpretative processes involved with understanding phenomena (Moran, 2002; Smith et al., 2009). A Heideggerian formulation of phenomenology discards Husserlian notions concerning the possibility of ‘bracketing out’ the influence of our own conscious experiences, instead emphasising how phenomena are interpreted. In so-doing, IPA places a distinct emphasis on researcher reflexivity as central to the analytic process.

Locating IPA on the epistemological spectrum, as discussed in Section 2.1.2, would be instructive to an appreciation of its particular utility in the context of a mixed methods research programme with principally pragmatic aims. Arguably, IPA adopts

something close to a contextual constructionist epistemological standpoint in that it assumes objective accessibility and representation of participant experiences, feelings and thoughts, yet also recognizes interpretative activities and the role of context in data production (Madill et al., 2000). Partly reflecting the flexibility of its epistemological location, IPA has become a widely-used qualitative analytic approach across a broad range of disciplinary contexts including occupational therapy (Clarke, 2009), nursing (Lopez & Willis, 2004), mental health care (e.g., Huws & Jones, 2008; Knight, Wykes, & Hayward, 2003) and health psychology (Brocki & Wearden, 2006; Smith & Osborn, 2003). A recent review of IPA illustrates this broad inter-disciplinary interest and its growth in popularity yet also suggests that its distinct methodological emphases have not always been well understood in published research (Smith, 2011).

2.2.4.1 Rationale for using IPA

IPA provides an appropriate framework for understanding how issues of self and identity are involved in the decision not to drink, and how that behaviour is experienced, with an emphasis on understanding ‘what that experience is like’ over rhetorical or narrative concerns. As discussed in the previous section, IPA privileges an understanding of the fine grain experiences of individuals alongside an account of the sense-making processes involved in understanding these experiences. This was important from an applied perspective, as a clear experiential sense of how non-drinking is managed in social situations and how these occasions are subjectively experienced by individuals is relevant to the experience of any student who might be encouraged not to drink during some social occasions. Specifically, a fine-grain understanding of non-drinking as a social experience might indicate ways in which young people might refuse alcoholic drinks with greater success, plan social lives which do not necessarily involve

alcohol consumption, and to have an opportunity to reassess alcohol's role in relation to how the self is experienced and managed within social interactions. However, it is also important to explicate the interpretative viewpoints of both participant and researcher in this process. Rather than a purely relativist understanding of participant data, there were pragmatic advantages in applying a realist IPA approach which would permit synthesis and integration between qualitative and quantitative research components of this dissertation and hold open the possibility of synthesis of empirical material in the form of an intervention study. Importantly, this would permit the inclusion of a *solution-focussed* component for the research programme, involving experiences of individuals who do not drink as a lifestyle choice to be extrapolated, to some extent, to other contexts. This balancing of idiographic commitments and nomothetic utility meant that IPA was a relevant and appropriate analytic perspective for the qualitative component of this dissertation.

2.2.4.2 IPA's limitations and strengths

As with any form of phenomenological analysis, one primary concern regarding the standards of published IPA research is that data analyses may be overly descriptive and suffer from a lack of interpretative depth (Smith, 2011). Furthermore, sometimes large sample sizes in IPA studies suggest that the approach's idiographic concerns may not always be privileged to the degree that was originally intended. It is also not entirely clear whether or how IPA's historical interest in cognition credibly permits a route toward transcending constructionist and positivist epistemologies, as suggested in early accounts of the method (Smith, 1996; Smith & Osborn, 2003). IPA has also been criticized in its attempt to integrate descriptive and interpretative phenomenological approaches on the basis that this constitutes blending contradictory epistemological

stances (Chamberlain, 2011; Willig, 2008). However, this integration might also be understood to provide a framework in which contradictions are transparent, and therefore permits a degree of methodological rigor.

Among its strengths, IPA provides clear, accessible guidelines to conduct, analyse and report qualitative research. In addition, IPA asserts the possibility of using study findings to produce a tentative generalised account of social phenomena which, hypothetically at least, means that IPA research may be used to enrich understanding of concepts and theories in health psychology more broadly. Ongoing critical debate concerning the contributions and shortcomings of the approach also reflects IPA's capacity to promote discussion of broader issues in qualitative research relating to quality, epistemology and pluralism (Chamberlain, 2000; Shaw, 2011; Todorova, 2011; Willig, 2008). Evaluating the quality of IPA research involves issues of quality applicable to qualitative research more broadly. These issues will be discussed in the next section.

2.3 Quality in qualitative research

Although quality criteria found in quantitative paradigms (e.g., reliability; generalizability) are now increasingly accepted as non-applicable to qualitative research, addressing quality in qualitative research has provoked considerable discussion and the notion of generic guidelines for addressing quality remains controversial among many qualitative researchers. Several guidelines of criteria for rigorous qualitative research have been proposed (Elliot, Fischer, & Rennie, 1999; Henwood & Pidgeon, 1992; Stiles, 1993). For example, one set of guidance relating primarily to grounded theory research refers to the importance of clear documentation; reflexivity and sensitivity (Henwood & Pidgeon, 1992). Other authors have emphasised

the importance of research which clearly grounds interpretation using appropriate illustrative data examples; the importance of credibility checks of data interpretation by participants or colleagues; and of research which is able to resonate with readers through clarifying or expanding appreciation of phenomena (Elliot et al., 1999). Such recommendations, Elliot et al (1999) assert, are in addition to generic standards applicable to both quantitative and qualitative research including the need for clarity of presentation; applicability of methods to phenomena; and making a clear contribution to knowledge. An inherent challenge involved in the production of quality guidelines is how these should be most effectively communicated within the broader research community where clear guidelines may not be readily available. This process has been described as involving a tension between maintaining the epistemological integrity of specific modes of qualitative analysis in conjunction with promoting appreciation of the complexities and uncertainties involved in conducting qualitative research (Yardley, 2000).

The applicability of quality frameworks offering generic criteria for all qualitative research has been strongly contested by some authors on the basis that generic quality guidance can assume that qualitative research falls under singular, rather than multiple, epistemological frameworks (Madill et al., 2000; Reicher, 2000; Willig, 2008). For example, Willig (2008) stresses the importance of judging qualitative research from the epistemological perspective from which it has been conducted using the kinds of knowledge that are identified and privileged within that paradigm. Specific guidance for conducting IPA research has been described in several texts though these recommendations have emphasised that quality criteria is understood as provisional and used as a heuristic guideline rather than as anything definitive (e.g., Smith et al., 2009; Smith, 2011). In a review of empirical studies reporting IPA research, a provisional

quality assessment guidance tool is described (Smith, 2011). A heuristic approach is evident in this review's main quality criteria which included an assessment of whether: (i) IPA's phenomenological, interpretative and idiographic orientation is reflected, (ii) whether a variety of participants are sufficiently represented within each theme and (iii) whether there is adequate transparency in terms of sampling and/or analytic processes. This discussion illustrates something of the issues involved in the quality assessment of qualitative research. Although a generic assessment list for qualitative research would be insensitive to the nuanced features of a particular analytic perspective, less specified quality guidance risks criticism of insufficient standards of quality adherence from within and beyond the qualitative research community. Because different methods have different kinds of quality criteria, qualitative and quantitative studies were conducted separately and according to their own specific quality criteria.

2.4 Ethics issues and approval

British Psychological Society (BPS) ethical requirements state that informed consent should be sought from all individuals involved in research (BPS, 2009). Issues relating to the right to withdraw from research participation, data anonymity and confidentiality were discussed with all participants so that informed consent could be meaningfully acquired. Survey participant consent was taken via a tick box as part of their online questionnaires. Consent was taken for interview participants via a paper form prior to interviews. Consistent with ethical concerns over privacy and confidentiality (BPS, 2009), survey data were collected and held on a secure server and held afterwards on the researcher's password-controlled laptop. Neither physical nor psychological harm linked to survey completion or interview participation was anticipated in this low risk research programme. In the interests of research transparency (BPS, 2009), interviewees

were told that they would be discussing drinking behaviour among university students, given that revealing an explicit interest in non-drinkers might have resulted in information being withheld or presented in a particular way within participants' accounts. The option of receiving a formal summary of research findings was given to both survey and interview participants. Ethical approval from University of Sussex was gained separately for Studies One and Two (i.e., the cross-sectional survey and interview studies) and Study Three (i.e., the intervention study). All were approved as "low risk", indicating that proposed research held minimal threat of potential harm to participants.

2.5 Study-specific methodological details

This section contains a brief description of the series of studies relevant to research reported in this dissertation. Specific methods pertinent to each paper are also described, where instructive.

2.5.1 Study One: Cross-sectional survey

Study One was a cross-sectional survey designed to gauge perceptions of non-drinkers in relation to student drinking behaviour. Research described in the first two empirical chapters (Chapters Three and Four) draw on findings from this study. The participants for this study were university students who were English aged 18-25 years. It was considered important to focus on solely university students who were English following the rationale that drinking behaviour is a culturally distinct behaviour and recruitment could therefore be restricted to individuals who have acclimatised to drinking norms/stereotypes and exposed to drinking legislation/etiquette specific to a distinct culture. For this reason, samples are referred to as 'English university students' (rather

than British or UK samples) throughout this research programme and throughout this dissertation write-up.

Analyses based on this data-set described in Chapter Three includes exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) analyses (e.g., Kline, 2011). To guide understanding of what is involved in the application of these more recent advanced statistical techniques, they will be briefly summarised. In the context of this dissertation, EFA can be understood as a statistical technique for summarising multivariate data as linear combinations of underlying factors on the basis of whether items possess common variance (e.g., Field, 2009). Thus, EFA does not involve a pre-identified scale item structure on the part of the researcher, and instead provides a data-driven indication as to where shared variance exists between scale items. In contrast, CFA involves specifying, a priori, a set of specific predictive pathways and implied hypotheses between observed and latent variables (Thompson, 2004). Different models can then be compared using conventional estimation methods designed to establish the discrepancy between observed and implied covariance matrices (e.g., maximum likelihood test). Models are also typically evaluated using a range of fit indices designed to assess different aspects of model fit (e.g., the comparative fit index, CFI; the root mean square error of approximation, RMSEA) of which a wide range have been described (Byrne, 2009; Hu & Bentler, 1999). Using this data, the relative favourability of one theoretical account of predictive relationships over another can be statistically established.

Both techniques are relevant to an understanding of prototype perceptions in the current research programme. First, EFA provides a summary of the factor structure of alcohol prototypes based on the study sample. Second, using a separate sample, CFA

can be used to confirm the data structure of alcohol prototypes as indicated by prior EFA analyses and in factor structures reported in other empirical work.

2.5.2 Study Two: Semi-structured interviews

Study Two was an interview study designed to recruit 18-25 year old English university students who were lifelong non-drinkers or who had stopped drinking alcohol at least six months ago. Research described in Chapters Six and Seven is based on this study. Given the idiographic focus in qualitative research and IPA especially, small sample sizes (e.g., $n = 3-8$ participants) are preferable to enable the fine-grain analysis of individual's lived experience (Smith et al., 2009). Although sample sizes in IPA research can vary considerably from individual case studies (e.g., de Visser & Smith, 2006) to samples as large as 35 interviewees (Murray, 2004), IPA's idiographic commitments imply that the method's strengths would be drawn out in the context of smaller sample sizes. At a practical level, working with a small sample size seemed almost inevitable given the decision to focus on only 'culturally unsanctioned' rather than having a broader, more inclusive sampling policy targeting non-drinkers as a broader group.

2.5.2.1 Interview format, question schedules and piloting

Semi-structured interviews were preferred as a data collection tool over more structured interview approaches or using samples of naturally occurring conversation. Semi-structured interviews have been described as the ideal method for IPA and are adopted in most IPA studies (Brocki & Wearden, 2006; Smith & Osborn, 2003). Notably, a focus group IPA approach has also recently been described (Palmer, Larkin, de Visser, & Fadden, 2010). Focus groups hold some interest in the context of the current research

programme, given that an environment in which non-drinkers would be able to share experiences together might promote a climate of solidarity or reflection throughout which a greater variety of experiences relevant to non-drinking might be revealed. However, focus groups might be expected to inhibit, as much as facilitate, expression of personal experiences. Furthermore, the practical difficulties of bringing together interviewees meant that a focus group approach was not a tenable data collection option.

The researcher liaised with all interviewees to identify a quiet, safe and accessible environment in which to meet and conduct interviews. Most students were interviewed on campus, with the exception of two who were interviewed in their homes. The final interview schedule was progressively refined to produce a sufficiently varied, logically-sequenced set of questions intended to be conducive to a conversation about the experiences of being a non-drinker. Based on core research questions linked to three discussion areas: (1) reasons for not drinking, (2) how alcohol is understood by non-drinking individuals and (3) how ‘pressure to drink alcohol’ is managed. Careful attention was paid to question phrasing and various drafts of these were proposed and re-worked to produce clear, concise and non-leading items. Detailed questions about gender identity in relation to non-drinking were rephrased in more general terms to minimise the risk of producing an overly leading interview schedule. Throughout this process of interview schedule design, it was important to remain reflexive to ensure that questions were phrased in a respectful, non-judgemental way that maximised the opportunities for participants to express themselves in their own way using their own expressions. The notion of minimal probes (e.g., “can you tell me a little more about that?”) was an important device for minimizing interviewer assumptions relating to conversational meanings or interview direction (Smith & Osborn, 2003). Pilot interviews were run with two colleagues. Piloting can provide an important way of

helping to identify poorly understood, ethically inappropriate or inadequately phrased questions while increasing familiarity with interview schedule content (Kezar, 2000). Piloting led to the removal of some questions, the addition of some questions and some restructuring of the interview schedule sequence. All interviews were conducted in well-lit, appropriately heated/ventilated spaces without interruption from other people. A dictaphone was positioned between interviewer and interviewee yet out of clear sight to reduce the possibility of it contributing to interviewee self-consciousness or anxiety. The role of the interviewer is another important consideration. Creating an atmosphere in which participants were comfortable to discuss their experiences on their own terms (e.g., their words; their pace) was important and involved an appropriate balance of verbal and non-verbal (e.g., eye contact; hand gestures) communication. Interviews were of varied lengths, lasting between 50 and 102 minutes.

2.5.2.2 Data analysis: transcription, coding, organisation and themes

Transcription of interviews was completed by a post-doctoral colleague at University of Sussex. This service was paid for from the researcher's annual research budget. Having not produced the transcripts himself it was important for the PhD candidate to thoroughly read through each transcript carefully in conjunction with the audio recording to check fidelity of the transcript against its audio source. A few minor corrections and the addition of some additional relevant punctuation were made to each transcript.

Rather than preparing all transcripts to a particular stage (e.g., initial notation), each transcript was dealt with on a case-by-case basis before proceeding to the next transcript. An initial transcript was worked on independently by myself and my supervisor. At a subsequent supervision meeting, transcript codes, interpretative

notation, and reflective comments in the script were then compared and discussed to provide an opportunity for feedback. This was important for three reasons. First, to ensure that a clear, comprehensive organisational approach had been followed. Second, to ensure that and that a distinctly phenomenological approach had been adhered to, with coding schemes clearly grounded in the data. Third, to ensure that an appropriately interpretative level of coding had been established – i.e., one which took coding beyond pure description of the data, but without working within a specific theoretical framework. It should be noted here that additional feedback was provided for the results sections of both Chapter Six and Chapter Seven while these papers were being prepared for publication. With coding for the first transcript mutually agreed, the remaining transcripts were coded by the PhD candidate.

The exact analytic process for Study Two is now described. First, it was first important to ‘map out’ the phenomenological features of each transcript, and to follow a coding system in which all aspects of experience described by each participant were carefully coded following a scheme which provided concise, clear codes that were clearly grounded in each participant’s specific phrasing. Second, each script was carefully examined at an interpretive level, exploring how particular features might be interpretatively ‘gathered together’ so as to be communicated for an outside audience. Within both stages, transcripts were coded in a dense, line-by-line manner so as to become fully immersed in the data contained in each transcript and so as not to miss less apparent features of a participant’s lifeworld. Third, to ensure careful organisation of the data, descriptive and interpretative codes were comprehensively listed in an Excel table. Fourth, these sections of transcript excerpts were grouped under basic thematic headings (e.g., ‘diverse types of social pressure to drink alcohol’), intended to reflect the character of each excerpt within a concise summary label. Fifth, descriptive and

interpretative codes across the transcripts were compared and table data was reorganised so as to reveal which thematic findings were shared among all (or most) participants and which findings were unique to individual participants. Where possible and appropriate, basic lower level headings were progressively grouped into superordinate theme titles. Superordinate themes were phrased and re-phrased via an iterative process of referring to transcript excerpts and theme titles in close conjunction to ensure the fidelity of part-whole relationships. The most prominent superordinate themes which drew on interview material from all or most participants were drawn together and written up as journal paper results sections contained as Chapter Six ('Being a student non-drinker') and Chapter Seven ('The importance of authenticity to student non-drinkers').

The analytic process described above reflects the importance of themes produced in IPA to be grounded sufficiently in the data to retain clear links with interview material, yet sufficiently abstracted so as to offer an account of psychological features at a conceptual level of understanding (Smith et al., 2009). By following this structured process to analysis it was possible to ensure a coherent 'audit trail' so that each superordinate theme could be traced back through lower level themes to coded sections of individual transcripts.

2.5.3 Study Three: Longitudinal survey

Study Three was a longitudinal randomised controlled trial presented to participants in the form of an online survey. Data was collected at three time-points – baseline, two-week and four-week follow-up. Measures of drinking behaviour and psychological measures of prototype perceptions were taken at each time-point. As with all studies in this research programme, the participants for this study were English university students aged 18-25 years. Research described in Chapter Ten is based on this study.

Two sets of analyses were conducted on this data set: mixed model ANOVAs and a sequence of latent growth curve (LGC) analyses. Using mixed model ANOVAs meant that factorial effects could be assessed at each time point for behavioural and psychological variables. Using LGC involved familiarisation with a less conventional analytic approach: as such, LGC is briefly outlined below. This method is part of a broader family of longitudinal analytic methods and can also be understood as a specific application of a structural equation modelling technique. Relevant technical references were consulted throughout these analyses (Singer & Willett, 2003; Byrne, 2009).

AMOS Version 21.0 was the software package used for all LGC analyses. The example of a weekly alcohol consumption variable, measured at three time-points will be used to illustrate the following description of LGC analysis. Carrying out a longitudinal analysis using LGC involves exploring how observed measurement values from each time-point ‘load’ onto shared ‘intercept’ and ‘slope’ latent constructs. Regression pathways between observed variables and latent constructs are fixed so that, with drinking measures at three time-points, one construct is specified as an intercept (1,1,1) and another construct as a slope (0,1,2) to statistically specify, respectively, initial drinking levels and rates of change in drinking at a conceptual level. Variances of the intercept and slope latent variables indicate the degree to which individuals differ from

each other in terms of their initial drinking and their rate of change in drinking. Where these variances are found to be significant, support exists for investigating the role of time-invariant factors which might predict initial drinking or rates of change in drinking. Time-invariant variables of interest might include possible confounding factors such as sex or age. Relevant to the time invariant analysis described in Section 10.4.4.3, experimental manipulations can also be assessed as time-invariant variables in the context of interventional research.

Chapter 3

Prototypical Views of Drinkers and Non-drinkers and Their Links to Alcohol Consumption

3.1 Abstract

Objectives. Students' notions of the prototypical drinker and non-drinker have been linked to their drinking behaviour in previous research. This paper reports analysis demonstrating the dimensional structure of these alcohol-related prototypes and shows how they vary in association with previous drinking behaviour. **Methods.** A sample of 601 students was recruited via an online survey. Measures of prototype perceptions were acquired and factor analysed. Measures of overall favourability and dimensional sociability between regular drinker prototypes and non-drinker prototypes were computed as two difference score variables. Self-reported drinking behaviour was also measured. **Results.** Exploratory factor analyses (EFA) were largely supportive of the recently demonstrated two factor 'sociability' and 'responsibility' prototype structure (Zimmermann & Sieverding, 2010). Good and poor scale reliabilities were demonstrated for sociability and responsibility factors, respectively. Within-participants analyses revealed that the prototypical non-drinker was rated as significantly less favourable and sociable than the prototypical regular drinker. Between-participants analyses revealed that less favourable and sociable perceptions of non-drinkers were reported among heavier drinkers. **Discussion.** The data broadly support a two factor solution in the domain of alcohol-related prototype perceptions. Evidence of an association between negative evaluations of prototypical non-drinkers (less favourable, less sociable) and higher levels of alcohol consumption supports further investigation of relations between the sociability prototype difference construct and drinking behaviour.

Such investigation holds potential implications for health screening and promoting university campus interventions.

3.2 Introduction

It is well-established that high levels of alcohol consumption hold close associations with wide-ranging poor health and social outcomes (Newbury-Birch et al., 2009).

Furthermore, levels of alcohol consumption among young people in England have been demonstrated to be relatively high compared with other European countries (Plant & Miller, 2001). English university students aged 18-25 have been identified as a group at particular risk of high levels and harmful types of drinking behaviour (Gill, 2002; Webb, Ashdon, Kelly, & Kamali, 1996). In a literature dominated by studies based on drinking behaviour at US colleges, it is important to develop culture-specific evidence relating to drivers of high-risk and high-volume alcohol consumption among English students.

An emerging strand of research in the alcohol field concerns the relationship between perceptions of non-drinkers and alcohol-related beliefs and behaviour. For example, authors have recently demonstrated a predictive relationship between less favourable scores on an Attitudes Toward Non-drinkers scale and an increased self-reported quantity and frequency of alcohol consumption among Irish adolescents (Regan & Morrison, 2011; Regan & Morrison, 2013). Previous to this, research testing the Prototype Willingness Model (PWM) has consistently demonstrated predictive effects of less favourable evaluations of the prototypical non-drinker over more positive beliefs and attitudes concerning heavy drinking and increased likelihood of more dangerous drinking behaviour (Gerrard, Gibbons, Reis-Bergan, Trudeau, Vande Lune, & Buunk, 2002; Spijkerman, Larsen, Gibbons, & Engels, 2010; van Lettow, de Vries, Burdorf,

Norman, & van Empelen, 2013; Zimmermann & Sieverding, 2010; Zimmermann & Sieverding, 2011). Usefully, recent research has clarified that prototypical perceptions of drinkers and non-drinkers might be understood in terms of ‘sociability’ and ‘responsibility’ dimensions, with evidence that the sociability factor might be of particular interest for health promotion (Zimmermann & Sieverding, 2011). Recent qualitative research has provided some basis for interpreting these findings, indicating that student non-drinkers may be understood as strange and unsociable yet, paradoxically, also *enviable* individuals given that they have not used alcohol to enjoy a social experience (Conroy & de Visser, 2013).

Prototype perceptions have provided a useful conceptual and operational tool for understanding how ideas about certain types of person are predictive of behaviour. However, the PWM literature primarily conceptualises prototypes as reflecting ‘images’ of behaviour which are risk-based (e.g., drinker, smoker) and not risk-based (e.g., non-drinker, non-smoker). Recent studies imply that more varied concepts may underlie the notion of perceptions of non-drinkers including normative and identity-based factors (Regan & Morrison, 2011), yet do not have the conceptual clarity or empirical validation advantages of PWM measures (e.g., Ravis, Sheeran, & Armitage, 2006). In this study, perceptions of prototypical non-drinkers were gauged in relation to a meaningful counter-point: prototypical regular drinkers. To explain: if a respondent rates prototypical non-drinkers negatively, it would be important to establish the extent to which this differs from the respondents’ rating for prototypical regular drinkers, and whether this discrepancy, reflecting some degree of bias for one drinker type over another, is in itself predictive of drinking behaviour.

This paper report analyses based on two difference scores computed from prototype perception measures: one single variable item (prototype favourability differences) and

one composite scale derived from factor analysis (sociability prototype differences). Four analytic objectives are presented. First, to use exploratory factor analysis (EFA) to understand the psychometric structure of existing and novel prototype items. Second, to conduct a confirmatory factor analysis to establish whether Zimmermann and Sieverding's (2011) two factor prototype structure is replicated using an English student sample. Third, to assess whether students held significantly more favourable/sociable perceptions of the prototypical regular drinker than the prototypical non-drinker. Fourth, and finally, to assess whether differences in prototype measures were associated with self-reported drinking behaviour.

3.3 Methods

3.3.1 Participants

Respondents who abandoned the survey part-way through ($n = 273$) were removed from the dataset. This left, in total, 601 English university students aged 18-25 completed the entire survey including 116 men ($M_{\text{Age}} = 20.7$ years, $SD = 1.88$) and 485 women ($M_{\text{Age}} = 20.5$ years, $SD = 1.85$). Acceptable levels of missing data for study variables ($\leq 1.8\%$) and individual cases ($\leq 3.4\%$) were demonstrated. Missing values were estimated using the expectation-maximisation algorithm: a maximum likelihood technique suited to the large sample size (Kline, 2011). Power analyses demonstrated sufficient control of Type II errors: for between-subjects and regression model analyses, 95% power to detect medium effect sizes (i.e., $r = 0.20$) was available (Cohen, 1992). The ethnic profile of the sample reflected the broader English undergraduate student body (Connor, Tyers, Modood & Hillage, 2004): 83.9% were white, 10.1% were Asian, 3.2% were of mixed ethnicity, and 2.8% were black.

3.3.2 Measures

3.3.2.1 Self-reported drinking behaviour

Alcohol consumption in the previous week was assessed using previously validated items (de Visser & Birch, 2012). Participants were given a guide containing the number of UK alcohol units (10mL/8g pure ethyl alcohol) contained in various drinks to facilitate their calculation of the number of units they had consumed on each day in the week prior to completing the questionnaire. These data were used to determine whether respondents' weekly alcohol intake was within or in excess of the lower threshold of UK National Health Service (NHS) safe consumption guidelines (21 units for men and 14 units for women, NHS, 2014b). Participants were also asked to report binge episodes in the previous month – defined as occasions when in excess of six and eight units of alcohol had been consumed by women and men (i.e., double the recommended intake maxima), respectively. Responses were dichotomised to identify individuals who had (i) exceeded recommended levels in a particular episode in the previous month and (ii) who had exceeded overall sex-specific recommended intake levels in the previous week. Based on these categories, respondents were allocated to one of four defined drinker status: ‘non-drinkers’ ($n = 58$) who had either not consumed alcohol ever before, or in the last six months ; ‘moderate drinkers’ ($n = 152$) who had neither exceeded weekly intake guidelines nor reported binge episodes in the previous month; ‘binge drinkers’ ($n = 245$) who reported at least one binge episode in the previous last month yet remained within weekly intake guidelines; and ‘heavy drinkers’ ($n = 146$) who reported binge episodes in the previous month and whose weekly consumption exceeded guideline recommendations. No individuals exceeded weekly intake maxima without also reporting binge drinking.

3.3.2.2 Alcohol-related prototype measures

Unless indicated otherwise, all survey responses to items were made on seven-point Likert-type scales. Perceptions of prototypical regular drinkers were assessed using adjective pairs: a stem statement was followed by semantic differential adjective pairs (i.e., “For each pair of words, indicate which best describes your image of the person your age who regularly drinks alcohol/ does not drink alcohol”: 1=extremely open; 7=extremely reserved). In total, twenty-four item pairs were used: twelve drinker and twelve non-drinker prototype items. These included all items from Zimmermann and Sieverding’s (2011) paper (popular-unpopular; responsible-irresponsible; able to enjoy-unable to enjoy; health-conscious-not health conscious; easy-uptight; open-reserved; willing to take risks-unwilling to take risks; reasonable-unreasonable; sociable-unsociable). Three further item used elsewhere in the literature were also included (immature-mature; cool-uncool; attractive-unattractive – Gerrard et al., 2002). A single variable assessed perceived favourability of prototypical drinkers (i.e., “Overall, how do you evaluate this type of person?”: 1=extremely unfavourably; 7=extremely favourably). An identical process was followed for prototypical non-drinkers.

3.3.3 Procedure

Ethical approval was granted by the host institution's Ethics Committee. A convenience sampling approach was adopted: administrators at 75 English universities agreed to a request to forward an invitation to complete an online ‘lifestyles questionnaire’ hosted on a secure server to their students. All participants were entered into a draw to win one of four £25 prizes, as an incentive to participate.

3.4 Results

3.4.1 Exploratory factor analyses

To cross-validate the dimensional models, the data set was randomly divided into separate data files. Accordingly, one data set was prepared for the exploratory factor analysis (EFA; $n = 201$), and a second data set was prepared for the confirmatory factor analysis (CFA; $n = 400$). Separate EFAs were run for regular drinker and non-drinker prototypes. Item loadings $\geq .40$ were considered relevant indicators of latent dimensions.

A forced two factor solution was run with Principal axis factoring. Factors were extracted via Promax rotation. Though a three factor structure was suggested using Kaiser's cut-off criterion (retain eigenvalues > 1.0), scree plots strongly suggested a two factor solution. For both EFAs, neither data singularity (determinants $= \geq .10$) nor multicollinearity (all $r_s = \leq 0.60$) were suggested, indicating that basic assumptions of factor analysis were likely to have been met. Given interest in producing a comparative difference score measure, further specification of each factor was designed to maximise the symmetry of their loadings. In this way, three items were removed due to low loadings ('Unattractive-attractive'), asymmetrical cross-loadings ('Able to enjoy-unable to enjoy' for non-drinker prototypes), or strong loadings on opposing dimensions ('Cool-uncool' loaded more strongly on responsibility and sociability dimensions for regular drinker and non-drinker prototypes respectively). This resulted in identical structures for both regular drinker and non-drinker prototypes, with a set of nine strongly-loading items on two dimensions in each case (see Table 3.1). Next, using the second data file, it was important to see whether the hypothesised two factor model was statistically verifiable via CFA.

Table 3.1 EFA and CFA factor loadings for drinker and non-drinker prototypes

	EFA factor loadings				CFA factor loadings			
	Drinker prototypes		Non-drinker prototypes		Drinker prototypes		Non-drinker prototypes	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
Open-Reserved	.78	-.06	.79	-.03	.66	-	.73	-
Sociable-Unsociable, ,	.71	.19	.74	.08	.81	-	.77	-
Easy-Uptight	.66	-.03	.79	.08	.57	-	.73	-
Willing to take risks-Unwilling to take risks	.58	-.27	.73	-.17	.55	[-.30]	.69	[-.22]
Popular-Unpopular	.42	.17	.62	-.05	.59	-	.59	-
Responsible-Irresponsible	.03	.81	-.07	.73	-	.66	-	.74
Health-conscious-Not health-conscious	.01	.69	-.14	.47	-	.61	-	.54
Immature-mature	.11	-.43	.01	-.41	-	-.47	-	.41
Reasonable-Unreasonable	.10	.51	.27	.52	[-.20]	.51	[.44]	-.37

Note. $n = 201$ participants (EFA); $n = 400$ participants (CFA).

For EFA, significant factor loadings $\geq .40$ shown in bold.

Weights reported from pattern matrix.

For CFA, significant standardised weights from cross-loading models shown.

CFA factor cross loadings contained in brackets []

3.4.2 Confirmatory factor analyses

Please refer to Table 3.2 in conjunction with the following discussion. An initial model showed borderline fit for both drinker prototypes and non-drinker prototypes.

Modification indices provided strong support for the addition of two cross-domain weights (sociability→‘Reasonable-unreasonable’ and responsibility→‘Willing to take risks-unwilling to take risks’) for both regular drinker and non-drinker prototypes, and were added. These revisions significantly improved model fit for each prototype model, $\Delta\chi^2(2) = \geq 46.6$, $ps = < .001$.

Varied differences were found between the current findings and Zimmermann and Sieverding’s (2011) specified prototype model, including, in the revised model: (i) an additional loading on the responsibility dimension (the ‘Mature-immature’ item), (ii) no support for balanced loadings for one item (‘Able to enjoy-unable to enjoy’) and (iii) asymmetrical cross-domain loadings during the EFA. Using the current data set, the revised model provided a significantly closer data fit compared with Zimmermann and Sieverding’s (2011) hypothesised model and this was the case for both regular drinker and non-drinker prototypes, $\Delta\chi^2(2) = \geq 71.1$, $ps = < .001$. Reliability analyses were good for both sociability factors (regular drinkers $\alpha = 0.77$; non-drinkers; $\alpha = 0.83$). However, extremely poor reliability was demonstrated for the responsibility factor for both regular drinker prototypes ($\alpha = 0.16$) and non-drinker prototypes ($\alpha = 0.12$). Though these values were greatly improved by removing the ‘Mature-immature’ item (regular drinker $\alpha = 0.62$; non-drinker $\alpha = 0.58$), they suggested statistical grounds to discount further investigation of the responsibility dimension given its low reliability.

Table 3.2 Model fit indices for an initial model, a revised model and Zimmermann and Sieverding's 2011 model

		χ^2	df	CFI	RMSEA	AIC	SRMR
<hr/>							
Initial model							
	Drinkers	117.84***	26	.88	.09	155.84	.08
	Non-drinkers	150.63***	26	.87	.11	188.63	.10
<hr/>							
Revised model							
	Drinkers	71.24***	24	.94	.07	113.24	.05
	Non-drinkers	56.74***	24	.97	.06	98.74	.04
<hr/>							
Zimmermann and Sieverding							
(2011) model structure							
	Drinkers	142.34***	26	.86	.11	180.34	.09
	Non-drinkers	204.85***	26	.84	.13	242.85	.12
<hr/>							
<i>Note.</i> * $p < .05$ ** $p < .01$ *** $p < .001$ CFA based on the second dataset ($n = 400$)							

3.4.3 Computing prototype difference measures

Paired samples t-tests revealed that participants perceived prototypical regular drinkers, relative to prototypical non-drinkers, as significantly more sociable, $t(600) = 28.61$, $p = < .001$, $d = 1.91$; and favourable, $t(600) = 9.45$, $p = < .001$, $d = 0.65$. Difference scores were computed for both prototype favourability and prototype sociability by subtracting non-drinker prototype scores from drinker prototype scores, based on similar approaches adopted in recent research (Rudman & Ashmore, 2001; de Visser & McDonnell, 2012). For the favourability difference variable, scores above zero indicated more favourable ratings of regular drinkers and scores below zero indicated more favourable ratings of non-drinkers. For the sociability difference variable, scores above zero indicated more sociable ratings of prototypical regular drinkers (relative to prototypical non-drinkers), and scores below zero indicated more sociable ratings of non-drinkers (relative to prototypical regular drinkers). Having established these novel prototype difference variables, the next stage of analysis was to assess them in relation to self-reported drinking behaviour.

3.4.4 Drinker profile analyses

One-way between-participants ANOVAs revealed significant differences for favourability difference scores between each drinker type (see Figure 3.1), ($F = 35.91$, $p < .001$, $\eta_p^2 = 0.15$). Games-Howell post hoc tests revealed a pattern in which the least favourable impressions of prototypical non-drinkers were held by those students who drank the most alcohol ($M_{\text{Diff.}} = \geq 0.98$ $ps = \leq .001$). This was the case with the exception of moderate drinkers and non-drinkers, between whom favourability difference scores did not significantly differ ($M_{\text{Diff.}} = 0.53$ $ps = .43$). Figure 3.2

Figure 3.1 Favourability difference scores by drinker group

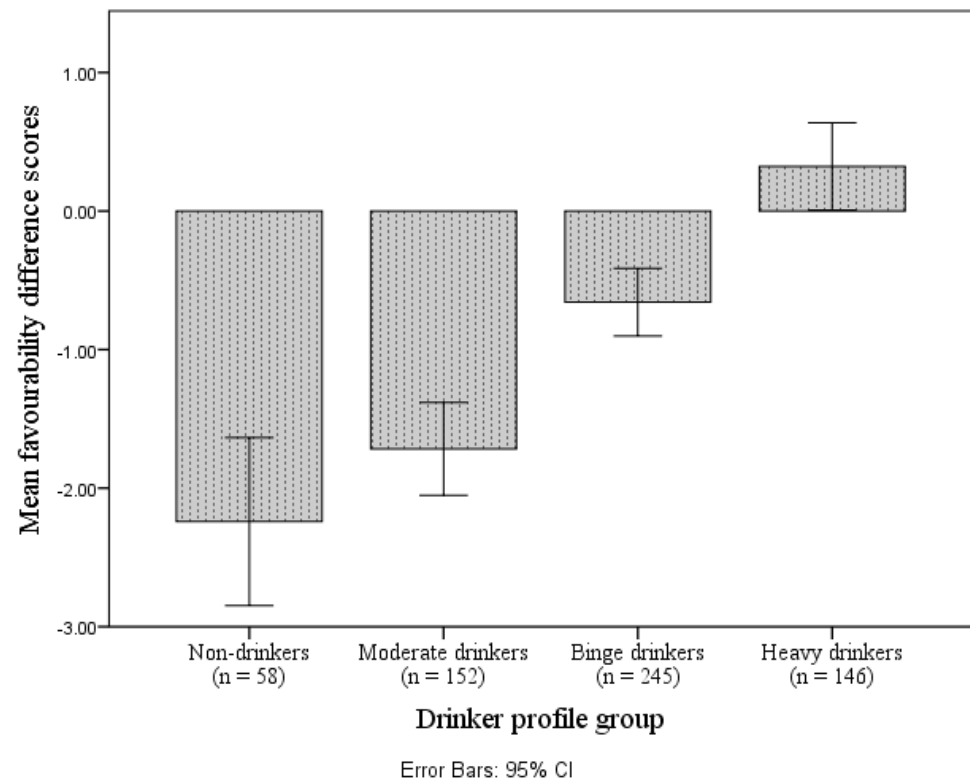
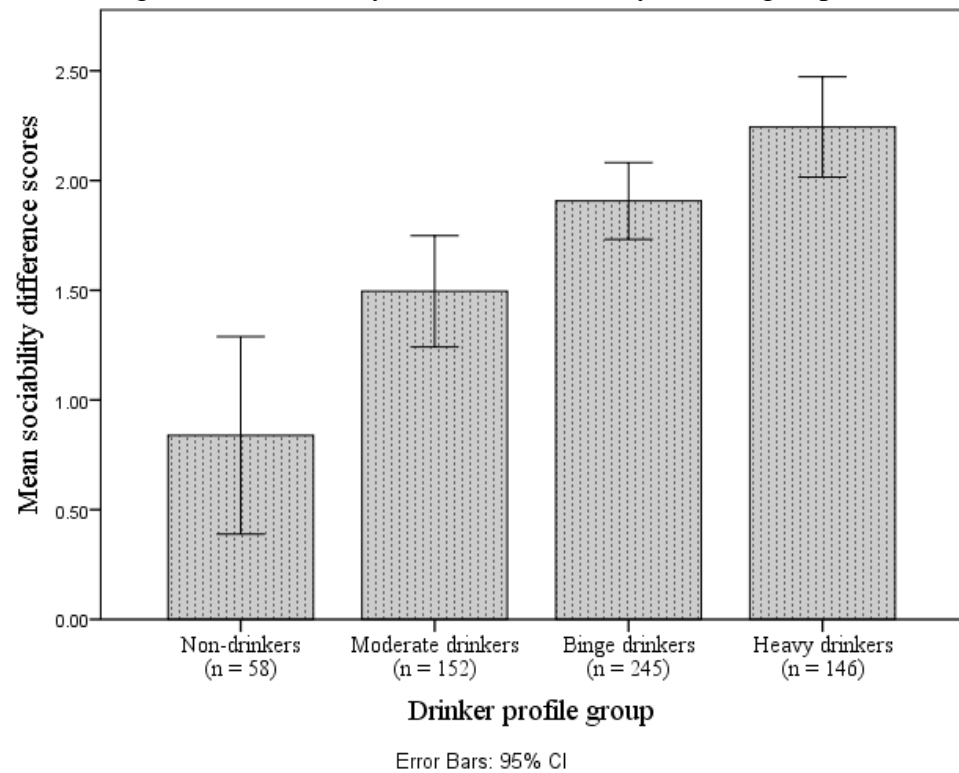


Figure 3.2 Sociability difference scores by drinker group



shows that participants in all four groups rated regular drinkers as more sociable than non-drinkers. There was a statistically significant effect of drinker type on sociability difference scores ($F = 9.67, p < .001, \eta_p^2 = 0.07$). The more heavily individuals drank, the more sociable they perceived regular drinkers to be ($M_{\text{Diff.}} = \geq 0.41, ps = \leq .04$). However, this was only marginally the case between binge drinkers and heavy drinkers ($M_{\text{Diff.}} = 0.34, p = .10$) and between moderate drinkers and non-drinkers ($M_{\text{Diff.}} = 0.66, p = .06$).

3.5 Discussion

This paper had four aims. First, to explore the psychometric structure of existing and novel prototype items. Second, to conduct a CFA to confirm or refute Zimmermann and Sieverding's (2011) two factor prototype structure. Third, to assess whether significantly more favourable/sociable perceptions of the prototypical regular drinker relative to the prototypical non-drinker were held by students. Fourth, to assess whether differences in prototype measures were associated with self-reported drinking behaviour.

Findings offered broad support for a two factor solution, indicated more favourable/sociable perceptions of the prototypical regular drinker compared with the prototypical non-drinker, and suggested how this occurs in association with drinking behaviour. The more heavily students consumed alcohol, the more likely they were to hold unfavourable and unsociable appraisals of the prototypical non-drinker. Study findings that negative perceptions of non-drinkers are associated with personal drinking behaviour match those of recent studies (Regan & Morrison, 2013; Zimmermann & Sieverding, 2010). Taken alone, these findings are open to varied interpretations. One interpretation is that students may be motivated to hold derogatory views of non-

drinkers to feel included by peers (Read, Wood, Kahler, Maddock & Palfai, 2003; Regan & Morrison, 2011). However, an equally compelling interpretation involves dissonance processes. To illustrate; subjective discomfort over one's potential excessive alcohol consumption may be alleviated via negative construal of behaviourally-salient individuals others – e.g., in this case, the prototypical non-drinker (Festinger, 1954). This explanation would also account for smaller discrepancies in regular drinker-non-drinker evaluations among lighter drinking students. Prototypes in this case could be understood to provide a crude but salient source of self-affirmation, a psychological phenomenon demonstrated to hold close links with drinking behaviour (Armitage, Harris & Arden, 2011; Steele & Liu, 1983).

3.5.1 Strengths and limitations

The current study contributed to a primarily US-based literature on alcohol prototypes, and (largely) replicated Zimmermann and Sieverding's (2011) two factor dimensional prototype structure using an English sample. Two core study limitations should be noted. First, chains of causal effect cannot be understood from the current data set. Inter-related factors such as normative influence or personality dispositions seem likely to play an important role in the extent to which holding relatively positive or negative views of non-drinkers becomes more or less likely. To address this, the current cross-sectional study design requires replication via longitudinal research. Second, this study relied entirely on self-reported measures of drinking behaviour. Though an imprecise gauge of drinking behaviour, self-reports have been widely acknowledged to provide an inexpensive and non-invasive measurement approach (Del Boca, & Darkes, 2003), yet recent evidence has highlighted concerns that impression management bias may lead to under-reporting hazardous alcohol use (Davis, Thake, & Vilhena, 2010). This noted, a

large proportion of the study sample ($n = 391$, 65%) self-reported regularly binge drank or exceeded weekly recommended maxima. As such, it is suggested that a sufficient proportion of high volume, single-episode drinking habits were well-represented in the current sample.

3.5.2 Health promotion applications and future research

Prototype perceptions are of considerable interest from a health promotion perspective, given these variables have potential to be modified. Current study data suggests that heavy alcohol consumption and relatively unfavourable perceptions of prototypical non-drinkers are closely associated. Speculatively, addressing prejudicial impressions of ‘the typical non-drinker’ offers a potentially effective basis for reducing harmful levels of alcohol consumption, particularly among students who exceed episodic and weekly recommended consumption thresholds. Future research could usefully establish *among whom* links between negative perceptions of non-drinkers and harmful drinking behaviour, and *among whom* links between positive perceptions of non-drinkers and moderate drinking behaviour are present. For example, exploring whether sociability prototype perceptions are moderated by, or act as moderators of, established correlates of harmful drinking behaviour including, for example, different personality types, drinking motives alcohol expectancies or drink refusal self-efficacy (Kuntsche, von Fischer, Gmel, 2008; Oei & Morawska, 2004) would usefully extend current findings.

3.6 Summary and conclusion

The current study presented an assessment of a novel operational approach to representing ‘perceptions of non-drinkers’ (as sociability and favourability prototype difference scores). Findings also demonstrated how these vary in association with

previous drinking behaviour. Future research should clarify several things. First, it would be useful to identify correlates of prototype difference scores from the large extant 'predictors of harmful student drinking' literature. Second, it would be useful to explore whether prospective drinking behaviour is conditional on sociability prototype differences, given the latter variable's potential for developing screening programmes or interventions designed to promote safer student drinking behaviour.

Chapter 4

Moderators of Perceptions of Non-drinkers on University Students' Drinking Intention

4.1 Abstract

Objectives. Previous research has suggested that evaluations of prototypical non-drinkers predict drinking beliefs and behaviour. This paper presents an initial investigation of whether this predictive relationship is contingent on dispositional and/or normative beliefs known to be associated with harmful drinking behaviour.

Methods. Using a sample of 543 students, prototype perception measures were used to produce prototype sociability difference scores (an index of the perceived sociability of regular drinkers relative to non-drinkers). Measures of drinking intention, descriptive/injunctive norms, conscientiousness, extraversion and sensation seeking impulsivity were also taken. **Results.** Sociability prototype differences moderated the relationship between drinking intention and students' beliefs about the frequency of their friends' drinking behaviour. Simple slopes analyses indicated that normative influence among those with the least favourable (i.e., least sociable) evaluations of non-drinkers was associated with lower intentions to heed safe drinking recommendations. **Discussion.** Findings suggest harmful effects of holding relatively negative perceptions of prototypical non-drinkers. By challenging prejudicial beliefs relating to non-drinkers (i.e., that they are less sociable) via health-promoting messages, lower levels of alcohol consumption might be encouraged.

4.2 Introduction

Excessive alcohol consumption is an ingrained aspect of university student culture in England (Gill, 2002; Plant & Plant, 2006).

Dispositional or belief-based factors have been of health promotion interest in distinguishing those most at risk from harmful drinking, and for designing campus-based interventions (e.g., Atwell et al., 2011; Kok, Schaalma, Ruiter, van Empelen, & Brug, 2004). Recent research has also demonstrated links between perceptions of non-drinkers and patterns of alcohol consumption among students, indicating that unfavourable perceptions of non-drinkers predict higher levels of alcohol consumption (Regan & Morrison, 2011; Zimmermann & Sieverding, 2010). For example, Prototype Willingness Model (PWM) studies have demonstrated how unfavourable adjectival evaluations of prototypical non-drinkers (e.g., as ‘uncool’ or ‘unsociable’) predict increased consumption levels (Gerrard et al., 2002; Ravis et al., 2006). A recent exploratory factor analysis of prototype perception items has demonstrated two core prototype dimensions - sociability and responsibility (Zimmermann & Sieverding, 2011). Evidence of the sociability dimension’s effectiveness in predicting participant intention to drink excessively is reported in this paper. Other PWM research has explored effects of varied kinds of drinker prototype (e.g., moderate, abstainer, tipsy), demonstrating that heavy drinkers may, inaccurately, believe that their behaviour is consistent with the prototypical moderate drinker (van Lettow et al., 2012; 2013).

Alternative psychometric approaches have demonstrated links between an Attitudes Toward Non-drinkers scale and prior consumption, such that more negative evaluations of non-drinkers and non-drinking were associated with higher consumption levels (Regan & Morrison, 2011; 2013). On this evidence, perceptions of non-drinkers would appear to present an important conceptual tool for screening and interventional purposes

in the context of harmful student drinking behaviour. For example, students identified as holding particularly negative evaluations of prototypical non-drinkers could be prioritized to receive interventional support, which could involve challenging stereotypical and unappealing notions of the prototypical non-drinker. The relationship between perceptions of non-drinkers and personality or belief-based factors has received little attention. Theory and evidence regarding these factors and potential points of cross-over with the non-drinking literature are now considered.

Harmful drinking among university students has been closely linked to personality factors such as lower levels of conscientiousness (Vollrath & Torgersen, 2002; Kashdan, Vetter, & Collins, 2005), and higher levels of extraversion (Prescott, Neale, Corey, & Kendler, 1997; Ruch, 1994) and sensation seeking impulsivity (LaBrie, Kenney, Napper, & Miller, 2014; Yanovitsky, 2006). Moderating effects of perceptions of non-drinkers might be anticipated for all three dispositions. For example, although increased conscientiousness may guard against an individual's propensity to engage in harmful drinking, holding prejudicially negative evaluations of prototypical non-drinkers might undermine these protective effects. Similarly, the potential risk-increasing effects of high levels of sensation seeking impulsivity might be nullified where an individual possesses favourable impressions of the prototypical non-drinker relative to the prototypical regular drinker.

Both perceived frequency of peer drinking (i.e., descriptive norms) and perceived peer beliefs relating to personal drinking (i.e., injunctive norms) have received empirical support as targets for health-promoting interventions in the alcohol domain (e.g., Bewick et al., 2008a; Moreira et al., 2009; Wechsler et al., 2003). However, whether these discrete influences are adequate in capturing the essence of 'peer influence' has been debated (Borsari & Carey, 2006; Rimal & Real, 2003). Some authors have

expressed interest in exploring factors involved in individual susceptibility to normative influence. For example, a quality of peer relationships framework has been used to suggest how variation in the perceived social value of the function of alcohol within peer relationships (e.g., integral to socialising vs. disapproved of) may influence drinking behaviour (Borsari & Carey, 2006). Another potential moderator of descriptive and injunctive norms is the degree to which prototypical ‘drinker types’ (e.g., non-drinkers; regular drinkers) are viewed in equal terms. For example, if an individual views non-drinkers as relatively unfavourable, this might increase their drinking intention and behaviour over and above their beliefs relating to the frequency of those drinking around them (i.e., their endorsed descriptive norms), or perceived approval of friends/peers relating to drinking practices (i.e., their endorsed injunctive norms). It seems possible that ‘perceptions of non-drinkers’ might represent an important yet little understood moderator of the potency of normative influence on drinking intention and behaviour.

An alternative conceptual and operational approach to gauging perceptions of non-drinkers relative to drinkers to those described above would be to adapt information available in PWM measures to compute drinker/non-drinker prototype difference scores. This would provide a useful indicator of preference for non-drinkers relative to regular drinkers which may provide an important novel conceptual and operational device for understanding how perceived social norms exert their influence over student alcohol consumption. This study was designed to explore whether and how the perception of prototypical regular drinkers as relatively more sociable than non-drinkers (‘prototype sociability differences’) might moderate dispositional and normative influence on drinking intention.

Three hypotheses were explored. First, it was hypothesised that increased sociability prototype differences (reflecting less favourable evaluations of prototypical non-drinkers) would be significantly correlated with increased extraversion, increased sensation seeking impulsivity, decreased conscientiousness, and stronger beliefs relating to the high proportion of friends who regularly drink, or who approve of heavy drinking behaviour. Second, it was hypothesised that sociability prototype differences would moderate the relationship between dispositional and normative belief-based predictor variables, with two possible implications. Higher sociability prototype differences (i.e., relatively favourable impressions of prototypical regular drinkers) were hypothesised to *amplify* predictive relationships between dispositions/beliefs and increased harmful drinking intention. Third, accordingly, lower sociability prototype differences (i.e., ambivalent or relatively favourable impressions of prototypical non-drinkers) were hypothesised to *nullify* predictive relationships between dispositions/beliefs and increased harmful drinking intention.

4.3 Methods

4.3.1 Participants

In total, 543 English university students aged 18-25 ($M_{\text{Age}} = 20.5$ years, 80.3% female) completed the entire survey. Respondents who abandoned the survey part-way through ($n = 273$) were removed from the dataset. Acceptable levels of missing data for study variables ($\leq 1.8\%$) and individual cases ($\leq 3.4\%$) were demonstrated. Missing data were estimated using the expectation-maximisation algorithm: a maximum likelihood technique suited to the large sample size (Schafer & Graham, 2002). Power analyses demonstrated sufficient control of Type II errors: for between-subjects and regression model analyses, 95% power to detect medium effect sizes (i.e., $r = 0.20$) was available

(Cohen, 1992; Faul, Erdfelder, Lang, & Buchner, 2007). The ethnic profile of the sample reflected the broader English undergraduate student body: 84% were white, 10% were Asian, 3% were of mixed ethnicity, and 3% were black (Connor et al., 2004).

4.3.2 Measures

4.3.2.1 Drinking intention

All survey responses to attitude/belief items were made on seven-point Likert-type scales. Two items were used to assess drinking intention “In the next month I intend to drink within government recommended alcohol consumption levels” (maxima were defined as 3-4 and 2-3 units for men and women respectively: National Health Service, 2014b) and “In the next month I intend to get drunk”. The robust yet not overly strong correlation between these items ($r = -0.39, p = < .001$) warranted their assessment as separate variables.

4.3.2.2 Sociability prototype differences

The perceived prototypical sociability of regular drinkers was assessed using five adjective pairs: a stem statement (i.e., “For each pair of words, indicate which best describes your image of the person your age who regularly drinks alcohol”) was followed by semantic differential adjective pairs (e.g., 1=extremely open; 7=extremely reserved). An identical process was followed for perceptions of prototypical non-drinkers so that, in total, ten adjective pairs were completed. Acceptable reliability levels were demonstrated for both regular drinker sociability prototypes ($\alpha = 0.77$) and non-drinker sociability prototypes ($\alpha = 0.83$). Scales were coded such that higher scores indicated more sociable evaluations. Paired samples t-tests revealed that, participants, on average, perceived prototypical regular drinkers ($M = 5.29, SD = 0.86$), relative to

prototypical non-drinkers ($M = 3.41$, $SD = 0.94$), as significantly more sociable, $t = 29.79$, $p = < .001$, $d = 2.09$. This provided a statistical basis for investigating the extent to which participants held discrepant perceptions of regular drinker and non-drinker prototypes. Sociability prototype difference scores were computed by subtracting non-drinker prototype scores from drinker prototype scores, following similar approaches adopted in applied psychological research (e.g., de Visser & McDonnell, 2012; Rudman et al., 2001). For both variables, scores above zero indicated more sociable ratings for regular drinkers and scores below zero indicated more sociable ratings for non-drinkers.

4.3.2.3 Normative measures

Peer influence was assessed using friends as a reference group. Descriptive norms were assessed as the responses to the statement “What proportion of your friends regularly drink alcohol?” (1=none of them, 7=all of them). Injunctive norms were assessed as the responses to the statement “What proportion of your friends consider heavy drinking to be acceptable behaviour?” (1=none of them, 7=all of them). Higher scores denoted stronger normative influence.

4.3.2.4 Personality measures

Three personality variables were assessed: an eight item extraversion scale (Costa & McCrae, 1992, e.g., “typically, I keep in the background”; $\alpha = 0.88$); a nine item conscientiousness scale (Costa & McCrae, 1992, e.g., “typically, I make plans and stick to them; $\alpha = 0.84$); and a 19-item scale of sensation seeking impulsivity (Zuckerman & Kuhlman, 2000; e.g., “I usually think about what I am going to do before doing it”; $\alpha = 0.90$). Scales were coded such that higher scores indicated greater extraversion, conscientiousness, and sensation seeking impulsivity.

4.3.3 Procedure

Ethical approval was granted by the host institution. A convenience sampling approach was adopted: administrators at 75 English universities were emailed a request to forward an invitation to complete an online lifestyles questionnaire hosted on a secure server to their students. In total, 36 departments across 28 institutions took part in the study.

4.4 Results

Associations between drinking intention, sociability prototype differences, normative influence and personality variables were first explored (Table 4.1). These indicate that higher sociability prototype differences (or, rating non-drinkers as relatively unsociable) were significantly associated with weaker intentions to heed drinking recommendations; stronger intention to get drunk; stronger beliefs that friends regularly drink; stronger beliefs that friends approved of heavy drinking and being less conscientiousness. Potential moderators of the relationship between sociability prototype differences and drinking intention were next investigated, using the significant correlates from the previous analysis as predictor variables. Conventional guidelines were adhered to in pre-analyses: predictor and moderator variables were centred to maximise interpretability and minimize potential multicollinearity and for post-hoc probing techniques (Aiken & West, 1991). Six regression models were run including: sociability prototype differences, descriptive norms, injunctive norms or conscientiousness as single variables on a criterion variable (either intention to get drunk or intention to heed drinking recommendations) at Step 1; and the product of these variables as an interaction terms at Step 2. All model details are contained in Table 4.2. A moderation effect would be identifiable where significant additional variance in intention was

Table 4.1 Correlations between drinking intention, sociability prototype differences and normative and personality influences.

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1 Intention to heed drinking recommendations	4.08	1.81	-							
2 Intention to get drunk	3.96	2.15	-.39***	-						
3 Sociability prototype differences	-1.88	1.47	.10*	-.20***	-					
4 Descriptive norms (friends)	5.63	1.22	-.10*	.34***	-.23***	-				
5 Injunctive norms (friends)	4.50	1.74	-.16***	.29***	-.16***	.51***	-			
6 Extraversion	4.42	1.15	-.08	.16***	.02	.21***	.07	-		
7 Conscientiousness	4.34	1.06	.19***	-.22***	.11*	-.07	-.13**	.08	-	
8 Sensation seeking impulsivity	4.07	0.98	-.15***	.26***	-.05	.10*	.06	.30***	-.38***	-

Note. $n = 543$ * $p < .05$ ** $p < .01$ *** $p < .001$

Table 4.2 Hierarchical regression of two intention outcome variables on sociability prototype differences and hypothesised correlates

Outcome variable = Intention to get drunk						
Step	Variables entered	β	β	R^2	ΔR^2	Model F
1.	Sociability prototype differences	-0.13**	-0.13**	0.13	0.13	39.40***
	Descriptive norms	0.31***	0.31***			
2.	Sociability prototype differences \times Descriptive norms		-0.07	0.13	0.00	27.28***
1.	Sociability prototype differences	-0.15***	-0.16***	0.11	0.11	32.27***
	Injunctive norms	0.27***	0.26***			
2.	Sociability prototype differences \times Injunctive norms		-0.03	0.11	0.00	21.72***
1.	Sociability prototype differences Conscientiousness	-0.17***	-0.17***	0.08	0.08	23.18***
		-0.20***	-0.20***			
2.	Sociability prototype differences \times Conscientiousness		-0.01	0.08	0.00	15.44***
Outcome variable = Intention to drink within recommended limits						
1.	Sociability prototype differences	0.08	0.08	0.02	0.02	4.23*
	Descriptive norms	-0.08	-0.10*			
2.	Sociability prototype differences \times Descriptive norms		0.19***	0.05	0.04	9.46***
1.	Sociability prototype differences	0.07	0.08	0.03	0.03	8.41***
	Injunctive norms	-0.15**	-0.14**			
2.	Sociability prototype differences \times Injunctive norms		0.07	0.04	0.01	6.62***
1.	Sociability prototype differences	0.08	0.08	0.04	0.04	11.78***
	Conscientiousness	0.18***	0.18***			
2.	Sociability prototype differences \times Conscientiousness		-0.02	0.04	0.00	7.94***

Note Standardised β values reported, Sample R^2 reported * $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$

explained by an interaction term over the preceding stage. Of six possible interaction terms, only one proved to be highly significant: descriptive norms \times sociability prototype differences, criterion variable = intention to heed drinking recommendations, $\beta = 0.19$, $p < .001$, $\Delta R^2 = 0.04\%$. To visually inspect this interaction, the relationship between descriptive norms and drinking intention was plotted using the three-level sociability prototype differences group variable (see Figure 4.1). In addition, to statistically assess the nature of this effect, this interaction was further examined via post-hoc probing. To proceed, the sociability prototype differences variable was converted into Z-scores. Z-score values were used to produce a three-level sociability prototype differences group variable, dividing the sample into sub-sections of those who (i) viewed *drinkers* as relatively unsociable (+1 SD), (ii) were ambivalent in their sociability ratings (Mean values) and (iii) viewed *non-drinkers* as relatively unsociable (-1 SD). This analysis revealed that among participants who viewed prototypical non-drinkers as *less* sociable relative to prototypical regular drinkers, higher descriptive norms significantly predicted lower levels of intention to heed government recommended alcohol consumption levels, $b = -0.68$, $SE = 0.17$, $\beta = -0.37$, $t = -3.97$, $p = < .001$. By contrast, descriptive norms had no predictive effect on drinking intention among participants who were ambivalent in their ratings (i.e., sociability was rated similarly for each prototype), $b = -0.11$, $SE = 0.08$, $\beta = -0.07$, $t = -1.34$, $p = 0.19$. n.s. Similarly, descriptive norms had no predictive effect on drinking intention among participants who viewed prototypical non-drinkers as *more* sociable relative to prototypical regular drinkers, $b = 0.24$, $SE = 0.14$, $\beta = 0.18$, $t = -1.69$, $p = 0.10$. n.s. This pattern of findings is also reflected in Figure 4.1. This graph demonstrates that while drinking intention did not regress onto descriptive norms among students who viewed

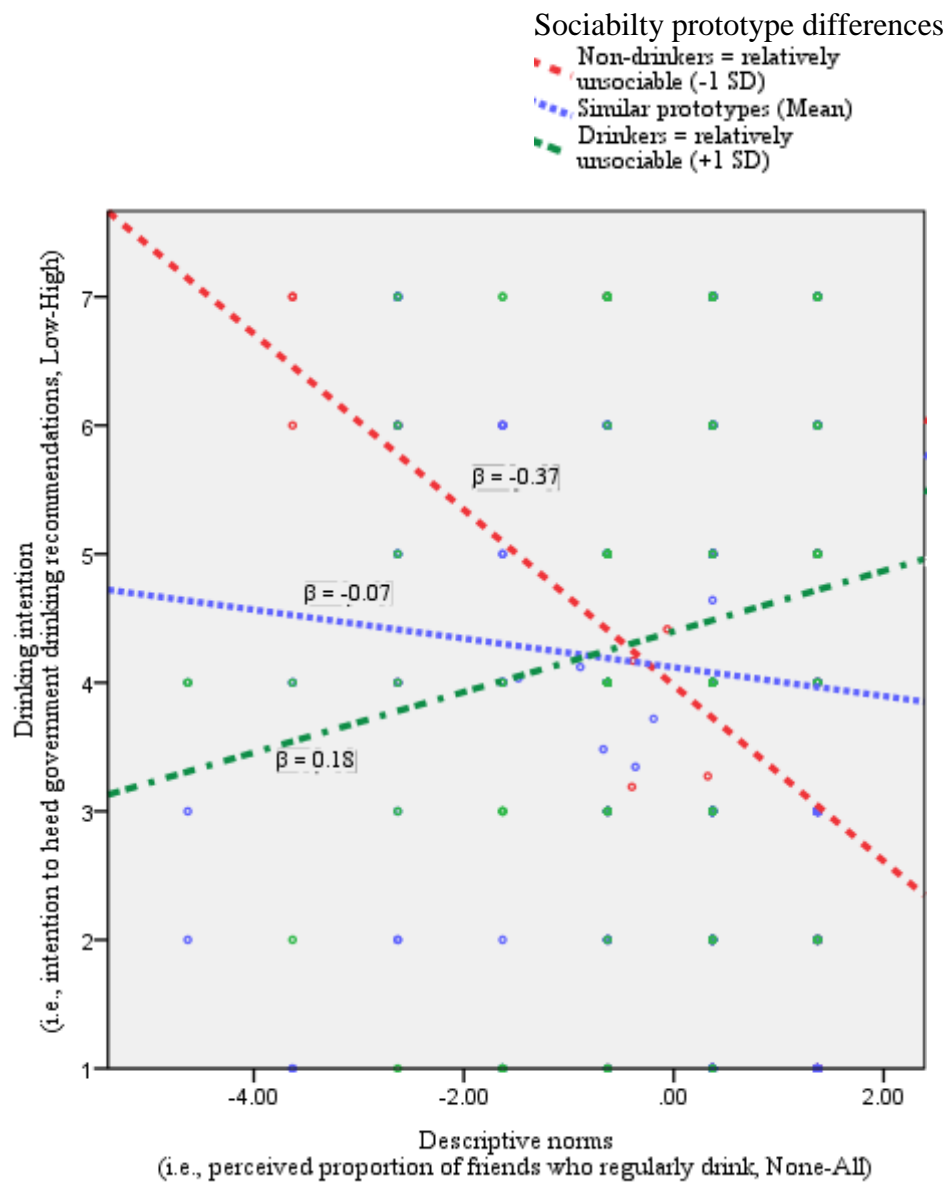


Figure 4.1 Significant interaction between sociability prototype differences and descriptive norms on drinking intention

Note Descriptive norms variable is mean centred.

drinkers as relatively unsociable (green line, Z-scores at +1 SD or greater), or among students who held similar ratings of drinker and non-drinker sociability prototypes (blue line, Z-scores within 1 SD of mean ratings), high descriptive norm ratings were predictive of less health-adherent drinking intention *only* among students who viewed non-drinkers as relatively unsociable (red line, Z-scores at -1 SD or lower).

Taken together, analyses suggested that (i) both dispositional and belief-based factors were associated with more negative (less sociable) evaluations of non-drinkers and, (ii) that individuals who simultaneously perceive that the majority of their friends regularly drink alcohol *and* hold negative evaluations of non-drinkers were those least likely to intend to adhere to drinking guidelines. Current findings suggest a potentially *harmful* effect of perceiving prototypical non-drinkers as relatively unsociable.

4.5 Discussion

This study was designed to explore the relation between sociability prototype differences and dispositional and belief-based factors that have been consistently linked to harmful drinking behaviour in previous studies. Evidence suggests a close relationship between perceptions of non-drinkers and normative influence such that normative influence appears to be conditional on comparative ratings of prototypical drinker types.

Associations between belief-based rather than dispositional variables and less sociable ratings of non-drinkers relative to regular drinkers provided some support for hypothesis 1. Conditional predictive effects of extraversion, conscientiousness and sensation seeking impulsivity on drinking intention depending on sociability ratings of the prototypical non-drinker (i.e., hypothesis 2) were not supported by study findings. However, conditional effects of one aspect of normative influence (descriptive norms)

were. This evidence is encouraging, suggesting that modifiable belief-based factors rather than enduring dispositional factors hold associations with perceptions of non-drinkers. This is important, as it suggests that perceptions of non-drinkers might provide one basis by which health promoting interventions might effectively modify normative beliefs concerning alcohol consumption among students. The finding that negative perceptions of non-drinkers were associated with planned personal drinking behaviour offers partial support for hypothesis 3 and helps verify and to some extent account for recent similar evidence (Regan & Morrison, 2013).

There may be several explanations for this pattern of findings. For example, this association potentially reflects motivations to hold derogatory views of non-drinkers, as a salient out-group, so as to feel included by peer group members. This notion extends from Social Identity Theory and might explain derogatory views of non-drinkers as a way of sharpening boundaries between socially valued in-groups (i.e., drinkers) and socially excluded out-groups (i.e., non-drinkers) among students (Turner, Brown, & Tajfel, 1979). Alternatively, this mechanism may reflect the need to buffer against potential threats to how personal drinking behaviour might hold latent threats to self-esteem or the integrity of self in keeping with the predictions of classical Self-affirmation Theory (Steele & Liu, 1983). Future experimental research might usefully test these rival theoretical positions.

Interestingly, neither harmful nor protective health-related effects of particular sociability prototype differences were strongly associated with different personality types. One interpretation is that this reflects the current study's relatively mature 18-25 year old sample, with recent research suggesting that personality-based risk factors for a variety of substance use may peak in middle adolescence (Collado, Felton, MacPherson, & Lejuez, 2014; Malmberg, Kleinjan, Overbeek, Vermulst, Lammers, & Engels, 2013).

Investigating whether drinking intention remains conditional on sociability prototype differences among adolescents for whom alcohol-related beliefs and behaviours are less firmly established is an empirical question to guide future research.

Rather than focussing on the minutiae of different kinds of alcohol-related prototypes held by social actors (van Lettow et al., 2013) or representing beliefs about non-drinkers in enduring attitudinal terms (Regan & Morrison, 2011), this paper has focussed on a pivotal normative counter-point (i.e., ‘those who drink regularly’ vs. ‘those who do not drink’). This acknowledged, future research might expand on current study findings by exploring similar discrepancies between alcohol-related prototypes differentiated by volume consumed (e.g., ‘moderate’ vs. ‘heavy’) or behavioural state (e.g., ‘tipsy’ vs. ‘drunk’) as explored elsewhere (van Lettow et al., 2012; 2013).

4.5.1 Strengths and limitations

A key strength of the current study was the decision to explore the relationship between two hitherto largely separate literatures relating to alcohol-related prototypes and normative influence. This separation arguably makes little sense, given that a large proportion of university drinking takes place socially where particular perceptions of ‘drinker types’ are likely to acquire distinctive characteristics. The current data suggested harmful effects of viewing prototypical non-drinkers as relatively unsociable, particularly in combination with perceptions of how commonplace regular drinking is within friendship groups. Several limitations should be acknowledged. Although statistically significant associations were found between prototype perception differences, prior drinking behaviour and social norms, the cross-sectional study design prohibits definitive statements of causality. Longitudinal research is needed to determine whether prototype perception differences should be understood as

determinants of, or as determined by, drinking behaviour. The influence of wide-ranging forms of common-method bias (e.g., common scale formats; social desirability) will inevitably have influenced measure responses to some degree (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Here it is noted that strategic question sequencing (e.g., presenting prototype perceptions prior to consumption measures) will have helped to partly address this concern.

4.5.2 Health promotion implications

The observed moderating influence of sociability prototype differences over descriptive norms might be employed in health-promoting university-based interventions to communicate positive impressions of non-drinkers (e.g., that they are equally sociable to regular drinkers). Study findings might be also be used to screen for potential high risk drinkers in the student community by targeting individuals who hold the least favourable appraisals of non-drinkers for health promotion support. Future interventions might capitalise on distinctions between ‘non-drinkers’ (as prototypical social actors), ‘non-drinking’ as a lifestyle choice and ‘non-drinking’ as a potential behavioural option within particular situations; exploring whether modifying negative evaluations of non-drinkers can increase the acceptability of non-drinking during some social occasions. Recent qualitative evidence has hinted at some degree of envy among alcohol consuming students regarding non-drinking as a lifestyle choice adopted by others. For example, evidence has suggested that non-drinkers may be perceived as more socially liberated and self-confident in some respects (Conroy & de Visser, 2013). It seems that any successful intervention of this kind would need to strike a balance between presenting non-drinking within specific situations as a possible and desirable option for

students, while simultaneously promoting broader tolerance of how non-drinking is perceived as an adopted behaviour within social contexts at university.

4.5.3 Practical applications

In the PWM literature, perceptions of non-drinkers have been investigated as ‘prototypical images of low risk health’, yet the scope of investigation need not be limited to a risk-based conceptualisation. Data in this paper demonstrating a conditional relationship of normative influence on drinking intention supports integration of perceptions of non-drinkers within the existing social norms literature in future research. An initial research avenue might involve exploring whether negative evaluations of non-drinkers are intensified or reduced in different social contexts (e.g., differences in group size; male-female ratios). This could be elaborated on by exploring the precise chain of relationships between perceptions of non-drinkers and normative influence. Such an approach might usefully take inspiration from Borsari and Carey’s (2006) quality of peer relations model which suggests that the potency of alcohol-relevant skills and beliefs (e.g., drink refusal self-efficacy; alcohol outcome expectancies) is contingent on peer network quality (e.g., alcohol’s centrality within peer interactions, peer approval concerning alcohol use/non-use). Here, perceptions of non-drinkers might be understood to represent an important conceptual indicator of peer relationship quality, with relatively positive perceptions of non-drinking and non-drinkers indicative of broader standards of tolerance and acceptance within a peer network. Further examination of these intricate inter-relationships is warranted. Further qualitative research might approach participants who gave the most and least favourable (sociable) evaluations of non-drinkers in order to clarify *why* non-drinkers may be viewed positively or negatively by different drinker types in different social contexts,

drawing on sampling approaches adopted in other studies (e.g., de Visser & McDonnell, 2012).

4.6 Conclusions

The current study suggests an inter-relationship between prototypical perceptions of non-drinkers relative to regular drinkers in the context of varied dispositional and normative belief-based factors. Study findings demonstrate how a potential perceptual bias toward non-drinkers may weaken intentions to drink within recommended drinking levels. Several lines of health promotion application and future research were considered to further develop this emerging literature.

Chapter 5

Section Discussion

The preceding two chapters contained results from a study designed to assess and explore perceptions of non-drinkers held by university students. Findings from Chapter Three provided support for a two factor structure for drinker and non-drinker prototypes. Evidence here concerned a sociability prototypes difference score variable which provides a gauge of the sociability of prototypical non-drinkers and prototypical drinkers relative to each other for each participant. Findings from this paper also demonstrate that, among students, more negative perceptions of prototypical non-drinkers (as less sociable) were associated with drinking alcohol in greater quantities. To develop understanding of the theoretical utility of sociability prototype differences, the paper presented as Chapter Four assessed the variable in relation to a variety of personality and belief-based measures and demonstrated that the predictive influence of descriptive norms on harmful drinking intention may be conditional on holding relatively unfavourable (less sociable) evaluations of the prototypical non-drinker.

Evidence in this section compliments existing data concerning the association between negative perceptions of non-drinkers and more harmful drinking behaviour recently reported by other authors (Regan & Morrison, 2013; Zimmermann & Sieverding, 2010). Given the large volume of empirical and interventional attention devoted to challenging misperceptions of peer drinking, findings in Chapter Four provide some evidence that such interventions may benefit from also seeking to modify relatively unfavourable perceptions of non-drinkers as well as correcting normative misperceptions.

Chapters Three and Four provided evidence that non-drinkers are perceived as relatively unsociable compared with regular drinkers; that this holds links with drinking behaviour; and that perceptions of non-drinkers may hold close links with normative perceptions about drinking behaviour. In light of this evidence, it would be useful to understand how these relatively unfavourable social evaluations translate as experiential features of subjective experience for student non-drinkers on the receiving end of these negative construals. This is important from a health promotion perspective as it would point toward ways in which being identified as someone who does not drink alcohol, either as a lifestyle choice but also, more broadly, for the duration of a social occasion, might be promoted as a holding particular advantages or of being more achievable than might be assumed among students. Consistent with these concerns, the next two empirical chapters report findings from an interview study (Study Two) designed to explore the social and subjective experiences of being a student who does not drink alcohol.

Chapter 6

Being a Student Non-drinker: An Interpretative Phenomenological Analysis

6.1 Abstract

Background. Recent research suggests that safer student alcohol consumption might be assisted by understanding how social occasions are managed by non-drinkers. **Methods.** In-depth, semi-structured interviews with five 19-22 year old non-drinking English undergraduates were subjected to interpretative phenomenological analysis (IPA). **Results.** Five inter-linked themes are presented: ‘living with challenges to non-drinking’; ‘seeing what goes on in drinking environments’; ‘dealing with conversations about non-drinking (‘making excuses vs. coming out’)’; ‘knowing which friends care about you’; and ‘the importance of withholding “legroom” for peer pressure’. Participants felt under persistent peer scrutiny (as a form of peer pressure) and could feel alienated in drinking environments. Talking about non-drinking was characterised by whether to ‘come out’ (as a non-drinker) or ‘fake it’ (e.g., ‘I’m on antibiotics’). Loyal friendships were reported as particularly important in this context. The decision not to drink was experienced as providing a successful buffer to peer pressure for former drinkers. **Discussion.** Current study findings unsettle traditional health promotion campaigns which advocate moderate drinking among students without always suggesting how it might be most successfully accomplished, and offer tentative guidance on how non-drinking during specific social occasions might be managed more successfully. Findings are discussed in relation to extant literature and future research directions are suggested.

6.2 Introduction

Promoting healthier alcohol consumption among young people and student populations in England is an on-going challenge (Plant & Plant, 2006) and, relative to other European countries, heavy drinking patterns in these demographics are pronounced (e.g., Fuhr & Gmel, 2011; Plant & Miller, 2001). The central position of alcohol in university cultures is of particular concern (Gill, 2002; Griffin, Szmigin, Hackley, Mistral & Bengry-Howell, 2009; Smith & Foxcroft, 2009). To address this, identifying predictors of harmful drinking behaviour among students and understanding how attitudes towards more moderate approaches to drinking might be encouraged has received substantial attention in psychological research (e.g., Atwell et al., 2011; Barry & Goodson, 2010; Clark et al., 2012; Green, Polen, Janoff, Castleton & Perrin, 2007). Many studies highlight the significant influence of social norms, peer pressure and peer conformity on drinking behaviour among young people and students (e.g., Brown, Clasen, & Eicher, 1986; Nash, McQueen, & Bray, 2005; Santor, Messervey, & Kusumakar, 2000). However, fewer studies have examined the experiences of those who do not drink alcohol in social contexts where heavy drinking may be normative (Nairn et al., 2006; Piacentini & Banister, 2009; Piacentini et al., 2012). Greater understanding of non-drinkers' experiences in university social contexts might be suggestive of new ways to challenge normative pressure to drink alcohol among students.

In 2009, approximately 20% of young people (16-24 year olds) in England were non-drinkers (Information Centre for Health & Social Care, 2012), with evidence that this number increased during the 2000s (Measham, 2008). Promoting non-drinking as a health goal would be an unrealistic or even undesirable health promotion objective (Pederson, Heitmann, Schnohr, & Grønbaek, 2008), yet learning how to empower

student drinkers to manage the dynamic and challenges of not drinking during some social situations would be desirable. Addressing situational non-drinking in this way is arguably an important and over-looked feature of strategies designed to successfully promote moderate drinking.

There is only a small body of literature on non-drinking. Drawing on interviews with nine non-drinkers, Piacentini and Banister (2009) reported significant tensions in the successful social management of ‘anti-consumption’ and discussed the usefulness of different coping strategies such as challenging stereotypes of non-drinkers. These authors also described ‘counter-neutralisation techniques’ used by non-drinkers to protect themselves from peer intolerance of counter-normative student lifestyles: for example, by acknowledging dangers of heavy drinking or by derogating drunken behaviour (Piacentini et al., 2012). Nairn et al. (2006) identified diverse subject positions young non-drinkers in New Zealand adopted to explain their counter-normative position. These included: (i) positions regarded as socially legitimate in terms of their lifestyle (e.g., sporty; healthy) or cultural basis (e.g., religious); (ii) alternative leisure activities such as daytime café meetings; (iii) constructing alcohol consumption as infantilising or character-changing; and contrastingly, (iv) ‘passing’ as a drinker in social contexts through actions such as pretending to be holding an alcoholic drink.

Recently, the social experiences of non-drinkers have been described in UK research reports, providing evidence relating to young people’s decision-making around alcohol use (Seaman & Ikegwuonu, 2010) and the processes of becoming and being a non-drinker (Herring et al., 2014). These studies revealed that peer tolerance of non-drinking was maximised where individuals strategically deployed ‘legitimate’ reasons, whether dispositional (e.g., ‘don’t like the taste’) or circumstantial (e.g., ‘on medication’, ‘designated driver’) in nature. Both studies also emphasised the importance of dealing

with the difficulties of non-drinking at a life stage where everyone seems to be drinking and in social environments where alcohol consumption is particularly prominent (e.g., parties, clubs). Evidence specific to non-drinkers has indicated diverse potential strategies for non-drinkers to use in social settings, including: rejecting stereotypical labels (e.g., ‘boring’); adopting alternative identities; ensuring that drinkers do not feel judged; alleviating situational tension using humour; boundary-setting for being out; and being assertive or resolute in how non-drinking is spoken about (Herring et al., 2014). Notably, Seaman and Ikegwuonu (2010) found that non-drinkers expressed pride in their minority status.

6.2.1 Sampling approach and focus

Studies exploring the experiences of young adult non-drinkers provide varied operational definitions of the behaviour. For example, infrequent drinkers are included alongside non-drinkers by some authors (Nairn et al., 2006), while others integrate light and non-drinkers within the category ‘anti-consumers’ – orientating their enquiry towards individuals understood to operate outside of student norms more generally (Piacentini & Banister, 2009). Studies focussing exclusively on non-drinkers have excluded individuals abstaining for religious reasons, either to explore less obvious reasons for not drinking alcohol (Herring et al., 2014) or for unspecified reasons (Seaman & Ikegwuonu, 2010).

While all approaches have their merits, it is suggested that a more conservative sampling approach is of particular appeal from a health promotion viewpoint. Specifically, it is proposed an original distinction between individuals who do not drink for reasons that are culturally *unsanctioned* - i.e., those who choose not to drink primarily because they dislike its effects on themselves or others – and those who

abstain for reasons that are culturally *sanctioned* – i.e., those who choose not to drink primarily for culturally-recognisable reasons such as religion, physical illness or prior dependence. While similar distinctions between individuals with different kinds of reasons for non-drinking have informed previous sampling approaches (e.g., Herring et al., 2014), this paper provides an explicit, conceptually informed distinction based on an underlying health promotion rationale and, as such, offer an original extension to this emerging literature.

It is suggested that investigating the experiences of culturally unsanctioned non-drinkers is more valuable to health promotion initiatives designed to reduce student consumption levels given that they can be more meaningfully applied to the broader student population than those which examine the experiences of non-drinkers en masse. For example, the culturally sanctioned non-drinker may respond to the question ‘Why don't you drink?’ by providing an irrefutable reason (e.g., ‘I have an autoimmune liver condition’). In contrast, the culturally unsanctioned non-drinker may have to do more work to convince others of the validity of his/her decision not to drink. This distinction is not intended to provide a reified taxonomical account of non-drinking motivations and in so doing to falsely simplify complex issues of social approval, cultural acceptance and personal choice involved in the decision not to drink alcohol. Instead, this distinction is intended to provide a pragmatic focus on non-drinkers whose experiences may be of most relevance to the broader student population.

As an original contribution within this literature, it was decided to focus exclusively on non-drinkers whose behaviour is the least readily defensible (in normative terms). Arguably, this focus carries the broadest applicability from a health promotion perspective, given that the experiences of culturally unsanctioned non-drinkers hold relevance to *any* university student motivated to drink alcohol more moderately yet who

would be required to defend the decision not to drink during a social occasion in the absence of a culturally sanctioned reason for such action. This study presents data collected from interviews with five individuals who have chosen not to drink alcohol and was structured around two broad research questions: (1) why have individuals chosen not to drink alcohol?; (2) what kind of social experiences do culturally unsanctioned non-drinkers have in university settings?

6.3 Methods

6.3.1 Sampling

All participants were recruited from a survey study of 609 drinkers and non-drinkers. Of 60 non-drinking respondents, twelve did not drink for culturally unsanctioned reasons (e.g., disliking alcohol's effects on others) rather than culturally sanctioned reasons (i.e., religious; physiological). Of these individuals, five were willing to be interviewed (Table 6.1). Both lifelong non-drinkers and former drinkers (abstinence of \geq six months) were interviewed. The sample was not designed to be representative of either non-drinking students or culturally unsanctioned non-drinkers, but rather to focus on the varied and intricate experiences of these particular individuals who had chosen not to drink alcohol.

6.3.2 Procedure and interview

Ethical approval was acquired from the host institution. An interview schedule started with general items (e.g., 'how do you like to spend your leisure time?') before turning to non-drinking items that were both broad (e.g., 'tell me about your experiences as a non-drinker') and more specific (e.g., 'describe how you have historically dealt with drink offers'). Semi-structured interviews took place on university campuses or at

interviewee's homes after obtaining written informed consent. Where possible, throughout interviews, terms such as 'non-drinker' or 'non-drinking' were avoided in an effort to minimize the presence of rigid labels indicative of social categories or lifestyle choices. No fixed interview structure was followed, enabling participants to discuss those experiences which held most personal relevance in an order of their own choosing. Post-interview, participants were asked if there was anything concerning their non-drinking not covered during the interview that they would like to discuss. Recordings of interviews were transcribed verbatim. In this manuscript [...] indicates the deletion of material not pertinent to analysis.

Table 6.1 Interview study participants

<i>Pseudonym</i>	<i>Age</i>	<i>Non-drinking duration (months)</i>	<i>Reasons for non-drinking</i>
Andy	20	Lifelong	Lacking knowledge about alcohol; self-confidence; not wanting to lose self; wanting to do what's right for himself; extended family alcohol problems; not wanting to lose control; healthy lifestyle; financial savings; uncertain about reasons
Katie	21	14	Witnessing negative effects on others (i.e., aggressive drunken behaviour and chronic health impact in barmaid and carer jobs); financial savings; alcohol not necessary for having a good time
Paul	19	Lifelong	Wanting to be himself; not wanting to lose control; family norms regarding alcohol; disliking taste; uncertain about reasons
Dawn	22	Lifelong	Linked to broader principles for living life; see no reason to drink; seeing negative effects on others (e.g., hangovers); healthy lifestyle
Michelle	21	6	Dislike self when drunk; partner a heavy drinker; lost confidence as a drinker; addictive personality; wanting university work focus; disliking taste; lost interest in drinking; uncertain about reasons

6.4 Results

6.4.1 Analytic approach

Interpretative phenomenological analysis (IPA: Smith & Osborn, 2003) was used as a guiding framework. IPA entails a fine-grain account of individual lived experience. It was well-suited to the current research enquiry given its focus on a homogenous group of individuals who share a common life phenomenon. Small sample sizes are typical of IPA studies and highly congruent with its methodological emphasis: the in-depth investigation of a shared aspect of lived experience. Recent IPA studies of drinking behaviour among young people (e.g., Shinebourne & Smith, 2009; de Visser & Smith, 2006, de Visser & Smith, 2007a; de Visser & Smith, 2007b) have demonstrated the inherent value of recognizing complex links between drinking behaviour and issues of self and identity among young people. Similarly, this study was designed to explore the phenomenology of the decision not to drink alcohol as something that might be expected to hold implications for self and identity given its counter-normative association. Analysis involved two broad phases. In the first phenomenological phase, features of each individual's experience, alongside both their and the interviewer's meaning-making interpretative activities, were carefully detailed. This process was repeated across transcripts, and was followed by the second phase of interpretation in which convergences and divergences within and between individual accounts were recorded. The second author assessed the credibility of data interpretation, the final thematic structure and the suitability of transcript excerpts appearing within themes, consistent with suggested quality guidelines (Willig, 2008).

6.4.2 Study findings

Analysis identified five inter-linked themes relating to the environmental challenges and peer pressure in the experience of being a non-drinking student. The data demonstrate how a combination of adaptability of self-presentation, support from friends, and the assured nature of the decision to abstain itself were identified by participants as conducive components of a more positive social experience of non-drinking during their time at university. Participants' experiences are presented via five inter-related but distinctive superordinate themes: 'Living with challenges to non-drinking', 'Seeing what goes on in drinking environments', 'Dealing with conversations about non-drinking (making excuses vs. coming out)', 'Knowing which friends care about you' and 'The importance of minimising "legroom" for peer pressure'. These themes are explained and illustrated below.

6.4.2.1 Living with challenges to non-drinking

All participants described an array of challenges to their non-drinking within peer conversations, though not always via explicit pressure to drink alcohol. These challenges were experienced as subtle but pervasive and diverse in nature, as illustrated in Katie's recounting of responses to the discovery that she is a non-drinker:

[You] get the multitude of um different, you know, you either get it forced on you, you get the silence, you get the questions, when you say you don't drink. -
Katie

Responses to Katie's lifestyle decision were palpably experienced as a bothersome and intrusive calling to account for *why* she had chosen not to drink. Whether her peer response was decisive ('forced on you') or passive ('the silence'), Katie described a

comprehensive and inevitable pattern of dialogue in her daily life in which this part of herself was called into question.

For Paul, a lifelong non-drinker, peer responses had focused on remedying his behaviour:

There is a tendency for [women] to sit down and get to the root of it, subtly trying to get you to drink without you knowing, through other means. The kind of, the “have you tried this”, the spiking the drink kind of... “what if we get drunk together.” ...I've heard a fair few of them. “What if you only drink half of what I drink”, those kind of things [...] and it's just, “no.” - Paul

In such encounters, Paul seemed to experience others' responses to his non-drinking as non-accepting, manifest in the perception of their efforts: to address the root cause of counter-normative behaviour; to undermine his decision by appealing to a shared or communal peer experience (‘get drunk together’) or agreed drinking ratios; or to sabotage his choice (‘spiking’). This range of reactions involved in peer pressure suggests how Paul's non-drinking instigates a powerful response from others: so provocative is the discovery of someone who does not do as others do, and so unequivocal is the belief that non-drinking justifiably requires problematizing rather than acceptance. Though forms of explicit pressure were present in both Katie's (‘forced’) and Paul's (‘spiking’) accounts, participants' tended to experience peer pressure in the form of more gentle resistance to, or suspicion of, non-drinking.

6.4.2.2 *Seeing what goes on in drinking environments*

Although challenges from peers made life more difficult for non-drinkers, there was also the sense from participants' accounts that sharing spaces with people who drink could be disquieting, as Dawn experienced:

I suppose when you're sober and looking at that kind of thing, and you see people throwing up and being silly, you tend to feel more uncomfortable. - Dawn

The contrast between Dawn's mind-set ('when you're sober) and her peers' behaviour ('being silly') set her apart from her drinking peers, having deprived her of a meaningful and comfortable social role. Andy, another lifelong non-drinker, described a similar dynamic:

Two people who were very, very drunk were making a big scene and [...] everyone was kind of being entertained by it and um. They were making fools of themselves and I was sitting there, only sober person in the place. I didn't want to stop it because I felt like, that's just killing a party and upsetting everyone. So, um, I had to leave. [...] I just felt it was kind of, ethically wrong for me to just sit there and watch this go on. Everyone else was drunk so they were kind of excused from the fact that they weren't really seeing what was going on. - Andy

Unaffected by alcohol's influence (social appraisals were uninhibited) and lacking alcohol's influence on the normative interpretation of the situation (social appraisals were unchanged), Andy experienced this scene as alarming rather than fun. A tension existed between Andy's and his peers' experience: to interject in some way would have been, effectively, 'killing the party', or, acting discordantly with the party's rules. A consistent desire for all participants was the need to experience regular, vibrant social lives in which the decision not to drink alcohol was tolerated among peers because it was irrelevant. However, these ambitions could be undermined both *externally* via

scrutiny (as a form of peer pressure) and *internally* via non-drinkers' sense of misfit between them and the social dynamic of heavy drinking occasions.

6.4.2.3 *Dealing with conversations about non-drinking (making excuses vs. coming out)*

All participants described the importance of providing false or misleading accounts of their reasons for not drinking alcohol so as to provide a culturally sanctioned explanation for their lifestyle decision. Andy's account indicated the social occasions where such avoidant strategies might be employed:

At my friend's 17th birthday I was meeting quite a lot of new people who were doing a drinking game. I didn't feel comfortable with being the party pooper and saying 'I can't do this I am going to watch instead.' I was getting on with them really well and didn't want to kind of ruin that [...] I said, 'I can't drink because I am taking antibiotics' [...] that felt like um, a more socially acceptable reason to not drink than because I didn't want to drink. - Andy

Drawing on his experiences, Andy recognised the distinction between not drinking alcohol for socially acceptable reasons (e.g., 'on antibiotics') and socially unacceptable reasons (e.g., dislike its social effects). As someone 'on antibiotics', Andy had a legitimate response, explaining away his behaviour in terms that were easy to understand and hard for others to challenge. This saved an otherwise enjoyable social situation from being 'ruined' by unpacking the complex and idiosyncratic account of his non-drinking presented during the course of his interview.

Similarly to Andy, Paul recognised the importance of deceiving others about being a non-drinker:

I am very skilled at hiding the fact that I don't drink, I know sleight of hand, or if other people are playing a drinking game I'll, whenever it gets to my turn I'll

leave the table or just having a half full glass of Coke, that everyone assumes is Coke and Jack Daniels. - Paul

Wanting to be understood to be doing as the group do, Paul considered it important to evade situations which would require explicit drinking behaviour ('I'll leave the table'), or managed to pass as a drinker by being seen in possession of a beverage that could be mistaken for alcohol. While confident in the success of these strategies ('very skilled'), Paul's experiences within drink-related scenarios entail risk in which constant monitoring of changing situational dynamics and potential negative evaluation are required to survive peer scrutiny or, worse, social revelation. However, Paul later divulged that deceptive strategies would not be required among closer friends:

When first getting to know people it's important to look like you've got a drink. But once you've got to know people and they accept it, the best strategy is just to say "No thanks". [...] not be, "no way, why would you offer me that, it's ridiculous" just a kind of, "I'm alright thanks." So it's accepted as part of who I am. It's not a secret, it's just not something that you broadcast when people who are around you are heavy drinkers. - Paul

Among friends, rather than confront the basis of drink offers, Paul found that making light of his non-drinking and polite refusal offered him effective protection against a potentially difficult social situation. Paul's experiences dovetail with Andy's concerns about concealing his non-drinking status among new acquaintances, yet suggest that a shift in strategy were found to become necessary and desirable among people who knew him better. Both male participants indicated that some degree of flexibility was required to address genuine, anticipated or imagined evaluations of their non-drinking. An alternative 'coming out' approach among both friends and peers was favoured among female participants. This was evident in Katie's response:

I'll say [to friends] "I'll go out but I won't drink", and then they're sort of like, "go on, you know, why not?" Because I am a bit more firm in it and I am like, "no, seriously I am not drinking. I am completely adamant, there's no way you can sway me, I will not drink." - Katie

In contrast to Paul and Andy, Katie, a former drinker, announces her intent to friends from the outset of a social occasion ('I won't drink') explicating her resolution ('adamant') and the futile nature of potential pressure ('no way you can sway me'). Katie gained confidence from the personal meanings hinging around personal choice to plainly defend her lifestyle preferences when faced by social pressure to drink alcohol.

This direct approach was also favoured by Dawn, a lifelong non-drinker, within peer interactions:

I say, "no, I don't drink, I never have drunk, I don't see the reason in drinking, I am not going to drink now." They say, "just smell it, you'll like it." It's like, "it doesn't matter if I like it or not, I don't want to drink." I repeat that for a bit and they tend to give up and go away. - Dawn

Dawn preferred to comprehensively refute peer pressure to drink alcohol, choosing to express her behavioural mind-set ('I don't'), its history ('I haven't') and her stance ('I don't see the reason in drinking'). This process required repetition (so strong is the expectation to drink among peers), yet appeared to work - 'they tend to give up'.

While some participants' experiences had led to a conviction that some degree of tactical flexibility was required when socially deploying non-drinking narratives, other participants' experienced advantages of towing an unfaltering narrative line. Neither faking it nor coming out provided a wholly satisfactory cross-situational framework for participants: faking it carrying the risk of being discovered, and coming out the risk of being demarcated as a social outsider.

6.4.2.4 *Knowing which friends care about you*

Three participants described the importance, in the broader context of peer scrutiny and intolerance, of keeping supportive friendship networks, including people who understood and respected their decision not to drink alcohol. Katie communicated this clearly:

People don't understand why you don't drink. At my age it's expected. If you don't you're a black sheep, kind of thing. I couldn't care less. I really don't care about what people think about me. [...] At the end of the day, I have my group of friends so, you know, I really couldn't care about what other people think. - Katie

In her 'black sheep' metaphor, Katie alludes to her experience of non-drinking as a visible and potent signifier of someone whose behaviour is diametrically opposite from that of her same-age peers. Awareness of friends for whom distinctions based on drinking behaviour are unimportant seemed to have provided Katie with an effective bolster against peer prejudice. Michelle had also experienced the importance of delineating between those capable, and incapable, of holding a more permissive understanding of non-drinking:

My closest friends respect my choice because they care, other people probably don't, they try and coax you to have a drink [...] if they cared they wouldn't do it would they? If they cared enough. I've got my close friends and the people who matter around me. So social gatherings with groups of students on my course [...] isn't really that important. - Michelle

The issue of sufficiency ('cared enough') seemed to characterise Michelle's experience of no longer drinking alcohol. Once she had abandoned alcohol, Michelle found herself compelled to sort those perceived as caring, from non-caring others. Both Katie and Michelle's accounts hinted at how much more straight-forward life might be

were they to drink (e.g., ‘black sheep’) yet for better or worse sharpened categories of ‘close friends’ from the broader peer group. For Katie, it was important to dissociate herself from personal investment in the responses of others (‘couldn’t care less’) while for Michelle, a sufficient level of investment on the part of others in her personal well-being (‘cared enough’) became the criterion through which being a ‘close friend’ could be established.

Paul also found that the meaningful boundaries of genuine friendship were contingent on respect for his decision not to drink alcohol:

There have been a few times when people have tried to spike my drink, they think, “Ah he won't know.” [...] When they try to spike my drink I do actually, the next morning, have a serious word about if they do it again that will be the end of the friendship on the spot. - Paul

Though willingness to endure peer challenges to his non-drinking appeared elsewhere in Paul’s interview, his need for dependable, loyal friendship represented the threshold at which such challenges could no longer be tolerated. For Katie, Michelle and Paul, closer university friendships partly involved accepting their decision not to drink alcohol (even where the basis for that choice was unknown or unclear). As Paul explained, inadequate acceptance levels might necessitate the breaking of social ties. Non-drinking, therefore appeared to lead not just to social challenges and exclusion, but suggested the potential need for renegotiating social support structures and friendship groups. Participants tended to describe this aspect of non-drinking in positive, empowered terms, creating a dynamic where supportive friendships were strengthened and less supportive friendships were discontinued.

6.4.2.5 The importance of minimising “legroom” for peer pressure

In addition to environmental pressures, Katie drew attention to the kind of pressure faced by someone who aims to drink moderately when out socially:

If you're adamant enough that you're not going to drink [...] people will understand that a bit more. Whereas, if you say, “oh I might have one.” They're like, “Waa-aay, a bit of legroom there, I might be able to sway ‘em', you know, get ‘em to have one”, like the weak link in the chain. Whereas if someone's completely, “no, I am not doing it”, then you won't bother 'cos they've obviously made up their mind. - Katie

Katie experienced evident benefits of denying the possibility of ‘legroom’ relating to unwanted drinking behaviours pressed by her peers. Dual interpretative meanings are present in Katie’s ‘weak link in the chain’ image: in its metaphorical meaning, as ‘the odd one out’ within a social occasion; and in its symbolic timbre, which evoked ‘chain-mail’, or body armour, unfit for purpose that renders the wearer vulnerable. Fully unpacking these symbols reveals how Katie experienced that her *previous* moderate drinker mind-set left her susceptible to social pressure in a way that her *current* non-drinker mind-set did not.

These data unsettle current health promotion initiatives which assume that lower levels of alcohol consumption among young people are most effectively instilled by ‘calibrating’ awareness of recommended consumption levels, chiming with commentary elsewhere (de Visser & Birch, 2012; Moss et al., 2009). Katie experienced that going out with the intention to drink moderately was fine in theory, but offered little defence when negotiating interactions with peers in which preferred consumption levels could come under fire.

Both former drinkers identified the potential pitfalls of attempting to drink moderately during social occasions where others were drinking more heavily. Having experienced life as both former and non-drinkers, these individuals offered clear experiential insights into two distinct mental dynamics: of ‘moderate drinkers’ and ‘non-drinkers’. Michelle said:

I started to avoid drinking situations and going out with certain groups of people because I felt uncomfortable in those situations. A lot of the time I would give in to peer pressure and end up having a few drinks when I'd gone out with every intention not to. When I've quit smoking [...] you know, just by sitting around other people smoking, or having people smoking, or people offering you a cigarette, it all puts pressure on you. - Michelle

Initially, Michelle cut down her alcohol consumption, yet, as a moderate drinker, was still socially present as someone who *may drink alcohol*. Referring by analogy to smoking, Michelle described diverse environmental pressures contended by the moderate mind-set: proximity to drinkers, observing drinking behaviour and experiencing drink offers. To not risk succumbing (‘having a few drinks’), she drank nothing in drinking contexts or avoided them entirely.

As non-drinkers, participants felt under persistent scrutiny and pressure to drink alcohol among peers. Participants were aware of a disjuncture in peers’ perceptions of behaviour during social occasions involving heavy drinking, leading to feelings of alienation in these environments. Their accounts showed how talking about non-drinking could be experienced as a delicate enterprise characterised by decisions around whether or not to ‘come out’ (as a non-drinker) or ‘fake it’ (e.g., ‘I’m on antibiotics’). The importance of loyal friendships in these circumstances was described as paramount by most participants. Among former drinkers and lifelong non-drinkers, the decision not

to drink was felt to buffer more successfully against peer pressure than the intention to drink moderately during social occasions.

6.5 Discussion

The findings presented above help to develop a currently small literature on the experiences of student non-drinkers in two novel ways: first, by restricting attention to non-drinkers whose experiences arguably have most bearing on promoting lower levels of student alcohol consumption ('culturally unsanctioned' non-drinkers); second, by providing an explicitly phenomenological account to provide a clearer sense of situational non-drinking in experiential terms.

Most participants limited their time spent in drinking environments given the sharp juxtaposition between mental states when sober and when under alcohol's psychoactive affects. Aside from the tedious experience of heavy drinking occasions when sober, participants also described a particular moral quandary about attendance at these occasions. For non-drinkers, retaining what has been described elsewhere as 'walk-away power' (Herring et al., 2014) when in heavy-drinking environments was an important strategy for coping with situations which were unable to socially accommodate them as non-drinking students.

For many participants, there were dilemmas around how and when to deceive others about their non-drinking. Misleading people via an excuse (e.g., 'I'm on antibiotics') was an undesirable but prudent route for evading social pressure or judgements – especially with new acquaintances. For example, being seen in possession of an alcoholic drink was one way in which participants achieved this, as demonstrated elsewhere in the importance of 'passing' as an alcohol consumer (e.g., Nairn et al., 2006). This partly seemed to involve being seen to have a culturally 'legitimate' reason

for non-drinking, evident in some situations in their tendency to present fictitious obligations underlying apparent non-drinking (e.g., ‘on antibiotics’). The findings here match similar excuses reported elsewhere (Seaman & Ikegwuonu, 2010). In lieu of religious/cultural reasons for non-drinking, culturally unsanctioned non-drinking students must manage the strenuous task of rebuffing social challenges without having a simple or compelling explanation for their non-drinking. Consistent with Nairn et al. (2006), these ‘faking’ strategies did not appear to indicate submission to dominant drinking norms, and were found predominantly within interactions (with less well-known peers) in which challenging drinking norms might prove counter-productive and ‘coming clean’ might be impractical. However, on this point it is also noted that recent experimental evidence suggesting that ‘don’t’, rather than ‘can’t’ refusal framings are more psychologically empowering in motivating goal-directed behaviour (Patrick & Hagtvedt, 2012). Encouragingly, this provides some basis for suggesting that non-drinkers may be in a stronger position than they imagine when being ‘completely adamant’ about not drinking alcohol (as Katie was), rather than relying principally on the subterfuge provided by excuses. It should also be noted that several participants (e.g., Paul) emphasised that, in addition to deploying plausible excuses, lightness-of-touch was also integral to successfully (i.e., inconspicuously) declining offers of alcoholic drinks to avoid drawing attention to non-drinking behaviour.

The importance of tolerance of lifestyle choices (i.e., their non-drinking) within closer friendships was experienced as an integral aspect of social well-being for most participants. These findings broadly correspond with studies of student friendships which consistently demonstrate positive links between social relationships and well-being (e.g., Buote et al., 2007; Demir & Davidson, 2013) and has highlighted close links between perceptions of genuine support, friendship quality and psychosocial well-

being (Demir & Davidson, 2013). It seems likely, then, that these friendship experiences are broadly applicable to students when addressing questions of fidelity, trust and proximity as part of the initiation and development of friendships during their time at university. This said, the socially demanding aspects of being a non-drinker illustrated here and elsewhere (Piacentini & Banister, 2009; Seaman & Ikegwuonu, 2010) suggest that the availability and dependability of such friendships might be particularly important or pertinent to individuals who must consistently defend the counter-normative position which they occupy through not drinking alcohol. In this way, the status of 'not drinking' seemed to provide a benchmark for the participants enabling (or forcing) them to assess the viability of particular social networks or individual friendships.

This process of appraisal was seemed to be particularly evident among participants who had experienced peer attempts to 'spike' their drinks with alcohol (e.g., Paul's interview). Studies of drink-spiking have tended to focus on their general incidence (McPherson & Smith, 2006; Moore & Burgess, 2011) and use in relation to sexual assault (Sheard, 2011). Studies have not, to the PhD candidate's knowledge, examined drink-spiking within university social networks and friendships. Understanding how drink-spiking behaviour linked to disregard of lifestyle choices around alcohol consumption and the implications this would hold for friendship boundaries would be useful to address in future research. The first author of this paper adopts the view that research concerning the experiences of non-drinkers may help to problematize alcohol consumption's entrenched normative status as a 'typical' or 'inevitable' part of student identities and socialising, as stated elsewhere (e.g., Piacentini & Banister, 2006; Piacentini et al., 2012). The study's former drinkers (Katie and Michelle) described important advantages of presenting themselves as non-drinkers, in terms of not

presenting ‘legroom’ for peer intolerance and pressure during social occasions. The effectiveness of presenting ‘a non-drinking mind-set’ among individuals who periodically do not drink during social occasions would be useful to explore in future research. In considering these issues, it is suggested that studies of non-, light/occasional and moderate drinking may help provoke some shift in the strategic emphases of alcohol-related public health promotions in England. Ongoing emphasis in recent health messages has been placed on promoting better understanding of how ‘safer drinking’ can be equated with alcohol consumption units (e.g., HM Government, 2012; Public Health England, 2013). It is suggested that health promotion initiatives that do not contain overt guidance on how perceptions of drinking behaviour and peer pressure might be strategically managed are likely to have limited impact in reducing alcohol consumption among students.

6.5.1 Strengths and limitations

Our study has provided an explicitly phenomenological account of how non-drinking is experienced based on a subset of non-drinkers from whom, it is argued, the most meaningful and applicable range of experiences can be learnt from and transposed to broader health promotion settings. This complements and extends the existing literature on experiences of non-drinkers. Investigating diverse sub-sets of homogenously-defined drinker ‘types’ is, it is suggested, an important aspect of future research, given the varied emphases and research settings that are required to fully understand the circumstances in which drinking and non-drinking behaviour are best and least well tolerated. In this study, attention has been drawn to supportive factors that might better empower students choosing to moderate their alcohol consumption by not drinking

during the course of occasions, during certain weeks or months, during particular academic periods or for the duration of their university life.

Study limitations and future research recommendations are considered in parallel. First, a larger sample of culturally unsanctioned non-drinkers should have usefully provided former and never-drinkers of both sexes. Given recent qualitative evidence that male non-drinkers may be more socially stigmatized and viewed in more pejorative terms by student peers (Conroy & de Visser, 2013), a larger dataset would usefully permit investigation of sex differences in managing non-drinking. Second, focussing on ‘culturally unsanctioned’ rather than ‘culturally sanctioned’ non-drinkers occurred at the expense of investigating the social experiences of non-drinkers who become suddenly unable to drink alcohol (e.g., post-liver infection). While it is maintained that focussing on culturally unsanctioned non-drinkers may have the most direct bearing on the alcohol-related behaviour of university students more broadly, understanding the differing boundaries of acceptability of different types of non-drinking presents a potentially fruitful future research objective. Third, attrition of some non-drinkers identified from the survey study suggests potential sample biases; specifically, interview meetings with two male former drinkers could not be finalised, though this in itself holds the possibility that conversations about non-drinking might be particularly burdensome or difficult for male students. Fourth, a naturalistic data-set containing non-drinkers’ social interactions (e.g., in student bars) could provide an important complement to the phenomenological focus of the current study. Particularly, such evidence would explicate the rhetorical devices and subcultural resources drawn on by individuals when managing the subject positions involved in non-drinking as a socially constructed category. Finally, though it is believed that study findings have transferable relevance to alcohol-related decision-making and student drinking patterns more

broadly (e.g., indicating possible aids and barriers to resisting peer pressure to drink during a social occasion), it is acknowledged that findings cannot be generalized beyond these specific non-drinking individuals. Appropriate to IPA's distinctive strengths as an analytic method, the findings are suggestive of ways in which health promotion approaches to student alcohol consumption might evolve and are not intended to be conclusive in any sense. It is suggested that these insights into lived experiences of non-drinkers facilitate critical re-thinking around alcohol's subjective effects, communal influence and social utility. These data chime with previous evidence of ambivalence towards alcohol consumption among young people (de Visser & Smith, 2007a). Study findings stand in contrast to the focus of much alcohol research, which can be geared towards understanding alcohol's ill effects in physical or psychopathological terms.

6.6 Conclusions

The present study enabled non-drinkers to communicate experiences in language of their own choosing which provided rich psychological insights into how pressure is experienced and strategically managed among individuals well-rehearsed in the social dynamics of this task. Given its norm-violating character, it is unsurprising that interviewees did not communicate clear 'magic bullet' strategies for successfully managing non-drinking within social settings. Instead, interviews alluded to how being a non-drinker may hold implications for how social networks, friendships and drinking environments are perceived and how conversations about non-drinking may be most effectively handled. It is not suggested that transposing the experiences of non-drinking individuals to student drinking behaviour more broadly is a trivial challenge, but it seems that further investigation of *how* the decision not to drink alcohol during social occasions might be presented as more feasible for young people provides at least part of

the support package required to successfully promote lower levels of alcohol consumption in this demographic.

Chapter 7

The Importance of Authenticity to Student Non-drinkers: An Interpretative Phenomenological Analysis

7.1 Abstract

Aim. This paper presents research which illustrates the importance of authenticity to student non-drinkers. **Methods.** Semi-structured interviews focussing on the lived experiences of five non-drinking students were subjected to interpretative phenomenological analysis (IPA). **Results.** Four inter-related themes are presented: ‘Retaining authenticity by not drinking’; ‘Tainting the self by drinking alcohol’; ‘Feeling trapped by superimposition and self-exposition’ and ‘Doing what you want with your life’. Self-authenticity informed the decision not to drink, became relevant within conversations about non-drinking, and underscored issues of choice and agency raised by alcohol consumption. **Discussion.** Entrenched assumptions about alcohol’s self-realising utility are challenged in the discussion section and future research recommendations are suggested.

7.2 Introduction

Promoting healthier alcohol consumption among young people in England is an on-going challenge and the central position of alcohol within university culture is of particular concern (Gill, 2002; Smith & Foxcroft, 2009).

Heavy drinking among students appears to be associated with unfavourable views of non-drinkers (e.g., Conroy & de Visser, 2013; Regan & Morrison, 2013; Zimmermann & Sieverding, 2010). Recently, this association has been explained as an unwillingness to be associated with a non-normative social group (Regan & Morrison, 2013). Studies

relating to perceptions of non-drinking help identity factors associated with higher consumption levels, yet research concerning the experience of non-drinkers might inform understanding of how safer episodes of drinking behaviour (e.g., non-drinking during some social occasions) might be presented more favourably within health promotion initiatives. Consistent with this objective, qualitative research has demonstrated varied coping strategies and means of negotiating peer intolerance adopted by non-drinkers in social situations (Herring et al., 2014; Nairn et al., 2006; Piacentini & Banister, 2009). Notably, other evidence suggests that some non-drinkers experience particular pride in their minority status (Seaman & Ikegwuonu, 2010).

Given alcohol's potentially transformative subjective effects (e.g., altered sense of self or others), one might expect that an individual's experience of 'their true selves' might either underlie initial decisions not to drink or have relevance within conversations about non-drinking. Authenticity has been discussed in diverse forms holding close associations with psychotherapy (e.g., Erikson, 1968; Rogers, 1951) and hermeneutic phenomenology (Heidegger, 1927/1962). Its depiction as central to positive human interactions and well-being common within these accounts has inspired sustained empirical interest in authenticity.

Applied research has explored both the consistency of individual's dispositional authenticity across different social roles (e.g., Sheldon, Ryan, Rawsthorne, & Llardi, 1997) and the extent to which behaviour within relationships reflects true thoughts or feelings (Theran, 2011). Evidence has pointed to an association between higher authenticity levels and increased subjective well-being and life satisfaction (English & John, 2013; Goldman & Kernis, 2002) and to negative health-related implications of 'false-self behaviour' (e.g., Peterson & Seligman, 2004). These findings have

substantiated ongoing health promotion interest in links between authenticity and both physical and psychological well-being.

Research linking authenticity to alcohol consumption is extremely rare. One study, based on Swedish adolescents, has demonstrated difficulties reconciling valued aspects of self (e.g., authenticity or ‘being a strong person’) with external agents (e.g., alcohol) which could be used to feel or behave in certain ways, illustrating the dilemmas encountered during a life-stage characterized by transitions in self-identity, peer relations and leisure activities (Bogren, 2006).

Student drinking occurs during a time of new-found freedom characterised by ‘bounded hedonistic consumption’ (Brain, 2000), psychological turbulence (Wei, Russell, & Zakalik, 2005) and peer pressure to drink socially (e.g., Borsari and Carey, 2001). Issues relating to an individual’s authentic self seem likely to become foregrounded during university years, with new opportunities to realise authentic identities. Given alcohol’s distinctive subjective influence on how authentic self (and authenticity in the behaviour of others) is experienced in an age group for whom its behaviour-changing effects will generally remain relatively novel, the absence of research linking alcohol and authenticity is arguably surprising. A fine-grain understanding of why individuals choose not to drink, and how issues of self and authenticity might correspond with this decision and the experience of ‘living’ a non-drinking identity, is therefore of both theoretical and applied interest.

7.2.1 Study focus and aims

Studies exploring the experiences of student non-drinkers have adopted diverse criteria for ‘non-drinkers’ including: infrequent drinkers (Nairn et al., 2006) and authors who steer their enquiry toward ‘anti-consumers’, or, individuals understood to operate

outside of student normative conventions (Piacentini & Banister, 2009). Studies focussing exclusively on non-drinkers have excluded individuals abstaining for religious reasons, either to explore less obvious reasons for not drinking alcohol (Herring et al., 2014) or for unspecified reasons (Seaman & Ikegwuonu, 2010). While all approaches have their merits, it is suggested that a distinction between individuals who have culturally *unsanctioned* reasons for non-drinking (e.g., do not drink primarily because they dislike its effects on themselves or others) and culturally *sanctioned* reasons for non-drinking (e.g., due to religion, physical illness or prior dependence). This more conservative sampling focus on unsanctioned non-drinkers is, it is suggested, of particular relevance to health promotion initiatives designed to reduce student consumption levels given applicability to the broader student population. For example, the sanctioned non-drinker may respond to the question “Why don't you drink?” by providing an irrefutable reason (e.g., “I have an autoimmune liver condition”) whereas, by contrast, unsanctioned non-drinkers may need to convince others of the validity of his/her decision not to drink. It is not intended to falsely simplify complex issues of social approval, cultural acceptance and personal choice involved in the decision not to drink. Instead, this study aims to produce empirical data most directly relevant to support students to manage the decision not to drink when socialising at university (as part of a broader effort to drink alcohol more moderately) more successfully. This pragmatic conceptual distinction represents an original extension to the emerging non-drinking literature.

This study contains interview data from five individuals who have chosen not to drink alcohol and addressed two broad research questions: (1) why have individuals chosen not to drink alcohol?; (2) what kind of social experiences do unsanctioned non-drinkers have in university settings?

7.3 Methods

7.3.1 Sampling approach

Participants were drawn from a sample of 60 non-drinking students identified from a prior survey study, 47 of whom were willing to participate in an interview study. Of these, twelve did not drink for primarily culturally unsanctioned reasons, five of whom were willing to be interviewed (see Table 6.1 in previous chapter). The sample included both lifelong non-drinkers and former drinkers (defined as having not drunk for ≥ 6 months). Rather than aiming to be exhaustively representative of non-drinkers or culturally unsanctioned non-drinkers, the privileging of individual accounts of non-drinker's experiences was the focus of this study.

7.3.2 Procedure and interview

Ethical approval was acquired from the host institution. The semi-structured interview schedule began with general items (e.g., 'how do you like to spend your leisure time?') leading to more specific questions (e.g., 'tell me about your experiences as a non-drinker'). Interviews took place either on student university campuses or in participant's homes.

7.4 Results

7.4.1 Analytic approach

Interpretative phenomenological analysis (IPA) was the chosen analytic method. IPA provides an idiographic framework well-suited to understanding the lived experiences of individuals who share a common life phenomenon, while explicating the analyst's interpretative efforts (Smith et al., 2009). Recent IPA studies of young people have identified complex links between drinking behaviour and issues of self and identity

among young people (Shinebourne & Smith, 2009; de Visser & Smith, 2006, de Visser & Smith, 2007a). Small sample sizes are typical of IPA studies and highly congruent with its methodological emphasis: the in-depth investigation of lived experience. IPA is characterised by two broad phases: an empathic phenomenological analysis of individual experience from an “insider” perspective is followed by an interpretative analysis from an “outsider” perspective. An iterative approach to analysis involved: initial transcript notation, thematic coding, and specification of superordinate themes. Themes were critically assessed for validity in relation to the original transcripts, ensuring that the breadth of transcript divergence and convergence had been captured.

7.4.2 Study findings

Four recurrent themes are presented: ‘Retaining authenticity by not drinking’; ‘Tainting the self by drinking alcohol’; ‘Feeling trapped by superimposition and self-exposition’ and ‘Doing what you want with your life’. Four major themes are described and illustrated with quotes.

7.4.2.1 Retaining authentic self by not drinking alcohol

All participants explained their non-drinking as partly stemming from their wish to experience themselves and life in authentic terms. Dawn, together with her non-drinking twin sister experienced authenticity as the possibility of fully marshalling cognitive capacities:

We kept sane and fully in control of our thoughts and heads and stuff while other people didn't. I don't really want to lose the ability to think clearly and remember things. Whereas people who drink and wake-up not remembering

things and, I don't think I could handle that, or I don't want to handle that. -

Dawn

Emphasising the implications of short-term cognitive effects of drinking, Dawn indicated that not drinking allowed her to retain control over her mental functions (“control of our... heads”); most dramatically in language referring, albeit figuratively, to the preservation of mental health (“we kept sane”). Having never consumed alcohol, Dawn anticipated the negative influence of alcohol over an authentic experience of life that she valued too highly to relinquish. Paul’s interview provided a similar illustration:

I don't get it for me, my kind of theory is I don't want to be anyone but me,
and do anything that I wouldn't do, if that makes sense? [...] life is too short
to not remember it the next morning, or to be living it the best you can,
feeling it as best you can. I want to experience life as it is. - Paul

For Paul, drinking alcohol would have undermined his experience of self (‘I don’t want to be anyone but me’) and of life more generally (‘as it is’). However, he continues:

When I am out a little bit of me depends on other people getting drunk
because, as their barriers go down my barriers can go do as well. So I can be
me most when everyone else is drunk, because as they get drunk I can act
drunker without being drunk. - Paul

Paradoxically, Paul acknowledges needing the company of drunken others to enjoy liberation from social barriers. The serial appearance of these statements seems to amplify the tension involved in accommodating alcohol’s self-depriving and self-realising properties. For Paul, fully realising an authentic experience of himself was partly conditional not just on others’ presence but on the presence of others who were

drinking alcohol. Intriguingly, this suggested how alcohol's subjective influence could be vicariously experienced as a kind of 'contact high' without actually being consumed.

7.4.2.2 Tainting the self by drinking alcohol

In addition to preserving authenticity, participants experienced threats to well-being through historical or imagined experiences of alcohol's potential for misrepresenting either the self or other people. Michelle, a former drinker, expressed this in her interview:

I realised that I don't like the way I am when I am drunk. There've been occasions where I've done things that I've regretted or maybe said something to a friend that I wouldn't dream of saying otherwise. I just kind of buried my head in the sand about the fact that I didn't like who I was when I was drunk. The less and less I drank the more I realised that I didn't like who I was when I was drunk, so the less I drank still. - Michelle

When drunk, Michelle had experienced 'selves' which she did not feel represented her ('wouldn't dream of saying otherwise') and that clashed with enduring self-interest ('done things that I've regretted'). Interplay between her experiences of 'drunken' and 'sober' self gradually led to a state of reassessment where she drank progressively less as the distinction between drunk and sober experiences of herself grew. Features of her struggle seemed to be built into the language of her account, with the repeated 'who I was when I was drunk' tangled up with her actions ('the less I drank') to regain the person whom she recognises as herself (her authentic self).

Katie, another former drinker, had developed a similar view in relation to alcohol's person-changing effects on others, as well as herself:

People are different, on alcohol you're not the same person, you're just different, you're tainting yourself, changing who you are with a bit of alcohol. - Katie

Katie seemed to experience contempt, both of her peers' willingness to cede possession of their authentic identities, and of the cheap medium ('a bit of alcohol') through which this was accomplished. Her alcohol consuming peers could not be readily equated with the individuals she knew when they were sober and as a consequence could not be recognised, respected or trusted.

For Paul, a lifelong non-drinker, the 'tainted self' of Katie's account seemed to represent a feared imagined state and consisted part of the reason why he didn't drink alcohol:

The reason I don't drink might be because I am afraid of what I might say or do, if I drink, saying things that might be permanent. Words that can't be healed. - Paul

Paul fears uncharacteristic behaviour under alcohol's influence expressed as physical and verbal acts holding severe consequences. This seemed to speak to experienced or anticipated risks involved in drinking alcohol among the participants. Despite alcohol's advantages in removing social inhibitions, its influence was experienced as (or perceived to be) untrustworthy, given its association with enduring, hurtful behavioural consequences, which serve ultimately to undermine personal well-being.

7.4.2.3 Feeling trapped by superimposition and self-exposition

Participants indicated how non-drinking was an important way in which authenticity might be preserved. In an ironic twist, latent threats to authenticity were often experienced as embedded within conversations about non-drinking. For some

participants, these conversations were perceived to involve the superimposition of aspects of self or identity linked to their non-drinking derived from stereotypes or prejudicial assumptions:

They don't understand the concept of why I don't. They are trying to fix me, or help me, I think they think I haven't tried it so I don't know if I like it or not. At that point they don't understand [why] I don't drink, it's not the reason I don't drink. - Dawn

These impressions held by peers were hardly flattering: Dawn was perceived as grossly naïve regarding alcohol's social benefits ('I haven't tried it so I don't know') and to be someone enacting a lifestyle decision that undermines personal happiness (e.g., someone needing to be 'helped' or 'fixed'). All participants experienced similar misconstruals of self through peer interactions where non-drinking was discussed. Andy explained the intricate pressures experienced within conversations about his non-drinking using the example of a non-drinking friend:

[My friend] didn't drink for very personal reasons and found it very uncomfortable whenever they got asked why they didn't drink, they were like, 'well I don't really know you enough to open up to you but if I say that I can't tell you then it's almost a statement in itself'. Then this person will think 'what are they hiding because there's all this bad stuff that's happened to them', so it's almost worse not to tell them because you think that their imagination could come up with so much more. So it's quite a difficult question to be faced with because you want to justify why you're not drinking but you also don't want to make the situation uncomfortable. - Andy

Andy depicted a scenario with different layers of discomfort and intrusion into personal space in which the conversational onus is firmly on the non-drinker to explicate their reasons for not drinking. Andy's friend juggles (at least) four tasks simultaneously to produce an account which is: (i) sufficiently coherent not to invite further interrogation, (ii) suitably light-hearted to ameliorate an already uncomfortable situation, (iii) robust enough to resist pressure to reveal private aspects of self and (iv) something approaching a self-justifying yet authentic and honest account of himself. Conversations about non-drinking, therefore, saw participants trapped between a rock and a hard place: they experienced the need to protect their authentic identities from unwanted exposure but, simultaneously, from the imbalanced peer impressions of 'who they were' that could emerge during these situations.

7.4.2.4 Doing what you want to do with your life

Another aspect of 'being the person that you are' in relation to non-drinking related to participants' experiences of personal choice and agency; in terms of how these issues were understood relative to both alcohol consumption and non-drinking. For some, including Katie, normative assumptions around alcohol's disinhibiting effects were questioned:

I mean, people say Dutch courage [...] but confidence in the first place, you know, change who you are, not try to do it with alcohol. [...] If I embarrass myself, I am going to remember it. I worked with special needs, they have this disco and I used to take my service users with me. When stuff like the Casper Slide and the Macarena came on, I used to get up and do it. One of the other staff used to say, 'I'd only be doing that if I was drinking' - Katie

For Katie, feelings of subjective inhibition when sober (e.g., feeling socially unconfident) in the context of alcohol's success as a social lubricant ('Dutch courage') were unfulfilling as a means of achieving aspirations. Having confidence in the first place, or seeking to embed self-confident feelings via personal growth, held greater appeal to Katie than alcohol's simple but impermanent blueprint for addressing social awkwardness or achieving social goals.

Her colleague's response ('I'd only be doing that if I was drinking') educes equivalent phrases referring to present "I haven't had enough to drink to do that yet" or retrospective "if I did that I must have been drunk" drinking behaviour, which demarcate the 'forbidden when sober' from the 'approved when drunk'. Risking ridicule (made more visceral given that she will 'remember it') without having the option to retrospectively appeal to drunken states, Katie appeared to challenge alcohol's normative status for permitting atypical behaviour as her non-drinking became the catalyst for, rather than the inhibitor of, novel action. Reflecting on what drinking enables for his peers, Paul's account resonated with Katie's:

Alcohol allows people to do what they think they should do or be, but they feel they can't because they've got so many barriers in place. People can't act in a certain way in public so they do it through alcohol because that's the only way they feel they can be, can do what they want to do. But if there wasn't so much of a kind of alcohol is a gateway into whatever you want to be, then a lot more would get done instead of having to wait 'til you're drunk before asking out a boy or girl. - Paul

Paul experienced alcohol's established role as an 'ice breaker' or social catalyst with some frustration and indignation, finding that this status impeded completion of important life goals (e.g., meeting potential partners) in states of sobriety. At least two

obstacles are implied in Paul's account: alcohol becomes 'the only way' of achieving these life goals, while drinking conventions could be understood to dictate the time-frame through which more exploratory behaviour becomes socially acceptable ('having to wait 'til you're drunk'). Like Katie, Paul problematised alcohol's perceived role in new or unfamiliar social contexts, lamenting its dominance as an easy route or 'gateway' to life's pleasures which seemed to carry important costs. Without a clearly sign-posted behavioural state (drunkenness), certain behaviours may be perceived as socially legitimate, and attempts to behave in these ways when sober risked being perceived as socially disjointed. From Paul's perspective, alcohol increases the perceived feasibility of self-interested behaviour (e.g., meeting sexual partners) yet simultaneously undermined the possibility of doing such things when sober.

Andy also highlighted issues of agency which might be put at stake in a lifestyle that involves regular drinking, in this case in a narrative concerning the developmental trajectory of his relationship with alcohol from adolescence to adulthood:

When I got older it felt that more, actually stepping towards being a man was more saying um, "I'll do what I want". There is actual security in saying, "This is what I want to do with my life". Like everyone can do what they want, but I want to do this. That was almost a replacement for um, drinking. - Andy

In the context of being a non-drinker, alcohol's equation of adulthood and masculinity were gradually eroded through Andy's awareness that 'choosing what you want to do with your life' represented a more authentic symbol of adult and manly identity. Despite the potential risks involved in non-drinking – e.g., abandoning traditional routes through which adult and masculine aspects of self might be perceived

to be obtained – non-drinking has, ironically, become an important statement of both.

Issues of personal agency existed in the very terminology of non-drinking for Michelle:

You know, if someone offers me a drink, I think, “Do I want a drink? Don't I want a drink?”, and I, 99.9% of the time I don't want a drink. [...] I don't like the idea of being labelled as anything. I am me, I do what, I do certain things, I don't do other things. But I don't want to be labelled by what I do and don't do. - Michelle

For Michelle, her non-drinking continued in a state of persistent flux: it was continuously re-assessed and re-chosen within social situations based on what she wants to do with her life. Located at the heart of this extract, Michelle stresses the importance of authenticity – ‘I am me’ – challenging the restrictive definitional and regulatory practices which ‘non-drinking’ as a social category was felt to impose.

7.5 Discussion

Student non-drinkers described several ways in which authenticity was relevant to their experience of non-drinking: as an underlay of their decision not to drink, as a valued aspect of self-experience which became salient within peer conversations about non-drinking and, in the longer-term, as an experiential aspect in which issues of self-agency became relevant.

Authenticity was a common feature of participants’ reasons for non-drinking. For some, retaining authenticity was akin to retaining a phenomenologically ‘pure’ perceptual experience of life, which potential alcohol consumption was experienced (or was anticipated) to undermine. For others, retaining an authentic experience of themselves meant commandeering higher cognitive facilities. However, the decision not to drink was also evidently a way of asserting an understanding of self or identity which

individuals' felt most accurately represented them. While these data chime with non-drinking motivations described elsewhere (e.g., 'general misgivings about alcohol', Piacentini & Banister, 2009; 'negative past experiences', Herring et al., 2014) they demonstrate a more explicitly self- or identity-related rationale for excluding alcohol as a lifestyle option permitted to the self than has been previously described. The flipside of this involved construing alcohol consumption as 'tainting the self'. It has been suggested how non-drinkers' might orient themselves toward an 'abject' construal of alcohol consumption, focussing on its character-changing influences which might come to be experienced as disturbing or false (see Nairn et al., 2006, p. 298).

Possessing, demonstrating, or prioritising authenticity within social relationships has been examined in past research (e.g., Sheldon et al., 1997; Theran, 2011; English & John, 2012). However, the mere presence of authenticity as a dispositional commodity did not seem to determine non-drinkers' experiences of peer interactions in the data. Instead, authenticity appeared to characterise the experiential dynamic in which non-drinkers found themselves socially or acquired particular relevance to non-drinkers' experiences, especially those involving conversations about non-drinking, during social interactions. Participants expressed frustration feeling like passive victims of peer assumptions regarding their decision not to drink (e.g., 'ex-alcoholic'); a scenario that partly stemmed from participants' reluctance to provide a (potentially very personal) full and genuine account of why they don't drink alcohol during interactions with people other than close friends. Alternatively, it is possible that distinct, unidimensional accounts of non-drinking simply aren't always accessible to individuals who choose not to drink, an explanation that is somewhat supported by the shifting nature of accounts of non-drinking during the trajectory of most individual's interviews.

Given alcohol consumption's normative status within university settings, disparities in social power between drinkers and non-drinkers felt by non-drinkers seem unsurprising, and accord with relational-cultural theory's emphases on the importance of mutually empowered interactive dynamics within adolescent peer relationships (Comstock, Hammer, Strentzsch, Cannon, Parson, & Salazar, 2008). Through experiences of this imbalance, authenticity might acquire a particular source of self-resilience and social fortitude for non-drinking individuals. This would help explain demonstrated links between relationship authenticity and subjective well-being (e.g., Theran, 2011; Wenzel & Lucas-Thompson, 2012), yet suggests that authenticity might need to acquire particular value before its protective effects are realised.

For some, the importance of authenticity was also understood in terms of how behaviours related to certain social goals (e.g., initiating romantic encounters; deepening friendship ties) acquire degrees of normative acceptability depending on whether they are conducted under alcohol's influence. This finding holds important implications for all individuals whether drinkers or not. If cherished goals feel only realisable where alcohol is involved then it seems likely that the idolization of alcohol as an emollient of social interaction might be lamented among young people, at least on one level. For other participants, retaining a sense of the authentic self was involved in the restrictiveness of overly-prescriptive categorical summaries of alcohol-related behaviour including the term 'non-drinker'. These findings accord with discussion elsewhere of the limitations involved in reference to clearly defined alcohol-related behavioural classes such as 'heavy drinkers' or 'non-drinkers' (Dufour, 1999; Piacentini & Banister, 2009). For example, Piacentini and Banister's (2009) participants understood the term 'non-drinker' to refer to diverse behaviours ranging from complete abstinence to occasional weekly drinking. This is an interesting feature of how being a

non-drinker might provoke self-scrutiny over possibilities or requirements for how the self is defined within interactions. Evidence suggested that being understood as ‘someone who never drinks’ might be equally constraining to being understood as ‘someone who always drinks’ within social situations. Among the participants, being able to choose and re-choose alcohol-related decisions provided a basis for rebutting social pigeon-holing and helped to realise an authentic experience of self and stronger feelings of self-agency.

7.5.1 Study limitations

Study limitations are acknowledged. First, despite the idiographic methodological approach of this study, caution regarding sample generalizability given the small sample size is recommended. Despite this, it is noted that there were important general features among participants regarding the importance of the authentic self to their social experience as non-drinkers. Furthermore, the decision to focus on culturally unsanctioned non-drinkers seemed justifiable given the complex dynamic involved in participants’ conversations about non-drinking in which the presence of relatively straight-forward accounts of non-drinking (e.g., “I’m on antibiotics”) would have simplified social encounters. Second, self-selection issues are acknowledged. More self-assured non-drinkers might have made themselves available for interviews, contributing to a biased impression of how non-drinking is experienced and managed in student contexts. This acknowledged, it is noted that none of the participants appeared to communicate atypically straight-forward or traumatic psychosocial experiences of non-drinking, each supplying an idiosyncratic and complex account.

7.5.2 Future research and health promotion applications

Several extensions of the study are possible. First, it is urged that further qualitative research relating to non-drinking students, including culturally sanctioned non-drinkers to develop understanding of relations between non-drinking, subjectivity and identity. Second, a larger sample would permit comparison of sex differences in non-drinking experiences, which would seem likely to be important in light of study findings and prior research (Conroy & de Visser, 2013). Third, comparing non-drinkers from varied cultural or geographic backgrounds (e.g., rural/urban) might elucidate variation in how non-drinking is dealt with, contributing to broader efforts to move discussion of cultural differences in drinking behaviour beyond traditional ‘wet’ and ‘dry’ distinctions (Bloomfield, Stockwell, Gmel, & Rehn, 2003). These findings conveyed complex but important implications for reinvigorating approaches to promoting healthier student drinking. Current health promotion initiatives focus on encouraging young people to drink ‘moderately’, according to government recommended levels, despite evidence that this information can prompt misinterpretation (e.g., Furtwängler & de Visser, 2013). Successfully ‘calibrating’ a moderate drinker mind-set seems likely to be a more challenging task than can be acknowledged. The data hints at how non-drinking might be communicated to students as a more feasible and favourable adopted social behaviour than they might otherwise imagine, holding relevance to all university students exposed to opportunities and pressure to drink socially. Issues relating to authenticity, choice and agency acquired visibility to the participants following the decision not to drink alcohol, rather than being of unique relevance to non-drinkers as an isolated social category. It seems possible that these more nuanced downsides to alcohol consumption – e.g., over-dependence on its effects as a social catalyst;

producing an ‘unreal’ or inauthentic experience of the self or other people – might be capitalized on in health promotional strategies aimed at university students.

7.6 Conclusion

The importance of an authentic experience of self was described by the study participants; evident in their reasons for non-drinking, the experiences of talking about non-drinking with others and the awareness of how issues of agency and authenticity were tied-up in drinking alcohol, despite its ubiquity within university culture and broader society. Contrary to cultural notions of alcohol as a liberating/disinhibiting substance, the participants could experience alcohol as something that undermined the possibilities of experiencing and enacting the self authentically. While the findings relate to a small group of non-drinking individuals, it is hoped that a contribution has been made towards some critical re-examination of how alcohol is used and understood within a key life-phase, particularly given the dilemmas posed by drinking for how self-authenticity is simultaneously fulfilled and comprised.

Chapter 8

Summary of Study Two

Research described in the previous section was drawn from Study Two of this research programme focusing on the social experiences of university student non-drinkers. Two thematic strands were presented. One paper gave insights into the key experiential features of social occasions for five student non-drinkers, while a second paper drew attention to the different ways in which authenticity seemed to characterise the initial or continuing decision not to drink alcohol for these individuals but also to their peer interactions involving conversations about non-drinking.

Evidence in this section was based on a sample of individuals who were either lifelong non-drinkers or former drinkers, but it is suggested that there are suggestive implications here for how non-drinking is successfully managed as a social behavioural option for any student regardless of their drinking status. For example, Chapter Six suggested that it would be important to consider the way in which non-drinking behaviour is made explicit or concealed during social occasions. Similarly, acknowledging the role of loyal friendships in the context of the decision not to drink during a social occasion was highlighted. Phenomenological findings presented in Chapter Seven concerned a narrow but powerful element of the data set regarding the importance of authenticity for student non-drinkers. Findings here indicated how alcohol consumption may in some respects be incompatible with core experiences of the self, including preserving an experience of ‘real self’ and having a sense of agency in life. Again, while these findings were limited to a sample of non-drinking students, there is no reason why alcohol’s subjective affects as modifying (for better

or worse) an individual's experience of themselves should not be understood as relevant to an understanding of alcohol consumption among *all* students whether they are drinkers or non-drinkers.

The final empirical chapter is intended to take findings from the quantitative and qualitative sections of this dissertation described to this point forward in an integrative fashion.

Findings from the qualitative chapters (Chapters Six and Seven) implied that lower levels of overall alcohol consumption might be successfully encouraged among students if the possible benefits and achievability of non-drinking during social occasions are made more salient to them. This could be explored in several ways. It is argued that encouraging individuals to spend time considering the possible benefits and strategies involved in non-drinking rather than simply listing generic benefits and strategies provides an imaginative and participant-led way of promoting reduced levels of alcohol consumption. With this in mind, a four-arm intervention study designed to explore whether asking students to think about possible benefits and strategies involved in non-drinking during some social situations even where peers are drinking, is described Chapter Ten.

Findings from the quantitative chapters (Chapters Three and Four) displayed that sociability prototype differences hold links with drinking intention (such that perceptions of non-drinkers as less sociable were associated with intending to drink harmfully). One might anticipate that improved perceptions of the prototypical non-drinker were either fully or partially responsible for any successful impact of imagining potential benefits and/or strategies of non-drinking in terms of instigating safer patterns of drinking behaviour. Following this rationale, sociability prototype differences will be explored as a potential mediator of any demonstrated effects of

the non-drinking intervention on reducing levels of student alcohol consumption, explored in the final empirical chapter.

Chapter 9

Designing an Intervention Study

The assumption that an intervention study provides a useful way of extending dissertation findings to this point is first considered.

Research reported in this dissertation operates within the disciplinary domain of health psychology. Therefore, it was important to explore evidence in relation to a real world context – in this case to see whether evidence could be used, speculatively perhaps, to reduce levels of alcohol consumption among university students. To ensure links with the surrounding health psychology literature, it was also important to integrate dissertation evidence within existing theoretical frameworks. These aspirations have been formally discussed by other authors. For example, adopting a theoretically-based, established interventional framework has been acknowledged as an important consideration for health promotion research (e.g., Oldenburg, Sallis, French, & Owen, 1999). It should also be acknowledged that assessing the potential social impact of research findings in real world settings and being able to communicate the relevance and validity of a research programme to a non-academic community is an increasingly important task for applied social psychology researchers (Davies, Nutley & Walter, 2008).

9.1 Applicability of mental simulations to a non-drinking research programme

Dissertation content to this point has presented three broad tiers of evidence.

Quantitative data has shown that perceptions of non-drinkers are associated with student drinking behaviour (Chapters Three and Four). Qualitative data has provided insights into the strategies involved in the successful management of non-drinking in university

social settings (Chapter Six) and has suggested how non-drinking is a challenging yet rewarding lifestyle choice which may hold distinct positive experiences for individuals' experiences of themselves (Chapter Seven). Starting from this foundation of evidence, it is suggested that findings might be usefully extended via an intervention based on mental simulation research (e.g., Pham & Taylor, 1999). Mental simulation research distinguishes between *outcome simulations* (envisioning desirable outcomes of a given behaviour) and *process simulations* (imagining processes involved in enacting a given behaviour) as different routes to facilitate desirable behavioural changes. Mental simulations have recently been assessed in the field of health psychology. For example, mental simulation interventions have been investigated in the context of Theory of Planned Behaviour variables and in conjunction with Implementation Intentions exercises (e.g., Armitage & Reidy, 2008; Hagger, Lonsdale, & Chatzisarantis, 2012a) and have recently been tested in the alcohol domain (Hagger et al., 2012b). Specifically, findings from Chapter Six have links with *process*-based simulations in that they suggest that any success in managing to abstain from alcohol consumption in situations where varied forms of perceived or genuine pressure to drink exist, requires problem-solving and planning. Findings from Chapter Seven have links with *outcome*-based simulations in that they suggest that periodic situational non-drinking as a health outcome holds some advantages and may therefore be of interest and applicable to any student wishing to reduce their alcohol consumption. Finally, understanding whether sociability prototype differences can be modified by an intervention using a non-drinking behavioural framing and whether, in turn, this modification is found to be associated with reductions in student drinking behaviour would provide a way of extending cross-sectional evidence presented in Chapters Three and Four.

9.2 Alternative intervention design options

In the interests of presenting a balanced account of how different decisions in the research programme were reached, two other intervention designs appropriate for extending dissertation findings are briefly considered. First, an alternative, simpler, approach would place greater focus on quantitative findings. For example, one option would be to simply ask people to list positive and/or negative things about the decision not to drink alcohol, either during specific social situations *or* as a more enduring lifestyle choice. Exploring whether a lower incidence of heavy episodic drinking resulted from completing this simple activity could then be established. A second option, again drawing on quantitative chapter findings, would be to assess whether prototypical images of non-drinkers embody a dissonance-invoking ‘health-relevant threatening message’ in the context of a self-affirmation study.

While both these alternative options had their merits, the proposed mental simulation study was felt to strike the right balance between drawing on prior dissertation evidence and relevant health psychology theory and evidence.

Chapter 10

Testing a Non-drinking Mental Simulation

Randomised Trial Intervention to Reduce Student Alcohol Consumption

10.1 Abstract

Objectives. To assess the impact of a mental simulation intervention designed to reduce student alcohol consumption by asking participants to imagine potential positive outcomes of and/or strategic processes involved in not drinking during social occasions.

Design. English university students aged 18-25 years ($n = 213$, $M_{\text{Age}} = 20$ years) were randomly allocated to one of four intervention conditions. The dependent variables were weekly alcohol consumption, heavy episodic drinking and frequency of social occasions at which participants did not drink alcohol when others were drinking alcohol. Measures of alcohol-related prototypes (i.e., prototypical non-drinker, prototypical regular drinker) were used to compute sociability prototype difference scores as a potential mediator of any intervention effects. All measures were taken at baseline and at two- and four-week follow-up. **Methods.** Participants completed one of four exercises involving either: imagining positive outcomes of non-drinking during a social occasion ('outcome' condition); imagining strategies required for non-drinking during a social occasion ('process' condition); imagining both positive outcomes and required strategies ('combined' condition); or completing a drinks diary task ('control' condition). **Results.** Evidence from mixed model ANCOVA provided some evidence of the effectiveness of the *process* condition for reducing heavy episodic drinking at

follow-up. Latent growth curve analyses (LGC) revealed a more substantial rate of decrease in weekly alcohol consumption and HED frequency among participants completing the single exercise *outcome* condition and *process* condition participants respectively (relative to *control* condition). LGC analyses did not reveal significant differences between the *combined* and *control* conditions. **Conclusions.** This study provides modest, preliminary evidence that mental simulation exercises using a non-drinking frame may have potential as a behaviour change intervention.

10.2 Introduction

Excessive alcohol consumption among English university students carries risks of both personal injury and impaired academic performance (Cherpitel, Bond, Ye, Borges, MacDonald, & Giesbrecht, 2003; Thombs, Olds, Bondy, Winchell, Baliunas, & Rehm, 2009). This is in addition to the longer-term health risks and risk of addiction posed from cultivating habitually high risk patterns of drinking behaviour during early adulthood (de Wit, Adlaf, Offord, & Ogborne, 2000; Meyerhoff, Bode, Nixon, Bruin, Bode, & Seitz, 2005). It is therefore important to identify effective strategies for encouraging moderate alcohol use. Evidence for the effectiveness of brief web-based alcohol interventions to reduce student alcohol consumption is mixed (Bewick, Trusler, Barkham, Hill, Cahill, & Mulhern, 2008; White et al., 2010), yet their promise of anonymity and low cost make it important to fully ascertain their applied potential. Efforts to promote safer drinking behaviour among young people primarily target awareness of what constitutes low-risk alcohol consumption (Raistrick, Heather, & Godfrey, 2006). However, the effectiveness of this approach has been challenged because knowledge of safe drinking guidelines is often incomplete and is not necessarily related to low risk drinking behaviour (Cooke, French, & Sniehotta, 2010;

de Visser, under review; de Visser & Birch 2012; Furtwängler & de Visser, 2013; Moss, Dyer, & Albery, 2009). For example, in a recent study of 386 UK undergraduates, participants underestimated how many alcohol units equated to harmful drinking behaviour, and only 13% of participants defined binge drinking in terms of alcohol units (Cooke et al., 2010, Study 2). It has also been demonstrated that increased motivation to heed advice about harmful drinking, alongside other health risk behaviours, is associated with having a greater sense of autonomy, overcoming the threats to personal freedom that may be invoked by health risk information (Pavey & Sparks, 2010). On this evidence, it is suggested that efforts to encourage moderate drinking among university students and young people may profit from alternative, more nuanced approaches. One such way in which research might explore different ways of encouraging higher levels of health-adherent yet self-directed drinking behaviour has been highlighted in recent research concerning perceptions of non-drinkers and experiences of non-drinking behaviour.

10.2.1 Perceptions of non-drinkers and non-drinking behaviour

Several studies have demonstrated that less favourable attitudes towards non-drinkers, or perceptions of the prototypical non-drinker as relatively unsociable predict greater alcohol consumption among students (e.g., Regan & Morrison, 2013; Zimmermann & Sieverding, 2011). Recent research suggests that a key challenge for efforts to reduce consumption is to oppose normative beliefs that are broadly permissive of heavy drinking at University (Conroy & de Visser, 2014; Herring, Bayley, & Hurcombe, 2014). Although abstinence from alcohol may be an unrealistic health promotion goal, non-drinking during single social situations where peers may be drinking alcohol ('episodic non-drinking') is arguably an overlooked target in campaigns to promote

moderate drinking. This approach would tie in with prior theoretical and empirical contributions to the promotion of health-related behaviour change. For example, empirical evidence has indicated that lower levels of anticipated regret are a strong independent predictor of excessive alcohol consumption among students (Cooke, Sniehotta, & Schütz, 2007). It is suggested that promoting episodic non-drinking as a desirable health promotion objective would provide one way in which potential regret about binge drinking episodes might be constructively evoked to promote lower overall levels of alcohol consumption. Similarly, a body of evidence supports the view that bolstering coping appraisals is likely to play a central role in promoting health-adherent behaviour change (Floyd, Prentice-Dunn, & Rogers, 2000; Milne, Sheeran, & Orbell, 2000). Arguably, supporting students to develop personally effective coping strategies to not drink alcohol during social situations holds the possibility of encouraging health-adherent protective motivation. This is particularly relevant in the context of current UK guidelines which recommend two alcohol-free days per week (National Health Service, 2014). By promoting the advantages and achievability of episodic non-drinking among university students, more moderate overall alcohol consumption might be assisted, without rebuking students about their personal drinking levels and without drawing attention to well-known risks of high levels of alcohol consumption.

10.2.2 Mental simulations

There are various means by which episodic non-drinking might be promoted: mental simulation interventions provide one such framework. Mental simulations require individuals to imagine positive outcomes (*outcome* simulations) and/or strategic requirements (*process* simulations) of enacting a target behaviour and are understood to strengthen links between thought and behaviour (Taylor, Pham, Rivkin, & Armor,

1998). Mental simulation interventions have been demonstrated as successful in the context of increasing individuals' intention to donate blood and to increase physical activity levels (Armitage & Reidy, 2008; Chan & Cameron, 2012). However, mixed evidence of efficacy exists in the alcohol domain. One UK-based study suggested efficacy particularly among students who drink more heavily (Hagger, Lonsdale, Chatzisarantis, 2012a), while a cross-national dataset provided no support for the efficacy of mental simulation interventions to reduce alcohol use (Hagger et al., 2012b). Given the potential cost-effectiveness of mental simulations as health promotion tools (Lairson, Newmark, Rakowski, Tiro, & Vernon, 2004; Noar, Benac, & Harris, 2007), it is important to explore whether imagining benefits and/or imagining strategies of not drinking during social occasions offers a novel behavioural approach for encouraging safer drinking among students. Given the discussed predictive relationship between negative perceptions of non-drinkers and higher levels of alcohol consumption (Regan & Morrison, 2013; Zimmermann & Sieverding, 2011), it would also be useful to assess whether changes in perceptions of the sociability of prototypical non-drinkers relative to prototypical drinkers (hereafter referred to as sociability prototype differences), mediate intervention effects on behavioural outcomes.

10.2.3 Rationale and hypotheses

The rationale for this study was to explore whether asking individuals to imagine possible benefits and/or potential obstacles involved in not drinking during situations where other people were drinking would lead to lower levels of alcohol consumption. Because drinking behaviour is associated with various health risks, consumption was assessed in two ways. First, in terms of overall drinking levels for the previous week. Second, in terms of the number of occasions of heavy episodic drinking, meaning

occasions where double the recommended daily intake maxima (i.e., men = 4 units, women = 3 units, National Health Service, 2014) had been consumed in the previous week. This is consistent with alcohol-related behavioural measures widely used in other research (e.g., Hagger et al., 2012a; Purshouse, Meier, Brennan, Taylor, & Rafia, 2010). Study hypotheses stemmed from the rationale described above and the background literature relating to perceptions of non-drinkers including in the introduction. Hypotheses 1a/1b, 2a/2b, 3a/3b and 4a/4b are tested via the mixed model ANCOVA analyses (reported in Sections 10.4.6.1–10.4.6.5). Hypotheses 5a/5b, 6a/6b and 7a/7b are tested via the latent growth curve analyses (reported in Sections 10.4.7.1–10.4.7.3). Two sets of hypotheses were formulated, each appropriate to the two main analytic approaches:

10.2.3.1 Mixed model ANCOVA hypotheses

- (1) Among participants in either single exercise mental simulation condition (i.e., those in *outcome* or *process* conditions), significantly lower T3 (a) weekly drinking levels and (b) HED incidence would be demonstrated, relative to T1.
- (2) Participants who complete both the *outcome* and the *process* mental simulation exercises (i.e., *combined* condition participants) will report significantly lower T3 levels of (a) weekly drinking and (b) HED incidence, relative to T1.
- (3) Among participants completing either single or combined mental simulation exercises, significantly altered T3 sociability prototype difference scores will be demonstrated, relative to T1. This pattern will be such that the prototypical non-drinker will be evaluated as significantly more sociable

(compared to the prototypical regular drinker) at follow-up ratings relative to baseline ratings.

- (4) Among participants completing either single or combined mental simulation exercises (i.e., participants in *outcome*, *process* or *combined* conditions), significantly higher levels of T3 episodic non-drinking will be demonstrated at follow-up compared to baseline, relative to T1.

10.2.3.2 Latent growth curve hypotheses

- (5) Significantly greater rates of decrease in (a) weekly drinking levels and (b) HED incidence will be demonstrated among participants completing single mental simulation exercises, relative to control condition participants.
- (6) Significantly greater rates of decrease in (a) weekly drinking levels and (b) HED incidence will be demonstrated among *combined* condition participants, relative to single exercise and control condition participants.
- (7) Rates of decrease in sociability prototype differences (i.e., smaller discrepancies in regular drinker-non-drinker prototypes) will (a) mediate rates of decrease in weekly drinking and (b) mediate rates of decrease in HED among participants randomized to any mental simulation condition.

10.3 Methods

10.3.1 Design

For the main analysis, a $2 \times 2 \times 3$ experimental design was adopted. Participants were randomly allocated to receive either an *outcome*, *process*, or *combined* (*outcome* + *process*) mental simulation exercise or were assigned to the *control* condition.

Participants were randomly assigned to conditions using a scripting procedure created

by a qualified Laboratory Technician at Sussex University. As such, the allocation sequence was concealed from the researcher involved in the study design, data collection and data analysis (the PhD Candidate). There was a 1:1 allocation ratio. Randomisation did not follow any pre-set restriction (e.g., particular block sequence or block size) or allocation sequence: at the point of participation, each individual had a one in four chance of being allocated to any condition at random. The prospective study involved collection of online data at three time-points over the period of a month, permitting an advanced structural equation modelling approach for understanding longitudinal effects via latent growth curve (LGC) techniques. The three time points included baseline (T1), two week follow-up (T2) and four week follow-up (T3). As participant outcomes were not assessed in person and follow-up data contained no information about a participant's assigned condition, post-assignment study blinding was not a required feature of the data collection process.

10.3.2 Sample and procedure

Ethical approval was granted by the host institution. For reference, it is acknowledged that this study was funded by an Economic and Social Science Research Council Studentship award (ES/J500173/1). A convenience sampling approach was adopted. Administrators at 80 academic departments across 45 English universities were requested to forward a pre-prepared recruitment message to their students containing a URL to an online survey hosted on a secure server. Of those contacted, 23 departments (29% of those emailed) stated that they were willing to forward the survey to their students. All decisions made relating to the enrolment of participants – e.g., which university departments to be approached regarding study participation – were made by the PhD Candidate. The recruitment period ran between October 21st 2014 and

December 16th 2014. The decision to send out the survey mid-way through the academic term was made so as to avoid data collection during ‘fresher’s week’ and pre-holiday time periods when atypically heavy drinking patterns might be expected, consistent with evidence of considerable seasonal variation in British alcohol consumption, including irregularly high consumption during festive periods (Uitenbroek, 1996). Individuals who identified as English, were aged 18-25 and were currently studying at University were eligible to participate. As an incentive to participate, individuals were automatically entered into a draw to win one of four £25 prizes. Once students had completed the baseline survey, follow-up data were collected via two additional online surveys sent as a URL link embedded in an email message. Restricting participation to students with an English national identity was important given the distinct socio-cultural context in which drinking practices, beliefs and norms are embedded, also reflected in alcohol production, distribution and policy (Furtwängler & de Visser, 2013; Gefou-Madianou, 2002).

The flow of participants through the intervention is indicated in Figure 10.1. Overall 1,250 eligible individuals began the survey. Of those eligible, 775 participants (62.0% of those eligible) received and began the intervention exercise appropriate to their allocated condition. In total, 27.6% ($n = 214$) of the eligible sample completed surveys at both T2 and T3; a completion rate that was comparable across study conditions including: *outcome* (29.5%), *process* (26.6%), *combined* (25.3%) and *control* (28.0%). The flow of participants through the intervention is indicated in Figure 10.1. Individuals who did not provide follow-up data ($n = 462$, 59.6% eligible sample), who did not access all survey web pages at all three time-points ($n = 100$, 12.9% eligible sample), and an outlier who self-reported T1 weekly unit consumption almost 50% more than the next highest value ($n = 1$, < 0.1% eligible sample), were excluded from the study.

Following removal of the outlier, the final sample of individuals analysed for behavioural outcomes consisted of 18-25 year old university students who provided data at three time points: 54 men ($M_{\text{age}} = 20.53$, $SD = 1.99$) and 159 women ($M_{\text{age}} = 19.79$, $SD = 1.73$). Notably, male participants were significantly older than female participants ($t = 2.68$, $p = .01$). Missing data were found among very few participants at T1 (9 cases), T2 (12 cases) and T3 (7 cases), accounted for an acceptably small proportion of overall missing data for each case (T1 = $\leq 1.9\%$; T2 = $\leq 4.1\%$; T3 = $\leq 2.7\%$), and was estimated using the expectation-maximisation algorithm (Schafer & Graham, 2002). Post-hoc power calculations were conducted using the G*Power software package (Faul, Erdfelder, Lang, & Buchner, 2007). These analyses revealed, at a $p = .05$ error level for a one-sided test, power of 0.90 to detect medium-small effect sizes ($r = .08$) for each outcome variable.

10.3.3 Manipulations

For all conditions, intervention exercises appeared immediately following psychological and behavioural measures in the baseline online survey. All mental simulation tasks were preceded by a brief vignette describing a non-drinking individual with the uni-sex name Alex. Varied lines of evidence suggest that gender-specific stereotypes hold links with a wide range of health-related behaviours including alcohol consumption (Courtenay, 2000; de Visser & McDonnell, 2012; Lyons, 2009). For example, drinking alcohol has been demonstrated to provide an important resource for both reinforcing and resisting gendered identities (de Visser & Smith, 2007). For this reason, it was important from the outset to try to limit evocation of sex-specific stereotypes associated with non-drinking behaviour which might have skewed subsequent engagement with the mental simulation exercise in line with sex-specific behavioural expectations, and

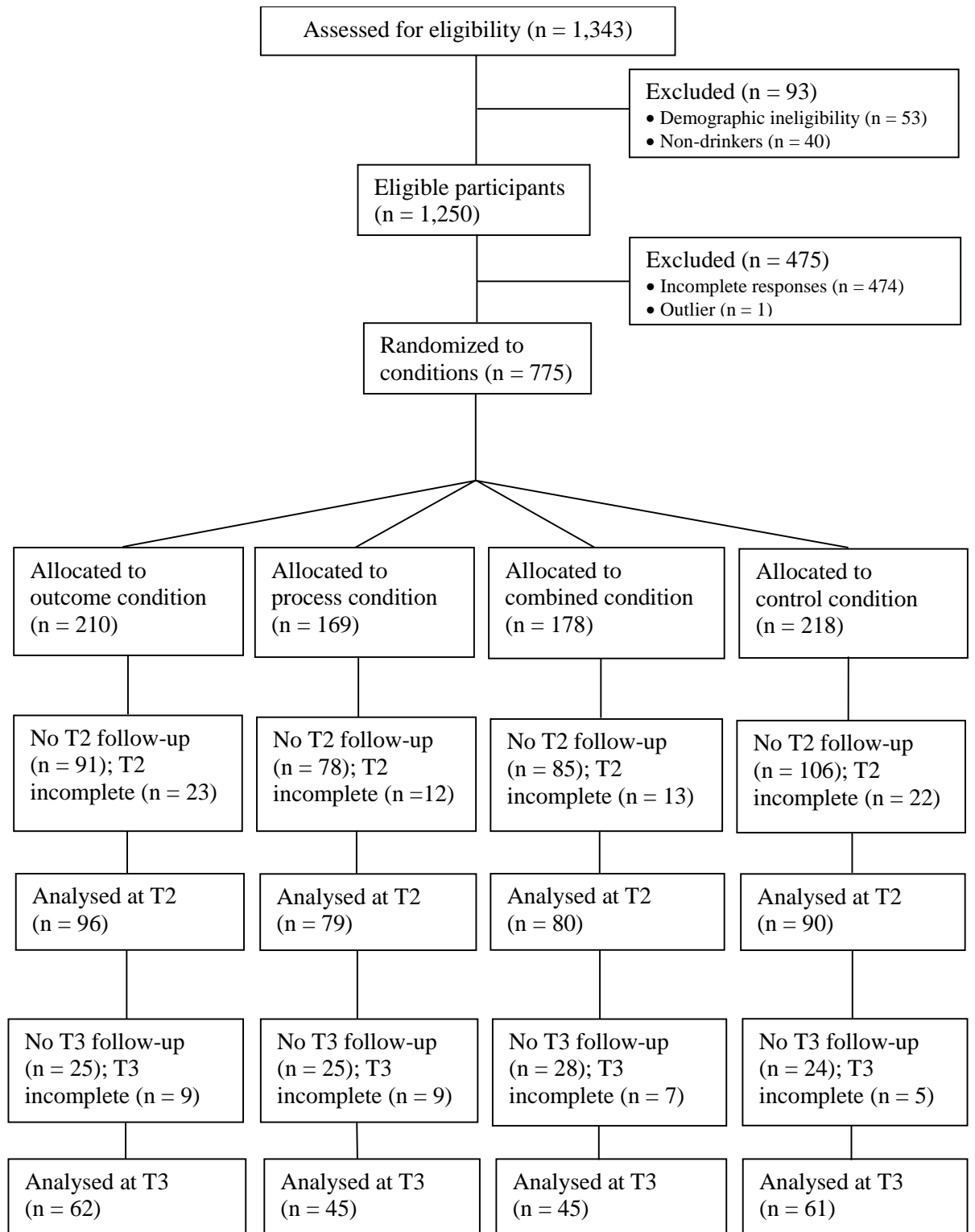


Figure 10.1 Participant recruitment flow diagram

away from a more personal response.

Outcome simulation tasks were preceded by a vignette displaying possible positive outcomes of periodic non-drinking during social occasions (e.g., saving money; increased willpower). Participants were then asked to “think about the possible short-/long-term positive benefits associated with increasing the number of occasions where you do not drink” and were asked to list these benefits in a free-text survey box. Following this, participants were asked to imagine having successfully managed not to drink during one or more social occasions each week as part of their life routine. Finally, participants were asked to list these benefits in a second free-text survey box.

Process simulation tasks were preceded by a vignette displaying possible strategies involved during non-drinking occasions (e.g., being direct but polite when declining offers of alcoholic drinks; choosing to be around friends who are likely to be supportive of non-drinking). Participants were then asked to “think about the kinds of strategies that you might use during social occasions where you do not drink” and were asked to list these benefits in a free-text survey box. Following this, participants were asked to imagine having successfully managed not to drink during one or more social occasions each week as part of their life routine. Finally, participants were asked to list these strategies in a second free-text survey box.

Participants in the *combined* condition were asked to complete both mental simulation and written exercise tasks just described in the order *outcome, process*. This sequence was chosen as a practical step to overcome potential confusion conveyed by encouraging reflection on the behavioural steps involved in achieving a behavioural outcome prior to reflection with regards the outcome itself.

At one- and three-week post baseline measures, participants in all three mental simulation conditions received an individually-tailored email message containing their

self-generated positive outcomes and/or required strategies for non-drinking during social situations and were asked to continue practicing this mental simulation.

Participants in the *control* condition completed a “drinks diary” in which they recorded daily consumed alcohol units over the four week study duration.

10.3.4 Measures

10.3.4.1 Self-reported drinking behaviour

With the exception of demographic details, measures were recorded at all three time-points (baseline, two/four week follow-up). At each time-point, alcohol consumption in UK units (10mL/8g pure ethyl alcohol) was self-reported for the previous week with the aid of a visual guide. Using baseline data, for each participant, the number of implied HED occasions (i.e., > 6 alcohol units = female; > 8 alcohol units = male) was calculated. A measure of episodes in which participants had socialised without drinking alcohol was obtained via responses to a grid containing days (i.e., Sunday-Monday) and associated drinking behaviour in social contexts (i.e., Did not socialise; I drank, others did NOT; I did NOT drink, others did; We ALL drank; NO-ONE drank).

10.3.4.2 Alcohol prototypes

Perceptions of the sociability of both prototypical regular drinkers and prototypical non-drinkers were assessed using 6 adjective pairs (popular-unpopular; easy-uptight; open-reserved; willing to take risks-unwilling to take risks; sociable-unsociable; able to enjoy-unable to enjoy) based on previous research (Zimmermann & Sieverding, 2011). All responses were given on a 5-point Likert-type scale. A stem statement (“For each pair of words, indicate which best describes your image of the person your age who [regularly drinks alcohol/does not drink alcohol]”) was followed by semantic differential adjective pairs (e.g., 1 = extremely sociable; 7 = extremely unsociable).

Sociability prototype difference scores were computed by subtracting non-drinker prototype scores from drinker prototype scores. Scores above zero indicated more sociable ratings of prototypical non-drinkers and scores below zero indicated more sociable ratings of prototypical regular drinkers.

10.4 Results

10.4.1 Participant demographic details

All demographic details relating to participant sex, regional location, ethnicity and age are presented below in Table 10.1.

10.4.2 Preliminary analyses

Differences between those included in the analysis, those lost to follow-up and those who provided incomplete responses were assessed via a series of ANOVAs with Games-Howell post hoc tests using a Bonferroni correction. Participant age, participant sex, sociability prototype differences, weekly drinking, heavy episodic drinking and episodic non-drinking were assessed as dependent variables (DVs): no significant differences between participants based on these categories were demonstrated. Baseline self-reports indicated that 23.0% of the final sample had exceeded weekly unit intake recommendations and that 54.9% had engaged in HED once or more in the preceding week. This compared with national averages among 16-24 year olds (Office for National Statistics, 2013) and suggested that a sub-sample among whom health-adherent behaviour change might be successfully promoted had been secured. Baseline outcome variable data by intervention group is included in Table 10.2.

Table 10.1 Participant demographic details by study condition

		Outcome (<i>n</i> = 62)		Process (<i>n</i> = 45)		Combined (<i>n</i> = 45)		Control (<i>n</i> = 61)	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Sex	Male	17	27.4	11	24.4	12	26.7	14	23.0
	Female	45	72.3	34	75.6	33	73.3	47	77.0
Region	East of England	3	4.8	0	0.0	0	0.0	1	1.6
	London	5	8.1	1	2.2	4	8.9	4	6.6
	North of England	22	35.5	16	35.6	15	33.3	7	13.2
	South of England	23	37.1	19	42.2	18	40.0	24	39.4
	Midlands	9	14.5	9	20.0	8	17.8	10	16.4
Ethnicity	Asian	1	1.6	4	8.9	2	4.4	1	1.6
	Black	1	1.6	1	4.4	0	0.0	1	1.6
	Mixed	0	0.0	2	4.4	1	2.2	1	1.6
	White	60	96.7	38	84.4	42	93.3	58	95.1
Age (years)	Mean	20.3		19.8		20.0		19.8	
	<i>SD</i>	2.10		1.67		1.80		1.66	
	Range	18–25		18–25		18–24		18–24	

Table 10.2 Mean dependent variable scores by study condition at T1, T2 and T3

Dependent variables	Intervention condition									Control		
	Outcome (<i>n</i> = 62)			Process (<i>n</i> = 45)			Combined (<i>n</i> = 45)			(n = 61)		
	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3
Weekly alcohol consumption (in UK units)	18.55 (2.05)	15.61 (2.03)	13.16 (1.45)	16.42 (1.78)	12.32 (1.34)	12.18 (1.41)	13.11 (1.53)	11.51 (1.12)	10.47 (1.48)	15.44 (1.52)	17.30 (1.93)	15.15 (1.57)
Heavy episodic drinking (weekly frequency)	0.98 (0.14)	0.77 (0.12)	0.69 (0.10)	1.02 (0.15)	0.64 (0.12)	0.60 (0.10)	0.69 (0.14)	0.73 (0.11)	0.56 (0.11)	0.82 (0.12)	0.95 (0.13)	0.84 (0.12)
Sociability prototype differences	-1.11 (0.09)	-0.98 (0.09)	-0.82 (0.09)	-1.19 (0.12)	-1.06 (0.13)	-0.83 (0.13)	-1.35 (0.13)	-1.14 (0.10)	-0.74 (0.13)	-1.19 (0.09)	-1.12 (0.09)	-0.85 (0.11)
Episodic non-drinking	0.66 (0.11)	1.60 (0.10)	0.69 (0.16)	0.96 (0.17)	1.62 (0.12)	0.60 (0.14)	0.80 (0.15)	1.69 (0.16)	0.60 (0.15)	0.69 (0.13)	1.54 (0.13)	0.82 (0.20)

Note. SE in parentheses.

10.4.3 Randomization check

Although differing participant numbers were allocated to each condition, between-condition analyses revealed non-significant differences in age, or in baseline behavioural and psychological measures, $F_s = \leq 1.63$, $p = \geq .18$, and non-significant sex differences across conditions, $\chi^2(3) = 0.39$, $p = .94$. On this basis, participants were understood to have been successfully randomized.

10.4.4 Manipulation check

Responses to mental simulation exercises were content analysed by the first author to assess whether not drinking during social occasions was considered to hold benefits or/and to require strategic management (an inherent assumption of the exercises).

Responses were dichotomously coded according to whether participants had identified potential benefits/strategies of episodic non-drinking (example of ‘yes’ code = “I would save money, avoid dangerous situations and have more meaningful conversations with peers...”). The vast majority (97%) generated responses consistent with the target behavioural premise. Line graphs supported linear change modelling over time for all outcome variables, except episodic non-drinking which displayed a quadratic trend (see Figures 10.2–10.5).

10.4.5 The data analytic approach

Two sets of analyses were conducted on the data in the interests of a broader understanding of potential intervention effects. First, as the primary mode of data analysis, a series of $2 \times 2 \times 3$ mixed model ANCOVA analyses were conducted to assess factorial main and interaction effects. Analyses followed a complete case analysis on an intention to treat basis: all participants with data collected at all three time-points

were included in the analyses regardless of whether they had been identified (or not) as having fully engaged with their allocated mental simulation exercise. Second, a latent growth curve analysis using a structural equation modelling approach was conducted to assess longitudinal trends and, specifically, whether rate of change by intervention condition differed for each DV.

10.4.6 Effects of the intervention I: $2 \times 2 \times 3$ mixed model ANCOVA analysis

A series of 2 (outcome mental simulation: present vs. absent) $\times 2$ (process mental simulation: present vs. absent) $\times 3$ (time: baseline, two week follow-up, four week follow-up) mixed model ANCOVAs were assessed in relation to four DVs: weekly drinking, HED frequency, episodic non-drinking frequency and sociability prototype differences. Effect coded variables were assessed to provide an appropriate statistical and conceptual framework for interpreting intervention effects. Distinct from *dummy coded* effects, (where study effects are assessed relative to a specific reference condition), or *contrast coded* effects (where more focused hypothesis may be tested) *effect coding* permits the assessment of hypotheses concerning whether condition means differed significantly from the grand overall mean of all participants for each DV (e.g., Pedhazur, 1997). A relevant technical reference was consulted for all effect coded analyses described in this chapter (Kugler, Trail, Dziak, & Collins, 2012). All main and interaction effects reported in this section were run with effect coded variables added as covariates. Participant sex and age were also entered as covariates in each analysis. All effects are reported as significant at $p < .05$.

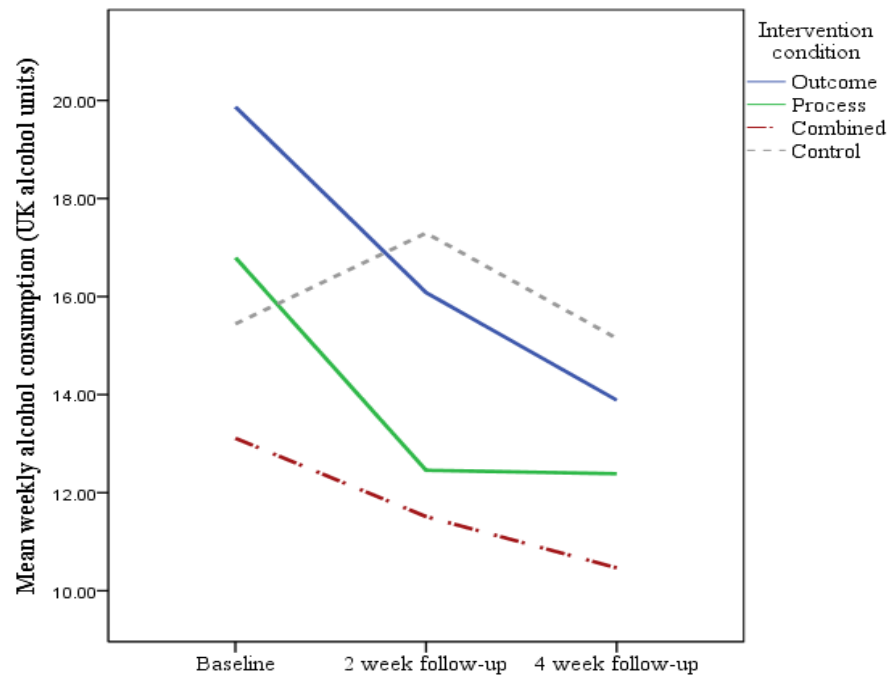


Figure 10.2 Trends in weekly unit consumption by condition

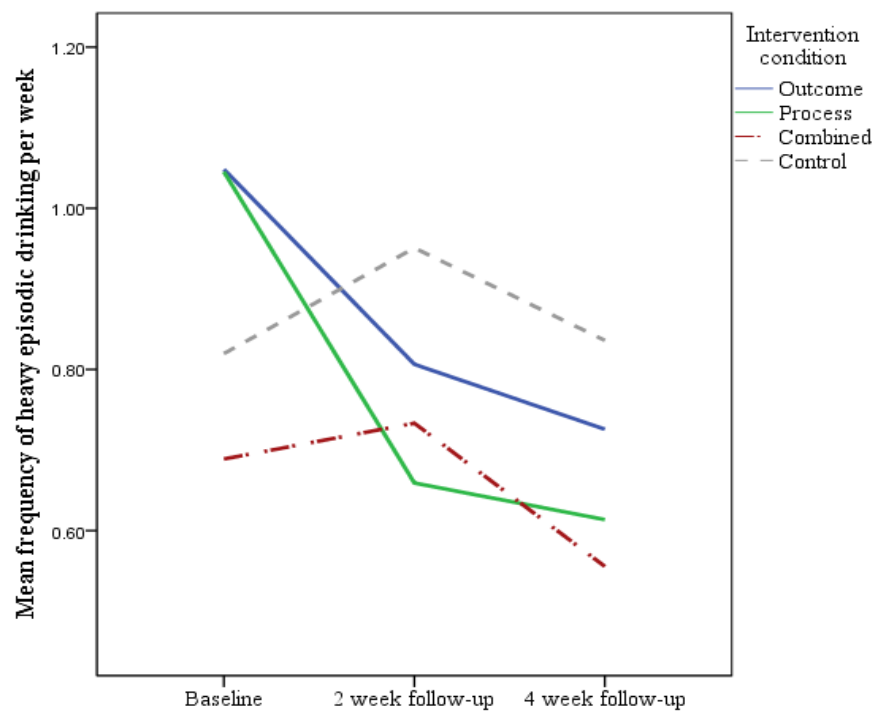


Figure 10.3 Trends in heavy episodic drinking by condition

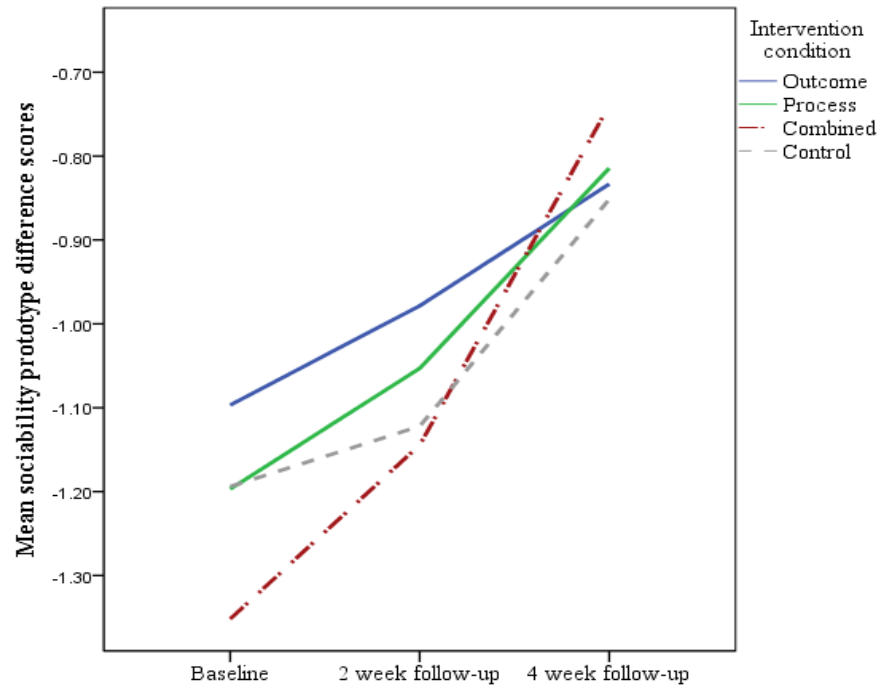


Figure 10.4 Trends in sociability prototype differences by condition

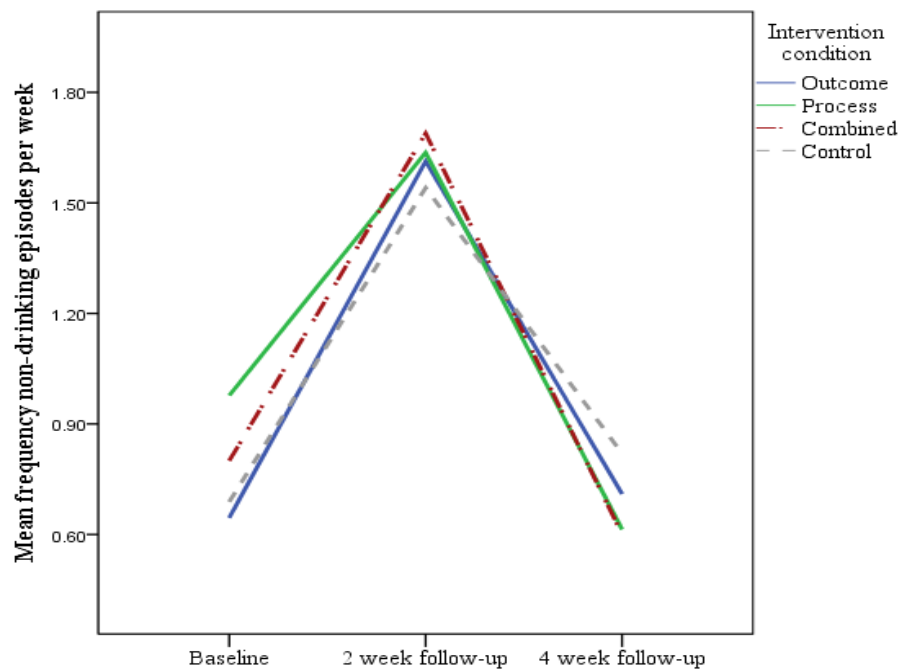


Figure 10.5 Trends in episodic non-drinking by condition

10.4.6.1 Main effects of outcome and process factors on dependent variables

There was a significant main effect of *process* on weekly drinking, reflecting the fact that participants who had completed the *process* mental simulation had lower levels of weekly drinking on average across time points ($M = 12.78$, $SD = 9.65$) than participants who had not ($M = 15.96$, $SD = 13.87$), $F(1, 207) = 5.11$, $p = .03$, $\eta_p^2 = .03$ 95% CI [0.00, 0.05]. There was no significant main effect of the *outcome* condition on weekly drinking, indicating that participants who had completed the *outcome* mental simulation exercise reported similar weekly drinking levels to those who had not, $F(1, 207) = 0.40$, $p = .53$, $\eta_p^2 = .00$ 95% CI [0.00, 0.01]. No significant main effects of belonging to either the *outcome* or the *process* condition were found for HED frequency, episodic non-drinking or sociability prototype differences.

10.4.6.2 Main effects of time on dependent variables

There was a significant main effect of time for episodic non-drinking, $F(2, 416) = 21.85$, $p = < .001$. Tukey post hoc tests indicated that average episodic non-drinking frequency across the sample was significantly higher at two week follow-up ($M = 1.61$ episodes/week, $SD = 0.92$) relative to frequency at baseline ($M = 0.76$ episodes/week, $SD = 1.00$), $M.Diff = 0.84$, $p = < .001$, 95% CI [0.70, 0.99]; and relative to frequency at four week follow-up ($M = 0.69$ episodes/week, $SD = 1.26$), $M.Diff = 0.92$, $p = < .001$, 95% CI [0.75, 1.08]. By contrast there were no significant effects of time for either weekly drinking, $F(2, 416) = 1.24$, $p = .29$ or for HED frequency, $F(2, 416) = 0.51$, $p = .60$, indicating that average sample levels of these DVs by time-point were similar.

There was also a significant main effect of time for sociability prototype differences, $F(2, 416) = 4.74$, $p = .01$. Tukey post hoc tests indicated that average sociability prototype difference scores across the sample were significantly higher

(reflecting more favourable evaluations of prototypical non-drinkers) at four week follow-up ($M = -0.81$, $SD = 0.81$) relative to two week follow-up scores ($M = -1.07$, $SD = 0.73$), $M.Diff = 0.26$, $p = < .001$, 95% CI $[-0.37, -0.15]$; and relative to baseline scores ($M = -1.20$, $SD = 0.78$), $M.Diff = 0.39$, $p = < .001$, 95% CI $[0.26, 0.52]$.

The interaction of the two mental simulation factors was next assessed and is described in Section 10.4.6.4, following a brief description of relevant diagnostic tests included in Section 10.4.6.3 below.

10.4.6.3 Interaction effects – preliminary diagnostic tests

Mauchley's test indicated that the assumption of sphericity was tenable for weekly drinking, $\chi^2(2) = 0.01$, $p = .99$; and HED, $\chi^2(2) = 0.99$, $p = .61$. However, Mauchley's test suggested that assumed sphericity was violated for sociability prototype differences, $\chi^2(2) = 14.77$, $p = .001$ and also for episodic non-drinking frequency, $\chi^2(2) = 15.13$, $p = < .001$. Therefore, for each interaction effect, corrected degrees of freedom using Greenhouse-Geisser estimates of sphericity for sociability prototype differences ($\epsilon = .93$) and for episodic non-drinking frequency ($\epsilon = .93$) are reported in the following two sections.

10.4.6.4 Two way interactions involving mental simulation exercises and time

Analyses did not demonstrate statistically significant findings for two way interactions between the mental simulation exercises for any DV. Interaction effects between *outcome* and *process* conditions were not demonstrated as significant for weekly drinking, $F(1, 207) = 0.57$, $p = .45$, $\eta_p^2 = .01$ 95% CI $[0.00, 0.03]$; HED, $F(1, 207) = 0.12$, $p = .73$, $\eta_p^2 = .00$ 95% CI $[0.00, 0.01]$; episodic non-drinking frequency, $F(1, 205) = 0.00$, $p = .95$, $\eta_p^2 = .00$ 95% CI $[0.00, 0.00]$ or sociability prototype differences, $F(1,$

205) = 0.67, $p = .42$, $\eta_p^2 = .00$ 95% CI [0.00, 0.02]. Statistically significant findings were also not demonstrated for the two way interactions between time and either of the mental simulation exercises for any DV. For weekly drinking, this included time \times outcome, $F(1, 206) = 0.86$, $p = .36$, $\eta_p^2 = .00$ 95% CI [0.00, 0.01]; and time \times process, $F(1, 206) = 0.16$, $p = .69$, $\eta_p^2 = .01$ 95% CI [0.00, 0.01]. For HED, this included time \times outcome, $F(1, 206) = 0.09$, $p = .91$, $\eta_p^2 = .00$ 95% CI [0.00, 0.00]; and time \times process, $F(1, 206) = 0.66$, $p = .52$, $\eta_p^2 = .00$ 95% C.I. [0.00, 0.01]. For episodic non-drinking frequency, neither two way interaction effect proved significant including time \times outcome, $F(1.87, 379.27) = 0.34$, $p = .70$, $\eta_p^2 = .00$ 95% CI [0.00, 0.01]; and time \times process, $F(1.87, 379.27) = 2.45$, $p = .09$, $\eta_p^2 = .01$ 95% CI [0.00, 0.02]. For sociability prototype differences, two way interaction effects were non-significant including time \times outcome, $F(1.87, 379.27) = 0.79$, $p = .45$, $\eta_p^2 = .00$ 95% CI [0.00, 0.01]; and time \times process, $F(1.87, 379.27) = 1.50$, $p = .23$, $\eta_p^2 = .01$ 95% CI [0.00, 0.02]. The three way interaction between mental simulations and time was assessed next.

10.4.6.5 Three way interaction effects involving time and both mental simulation exercises

Statistically significant findings were not demonstrated for three way interaction effects (time \times outcome \times process) involving weekly drinking, sociability prototype differences or episodic non-drinking DVs. For weekly drinking, the interaction term just failed to reach statistical significance, $F(2, 412) = 3.02$, $p = .05$, $\eta_p^2 = .01$ 95% CI [0.00, 0.04]; while non-significant interaction terms were demonstrated for sociability prototype differences, $F(1.87, 379.27) = 1.00$, $p = .36$, $\eta_p^2 = .01$ 95% CI [0.00, 0.01]; and episodic non-drinking, $F(1.87, 379.27) = 0.30$, $p = .72$, $\eta_p^2 = .01$ 95% CI [0.00, 0.01].

However, the three way interaction involving HED, the time \times outcome \times process product term was statistically significant, $F(2, 412) = 4.05$, $p = .02$, $\eta_p^2 = .02$ 95% CI

[0.00, 0.03]. To explore this further, four one-way repeated measures ANOVAs were conducted with time as the repeated measures factor, for each of the four conditions in turn. Sphericity could be assumed for all analyses $\chi^2(2) = \leq 1.90, p = \geq .39$. Analyses revealed no significant main effect of time for participants in the *outcome* only condition, $F(2,120) = 2.53, p = .08$, the *combined* condition, $F(2,88) = 0.84, p = .44$, or the *control* condition, $F(2,120) = 0.71, p = .49$. There was, however, a significant main effect of time for the *process* only condition, $F(2,86) = 4.73, p = .01$. Tukey post hoc tests revealed that, relative to baseline HED episode frequency, *process* condition participants engaged in significantly less HED episodes at two week follow-up ($M.Diff = 0.39, p = .02, 95\% CI [0.08, 0.70]$) and at four week follow-up ($M.Diff = 0.43, p = .01, 95\% CI [0.12, 0.75]$). There were no significant differences in HED episodes at two week follow-up as compared to four week follow-up ($M.Diff = 0.05, p = .77$).

Taken together, evidence presented in this section suggests some utility of completing the *process* mental simulation exercise in HED incidence at follow-up time points. Specifically, partial support was found for hypothesis 1b, that lower HED incidence would be demonstrated among participants who had completed a single exercise *process* mental simulation condition at four week follow-up relative to baseline. No evidence was found in support of any other research hypotheses for the mixed model ANCOVA stage of the analyses.

10.4.7 Effects of the intervention II: latent growth curve analysis

As an additional assessment of whether there were effects of the intervention, Latent Growth Curve (LGC) models were evaluated using AMOS version 21.0. As noted, line graphs indicated that linear trends over time were demonstrated for three DVs (weekly drinking, HED, sociability prototype differences) but not for episodic drinking (see

Figures 10.2–10.5). Therefore three LGC models were estimated to explore linear rate of change using three time point measures (baseline, two weeks, four weeks). Using LGCs, outcome measures can be assessed in terms of intercepts (average initial status) and slopes (averages rates of change). Intercept and slope variances indicate whether inter-individual differences were present. Five goodness-of fit indicators are reported: model χ^2 ; the comparative fit index (CFI, desirable values ≥ 0.95); the root mean square error of approximation (RMSEA, desirable values ≤ 0.05) and the standardised root mean square residual (SRMR, desirable values ≤ 0.05) following conventional recommendations (Hu & Bentler, 1999).

10.4.7.1 Unconditional growth models

Initially, inter-individual differences in change were modelled via a series of unconditional growth models (Singer & Willett, 2003). An unconditional growth model involves assessing baseline and rate of change in a variable of interest. Significant variability terms in an unconditional growth model suggest that assessment of ‘time invariant’ variables – referring to any variable not measured over a series of time-points – might be warranted. By incorporating a covariance term between T2 indicator residuals for weekly unit consumption and HED, a well-fitting growth model was specified, $\chi^2(17) = 29.35$, $p = .03$, CFI = 0.99, RMSEA = 0.06, SRMR = 0.05.

Significant variances of both intercepts and slopes for weekly unit intake ($Z = \geq 7.17$, $p = <.001$); HED frequency ($Z = \geq 6.19$, $p = <.001$) and sociability prototype differences ($Z = \geq 2.49$, $p = \leq .05$) supported model adequacy for evaluating inter-individual change in key DVs over time.

10.4.7.2 Time invariant analyses

To gauge time invariant intervention effects on growth trajectories, three dummy variables were created coding intervention conditions (i.e., *outcome*, *process*, or *combined*) in relation to the control condition. Predictive paths were hypothesised between dummy variables and all intercepts/slopes. Covariance terms were added between all intercept/slope residual terms. Participant age was treated as a covariate based on preliminary correlational analyses. Non-significant hypothesised paths or covariance terms were removed. Excellent support was provided for the data fit of the final model both alone, $\chi^2(43) = 61.12, p = .04$, CFI = 0.99, RMSEA = 0.05, SRMR = 0.05, and relative to the measurement model, $\Delta\chi^2(26)=31.77, p = .20$ (final model shown in Figure 10.8). Significant intervention effects on drinking behaviour were demonstrated. Relative to control condition participants, *outcome* condition participants indicated significant reductions in weekly unit consumption over time ($Z = -2.52, p = .01$), and *process* condition participants showed significant reductions in HED frequency over time ($Z = -2.17, p = .03$). Being in the *combined* condition rather than the control condition had no influence over rate of change in weekly drinking or HED incidence ($Zs = \leq -1.01, p = \geq .41$). At T3 follow-up, lower weekly drinking and HED incidence were found among *outcome* ($M. \text{ level} = 13.38 \text{ units/week}, SD = 11.98; M = 0.70 \text{ episodes/week}, SD = 0.77$), *process* ($M. \text{ level} = 12.39 \text{ units/week}, SD = 9.45; M = 0.61 \text{ episodes/week}, SD = 0.69$), and *combined* condition participants ($M. \text{ level} = 10.47 \text{ units/week}, SD = 9.94; M = 0.56 \text{ episodes/week}, SD = 0.76$) relative to *control*

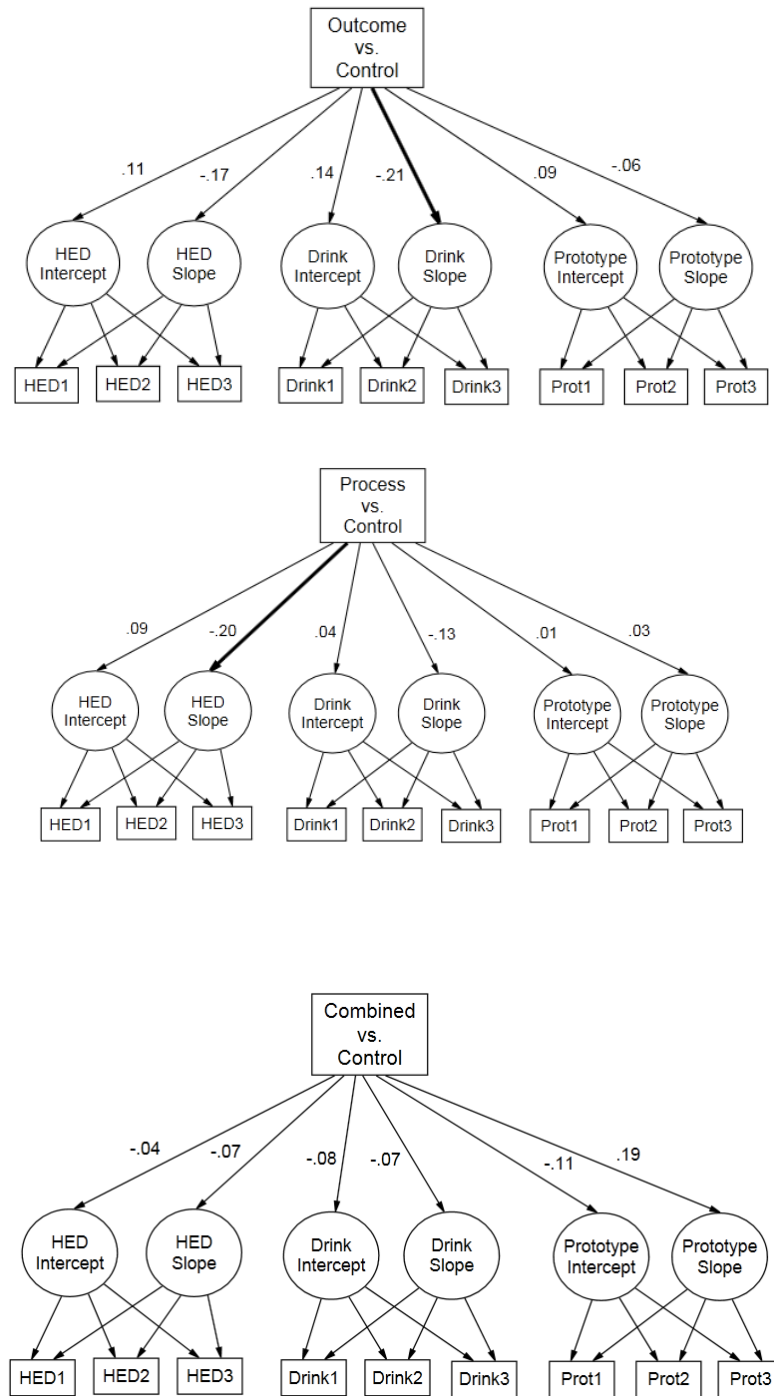


Figure 10.6 Mental simulation intervention effects on weekly unit consumption, heavy episodic drinking frequency and sociability prototype differences

Please note: Three models are included in this figure for visual clarity only; in reality, intervention dummy variables were included simultaneously as time invariant variables in the model. Statistically significant lines ($p < .05$) in bold. Covariates (i.e., experimental dummy variables, age), residuals and parameter data omitted to enhance clarity. Standardised coefficients shown. Indicator item numbers refer to: 1=baseline, 2=two week follow-up and 3=four week follow-up.

condition participants (M . consumption = 15.15 units/week, SD = 12.24; M = 0.84 episodes/week, SD = 0.97). Changes in sociability prototype differences were found in all conditions: at T3 participants in all conditions rated the prototypical non-drinker as more sociable relative to the prototypical regular drinker than they had done at T1 (see Figure 10.4). However, analyses did not indicate that rates of change in sociability prototype differences for participants in any of the mental simulation conditions were significantly greater than for participants in the *control* condition (Z s = ≤ 1.49 , p = $\geq .14$).

Results from these analyses suggested that the single exercise *outcome* and *process* mental simulations held distinct types of efficacy in reducing high levels of weekly unit consumption and HED (respectively) at four week follow-up. On this basis, partial support for hypotheses 5a and 5b was provided. However, support was not provided for hypotheses 6a and 6b, as greatest decreases in weekly drinking and HED among *combined* condition participants (relative to control condition participants) were not demonstrated.

10.4.7.3 LGC mediation analysis

Six indirect pathways were specified to assess possible mediation of intervention effects via sociability prototype differences, specified as a mediator between each dummy variable and the slope of each outcome variable (i.e., weekly unit intake; HED). No significant indirect pathways were found, (ps = $\geq .33$). Therefore, there was no evidence in support of hypotheses 7a or 7b.

10.4.8 Episodic non-drinking – sub-analyses

Associations between episodic non-drinking and weekly unit intake were explored.

Across conditions, relative to baseline levels of episodic non-drinking ($M = 0.76$, $SD = 1.00$), participants reported increased frequency of episodic non-drinking at T2 ($M = 1.61$, $SD = 0.92$), followed by a decreased frequency of episodic non-drinking at T3 ($M = 0.70$, $SD = 1.26$). Time-point difference scores were computed for episodic non-drinking frequency and weekly consumption and HED frequency to explore potential associations between time-point decreases in drinking behaviour and episodic non-drinking. Pearson's correlations with an applied Bonferroni correction demonstrated a single significant association between episodic non-drinking frequency differences (T1 minus T2) and weekly unit intake differences (T1 minus T2): among *outcome* condition participants, lower levels of T2 weekly unit intake, were positively associated with increased frequency of episodic non-drinking at T2 ($r = -0.37$, $p = < .001$). The possibility that increases in episodic non-drinking would correspond with (compensatory) increases in HED was rejected, $r = \leq 0.07$, $p = \geq .32$. Evidence suggested that increased episodic non-drinking reflected decreases in weekly unit intake among some participants.

10.5 Discussion

Using a range of analytic approaches, results from this study provided tentative evidence somewhat in support of the efficacy of mental simulations using a non-drinking framing in decreasing alcohol consumption levels among university students.

Evidence from both mixed model ANCOVA and LGC analyses offered some support for the *process* condition for encouraging both lower levels of weekly drinking and decreased HED incidence at follow-up. Specifically, mixed model ANCOVAs

offered partial support for hypothesis 1b, given that participants who completed the single exercise process mental simulation self-reported a lower incidence of HED frequency at four week follow-up relative to baseline. Support was also available from the LGC analysis (specifically, for hypothesis 5b) where it was demonstrated that a greater rate of change in HED frequency was demonstrated among single exercise process condition participants relative to participants who had completed the drinks diary control exercise.

However, no further support was provided in the mixed model ANCOVA analysis for any other research hypothesis. Specifically: completing the single exercise outcome mental simulation did not significantly alter HED frequency at follow-up (no support for hypothesis 1a); completing both mental simulation exercises did not significantly lower weekly drinking or HED frequency at follow-up (no support for hypotheses 2a or 2b); completing either single or combined mental simulation exercises did not lead to significantly improved sociability prototype difference scores at follow-up (no support for hypothesis 3) and completing either single or combined mental simulation exercises did not lead to significantly higher frequency of episodic non-drinking at follow-up (no support for hypothesis 4).

Results from the LGC provided the sole study finding which offered any kind of support for the single exercise *outcome* condition. Here, the greatest rates of change in weekly drinking at follow-up were demonstrated among individuals in the *outcome* condition (supporting hypothesis 5b). Despite lower levels of weekly drinking and HED incidence at follow-up among participants in the *combined* condition, findings did not support hypothesised health promoting advantages of completing both exercises in combination (hence no support was found for hypothesis 6). Finally, ratings of prototypical non-drinkers as relatively more sociable than prototypical regular drinkers

did not mediate intervention effects related to the reduction of weekly unit intake or HED for any condition, hence offering no support for hypotheses 7a/7b.

Different lines of evidence from both mixed model ANCOVA and LGC analyses offer tentative support for the utility of *process* mental simulations in the context of university student drinking behavior. This provides a complimentary line of evidence to the recently demonstrated success of *outcome* mental simulations for reducing student alcohol consumption (Hagger et al., 2012a). The current study also provides two novel contributions to the alcohol-related mental simulation literature. First, a full factorial design was tested for the first time, to the authors' knowledge, in the alcohol domain. Second, analyses provide tentative evidence in support of mental simulations as a way of promoting safer patterns of alcohol consumption among students. LGC analyses suggested that completing an *outcome* mental simulation exercise rather than a 'drinks diary' control exercise predicts steeper decreases in weekly drinking. This mirrors established predictive links between holding positive alcohol expectancies and increased likelihood of higher levels of alcohol consumption among young adults (Connor, George, Gullo, Kelly, & Young, 2011; Ham & Hope, 2003). Intuitively this makes sense: either challenging positive expectancies relating to alcohol use *or* challenging negative/ambivalent anticipations relating to *episodic non-drinking* might each be expected to encourage safer drinking behaviours. Theoretically, effects of the intervention might be attributed to successfully challenging threat perceptions (in this case related to non-drinking during social situations) which might otherwise inhibit motivations to modify personal drinking behaviour (Prentice-Dunn & Rogers, 1986). Tentative evidence that the *process* simulation exercise may be particularly effective in reducing HED incidence at follow-up matches findings from the broader social resistance skills literature: for example, increasing drink refusal self-efficacy can

diminish the amount of alcohol consumed during a single occasion (Botvin, 2000; Scheier, Botvin, Diaz, & Griffin, 1999). Taken together, the current evidence offers mixed evidence concerning the utility of *outcome* and *process* mental simulation approaches which now require further investigation in replication studies. Encouraging individuals to consider possible advantages in not drinking during some social occasions seems likely to offer one way in which more moderate drinking might be more successfully promoted among university students. However, imagining how non-drinking might be most successfully achieved within social situations seems likely to be integral to developing the necessary drink refusal self-efficacy skills required to be socially present as a non-drinker, a behaviour that has been suggested to carry unique and significant social challenges (Conroy & de Visser, 2014). However, is acknowledged that the multiplicity of inferential analyses presented in this study will have inflated Type I error rates. Therefore successful effects of the intervention reported in this chapter should be viewed with caution and understood as entirely provisional on study replication. This acknowledged, it is noted that the varied analyses included in this chapter have permitted a broader understanding of the possible effects and non-effects of the mental simulation intervention than would otherwise have been possible.

The failure of the *combined* condition suggests that merging the simulation tasks may not improve the success of mental simulation interventions, though this finding could be explained in several ways. Recent evidence indicates that individuals randomized to conditions in which they receive a combination battery of exercises may be generally ineffective (Hagger et al., 2012a, 2012b) or, worse still, may report *lower* health-adherent behavioural intentions at follow-up than reported at baseline (Jessop, Sparks, Buckland, Harris, & Churchill, 2014). This failure of combination exercise condition might be most simply explained in terms of the potential deleterious impact of

online survey task length on study engagement, as recently demonstrated in one study (McCambridge et al., 2011). On this evidence, the *combined* condition in the current study may have been ineffective given that it required the completion of two reasonably time-consuming tasks, leading to a somewhat more negative impression of the exercise, lower engagement levels, and greater resistance to the intended health-promoting effects of the mental simulation exercise. It is acknowledged here that Hagger et al. (2012a) did report an interaction effect in their combined mental simulation + implementation intention condition among the heaviest drinkers in the sample, suggesting that drinking history might be an important moderator to examine in mental simulation research involving combined conditions (an option not possible in the current sample due to low levels of statistical power). It may be advisable for future studies to employ an alternative, relevant behaviour change technique (e.g., prompting barrier identification, or providing instruction: see, for example, Abraham & Michie, 2008) alongside a single mental simulation exercise to maximise health-adherent behaviour change.

Interestingly, *all* participants engaged in more, then less, episodic non-drinking, though clear links between changes in episodic non-drinking and decreased weekly consumption rates or HED over time could not be established. This may reflect widely reported difficulties in maintaining initially successful behaviour change intervention effects (Schwarzer, 2008). Given the uniformity of response at each time-point for episodic drinking, the operational form of the measure would also benefit from further investigation. As a novel way of understanding mechanisms underlying the effects of future non-drinking mental simulations, episodic non-drinking warrants further operational assessment and empirical exploration as a behavioural measure.

Study limitations should be noted. First, the low response rate might be partly explained by time demands placed on participants in each condition but also the

multiple time-points at which data was collected. Our online data collection method suffers from what has been discussed as a recruitment trade-off of the format: large samples may be more readily accessed but at the cost of an increased likelihood of high drop-out rates (Riper, Kramer, Smit, Conijn, Schippers, & Cuijpers, 2008). Importantly, follow-up responses were provided from students among whom lower levels of alcohol consumption could be usefully promoted in the majority, indicating that a small but relevant sample had been successfully targeted. Second, convenience sampling produced findings that may not be representative of the broader university student body, though it is noted that this approach is typical of web-based intervention studies (Bewick et al., 2008). Third, it is possible that order effects may have been introduced following the decision not to counter-balance the sequence of exercises among participants in the *combined* condition. The pattern of findings may have been somewhat different if the ‘outcome then process’ ordering had been reversed. Fourth, the efficacy of the intervention could be attributable to varied factors including exposure to the pre-manipulation vignette or the individually-tailored reminder message and distinguishing between the relative contributions of these components is required. Fifth, inclusion of a no-intervention control group, rather than a drinks diary exercise control group, might have permitted a less conservative comparison for assessing effects of the mental simulation exercises alone or in combination. Sixth, a follow-up period of longer than four weeks would have been preferable to assess longer-term effects of the intervention. However, it was anticipated that a longer follow-up period would have had a potentially negative impact on response rates. Given the study’s already reasonably high attrition level, this appears to have been a prudent decision.

In conclusion, the data presented here suggest that a theoretically supported mental simulation using an ‘episodic non-drinking’ behavioural framing shows tentative

potential in reducing alcohol consumption and HED among students at multiple institutions over a four week period. Further empirical validation of mental simulation interventions containing a non-drinking frame is now required to replicate these effects, to clarify the precise mechanisms of action and to assess the extent to which behaviour change is maintained over time.

Chapter 11

General Discussion and Conclusions

11.1 Restatement of background literature and project aims

Historically, non-drinking and non-drinkers have been studied as phenomena with differing conceptual emphases and across varied disciplinary literatures. In the alcohol literature there has recently been some attempt to understand different styles and approaches to drinking behaviour among young people (Conroy & de Visser, 2014; Conroy & de Visser, In press; Herring et al., 2014; Seaman & Ikegwuonu, 2010; de Visser & Smith, 2007a; de Visser et al., 2013). This is significant in a literature dominated by ‘disease model’ research designed to understand student alcohol consumption by looking at what some students have ‘too much’ or ‘too little’ of in their psychological composition. The growing interest in studying non-drinkers and non-drinking from a health promotion perspective provided an important source of inspiration for the current research programme.

From the outset of this research programme, there seemed to be different ways in which each of the ‘experiences of non-drinkers’ and ‘perceptions of non-drinkers’ fields of research could be usefully developed. One area of previous research in the field of non-drinking has highlighted that negative evaluations of prototypical non-drinkers are associated with increased levels of alcohol consumption (Regan & Morrison, 2013; Zimmermann & Sieverding, 2010). Although psychometric scales designed to gauge individuals’ evaluations of typical non-drinkers have been outlined using several conceptual and operational approaches (e.g., Gerrard et al., 2002; Regan & Morrison, 2011) none have explicitly assessed how the prototypical non-drinker is evaluated relative to the prototypical regular drinker (i.e., explored counter-point alcohol

prototypes as difference scores). It was felt that clarifying whether prototype differences hold associations with, and moderate the influence of, correlates of harmful drinking described in personality trait and social-cognitive traditions on drinking behaviour, would be important to establish.

Another area of research, relevant to the qualitative research reported in this dissertation concerns the experiences of non-drinkers. Research here has indicated reasons for non-drinking ranging from the practical or unavoidable (e.g., sporting/health reasons) to the more idiosyncratic or complex (e.g., misgivings about the role of alcohol in social interaction). These studies helped provide a more sophisticated understanding of the range of reasons for being or becoming a non-drinker (Nairn et al., 2006; Piacentini & Banister, 2009). Other research has drawn attention to the range of discursive options involved in the construction of a non-drinking subjectivity or social identity. This includes the importance of constructing non-drinking identity positions in opposition to drinking and in terms of leisure time activities (e.g., preference for café culture), but also more directly via constructions of alcohol's subjective influence as unattractive or socially inappropriate (Nairn et al., 2006). Some studies have indicated how non-drinkers may experience a sense of pride, self-confidence and individuality in relation to their decision not to drink alcohol (Herring et al., 2014; Seaman & Ikegwonu, 2010). Research concerning experiences of non-drinkers reported in this dissertation provides several novel contributions including: focusing exclusively on students, focusing exclusively on 'culturally unsanctioned non-drinkers' (i.e., those non-drinking individuals without a compelling explanation for their non-drinking), and using interpretative phenomenological methods to provide a grounded, experiential account of what it is *like* to be an individual who does not drink during their time at university.

Finally, suiting the applied orientation of this health psychology research programme, it was important to explore how the findings of Study One (the cross-sectional survey) and Study Two (the semi-structured interview study) might be used to promote lower levels of student alcohol consumption. This is illustrated in Chapter Ten, where a mental simulation intervention using a non-drinking behaviour frame was tested, drawing on qualitative study evidence (Chapters Six and Seven) and incorporating sociability prototype differences (described in Chapters Three and Four) as a relevant mediator variable. In this way, evidence acquired across ‘perceptions’ and ‘experiences’ parts of this research programme was explored integratively to illustrate how such knowledge might be applied practically in the context of student drinking.

11.2 Summary of findings

11.2.1 How are perceptions of non-drinkers and harmful drinking related?

The first survey study was designed to examine the relative importance of alcohol prototypes as predictors of drinking behaviour among students: these findings are reported in dissertation Chapters Three and Four. Findings from Chapter Three offered broad support for Zimmermann and Sieverding’s (2011) two factor prototype perceptions model comprising sociability and responsibility factors. To expand the existing knowledge base in this area, a novel prototype difference variable was computed (termed ‘sociability prototype differences’) and tested in relation to drinking behaviours. Findings in this chapter suggested how less favourable construal of the prototypical non-drinker relative to the prototypical drinker were associated with drinking behaviour: non-drinkers were construed as less favourable and less sociable among students who drank relatively large quantities of alcohol each week and who reported a relatively high frequency of HED. Findings from Chapter Four extended the

research in Chapter Three, indicating how sociability prototype differences were correlated with measures of drinking behaviour and normative influence and to some extent with personality measures. Sociability prototype differences were found to moderate the relationship between descriptive norms and drinking intention.

Specifically, students with larger sociability prototype difference scores were more likely to intend to drink to harmful levels than students who provided relatively neutral or positive sociability ratings. Evidence presented in Chapters Three and Four suggested that sociability prototype differences, both conceptually and operationally, may provide a useful way of assessing the relative influence of perceptions of non-drinkers on student drinking behaviour. As such, sociability prototype differences was discussed in this section as a variable of theoretical and applied interest which warrants further investigation.

11.2.2 What are the social and subjective experiences of student non-drinkers?

The results of the interview study reported in Chapters Six and Seven concerned the experiences of non-drinking university students. The qualitative analyses presented in Chapter Six outlined how potential difficulties linked to being a non-drinker during social occasions where other students are drinking might be managed more successfully. These findings were summarised in terms of five themes. The first theme related to the variety of challenges involved in non-drinking during social occasions and suggested subtle ways in which peer pressure to drink alcohol or peer scrutiny relating to non-drinking could be manifest. The second theme concerned experiencing the drunken behaviour of others in social environments, and suggested how experiencing the disinhibited behaviour of others as someone who was sober could be an uncomfortable feature of being a non-drinker. The third theme related to the varied

options open to non-drinkers in terms of how non-drinking was talked about within social situations: although it was important for some interviewees to conceal their non-drinking status, others had decided to ‘come out’ as a non-drinker. The fourth theme provided evidence of the importance of having a tolerant and supportive friendship group during social occasions to make it easier to feel secure and assured in the decision not to drink alcohol within that social occasion. Finally, a fifth theme suggested that among former drinkers there was evidence that becoming a non-drinker had illuminated the difficulties of assuming a ‘moderate drinker’ role during social occasions where other students were drinking. Whereas being identified as a moderate drinker during a social occasion had been associated with peer pressure to drink in large quantities, being identified as a non-drinker was experienced as a means of successfully placing limits on alcohol-related peer pressure or intolerance.

Another selection of material from Study Two (presented as Chapter Seven) comprised a distinct thematic strand relating to how issues of selfhood were intimately bound up with deciding not to drink alcohol and, particularly, to the importance or relevance of authenticity for student non-drinkers. This chapter reported details of four inter-related themes. The first theme, indicated that by not drinking, participants were able to retain the integrity of their authentic selfhood or identity. The second theme ran in parallel to the first theme, indicating how alcohol consumption could be understood to hold implications for how the authentic identities of other people were experienced as ‘tainted’ when they were under the influence of alcohol – i.e., authentic identities were somehow diminished or obscured. The third theme illustrated how the dynamics of social conversations about non-drinking involved authenticity in two ways – (i) in terms of feeling that stereotypes about non-drinking behaviour impinged acceptance of the authentic self and (ii) that conversations about reasons for non-drinking involved

pressure to expose facets of authentic self forcibly. Finally, the third theme suggested that, for some participants, the decision to ‘do what you want to do with your life’ was centrally relevant to decisions about whether to drink alcohol or not. These broader issues of choice and agency alongside implications for self-hood and identity were experienced as important yet rarely acknowledged characteristic features relevant to drinking behaviour more generally.

Qualitative evidence presented in Chapters Six and Seven underscored the importance of using novel approaches to explore diversity in drinking behaviour within the student population as a way of informing a more sophisticated strategic health promotion emphases in the context of drinking behaviour among students. Evidence here was also stimulating from a theoretical viewpoint, drawing attention to an understanding of how issues relating to belonging, friendship, agency and selfhood were tightly woven into alcohol consumption as a social behaviour for 18-25 year old university students.

11.2.3 Can an intervention involving self-generated benefits and strategies relating to episodic non-drinking successfully reduce student alcohol consumption?

The research reported in Chapter Ten was from a novel intervention study which drew inspiration principally from qualitative study findings (Chapters Six and Seven). The intervention involved a mental simulation designed around a non-drinking behavioural frame: participants were encouraged to contemplate possible benefits of socialising without drinking alcohol and/or possible strategies which might make episodic non-drinking more straightforward. Findings provided a range of evidence some of which offered support for the view that both single condition mental simulation exercises with a non-drinking framing may be effective in reducing student alcohol consumption.

Tentative evidence in support of the *process* exercise was provided by both sets of analyses, with mixed model ANCOVA indicating lower follow-up levels of HED frequency relative to baseline levels and LGC analysis suggesting that, relative to the control condition, process participants had significantly steeper rates of change in HED frequency at follow-up. Findings also suggested that the intervention, albeit non-significantly, led to more favourable perceptions of non-drinkers (i.e., non-drinkers were perceived as more sociable at four week follow-up relative to baseline construals) over the four week period. It is reemphasised here that this was true of all participants whether they had taken the mental simulation exercise or not and therefore cannot be attributed to effects of the non-drinking intervention. Counter hypothesised effects (hypotheses 7a and 7b), more favourable perceptions of non-drinkers were not found to be the mediating mechanism between intervention condition and either decreased weekly drinking or decreased HED episodes.

11.3 Theoretical and Practical Implications of the Research Findings

The research summarised above contains a range of theoretical and practical implications. In the following section, implications for the current evidence base concerning perceptions of non-drinkers, experiences of non-drinkers and the scope of application for alcohol-related mental simulation interventions are discussed. This is followed by a discussion of the possibilities inherent in episodic non-drinking as a potential variable to be used in health-promotion research in light of evidence from the intervention study described in Chapter Ten of this dissertation.

11.3.1 Implications for perceptions of non-drinkers

Evidence reported in this dissertation broadly supports previously demonstrated findings that the 12-14 prototype perceptions variables used in the majority of Prototype Willingness Model research can be summarised in terms of two broader dimensions: sociability and responsibility (Zimmermann & Sieverding, 2011). Study evidence also demonstrated that a variable based on the differences between two prototypes (i.e., regular drinker prototypes and non-drinker prototypes) was a significant correlate of drinking behaviour and known correlates of harmful drinking.

The findings presented in Chapters Three and Four supported the conclusions of recent research that negative evaluations of non-drinkers are predictive of higher levels of alcohol consumption (e.g., Regan & Morrison, 2012; Zimmermann & Sieverding, 2010). Evidence relating to the sociability prototype was somewhat mixed. Results described in Chapter Four provided initial evidence that sociability prototype perceptions are of theoretical and applied interest. From a health psychology perspective, further empirical investigation might usefully clarify whether and how sociability prototype perceptions are associated with other predictors of student drinking behaviour. From a health promotion perspective, sociability prototype perceptions provide a potentially useful focus of behavioural intervention research. For example, one interventional approach might seek to challenge students' prejudicial beliefs about prototypical non-drinkers as less sociable than students who regularly drink.

Alternatively, non-drinking might be presented as a more sociable behaviour during social occasions perhaps by drawing new attention to ways in which regular drinking during social occasions might be understood, counter-intuitively, as an unsociable behavioural choice.

Historically, the prototype perceptions paradigm has been used to assess paired behavioural ‘types’ conceptualised in dichotomous terms (e.g., regular drinker-non-drinker) in relation to adjectives associated with risk and non-risk behaviours respectively (Gerrard et al., 2008; Ravis et al., 2006). Recent research has suggested ways in which ‘typical drinker types’ can be understood in greater detail using a more diverse conceptual framework. For example, one study has demonstrated how additional alcohol prototype terms (e.g., ‘moderate’; ‘heavy’; ‘tipsy’; ‘drunk’) might illuminate more complex aspects of prototype perception, discriminating between individuals who focus on, for example, controlled or hedonistic characteristics of drinking behaviour (van Lettow et al., 2012). Another study by the same research team has highlighted contradictions between drinking behaviour and perceived prototype similarity and favourability such that heavy drinkers held the least favourable ratings of heavy drinker prototypes, yet felt, inaccurately, most similar to moderate drinker prototypes (van Lettow et al., 2013). While these research extensions are important from a conceptual viewpoint in that they diversify the variety of drinker prototypes open to investigation, this raises issues about the extent to which terms such as ‘moderate’ and ‘heavy’ are open to subjective interpretation. For instance, research exploring non-drinker prototypes in relation to a meaningful prototype counter-point (e.g., heavy drinker prototypes, moderate drinker prototypes) might indicate where the greatest discrepancies are found yet relies on a chain of assumptions about the extent to which each label holds a commonly shared meaning.

Results presented in this dissertation suggest that less sociable perceptions of non-drinkers are linked with the belief that most peers drink regularly (i.e., stronger descriptive norms) and with a lower intention to drink alcohol to moderate levels. By contrast, perceptions of non-drinkers in terms of their relative sociability were not found

to moderate the influence of personality variables on drinking behaviour. Links between sociability prototype differences and descriptive norms might be explored further via personalized normative feedback interventions which have been demonstrated as efficacious among students either as face-to-face or computer-delivered interventions (e.g., Lewis & Neighbors, 2006; Neighbors et al., 2004). It is possible that interventions designed to simultaneously challenge beliefs about the sociability of the prototypical non-drinker alongside beliefs relating to the frequency of peer drinking might interactively promote safer patterns of drinking behaviour among students.

11.3.2 Implications for understanding experiences of non-drinkers

Qualitative evidence from Chapters Six and Seven offers broad support for, and helps to extend, the small available literature relating to experiences of non-drinkers.

Participants who were lifelong non-drinkers voiced similar reasons for non-drinking to the reasons described in other studies such as having ‘general misgivings about alcohol’ (Piacentini & Banister, 2009, pp. 282). Similarly, participants who were former drinkers tended to reflect on having had negative experiences as a result of drinking alcohol, as reported in previous research (Nairn et al., 2006). The trajectories of participants' recollections and accounts of their reasons for becoming a non-drinker were often idiosyncratic. This chimes with findings from recent interview research which highlighted distinct ‘consistent’, ‘transitional’ and ‘turning-point’ accounts employed by non- or light-drinkers when producing a narrative account of how they had become non-drinkers (Herring et al., 2014). The qualitative data presented in this dissertation contained evidence of all three narrative styles including consistent narratives (e.g., Dawn, Paul), transitional narratives (e.g., Andy) and, in the case of former drinkers, turning point narratives (e.g., Katie, Michelle). However, although similar patterns in

the sequence of events and life experiences which led to non-drinking as a relatively stable lifestyle choice were present, it would be difficult to straight-forwardly map participant experiences directly on to each of Herring et al's (2014) narratives. Indeed, participant accounts seemed to contain a blend of the three narratives: for most participants some form of 'turning point' experience was described, but these were generally embedded within a broader *transitional* experience through which alcohol consumption was eventually forsaken as a behavioural option leading to the adoption of non-drinking as a *consistent* behavioural lifestyle decision.

Understanding different routes towards becoming a non-drinker is one important way of gaining insight into the different ways in which drinking behaviour is understood and experienced among young people. This includes recognition of perhaps less apparent potential disadvantages of regular drinking, as well as potential advantages of regular non-drinking. This may involve focussing beyond purely material or practical advantages of non-drinking (e.g., saving money, avoiding hangovers) or disadvantages of drinking (e.g., engaging in behaviour that is later regretted). For example, evidence presented in Chapter Seven suggested that there may be more esoteric advantages of non-drinking such as an increased appreciation of personal authenticity or sense of how alcohol consumption might in some ways compromise experiencing the self and others in authentic ways. In this way, counter-intuitive reasons for becoming dissatisfied with drinking as a regular component of socialising were apparent from the data. Although consistent narratives might only carry relevance primarily to those who choose not to drink as an enduring lifestyle choice, it seems likely that transitional and turning-point narratives have some bearing on any student who socialises within contexts where alcohol is consumed. This might work in different ways but could, for example, be seen

to illuminate to an individual concerned about their drinking behaviour how habitual patterns are open to change or merely by prompting some degree of personal reflection.

Only non-drinkers *without* a medical or religious reason for not drinking were included in the qualitative study. The application of IPA to this distinct sub-sample seems to have been apt given the rich experiential data produced from these interviews. Data which of a sufficiently personally-meaningful nature might not have been acquired had a broader sampling approach been adopted in which individual's possessing a more straight-forward or uncontrollable reason for non-drinking had been included.

Understanding what might lead students' to reject regular alcohol consumption entirely is a unique contribution of the qualitative component of this dissertation. It would be useful to develop understanding of the different routes through which such decisions are made and the circumstances by which the decision not to drink is either maintained or revoked.

11.3.3 Implications for mental simulation studies

The intervention study described in Chapter Ten is only the third mental simulation study applied to alcohol use, and the first to include a process simulation in the context of drinking behaviour. Previous studies have involved imagining adherence to safe drinking limits as the target behaviour (Hagger et al., 2012a; Hagger et al., 2012b). In contrast, Chapter Ten described an alternative framing requiring participants to imagine not drinking during social occasions where others may be drinking alcohol. The value of this novel interventional framing was somewhat supported by findings described in this dissertation. However, with Type I error inflation and the small effect sizes demonstrated in analyses for this intervention study (e.g., never greater than $\eta_p^2 = .03$, 95% CI [0.00, 0.07] the PhD Candidate advocates caution in how these results are

interpreted. In addition to practical and theoretical motivations held in extending study findings reported in this research programme, it is suggested that the current evidence offers an initial test of whether mental simulation designs using a non-drinking behavioural frame encourage safer student drinking behaviour which now require exploration in future replication studies.

Previous studies have demonstrated the effectiveness of outcome simulations in boosting motivation, self-efficacy and positive emotion (Elliot et al., 2005; Escalas & Luce, 2003; Vasquez & Bueller, 2007), whereas process simulations have been particularly associated with increased action planning (Chan & Cameron, 2012; Pham & Taylor, 1999). Other evidence suggests that process condition effects on behavioural intention may be mediated by improved attitudes and an enhanced sense of perceived behavioural control pertaining to the target behaviour (Armitage & Reidy, 2008). Evidence from Chapter Ten that mental simulations also influenced alcohol-related prototypes suggests that it would be important to assess a range of outcome variables alongside attitudinal or efficacy-based measures in future mental simulation research.

To the author's knowledge, Chapter Ten reports the first study in the alcohol-related mental simulation literature to use a full factorial design. On the basis of evidence from the intervention study, the combined design was not well supported. It is noted here that a better powered version of the study may have produced stronger evidenced to support the combined condition. Full factorial designs have rarely been used across the mental simulation literature, making this finding difficult to set in a broader context. This acknowledged, one recent study has indicated the effectiveness of a combined condition in increasing action planning relating to physical activity (Chan & Cameron, 2012). A potentially more effective strategy would be to compare interventions based on different theoretical premises, both alone and in combination with each other. This would follow

a trend in the mental simulation literature to assess mental simulation exercises either against, or alongside, Implementation Intention exercises (Hagger et al., 2012a; Hagger et al., 2012b) or alongside Theory of Planned Behaviour variables (Armitage & Reidy, 2008).

One aspect of findings from Chapter Ten's LGC analyses suggested that outcome exercise mental simulations resulted in lower weekly unit intake and process simulations resulted in decreased HED frequency. This raises the modest possibility that distinct aspects of behaviour are differentially effected by specific mental simulation exercises. Arguably, these focussed effects of each mental simulation exercise on different behavioural outcomes followed a conceptually meaningful pattern, suggesting that both forms of exercise may have merits. Specifically, while simulating self-identified benefits may have helped reduce overall alcohol consumption, process simulations may have been required to provide participants with the psychological tools to successfully assert a non-drinking mind-set within specific social situations. To summarise, mental simulation research using a non-drinking framing described in this dissertation provides tentative support for the further exploration of both mental simulation exercises, but it would be important to assess these findings further in relation to a variety of relevant outcome variables, so that patterns of behaviour-specific effects can be more clearly identified.

11.3.4 Implications for studies of episodic non-drinking

Research into drinking behaviour among students and young people more broadly has traditionally focussed on measures of overall consumption, on measures of heavy episodic drinking (or binge drinking) or on measures designed to gauge the harmful impact of alcohol on an individual's life such as the AUDIT measure (Babor, Higgins-

Biddle, Saunders, & Monteiro, 2001). To ensure a consistent conceptual framework, and so as to focus on aspects of behaviour which carried the least ambiguous health implications, this research programme drew primarily on measures of drinking behaviour (i.e., weekly drinking, HED). However, as a novel addition to the alcohol literature, and appropriate to the focus of this PhD research programme, an episodic non-drinking variable was assessed in the intervention study in terms of its utility as an original indicator of health-adherent leisure time behaviour.

In light of intervention study evidence, it is not possible to conclude definitively that an increased occurrence of episodic non-drinking acts as a proxy indicator of healthier drinking behaviour. However, the initial increases in episodic non-drinking, which were demonstrated to hold associations with decreased alcohol consumption, indicate that the behaviour may have some conceptual utility as an indicator of changing trends in drinking behaviour and this pattern warrants further empirical investigation. The decision to include additional measures of drinking behaviour (e.g., episodic non-drinking) alongside established measures (e.g., HED, weekly alcohol consumption) is also consistent with recent discussion that no single measure can capture the complexity of an individual's patterns of drinking behaviour (Glassman, 2010).

As a variable in alcohol research, episodic non-drinking seems to hold potential advantages in that respondents are required to reflect more carefully on the previous week's socialising and alcohol use in close conjunction, when reporting specific details of drinking behaviour for themselves and others. For example, as an added advantage of measuring drinking behaviour in this way, it is possible that self-reported drinking (or not) where others are drinking (or not) provides an original and informative approach. It is possible that using episodic non-drinking as a variable in alcohol survey research might go some way toward addressing longstanding concerns over memory biases

inherent in self-reported alcohol measures (Del Boca & Darkes, 2003; Embree & Whitehead, 1993; Koning, Harakeh, Engels, & Vollebergh, 2010). To explain: by encouraging participants to reflect on previous drinking behaviour in a more creative fashion – e.g., reflecting on the ratio of drinkers to non-drinkers and personal drinking behaviour within specific social occasions – it is possible that more accurate recall might be facilitated.

Evidence from this dissertation relating to episodic non-drinking holds varied implications for the surrounding alcohol literature concerning short-term habitual trends in drinking behaviour. First, it would be useful to further clarify the extent to which increased episodes of non-drinking are related to lower alcohol consumption, as tentatively suggested in this dissertation. However, the inverted-U trend demonstrated in Chapter Ten suggests that it may not be possible to modify episodic non-drinking via the same interventional route as drinking behaviour. Second, understanding whether this quadratic trend is present in other samples and factors which moderate its occurrence would also be useful. The similarity and lack of variability in the upward, then downward trend across conditions is striking, but difficult to interpret. One possible explanation is that initial efforts to reduce levels of alcohol consumption, regardless of how this has been motivated, might include social occasions where no alcohol has been consumed, but that episodic non-drinking is not experienced as compatible with leisure time socialising in the longer term. Third, collecting further information relating to the social experiences during occasions where episodic non-drinking increased (i.e., at two week follow-up) might help identify positive and negative features of such occasions and, among mental simulation participants, the way in which these experiences tallied with how they had been imagined. Fourth, the notion of episodic non-drinking has relevance to previous literature regarding compensation behaviours. For example,

episodic non-drinking evokes theoretical and empirical work concerning ‘the abstinence violation effect’ (AVE), referring to the risk of excessive behavioural indulgence following a period of complete abstinence (Collins & Lapp, 1992; Marlatt & Gordon, 1980; Marlatt 1985). Analyses reported in Section 10.4.6 did not suggest behavioural patterns which might be interpreted as equivalent to AVE – e.g., where a student successfully engaged in a greater number of episodic non-drinking occasions yet also engaged in more HED episodes at follow-up.

Instinctively, efforts to measure episodic non-drinking would seem to offer a useful basis for health promotion initiatives designed to reduce student alcohol consumption overall. However, the variable is also directly relevant to current government recommendations for reducing alcohol consumption levels, which encourage individuals not to drink alcohol on two or more occasions each week (National Health Service, 2014a). Measures of episodic non-drinking in health psychology research would provide formal quantification of guideline recommendations regarding non-drinking behaviour within a fixed time period.

An important strand of effective health education regarding alcohol consumption has been discussed as movements to cultivate student appreciation that alcohol consumption need not be a prerequisite of enjoyable socialising (e.g., Herring et al., 2014, Seaman & Ikegwonu, 2010). However, demonstrating that it is possible and potentially desirable not to drink during some social occasions even when other people *are*, has arguably been overlooked as an explicit ingredient of health promotion programmes designed to promote more moderate forms of student drinking behaviour.

There is insufficient evidence in this dissertation that episodic non-drinking could be understood, uncritically, as a marker of health-adherent behaviour. However, on the balance of evidence, it is tentatively suggested that efforts to reduce student drinking

may benefit by focussing on a more concrete behavioural goal (i.e., increasing episodic non-drinking) rather than a more abstract goal (i.e., adherence to recommended alcohol consumption level maxima).

11.4 Limitations of the research programme

Although study limitations have been noted in each chapter of this dissertation, there are a number of additional limitations which should be acknowledged. These are organized in this section according to the chronology of studies described in this dissertation.

11.4.1 Cross-sectional survey study limitations

Several limitations of the initial survey can be discussed. First, in terms of representative generalisability, the exclusive focus on 18-25 year old English university students means that findings cannot be meaningfully applied to young people in the broader population. It has been previously suggested that researchers may be in a reasonable position to cautiously generalise from student samples to young adults in general (Borsari & Carey, 2001; de Visser, Smith, & Richters, 2005). However, it has also been acknowledged that student-based samples arguably contain an inherent bias toward the drinking behaviour of white, middle class young people, echoing broader concerns relating to poor multicultural representation in psychological research (Pickren & Burchett, 2014). On this point, it is noted that perceptions of drinkers and social experiences of non-drinkers relevant to more diverse cultural communities are not well represented in this dissertation. However, the characteristics of the data presented in this dissertation are broadly consistent with prior discussion that students should be understood as a high risk social group in terms of their drinking behaviour (Gill, 2002; Webb et al., 1996). The figures from both quantitative studies illustrate this well: a large

proportion of participants reported at least one HED episode in the previous week in both Survey I (71.5%) and at baseline in Survey II (55.7%). This is consistent with figures from previous studies based on English student samples (Cooke et al., 2007; Jamison & Myers, 2008; Norman, Armitage & Quigley, 2007). On this basis, although evidence from this dissertation may not be readily transferable to broader population settings, it is of clear relevance to a large, high risk social group (i.e., university students aged in England).

Second, the sociability prototype differences variable created some difficulties given its narrow conceptual and operational framing. Although ‘sociability prototype differences’ is the term used throughout this dissertation, the more general phenomena of interest was ‘perceptions of non-drinkers’ and there was a persistent risk of using the latter as an (inappropriate) synonym for the former throughout the research process. It is noted here that the Regan Attitudes Toward Non-drinkers (RANDS, Regan & Morrison, 2011) measure was published directly before the first survey from this PhD research programme was designed. The decision to focus on an operationally more coherent and empirically validated measure (the prototype difference score approach) was important. The RANDS measure was understood to have conflated several distinct elements including attitudes towards non-drinkers (the people), attitudes towards non-drinking (the behaviour) and other items with arguably greater relevance to experiences of peer pressure regarding personal drinking behaviour. However this decision may have been at the expense of developing an alternative to the RANDS measure in which these distinct elements could have been operationally disentangled.

11.4.2 Interview study limitations

Several limitations of the interviews with student non-drinkers should also be noted.

First, though small sample sizes are typical of IPA studies, it is important to note that, with five participants, the interview sample size for this research programme was somewhat small. This reflects a broader challenge to the integrity of IPA as a qualitative method given its concurrent commitments to the idiographic depiction of unique individual experience alongside nomothetic commitments to exploring patterns of convergence and divergence between transcripts. These difficult, and somewhat contradictory aspects of IPA's epistemology has recently been raised as a concern given the method's common use in qualitative health research (Willig, In press). Beyond these issues of methodological purism, at a practical level it was extremely difficult to obtain a sample of culturally unsanctioned non-drinkers willing to be interviewed for the study. Distinct sub-sets of non-drinkers would preferably have been recruited. Ideally, the sample would have included perhaps 3-4 male and 3-4 female never drinkers and 3-4 male and 3-4 female former drinkers to explore differences in reasons for non-drinking and experiences of non-drinking between these sub-groups.

Second, and relating to the above point, the small sample size meant that exploration of differences in the lived experiences of male and female students was not possible. These comparisons are likely to be important given recent evidence of sex-specific double standards involved in the construal of drinking behaviour (Conroy & de Visser, 2013; de Visser & McDonnell, 2012); evidence of both complicity and resistance to sex-specific expectations of drinking behaviour (de Visser & Smith, 2007a; de Visser & McDonnell, 2012; Dempster, 2011) and evidence supporting the need for sex-specific interventional programmes (Iwamoto, Cheng, Lee, Takamatsu, & Gordon, 2011; Korcuska & Thombs, 2003).

A third limitation of the interview study concerns the term 'culturally unsanctioned non-drinkers' as a device used to frame investigation of experiences of non-drinkers.

Although the term provided an important way of focussing on the sub-set of non-drinkers arguably of greater interest from a health psychology/health promotion viewpoint, it is important to note that the boundaries of this definition are open to interpretation and could be said to reflect the biases of the author. As such, the term culturally unsanctioned non-drinkers arguably constrained as well as permitted meaning within this research programme. For example, though someone who primarily does not drink alcohol because they do not like its subjective influence *could* be understood to have a ‘culturally unsanctioned’ reason for non-drinking, it is quite possible that this is not consistent with the level of cultural endorsement, support and tolerance from those around them from their unique experiential viewpoint. Discussion here evokes Haraway’s (1988) notion of *situated knowledges*, where refers to the importance of understanding all phenomena as located within a specific historical and cultural settings, implying the impermanence of any given conceptual or theoretical framing of the social world. Applying this concept to the novel research reported in this dissertation, cultural influences were situated in a general form as homogenous, fixed and directive rather than in more relativist terms as, fractionated, reciprocal and negotiated. However, in defence of the term ‘culturally unsanctioned non-drinkers’, it is instructive to note here that previous research based on the drinking experiences of 35-50 year olds has also demonstrated an underlying distinction between not drinking during a social occasion for a culturally sanctioned reason (e.g., “I’m on a diet”) versus a culturally unsanctioned reason (e.g., “I’m cutting down on my drinking”) for not drinking alcohol during a social occasion (Emslie, Hunt, & Lyons, 2012). In keeping with the pragmatist approach adopted throughout this dissertation, it is argued that meaning and utility has been gained from imposing these distinctions. In this way, student non-drinkers who might be expected to have a more complex and dynamic experience talking about non-

drinking with other people became focal to research inquiry, despite the inevitable loss of meaning produced by this dichotomised framework for understanding non-drinker ‘types’.

A fourth limitation concerns the debatable health promotion relevance of findings from a study based entirely on student non-drinkers. For example, one might suggest that strategies involved in managing peer scrutiny relating to one’s non-drinking are fundamentally different for someone who does not drink alcohol as a long-term lifestyle choice and someone who usually *does* drink but has decided not to for the course of a social occasion. Similarly, one might question whether reasons for non-drinking in the longer term which involve particular advantages (e.g., feeling a sense of personal agency) can be meaningfully understood as comparable for longer-term non-drinkers and individuals not drinking alcohol during a certain period such as an evening out with friends. However, it is suggested that the difficulties involved in the process of equating clearly defined ‘doers’ and ‘non-doers’ of a behaviour open to anyone (i.e., not drinking alcohol) reflects broader tendencies within social science to understand phenomena in terms of opposed dichotomies (Hermans & Kempen, 1998). Thus, traditionally, the literature on non-drinkers and non-drinking has tended to focus on concrete behaviours (i.e., ‘those who never drink’ or ‘those who have never drunk’). Evidence from this dissertation suggests that this dichotomised thinking may have inhibited a more fluid understanding of non-drinking as a behavioural option for individuals regardless of their personally or socially prescribed alcohol consumption status.

11.4.3 Longitudinal survey study limitations

Various limitations of the longitudinal survey study should be acknowledged. First, there was a relatively high attrition rate which meant that only 28% of the eligible

sample provided responses to surveys at all three time-points. This is substantially lower than the response rate from recent mental simulation study in the alcohol domain, in which a 62% response rate was obtained for two waves of data collection (Hagger et al., 2012a). The high attrition rate may have been influenced by the relatively involved nature of both mental simulation and drink diary exercises and the multiple time-points at which survey completion was required. Intention-to-treat statistical analyses suggested that retention of a somewhat more heavily drinking sample of students may have led to an inflated sense of interventional efficacy. However, importantly, it should be noted here that the interventional dynamic did not seem to inhibit responses from those students who drank a relatively large amount of alcohol. Furthermore, web-based surveys contain a recruitment trade-off: although researchers have the opportunity to access potentially large samples with relative ease, they also face the risk of high drop-out rates partly due to the anonymous nature of online study participation (Eysenbach, 2005; Riper et al., 2008).

Second, there were difficulties involved in deciding on an appropriate control group to include for the intervention study. A drinks diary control group was chosen so as to provide a yardstick for comparing potential effects of the mental simulation exercise conditions on student alcohol consumption. Including this type of ‘active’ control group may have provided a somewhat conservative test of the efficacy of the non-drinking mental simulation. A more suitable control group may have been a ‘neutral imagery instructions’ condition, as adopted in a recent mental simulation study in the exercise behavioural domain (Chan & Cameron, 2012). However, framing a neutral imagery condition as a counter-point to imagining non-drinking as a behaviour adopted in social environments involving alcohol consumption would have been difficult to successfully phrase. Despite this, alternative control conditions containing no form of health-related

or health-promoting exercise, or simply providing alcohol-related health promotion information, might have led to more demonstrable and stronger mental simulation intervention effects.

Third, the intervention study had a relatively short follow-up period (four weeks), and it cannot be assumed that the consumption decreasing effects of the mental simulation intervention would continue or endure for a longer time period longer. Here it is noted that the one month follow-up period adopted in this study was an equivalent time-span to that adopted in some mental simulation studies (Chan & Cameron, 2012; Hagger et al., 2012a). It should also be noted here that a one month follow-up period is longer than in other mental simulation studies which have been as short as one week (Pham & Taylor, 1999) or have been limited to post-manipulation measures of intention (Armitage & Reidy, 2008). Given the difficulty of establishing when a moderate drinking lifestyle has been habitually ‘obtained’, it would be useful to establish the longer term stability of reductions in alcohol consumption attributable to mental simulation interventions.

11.4.4 General research programme limitation

Finally, a general limitation of this dissertation’s scope of focus should be discussed. This research programme favoured a broad focus on several subject areas including perceptions of non-drinkers, experiences of non-drinkers and an intervention using a non-drinking framing. This approach was favoured over a more focussed examination of one subject. While covering these varied topics in close combination is considered by the author as a strength of the research programme, this breadth of approach could also be acknowledged as a limitation. In this way, a narrower, yet more focussed alternative approach might have developed understanding in one subject area using a number of

different methodologies or analytic perspectives. For example, had perceptions of non-drinkers been the sole subject interest, quantitative research might have compared different kinds of psychometric measure used to gauge ‘perceptions of non-drinkers’. By the same token, a research programme drawing exclusively on qualitative methods might have assessed how non-drinkers are construed by different groups of young people (e.g., students, non-students) of different ages (e.g., 18-25 year olds, 25-30 year olds) and in different social contexts (e.g., house parties, student bars, pubs, clubs).

The current research approach seems justifiable for two principle reasons. Although useful data has emerged from both the experiences of non-drinkers and the perceptions of non-drinkers research fields, it was felt that each domain was somewhat fragmented and could be usefully unified in a way that clarified outstanding conceptual issues (e.g., via conceptual tools which help identify those non-drinking individuals who might be most interesting from a health promotion perspective). In addition, and relatedly, focusing on both fields in Chapter Ten meant that both *problem-focussed* (i.e., perceptions of non-drinkers) and *solution-focussed* (i.e., experiences of non-drinkers) aspects of non-drinking could be explored simultaneously, leading to some initial synthesis of these previously distinct research fields.

11.5 Reflexive Account

Reflexivity is an important component of qualitative research and has been described as a way of being transparent about the influence of the researcher on how data are interpreted (Finlay, 2002).

When I began my PhD research, I had not consumed alcohol for five and a half years and continued not to drink for the majority of my postgraduate studies. My decision not to drink held implications for how I experienced myself and my perception of how

others perceived me, but non-drinking was also a powerful catalyst for conversation with other people about how alcohol is used, esteemed and understood within local and broader cultural contexts. My interest in drinking behaviour stems from my own experiences and understandings of alcohol consumption as a complex behaviour occurring in families, within friendship groups, and within close relationships. I was struck as a teenager how alcohol seemed to provide a one-stop-shop for articulating a wide range of emotions and for experiencing novel subjective and inter-subjective experiences. For example, I have experienced occasions where friends have clearly felt much more able to say something like “I love you” under the influence of alcohol than they would have done had they not been drinking. This always struck me as quite difficult because although it is positive that alcohol can make people feel and behave in particular ways that would not be so easy to ‘do’ when sober, this seems to simultaneously create a problem for feeling or expressing these things in other areas of life where alcohol is not being consumed.

There is also a gender-specific dimension to my interest in non-drinking which is relevant when considering how my personal choices have influenced the interpretative slant of my PhD research. My experiences have led me to believe that the more varied range of subjective positions made possible by consuming alcohol presents a particular kind of problem for men in English society. Alcohol consumption makes explicable, if not permissible, a much wider range of expressed emotional states (e.g., grief, anger or joy as broad illustrative examples) for men when drinking alcohol than would be possible when sober. From personal experience, the most striking example of this can be thinking about the emotional ‘highs’ of a social night out with other men, followed by the inevitable ‘lows’ of the next day where (in addition to a hangover) I have felt self-conscious, embarrassed or regretful about having expressed strong emotion with

male friends. These experiences have perhaps given me a rather sceptical understanding of how alcohol can be used in some social settings leading to a somewhat more pessimistic impression of how alcohol is used among students. At the same time, I believe that my non-drinking status gave me the opportunity to offer a more optimistic account of the benefits and achievability of not drinking alcohol during social occasions than might otherwise have been possible.

From the outset of the research programme, personal choices were involved in the decision to adopt a mixed methods research approach where research questions concerning perceptions of non-drinkers and experiences of non-drinkers were investigated separately and then integratively. My interest here was in exploring links between the two areas and was informed by personal experience and personal reflection. For example, an important component of the sense of feeling socially ostracised during drinking occasions as a non-drinker seemed inextricably linked to pejorative or intolerant views of non-drinking behaviour articulated by those around me drinking alcohol. As part of the intervention study described in Chapter Ten it was therefore important for me (though not necessarily for another PhD candidate) to investigate the hypothesis that thinking about the inherent benefits and/or required strategies of non-drinking during social situations would reduce alcohol consumption levels by cultivating more favourable construals of the prototypical non-drinker.

This is relevant for the quantitative chapters in this dissertation where, in addition to the possibilities involved in exploring an existing literature gap, personal choice guided the decision to focus on sociability prototype differences and the role of normative influences. This was in preference to, for example, an understanding of alcohol prototypes grounded in a risk-based Prototype Willingness Model framework for understanding potential effects. This personal choice was partly in response to the

recent Attitudes Toward Non-drinkers measure (Regan & Morrison, 2011). Though this measure provided a framework for foregrounding perceptions of non-drinkers as psychological phenomenon worthy of independent research, there seemed to be important limitations in the conflation of varied psychological influences as well as assuming that perceptions of non-drinkers were enduring, attitudinal phenomena. My interest was to provide a simplified account of how discrepancies between how prototypical non-drinkers and regular drinkers are perceived may be predictive of drinking behavioural intention or drinking behaviour itself.

The impact of personal choice is perhaps most clearly apparent in the context of the qualitative study. This involves discussion of how being a non-drinker influenced inter-subjective aspects of my research, particularly on the qualitative interviews with non-drinkers described in Chapters Six and Seven. My influence on this data collection process is apparent in many ways, including decisions concerning: the need to focus on ‘culturally unsanctioned non-drinkers’ and on English rather than UK-wide university students, the specifics of the interview schedule, and on the characteristic features of the interviews themselves (e.g., structure, contents, dynamic, tone). The influences of my personal history, cultural background and social network are also relevant to my decision to use a mental simulation paradigm and furthermore to privilege material from the qualitative chapters over material from the quantitative chapters when designing the intervention study. For example, it is likely that another individual writing the same dissertation would have been more interested in using material from the perceptions of non-drinkers study (i.e., material reported in Chapters Three and Four) to design a health promotion intervention for the interventional stage of this PhD research programme. For the cross-sectional survey study, varied personal choices were also involved in how university administrators were approached regarding recruitment and,

how material was presented to participants via the online questionnaires. For the interview study, a wide variety of personal choices were also involved in the construction and phrasing of study materials (e.g., participant information sheets and consent sheets, interview schedule, email correspondence). For example, my interview schedule contained an item midway through the schedule concerning how issues relating to gender identity or gender relations may be associated with drinking behaviour (“how do you think issues of gender identity or the relationship between men and women are linked to drinking?”). Although gender issues did not transpire to be key to any of the major themes reported from the IPA analysis, it is possible that the presence of this closed-format question (which assumed that gender issues *were* relevant to drinking behaviour) altered the dynamic of the interview interaction thereafter. Similarly it may have suppressed participants’ willingness to think about, or discuss, areas relating to gender and alcohol which might otherwise have appeared in the interview.

Deciding whether or not to ‘come out’ to participants during the course of individual interviews about my own non-drinking status was a difficult issue and even my hesitation over this decision is likely to have influenced the way in which participants talked about their own non-drinking and their willingness to talk about their reasons for non-drinking in an unguarded manner. No participant directly asked me during the course of an interview whether or not I drank alcohol myself. However, sometimes the question of whether I drank alcohol myself or not seemed to be an unvoiced issue hanging over the interview context. I felt that my status as a non-drinker would need to be touched at some point during the meeting if only in the interests of interviewer-interviewee parity as part of my general ethical duty of care. Although I was not asked directly, some participants seemed to have assumed that was I a non-drinker via

comments made in post-interview conversations such as: “that’s what it’s like, isn’t it?” or “you know what it’s like...”.

In addition to the influence of the interview dynamic, the coding and interpretation of each interview was also inevitably influenced by my own leanings and interests. In this way, it is important to recognize that particular thematic strands becoming more or less prominent as a result. For example, the decision to isolate and focus on the role of authenticity for student non-drinkers can be understood to have been informed in part by my own empathies for this aspect of my participants’ experiences. Labelling aspects of participants’ experiences in terms of ‘the importance of authenticity’ was a significant interpretative decision and another interpretative account of the same dataset might have, for example, emphasised the role of feigned aspects of identity without necessarily discussing this in terms of the relevance of, or loss of, authentic identity.

Both advantages and disadvantages arose from my being a non-drinker involved in the current research programme on non-drinking and non-drinkers. On the one hand, I had first-hand experience of the kinds of issues which *might* have been relevant to other non-drinking individuals. On the other hand, I might have only focussed on issues that I had already decided were important, leaving behind potentially more important or prominent experiential material which another analyst might have addressed.

Fundamental to IPA is its interpretative commitment – unlike Husserlian phenomenology, it is not considered possible within an IPA framework that ‘pure experience’ can be distilled from the presentation of another individual’s personal account as this process will always be refracted through the prism of the analysts account. One important safeguard in this regard was to ensure that interpretation remained clearly grounded in the data so as to avoid what could be understood as a primarily subjective kind of analytic account (Brocki & Wearden, 2006). This meant

that my interpretative claims always needed to be reflected in the unique experiences of my participants rather than my own personal experiences. Maintaining a rigorous coding system and keeping a trail of reflective notes throughout the research process provided a further important way of guarding against an arrangement of data findings which could be criticised as primarily subjective rather than primarily grounded in the data. Gaining participant feedback on qualitative analysis has recently been discussed as an important but divisive component of quality assurance in qualitative research (Bradbury-Jones, Irvine, & Sambrook, 2010). With this in mind, initial pre-publication drafts of the two qualitative chapters were sent to all participants with a view to gain participant feedback on how the data findings as presented in the two qualitative write-ups (see Chapters Six and Seven). This was an important way of attempting to identify gaps in my understanding of what participants' had said about their non-drinking, the extent to which participants' found my interpretations to be accurate and/or convincing and whether they felt that my chosen extracts were, to some extent at least, representative parts of the broader interview discussion. Unfortunately no participants responded to this message, so possibilities for incorporating their potential feedback was not possible.

In conclusion to this reflective section, it should be noted that I maintained a reflexive file throughout the research process to ensure a suitably high level of reflexive engagement. Excerpts from this included my own evolving understanding of the different conceptual distinctions involved in the writing process (e.g., culturally sanctioned vs. unsanctioned non-drinkers), recording feedback from participants via email or free-text sections of the surveys, and recording comments from participants from outside the formal interview setting provided either pre- or post-interview and either face-to-face or via email.

11.6 Implications and Suggestions for Future Research

In addition to study suggestions outlined in specific chapters in this dissertation, several specific areas open for potential future research investigation for each main research question are discussed below.

11.6.1 Ambiguity of meaning surrounding the terms ‘non-drinking’ and ‘non-drinkers’

An assumption guiding much of the research reported in this dissertation is that coherent, generic meaning attached to the terms ‘non-drinkers’ and ‘non-drinking’. A sense of the ambiguity relating to these terms was raised in both the interview study and in feedback from participants during both survey studies. However, it is noted here that participants were never unwilling or incapable of discussing ‘non-drinkers’ as a person type or group of people, and did not appear unconvincing when articulating their views and illustrations of how non-drinkers were perceived, accorded status and treated within their university peer group. This acknowledged, one future research line of enquiry might probe this ambiguity further to develop a sense of the breadth of meaning relating to these terms to understand whether clearly defined meanings are found or whether meanings are as variable as their definitional use in the non-drinking literature – e.g., referring to light and occasional drinkers as well as individuals who do not drink alcohol at all. The diversity of meaning in the terms non-drinker or non-drinking holds implications for how drinking behaviours or beliefs are justified, enacted or understood among young people.

11.6.2 Further research into the social and subjective experiences of non-drinkers

On the basis of research reported in this dissertation, further investigation of culturally unsanctioned non-drinkers is arguably warranted. There are several features of the

experiences of this group which could be studied in greater detail using different samples, alternative research designs, or different data collection frames and data analytic techniques. These options are outlined in this section.

One research extension would be to explore whether a heightened experience of the authentic self was a commonly reported positive aspect of the lived experience of non-drinking, among students who do not drink at all and among students who periodically socialise without drinking alcohol. It would also be useful to explore further the dynamic of how authenticity may arise in conversations about non-drinking, and how authenticity is valued relative to other personal or social goals – e.g., blending in with the broader student community, initiating friendships and fulfilling valued goals. This holds relevance for anyone who does not drink during social occasions when others are, where advantages of authenticity and, similarly, potential *disadvantages* of being viewed as disingenuous or ‘fake’ in relation to drinking behaviour may be found. As such, these findings are relevant from a health promotion perspective, given that the possible benefits of authentic non-use of alcohol during a social occasion and the negative implications of inauthentic behaviour might be incorporated within distinct health promotions communications aimed at university students.

Both quantitative and qualitative approaches would bring particular advantages in this context. For example, quantitative research might explore links between self-reported social authenticity in relation to how frequently they went out socially and did not drink during occasions where others did. This might provide evidence to confirm or support the hypothesis that spending at least a proportion of social leisure time without being under the influence of alcohol holds links with increased levels of personal or social authenticity. Exploring such findings in relation to measures of social belonging, subjective well-being or life satisfaction would also be of interest. Though it would be

challenging within the context of a semi-structured interview setting, it would be useful to develop a stronger sense of the different disadvantages involved in non-drinking. These were generally only hinted at during interviews for Study Two. A clearer sense of the personal and social regrets relating to the decision not to drink alcohol in either the short-term or the longer term would be useful to understand. Given the varied and idiosyncratic accounts of non-drinking provided by participants, it is suggested that further one-to-one interviews would offer the most appropriate means of drawing on the experiential qualities and nuance of the lived experiences non-drinkers. However, facilitated focus group data collection methods have been applied in the context of IPA research (e.g., Flowers, Knussen, & Duncan, 2001; de Visser & Smith, 2007a). A focus group approach might have some advantages in future research involving non-drinkers to gain a sense of a group-derived experiential perspective (Palmer et al., 2010). While this focus group approach would provide a useful complement to individual experiences this would seem likely to be at the expense of accessing more complex or contradictory aspects of non-drinking experience, as highlighted throughout Chapters Six and Seven.

Although focussing on students who identified as ‘non-drinkers’ provided a useful sampling focus for the interviews reported in this dissertation, an important research extension would be to investigate the social experiences and strategies used by individuals who regularly engage in episodic non-drinking, as part of a moderate drinking lifestyle. This approach would usefully complement recent research explicating the variety of reasons for abstained or limited drinking and the predictive influence of increased non-drinking motivations on decreased alcohol consumption (Anderson, Grunwald, Bekman, Brown, & Grant, 2011; Epler et al., 2009). Developing a richer sense of the qualities of these social experiences, whether positive or negative, would help clarify the circumstances in which episodic non-drinking is more or less likely,

more or less manageable and more or less desirable. It would be particularly interesting to reveal whether the theme concerning the “importance of withholding legroom for peer pressure” would be demonstrated in further studies of students’ experiences of drinking behaviour in the context of managing peer pressure. In Chapter Six, this related primarily to the experiences of former drinkers. It would be useful to explore whether a ‘non-drinking stance’ is a tool that other students – e.g., those identifiable as (mainly) regular drinkers – might build into their social lives as an effective way of dealing with pressure to drink on occasions where they are unwilling or uninterested in doing so. Explicating the range of experiences and interactions relevant to an individual not drinking during social occasions (when they would be recognisable as people who would drink alcohol on other occasions) would provide a useful complement to current dissertation findings.

In addition, it would be useful to explore perceptions of non-drinkers and experiences of non-drinkers in countries other than England. One anecdotal source of inspiration behind the current research programme was the surprised reaction of overseas students to permissive drinking norms and relatively excessive drinking behaviour among students at English universities. While alcohol consumption is inevitably bound up within a broader network of cultural norms and expectations which cannot realistically be expected to be easily deconstructed or challenged (Heath, 2000), it would be valuable to explore how non-drinking may be more/less tolerated among young people in different behavioural or environmental contexts across cultural settings.

Other research might focus on extending the research base concerning non-drinking as a behaviour in different social demographics. For example, recent focus group research has demonstrated that peer pressure to drink beyond moderate levels is found among individuals aged 35-50 (Emslie et al., 2012). Importantly, this provides evidence

that the decision not to drink alcohol during social occasions may come under social scrutiny across the lifespan. Such findings suggest that research exploring social non-drinking may have far-reaching implications, providing a basis for cultivating greater appreciation of socialising without drinking alcohol and developing the skill base to make this a more manageable and achievable behavioural decision. Future qualitative research might focus more explicitly on middle age and older person samples, in research which would hold the possibility of highlighting pressures, and effective strategies for dealing with pressure, unique to different life stages.

Alternative methodological approaches might be fruitfully adopted. For example, exposition of the rhetorical features, subject positions and interpretative repertoires involved in conversations about non-drinking would provide a valuable discursive complement to this dissertation's focus on aspects of lived experience (Wetherell, 1998). Here, findings from a conversational analysis study might, for example, point to more and less successful routes for students to negotiate undesirable subject positions (e.g., 'unsociable', 'loner') or desirable subject positions (e.g., 'self-assured', 'not needing alcohol to socialise'). Similarly, quantitative analysis of reasons for non-drinking might supplement current dissertation evidence. A large sample of non-drinkers would permit exploratory factor analysis of reasons for non-drinking and how these reasons can be understood to cluster in different ways. For example, establishing the degree of dimensional overlap between culturally sanctioned and culturally unsanctioned non-drinking would be useful as a way of verifying the utility of this binary division.

11.6.3 Further research into perceptions of non-drinkers

There are various ways in which perceptions of non-drinkers as a psychometric construct might be pursued beyond the sociability prototype differences measure described in Chapters Three, Four and Ten of this dissertation. Evidence in Chapter Four suggested that, among students, the influence of descriptive norms on harmful drinking intention may be conditional on holding relatively unsociable appraisals of student non-drinkers. Replicating this finding and clarifying the nature of this relationship would be an important next stage in understanding sociability prototype differences more fully. Operational difficulties with the Regan Attitudes Toward Non-drinkers (RANDS) measure would not make this scale an obvious choice for future research purposes (Regan & Morrison, 2011). However, it is suggested that there is considerable scope for developing a similar measure in which particular elements of perceptions of non-drinking are distinguished more explicitly. The research reported in this dissertation and summarised in the literature review points to multiple rather than singular influences of perceptions of non-drinking and non-drinkers. For example, previous research has suggested that the mere presence of non-drinkers during social occasions may act as an ostensibly unimportant but meaningfully productive challenge to drinkers' feelings of self-assurance about high levels of alcohol consumption during social occasions (Brown et al., 2010; Nairn et al., 2006). Importantly, phenomena described in these qualitative studies is not a measure of 'prototypical perceptions of non-drinkers' in the precise conceptual terms of the Prototype Willingness Model. A revised measure, in which prototypical aspects of *individuals* but also of *others'* *behaviour* and of *personal behaviour* (e.g., a 'perceptions of non-drinkers and non-drinking' scale), would seem to offer a more comprehensive conceptual framework and measurement tool. For example, a revised measure might include elements relating to:

(i) perceptions of *the prototypical non-drinker* (as per PWM measures); (ii) beliefs about *non-drinking* as a behaviour of others experienced within social interactions (e.g., “being around people who are not drinking alcohol makes me uneasy”); (iii) beliefs concerning non-drinking as a personal behaviour *imagined* by the respondent (e.g., “not drinking alcohol might make me a boring person to be around socially”) and (iv) beliefs concerning non-drinking as a personal behaviour already *enacted* by the respondent. (e.g., “not drinking alcohol has made me anxious during social occasions previously”). These distinctions would provide a more precise account of how *non-drinking individuals* (the individuals who are associated with or embody non-drinking behaviour), and *non-drinking, the behaviour* (whether enacted by others or personally enacted; whether retrospectively experienced or prospectively imagined) are evaluated and how these elements may be associated with personal drinking behaviour.

11.7 Conclusion

Evidence presented in this dissertation helps to develop and refine two small but emerging fields of enquiry relating to non-drinking and provides a novel basis for further enquiry in an interventional context. First, a sense of the relative importance of perceptions of non-drinkers in relation to student drinking behaviour has been considered. Second, an understanding of the experiences of student non-drinkers has been explored. Third, the author has described an initial test of how non-drinking can be assessed as a perceptual measure (of prototypical non-drinkers), as a mentally rehearsed future behaviour, and as a periodically enacted behaviour (as a proxy measure of health-adherent behaviour) in an interventional setting. Perhaps most significantly, the studies presented in this dissertation have helped to substantiate the view that research which purely focusses on the dangers presented by high levels of alcohol consumption, or

among whom high levels of consumption might be most expected, only offers one route toward reducing alcohol consumption among students and of theorising drinking behaviour in health psychology. The mixed methods approach employed in this research programme has provided different ways of thinking about non-drinking. This has included: perceptual evaluations of non-drinkers held by students; phenomenological accounts of the lived experience of non-drinking among lifelong non-drinkers and former drinkers; and investigated effects of a manipulation framed around imagining positive outcomes and required processes involved in non-drinking on, in part, episodic non-drinking as a novel behavioural outcome. Research on non-drinkers and non-drinking provides an important foundation for theoretical debate about subjective, inter-subjective and normative factors involving in student drinking behaviour. It is hoped that this dissertation has gone some way toward cementing features of this emerging field of work.

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