Social patterning and perceptions of alcohol use amongst mothers with pre-school aged children.

A multi-methods study.

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Abstract

Social factors have been linked to patterns of alcohol use amongst women. However, conflicting evidence on the ways in which socio-economic circumstances are linked to women's alcohol use impedes our understanding. Interest in women's alcohol use has moved up the policy agenda in recent years. Nevertheless, an examination of the literature revealed a dearth of contemporary UK specific research and few qualitative or mixed/multi-methods studies. Furthermore, the existing literature framed women's alcohol use as a public health issue focused on a small minority of 'risky' drinkers and fails to attend to differences amongst groups of women according to their social circumstances, including whether or not they were mothers.

Using a multi-method approach, this thesis aims to enhance our understanding of everyday patterns and perceptions of alcohol use amongst mothers with pre-school aged children by including the majority of mothers who drink moderate amounts of alcohol infrequently, as well as the minority who engage in 'risky' alcohol use. The research is UK focused thus enabling us to contextualise the findings and increase our understanding of alcohol use amongst mothers with pre-school aged children in the UK.

Alcohol use varied depending on the socio-economic measure used. Social gradients were evident for drinking frequency, quantity, and 'risky' alcohol use amongst mothers with pre-school aged children. Qualitative data obtained from focus group discussions with advantaged and disadvantaged mothers helped explain to some extent the social patterning of alcohol use evident in the quantitative analysis of the MCS (Millennium Cohort Study) and, provided a unique portrayal of the ways in which alcohol was integrated into the daily lives of women with children.

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Declaration

I hereby declare that the research presented in this thesis is my own work and that it has not been submitted for any award elsewhere. Where other sources of information have been used they have been appropriately acknowledged and full references included. This research was carried out under the supervision of Professor Hilary Graham in the Department of Health Sciences at the University of York and was funded by the Economic and Social Research Council (ESRC).

Chapter 1: Introduction to the study

Introduction

Using a multi-methods approach, this thesis investigates the patterns and perceptions of alcohol use among mothers, paying particular attention to differences and similarities by mothers' socio-economic circumstances. It examines the quantitative patterns of alcohol use in mothers with pre-school aged children and, through a series of focus groups, explores the perceptions of mothers' alcohol use. Together, the results provide an overview of women's alcohol use during the early years of motherhood according to the social circumstances in which it was experienced. In so doing, the thesis addresses a significant gap in the research literature pertaining to majority patterns of alcohol use in this under researched sub-group of the population. The most common patterns for the frequency of alcohol consumption based on the categories used in the quantitative analysis in this research are never drinking and drinking less than once per week, grouped together as 'infrequent drinkers'. For the quantity of alcohol consumed, the most common patterns are: 1 unit per day amongst mothers who drink less than once per week, identified as 'infrequent light drinkers' and, amongst mothers who drink at least once per week, less than 4 units per week ('frequent light drinkers').

Chapter 1 serves as an introduction to the thesis. It briefly describes its rationale and aims before considering some of the unavoidable difficulties associated with researching alcohol consumption patterns amongst population groups. Notwithstanding these difficulties, the chapter draws on available evidence to provide a descriptive account of the patterns of alcohol use according to age and gender, and women's social circumstances. It focuses in particular on the childrearing years (16-44 years), thus providing a backdrop to carrying out research on mothers' alcohol use.

Rationale

The majority of adults in the UK drink alcohol and it is considered a social norm to do so (Smith and Foxcroft, 2009). As such, alcohol use is deeply ingrained in our society. Indeed, alcohol use is a pleasurable experience for most of the population

and, for the majority, is not associated with adverse consequences. The estimated worth of the alcoholic drinks industry is around £30 billion per year (Prime Minister's Strategy Unit, 2004).

While the majority of the population have drinking (and non-drinking) habits that do not present risks for their own, or others' wellbeing, the majority of studies in the last decade, both in the UK and internationally, focus on the minority who engage in problematic alcohol use. In contrast, this thesis takes a population perspective and focuses on everyday habitual patterns of alcohol use amongst mothers of pre-school aged children. This is not to deny that harmful alcohol use has a major impact on both individuals themselves and society at large. Alcohol misuse has high individual and societal costs and it is estimated that £17.7 billion to £25.1 billion each year is spent tackling alcohol related problems, at a cost to the NHS of approximately £2.7 billion per annum (Department Of Health, 2008a). Interestingly, the United Kingdom Alcohol Treatment Trial (UKATT) in England found females to be more costly than males in terms of the treatment they received as a result of alcohol related problems (Coyle, 1997). This may have been due to the fact that medical problems as a result of alcohol misuse in women develop at a much faster rate and require more intensive, and hence expensive, treatment interventions (Diehl et al., 2007; Flensborg-Madsen et al., 2007). Therefore, this thesis will also explore 'risky' alcohol use patterns (>3 units/day or >21 units/week) amongst women with pre-school aged children, a population sub-group who, as the thesis demonstrates, are under-represented in the research literature to date, both with respect to majority 'low risk' alcohol use and minority 'high risk' use.

Interest in and acknowledgement of the contribution of social factors to alcohol use has increased overtime. However, it is recognised that further research is needed in this area to fully appreciate how social factors operate in relation to alcohol use. In particular, work on families and how alcohol is integrated into family life is important since the socialisation of alcohol begins at home (Valentine et al., 2007; Smith and Foxcroft, 2009). Despite this recognition, alcohol being consumed by most adults in ways with few known adverse effects (i.e. the everyday use of alcohol by the majority) has yet to become a major focus. There is relatively little research on mothers' alcohol use despite their central role in the socialisation of children and

the domestic organisation of the family. Therefore, using a multi-methods design that captures the patterns of mothers' alcohol use and their perceptions of alcohol use during motherhood in relation to their socio-economic circumstances, the thesis seeks to provide a greater understanding of women's alcohol use during motherhood.

Multi-methods design

A multi-methods study was carried out in order to fill an important gap in the research literature relating to mothers' alcohol use during their children's pre-school years. Multi-methods studies are composed of two or more self-contained studies, each designed to answer specific components of the research question (Morse, 2003). The results of each of the studies are triangulated to gain a more comprehensive understanding of the phenomenon in question (Morse, 2003).

Research question:

- What are the everyday patterns and perceptions of alcohol use amongst mothers with pre-school aged children in England, and do they vary according to social circumstances?

The first component of the multi-methods design was a quantitative analysis of the social patterning of alcohol use among mothers with pre-school aged children carried out using the Millennium Cohort Study (MCS), a UK survey of children born in 2000/2001 and their families.

The statistical analysis was theoretically informed by the research literature that identified an association between measures of socio-economic and domestic circumstances and specific patterns of alcohol use amongst women (chapter 1) and mothers (chapter 2).

The analysis investigated 'risky' alcohol use, defined in this study as drinking more than 3 units per day or more than 21 units per week, but did so alongside a focus on the most common patterns of alcohol use in an attempt to shift the focus from the high-risk end of the alcohol use continuum, where few members of the population

are located, to the centre of the distribution, where the majority are, thus answering the research objective below:

Objective 1:

- What are the everyday patterns of alcohol use among women with pre-school aged children and do they differ according to their social background and current socio-economic and domestic circumstances?

Alongside the quantitative analysis, a qualitative focus group study was carried out with mothers from advantaged and disadvantaged circumstances who were purposively recruited through a childcare provider and charity organisation in Yorkshire in order to explore mothers' perceptions of alcohol use.

Advantaged and disadvantaged mothers were theoretically sampled on the basis of the results of the MCS analyses (chapter 6). The qualitative study provided a means by which to contextualise mothers' experiences of motherhood (chapter 8); its design was informed by the literature review presented in chapter 3. In addition, a separate theoretical framework emerged from the qualitative data as mothers described how social (dis)advantage may be associated with maternal alcohol use (chapter 9) (Graham, 2007), thus answering the research objective below;

Objective 2:

- What are mothers' perceptions of alcohol use and do they differ according to their social background and current socio-economic and domestic circumstances?

All research that aims to identify patterns of alcohol use is dependent on the classification systems through which individuals' alcohol consumption is measured and categorised. What follows is a discussion of the inherent difficulties associated with capturing individual patterns of alcohol use, from the controversy surrounding the UK recommendations, to the limited applicability of national reports on alcohol use.

Measuring alcohol use

Recommendations

The Department of Health (2008) has set the maximum recommended units at 3-4 per day for men and 2-3 per day for women, based on various bodies of research. A number of meta-analyses established that drinking above the recommended levels increased the risk of developing future health problems (Corrao et al., 2004; Corrao et al., 2000). A similar conclusion was reached by Batty et al (2009) in a narrative review of research pointing again to the association between alcohol consumption in excess of the recommendations and an elevated risk of ill-health, particularly coronary heart disease (Anderson et al., 1993; Britton et al., 1998; Gronbaek, 2002; Poikolainen, 1995; Sasaki, 2000; Shaper, 1990; Batty et al., 2009). For the purposes of this thesis, cut-off levels denoting 'risky' drinking among mothers were >3 units/day or >21 units/week.

Despite evidence supporting the recommendations, they remain somewhat arbitrary, since individual tolerance levels vary (Department Of Health, 2008b). Furthermore, the majority of studies are confined to the effect of drinking above recommended levels in relation to coronary heart disease and further research is needed to establish the consequences with respect to other health-related diseases.

Measures

Measures of alcohol consumption vary across different countries making cross-national comparisons difficult. In the UK, the standard measure is units of alcohol; however, other countries for example Germany and the USA, use measures such as grams of alcohol, or number of drinks per drinking occasion respectively.

Beverages sold in the UK that contain above 1.2% ABV (Alcohol by Volume) are classed as alcoholic, and as such should be labelled in terms of their strength (percentage). Alcohol is measured in units and "One unit is 10ml or 8g of pure alcohol. This equals one 25ml single measure of whisky (ABV 40%), or a third of a pint of beer (ABV 5-6%), or half a standard (175ml) glass of red wine (ABV 12%)" (Drink aware http://www.drinkaware.co.uk/facts/frequently-asked-questions). Safe

drinking levels are defined as 3-4 units per day for men, and 2-3 units per day for women. Women are said to be at "increasing risk" if they drink above the recommendations (>2-3 units/day) "regularly" and at "higher risk" if they drink more than twice the recommendations (>6 units/day) "regularly" (Anderson, 2008). "Regularly" means drinking every day or most days of the week (Department Of Health, 2008b). The "higher risk" category of drinking is also referred to as 'binge drinking', or 'heavy episodic drinking'; these too have been defined as drinking twice the recommended limits on one occasion (Department Of Health, 2008b). It is further defined as a level at which individuals are likely to become "substantially impaired" (Department Of Health, 2008b). This level of consumption is again acknowledged to be arbitrary, and impairment is a subjective measure dependant on the individual making that judgement (Department Of Health, 2008b).

The UK's use of self-reported units of alcohol consumption in units is likely to introduce inconsistencies and inaccuracies into the data since studies have shown that many people do not understand how many units are in different alcoholic beverages (Office for National Statistics, 2010), or what the recommendations are (Office for National Statistics, 2010). In the 2009 NHS Health and Social Care report on adult's drinking behaviour and knowledge, of the 75% of individuals who had heard of daily limits, only 44% and 52% knew the correct daily limits for men and women respectively (Office for National Statistics, 2010). Furthermore, of these individuals, only 12% of men and 14% of women kept track of the number of units they consumed (Office for National Statistics, 2010).

Reporting

In surveys, alcohol consumption is measured using volume (units) and frequency. As noted above, both measures are based on self-reported alcohol use. Customs and Excise data based on imported goods and country specific tax on those goods, provides an alternative source of information on alcohol use. When Customs and Excise data on the average number of units of alcohol consumed per week over a one year period, based on total alcohol volume, are compared to self-reported data, self-reported data produce a significantly lower estimate. In 2008, estimated consumption based on self-report was 59% lower than Customs and Excise data suggest (Smith

and Foxcroft, 2009). Customs and Excise data collection is likely to capture some of the missing data from individuals who do not respond to survey measures of alcohol use, for example, alcohol dependants. However, the higher estimates derived from Customs and Excise data are likely to reflect, at least in part, the volume of alcohol bought/ imported and not necessarily the amount of alcohol actually consumed.

Delving more deeply into the accuracy of self-reporting, studies have pointed to gender and age differences. Some studies suggest that self-reported alcohol use is less reliable in men than women (Simpura and Poikolainen, 1983), and younger aged men and women in comparison to older age groups (Dwyer et al., 1989). Other studies suggest that self-reported data are valid, based on cross-validation techniques, such as 24 hour recall compared with diary information (Brown et al., 1992; Smith et al., 1995). However, the majority of these studies simply examine whether an individual is consistent in their reporting rather than comparing their subjective reports to objective measures of alcohol consumption, such as blood alcohol concentration levels. Indeed, research has identified that blood alcohol concentration was more positively correlated with self-reported levels of alcohol consumption in men compared with women, and women under-reported to a greater extent in comparison to men (Sommers et al., 2000).

Despite their limitations, self-reported measures of alcohol consumption are the only option for large scale population surveys (NHS Information Centre, 2011). The HSE (Health Survey for England) and the GLS (General Lifestyle Survey) are two key population surveys that include questions on alcohol use.

The GLS is a continuous cross-sectional survey (longitudinal component introduced in 2005) that has provided information on alcohol use amongst a representative sample of adults in the UK (aged 16+ from 1998 onwards) since 1978. Data are collected over a 12 month period using trained interviewers who carry out personal interviews or provide self-complete questionnaires in the case of 16 and 17 year olds. Since 2000, the method has changed from CAPI (Computer Assisted Personal Interviewing) to CATI (Computer Assisted Telephone Interviewing) with response rates that have ranged from 67% to 76% between 1998 and 2009.

The HSE is a cross-sectional study that has reported on patterns of alcohol use across a nationally representative sample of adults (aged 16+ from 1994 onwards) since 1991. Like the GLS, data are collected over a 12 month period whereby trained interviewers carry out CAPI (Computer Assisted Personal Interviewing) or provide 16 and 17 years olds with a self-complete questionnaire and the option to complete one for 19-24 year olds. Response rates for the HSE are similar to those found in the GLS and ranged from 58-75% between 1998 and 2009.

Measures of alcohol use include: 'usual weekly consumption' in the GLS (to date) and HSE (up until 2002) and 'maximum amount drunk on any day in the previous week' in both surveys to date. In order to ascertain their 'usual weekly consumption', respondents are asked how often during the past year they drank: normal strength beer, strong beer (6% ABV), wine, spirits, fortified wine, and alcopops (and 'other' in the HSE), and how much they drank on any one day. The number of units corresponding to each type of drink are then multiplied by the drinking frequency and summed up across all drink types to provide an overall measure of consumption.

The 'maximum amount drunk on any day in the previous week' was adopted by the GLS and the HSE in 1998 to reflect the change from weekly to daily maximum recommended units of alcohol. Respondents are asked on how many days they drank during the previous week and how much of each type of drink they drank on the heaviest drinking day. An estimate of the most number of units they drank on any one day was devised by multiplying the frequency and quantity measures.

Despite obvious similarities in their methodology, differences exist between the GLS and the HSE. For example, there are differences in the number of units ascribed to different types of drinks used to calculate 'usual weekly' and 'maximum daily' consumption, and the HSE includes 'other' as a category under drink type. These differences may have resulted in slight differences in the surveys' findings.

As previously discussed, large scale surveys are subject to changes in design. For example, there was no GLS survey data in 1999 as a result of survey re-development (Figure 5, Figure 7, Figure 8, and Figure 9). Changes are also made in response to

wider changes in drinking habits, for example a shift to larger glass sizes and to beverages with higher alcohol content. For instance, in 2006 the GLS amended the number of units it assumed was contained in 'normal' strength beer, lager and cider, 'strong' beer, lager and cider and particularly wine (ABV from 9-12 per cent). In addition, the GLS included a question about wine glasses denoting: small (125ml) equal to 1.5 units, standard (175ml) equal to 2 units, and large (250ml) equal to 3 units. Similarly, the HSE included questions about wine glasses in 2007, as well as additional measures such as bottles or fractions of bottles (1 bottle equivalent of 6 x 125ml glasses equal to 9 units). These changes may explain some of the unexpected variations in alcohol consumption patterns around these time periods.

In addition to the survey design, there are a number of limitations with regards to the questions about alcohol use. Both the GLS and the HSE ask respondents to recall their previous 7 days alcohol use. Asking questions about the previous week's alcohol use aids reliability of recall (as compared with having to recall drinking patterns over a longer time period). However, this focus may mask individual variations in patterns of alcohol use across time including seasonal variations and non-habitual occasional use. In addition, participants may not wish to disclose how much they drank on their heaviest drinking day during the interview and may under-report their alcohol use, particularly if other family members are privy to this information.

A narrative review of women's alcohol use

Notwithstanding the limitations discussed above, our understanding of the patterning of men and women's alcohol use in the UK is primarily based on large scale survey data. What follows is a summary of the current trends relating to women's alcohol use in England and the UK both in comparison to men's and over time. The evidence is drawn primarily from the two aforementioned large national surveys; the Health Survey for England and the General Lifestyle Survey (previously known as General Household Survey).

The evidence is structured around the relationship between gender and age in relation to specific patterns of alcohol use: non-drinking, frequency of alcohol

consumption, quantity of alcohol consumption, and binge/heavy drinking, paying particular attention to evidence that encompasses the peak reproductive years (16-44).

In addition to data from the HSE and the GLS on contemporary patterns of alcohol use in the UK, a separate literature review was carried out. The purpose of this review was to supplement the evidence on alcohol use in the two surveys with a narrative review of the broader research in relation to patterns of alcohol use according to gender, age, and social circumstances. This broader review was based on a search for studies using electronic databases, with study details summarised using a standard template (study design, reported pattern of alcohol use, population group, and social measures). In detail, electronic searches of the following databases were conducted;

- MEDLINE(R) was searched for the period 1946 to 2011 (searched January 2010 and repeated on 13/10/2011 via Ovid interface)
- EMBASE was searched for the period 1980 to 2011 (searched January 2010 and repeated on 13/10/2011 via Ovid interface)
- PSYCINFO was searched for the period 1987 to 2011 (searched January 2010 and repeated on 13/10/2011 via Ovid interface)

A number of search terms were included (e.g. alcohol, drinking behaviour, female, women, mother, gender, socio-economic, disadvantage) and references retrieved from the search ($n = 8701$) were exported into Endnote X4, a reference management tool.

Since the intention was to provide a narrative overview of patterns and perceptions of alcohol use, looking in particular for evidence relating to mothers, papers were not excluded on the basis of quality. Therefore, all papers reporting patterns and perceptions of alcohol use (non-drinking, drinking frequency, drinking quantity, and binge/heavy drinking) in relation to gender, age, and social circumstances were included. Papers that did not include data on women's alcohol use were excluded. Following the screening of titles and abstracts, a total of $n = 47$ papers remained that were eligible for inclusion in the review. Details of the search strategy and the

studies extracted are included in appendix 1 and appendix 2 respectively. The review indicated that we have very little information on mothers and the information we have on women is predominantly

1. Derived from quantitative research
2. Focused on binge drinking and problematic alcohol use
3. Focused on young adults and students
4. Based on studies in countries other than the UK

Figure 1 to Figure 4 summarise the evidence from the review relating specifically to research on women's alcohol use. It illustrates how research is biased towards specific study designs, dimensions of alcohol use, and population groups. In addition, it highlights the relative lack of English studies in this field.
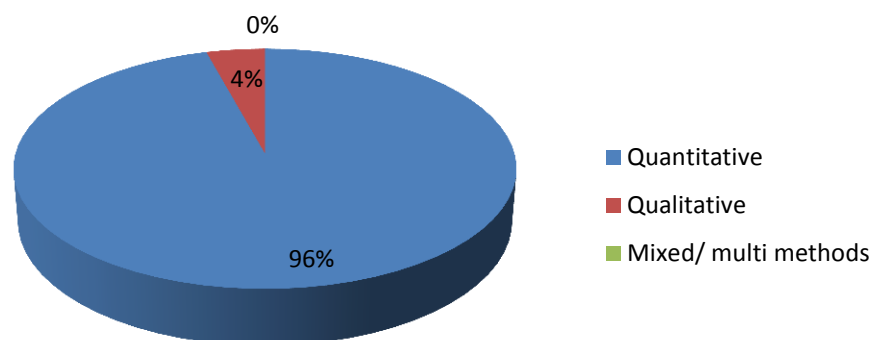
Figure 1 Distribution of studies on women's alcohol use according to research design (n = 47 papers).
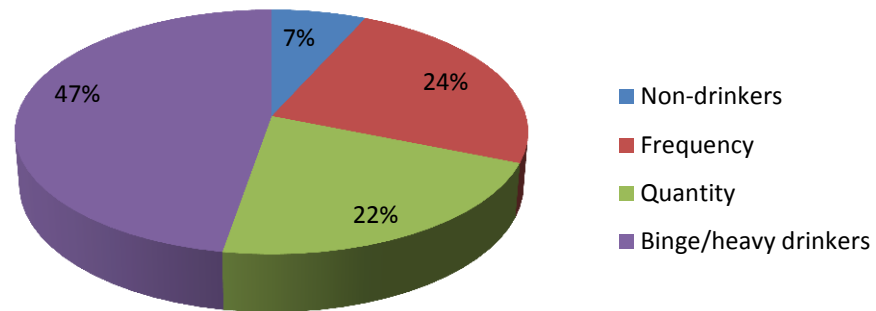
Figure 2 Distribution of papers on women examining specific dimensions of alcohol use (*n* = 47 papers).

Note: Some papers included a report on more than one dimension of alcohol use (n = 84 total reported dimensions of alcohol use see appendix 2).
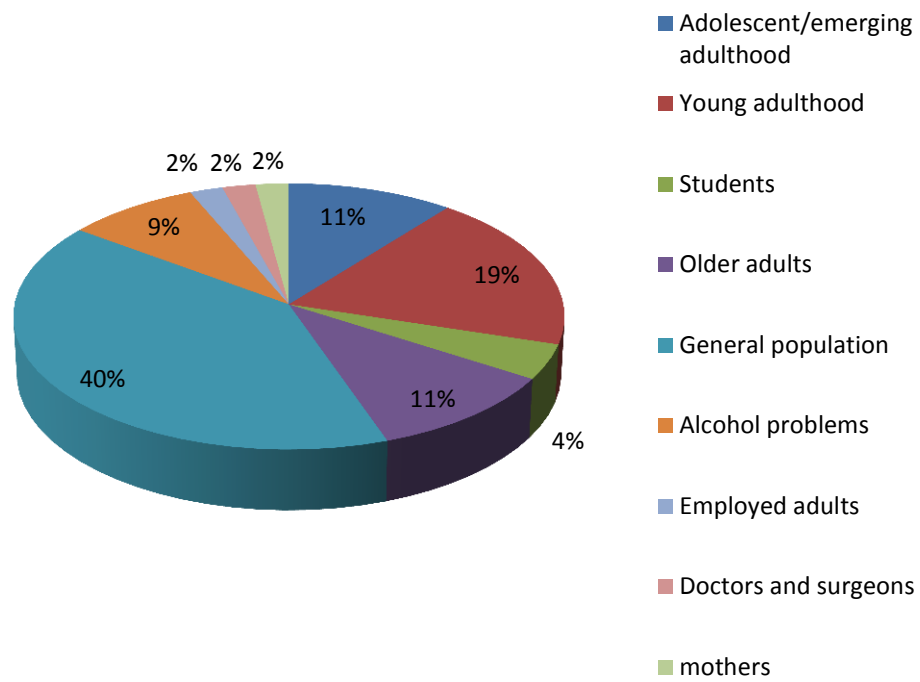
Figure 3 Distribution of papers according to study population ($n = 47$ papers).
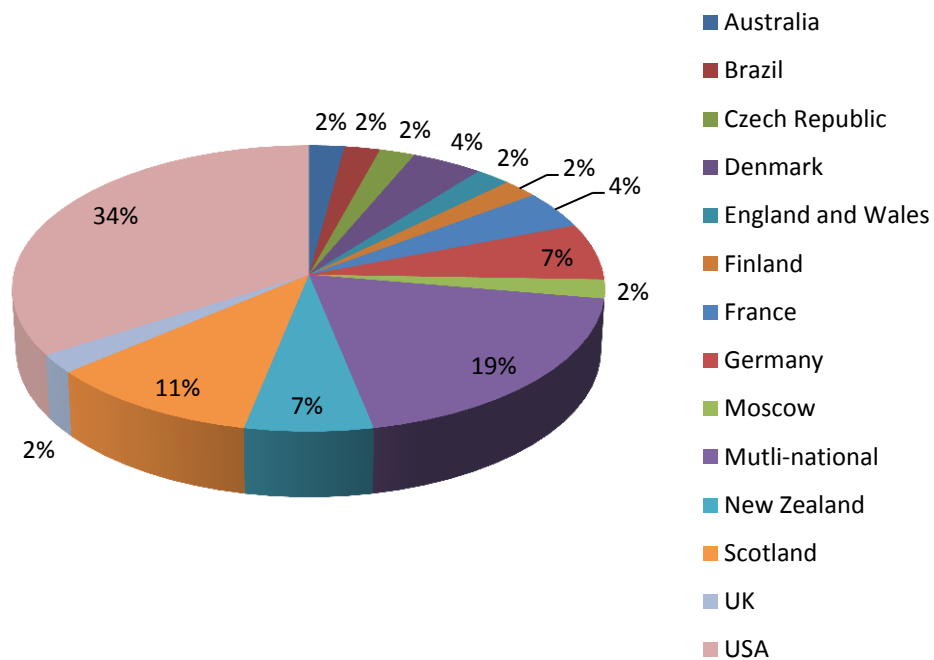
Figure 4 Distribution of papers according to study country (*n* = 47 papers).

As Figure 1 to Figure 4 indicate, the 47 papers on alcohol use in women identified in this review favour quantitative methods, binge/heavy drinking, young adults and students, and countries other than the UK. A summary of the 47 papers with respect to these dimensions - social dimensions, patterns of alcohol use and study design - is provided in Table 1.

Table 1 A summary of the papers included in the review of the social patterning of women's alcohol use according to their social measures, dimensions of alcohol use, and research design.

	Dimension of alcohol use			
Social measure	*Non-drinking* (*n* = 8)	*Frequency* (*n* = 20)	*Quantity* (*n* = 17)	*Binge/ heavy drinking* (*n* = 39)
Gender (*n* = 38)				
Quantitative papers	6 (6*)	15 (12*)	13 (11*)	33 (27*)
Qualitative papers	0	0	0	2
Mixed/ multi-methods papers	0	0	0	0
Age (*n* =17)				
Quantitative papers	5	7	7	16
Qualitative papers	0	0	0	0
Mixed/ multi-methods papers	0	0	0	0
Socio-economic circumstances (*n* = 26)				
Quantitative papers	4	11	11	21
Qualitative papers	0	0	0	0
Mixed/ multi-methods papers	0	0	0	0

*Simple systematic comparisons of gender

Note: Total number of papers included in the review n = 47 (n = 45 quantitative, n = 2 qualitative, n = 0 mixed/multi-methods).

Note: Some papers included a report on more than one dimension of alcohol use (total dimensions of alcohol use n = 84 see appendix 2) and more than one social measure (total social measures n =81 see appendix 2).

A more detailed description of each of the studies included in the review is provided in appendix 2.

Contemporary patterns of alcohol use in the UK according to age and gender

The HSE suggests that 83% women have consumed alcohol in the last year in comparison to 89% of men (Fuller, 2011). In national UK surveys, for example the Continuous Household Survey, General Health Survey, Health Survey for England, Omnibus Survey and the Scottish Health Survey, men report drinking more alcohol than women (Smith and Foxcroft, 2009). Comparisons of drinking habits across survey years (1998 to 2006) indicate that the average UK consumption for women has increased for all age groups. For men, consumption has increased across all age groups other than 16-24 year olds (Goddard, 2008). A multinational study of alcohol consumption conducted across 35 high and low income countries (including the UK) found that men are more likely to be current drinkers, drink more frequently, and drink more heavily (Wilsnack et al., 2009), a pattern in line with findings from other multinational studies (Makela, 2006; Rahav et al., 2006). In a study of American high school students, gender was found to be a more powerful predictor of alcohol use than ethnicity which was in turn more powerful than social class, defined by parent's educational attainment and occupational status (Stewart and Power, 2003).

The section that follows further examines the influence of age and gender on different dimensions of alcohol use: non-drinkers, drinking frequency, drinking quantity and binge/ heavy drinking. It becomes clear that age and gender are important factors in relation to patterns of alcohol consumption and points to the need to look separately at women's and men's alcohol use.

Non-drinking

Across all age groups, UK evidence from the GLS indicates that non-drinkers, defined as never having consumed alcohol or having given up alcohol, have increased over the last decade from 14% in 1998 to 19% in 2009 in women and from 7% to 12% in men (Figure 5) (Robinson and Harris, 2011).
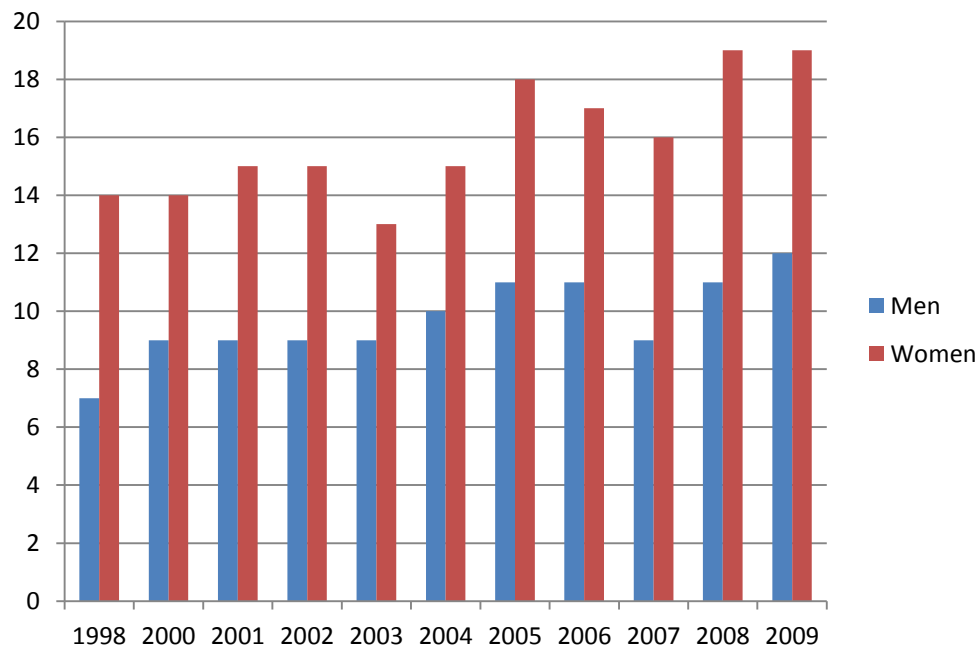
Figure 5 Proportion of non-drinkers in the general UK adult population (aged 16 and over)*

Data source: Office for National Statistics report on the General Lifestyle Survey (2009) Figure 2.3 "Percentage of adults who report never drinking alcohol" (Robinson and Harris, 2011).

* Data is not available for 1999.

In accordance with these findings, the HSE (2009) indicates that the number of women reporting not having drunk in the last week (non-drinkers) has increased over time from 39% in 1998 to 44% in 2009 (NHS Information Centre, 2011). Once again the same pattern can be seen in men (an increase from 24% to 28% between 1998 and 2009) (NHS Information Centre, 2011).

During the peak reproductive years (16-44), the greatest increase was recorded amongst women aged 16-24, where the proportion of "non-drinkers" rose from 40%

in 1998 to 52% in 2009; among men in this age group, the proportion of non-drinkers rose from 29% to 33% across this time period (Figure 6) (NHS Information Centre, 2010). Self-reported data in the HSE showed men and women, particularly young women, are now more likely to report not having consumed alcohol in the previous week when comparing drinking habits across survey years (1998 to 2006) (NHS Information Centre, 2010).
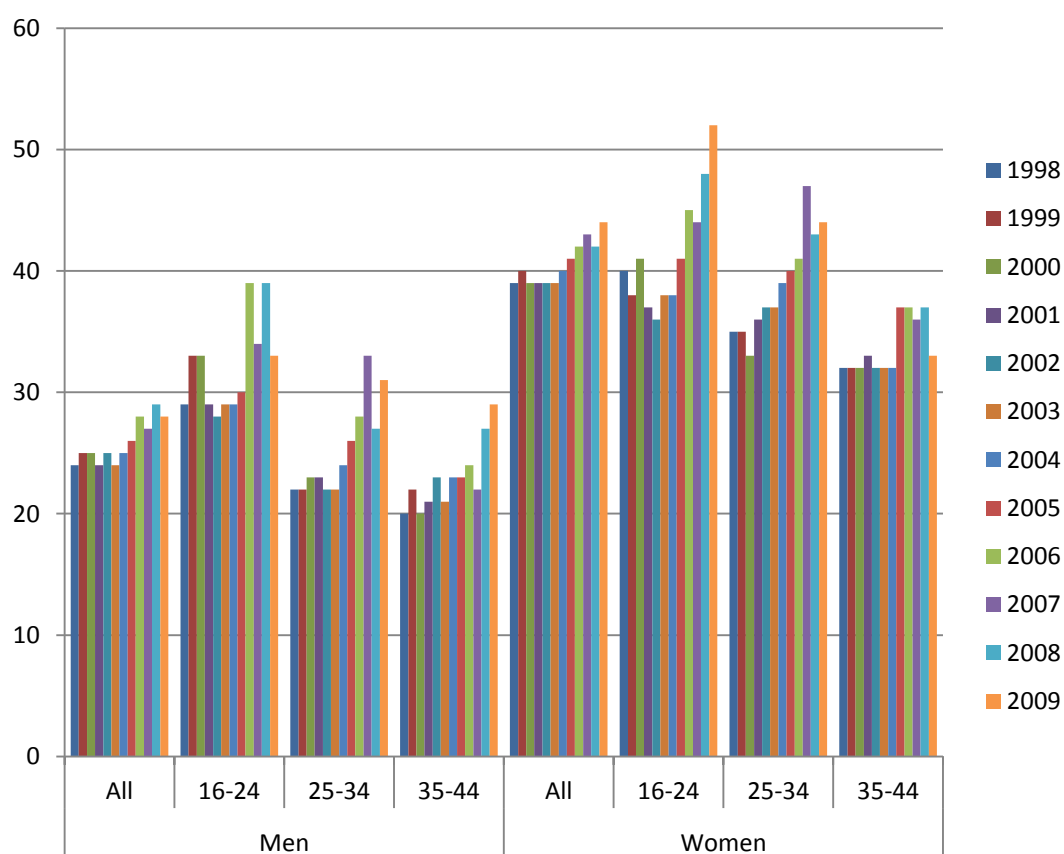
Figure 6 Proportion of the population in England who did not consume alcohol in the previous week

Data source: Health Survey for England (2009) Trend Tables: Table 9 "Estimated alcohol consumption on heaviest drinking day in the last week, by survey year, age and sex" (NHS Information Centre, 2010).

Consistent with national data on abstinence in the UK, a number of multinational studies identified through my review also suggest that women are increasingly likely to be abstinent (Makela, 2006; Wilsnack et al., 2009). However, the variation in

rates of abstinence across Europe has been found to be greater amongst women (6-49%) in comparison to men (4-27%) (Makela, 2006).

In relation to the peak reproductive years (16-44), my review found one Danish study that showed men were more likely to be abstinent than women (Mortensen et al., 2006). Similarly, a US study examining the rate of 30 day abstinence among women, found that abstinence had increased between 1981 and 2001, especially among women aged 21-30 (Wilsnack et al., 2006).

Drinking frequency

Gender differences in the frequency of alcohol consumption are evident in UK national surveys. UK evidence shows a general decline in reported drinking during the previous week over time regardless of age that is more apparent in men than in women whose drinking during the previous week has declined to a lesser extent (Figure 7) (Robinson and Harris, 2011). Evidence from the HSE (2009) across all age groups suggests that 56% of women reported having drank during the previous week in comparison to 72% of men (Fuller, 2011).

The GLS (2009) indicates that across the UK, during the peak reproductive years (16-44), men and women aged 25-44 are more likely to have drunk alcohol during the previous week than 16-24 year olds (Figure 7) (Robinson and Harris, 2011). The proportion of women reporting having drunk in the last week has fallen between 1998 and 2009 from 62% to 51% among women aged 16-24, and 65% to 59% of women aged 25-44 (Robinson and Harris, 2011). The respective proportions for men are 71% to 56% in the 16-24 age group and 79% to 72% of men aged 25-44 (Figure 7) (Robinson and Harris, 2011). A summary of survey results looking at drinking trends in the UK supports this evidence also pointing to a more evident decline among 16-24 year olds (Smith and Foxcroft, 2009).
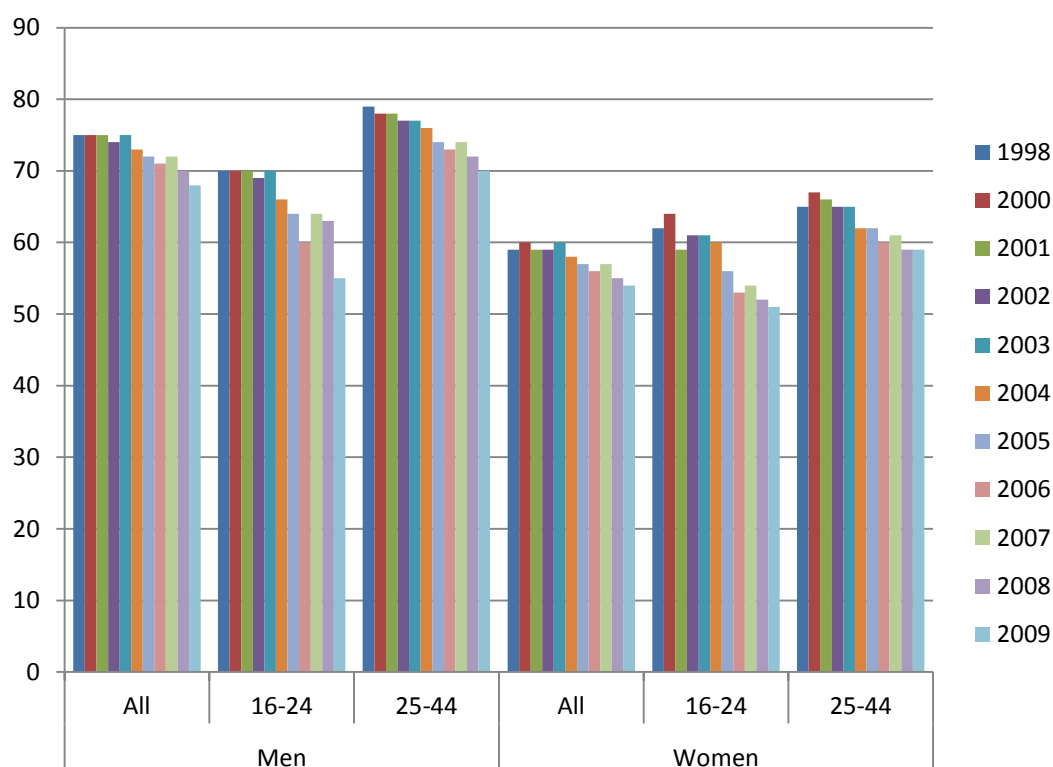
Figure 7 Proportion of adults in the general UK population who drank alcohol in the previous week*.

Data source: Office for National Statistics report on the General Lifestyle Survey (2009). Table 2.3 "Drinking last week, by sex and age" (Robinson and Harris, 2011)

* Data are not available for 1999.

With regards to more frequent drinking, UK evidence from the GLS, suggests a decreasing trend in the number of men and women drinking on 5 days or more during the previous week regardless of age (Figure 8) (Robinson and Harris, 2011). HSE (2009) data indicate that 12% of women reported having drank on 5 days or more in last week in comparison to 22% of men, and also points to a decreasing trend across age groups (Fuller, 2011; NHS Information Centre, 2010). However, the HSE (2009) illustrates that despite this decreasing trend, there remains a positive association between increasing age and the proportion of adults who drank ≥ 5 days in previous week: 11% men and 4% women aged 16-24 compared to 33% men aged 55-64 and 17% women aged 55-74 (Fuller, 2011).

Again focusing on more frequent drinking among men and women of reproductive age (16-44) in the UK, the GLS (2009) indicates that men and women aged 25-44 are more likely to have drunk on 5 or more days during the previous week than 16-

24 year olds (Figure 8) (Robinson and Harris, 2011). However, the proportion of women reporting having drunk on 5 days or more in the last week has declined in both age groups over time from 9% in 1998 to 2% in 2009 among women aged 16-24 and 12% to 8% of women aged 25-44. The respective proportions for men are 14% to 8% in the 16-24 age group and 22% to 14% of men aged 25-44 (Figure 8) (Robinson and Harris, 2011).
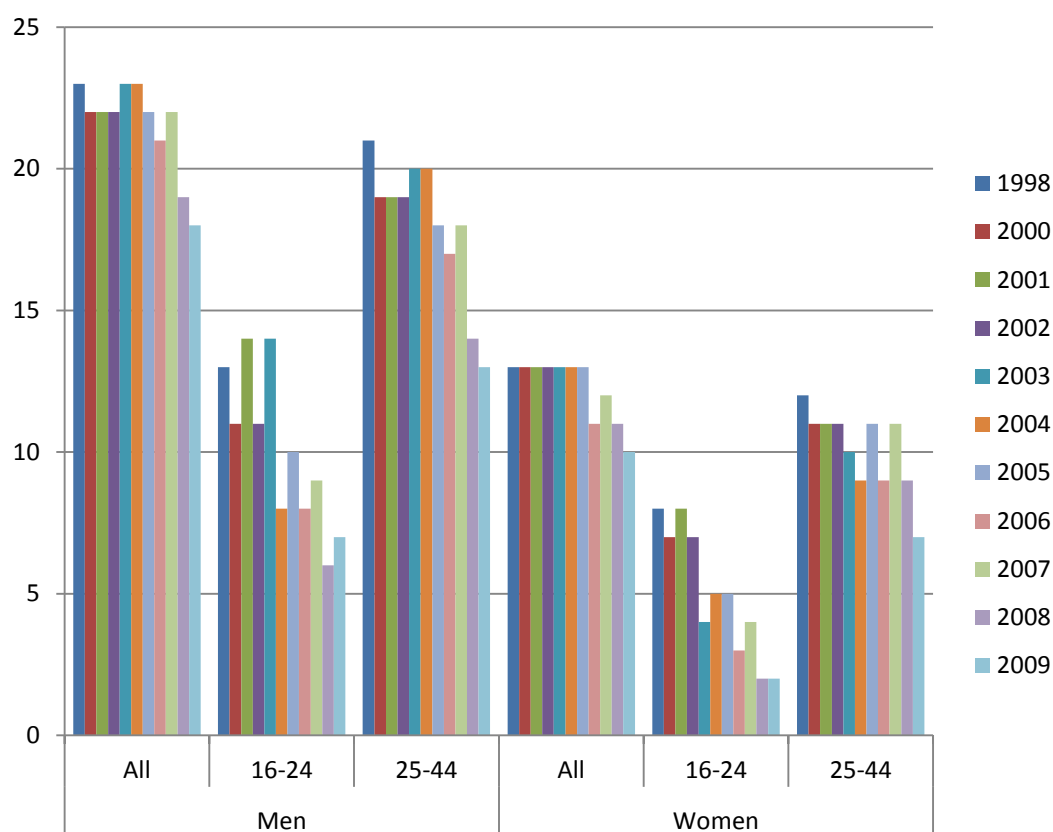
Figure 8 Proportion of adults in the general UK population who drank alcohol on five or more days in the previous week*.

Data source: Office for National Statistics report on the General Lifestyle Survey (2009). Table 2.3 "Drinking last week, by sex and age" (Robinson and Harris, 2011).

* Data are not available for 1999.

In comparison to national data on drinking frequency in the UK, multinational research identified through my review has also highlighted gender differences in alcohol consumption that are more marked for frequency than volume across different cultures (Makela, 2006). Evidence from multinational studies that included the UK and evidence from smaller studies in the US and New Zealand support the

finding that men drink more frequently than women (Makela, 2006; Casswell, 2003). In addition, research in other developed countries reflects UK findings that point to increased frequency of alcohol consumption with age (Wilsnack et al., 2009; Casswell, 2003). However, the positive association between drinking frequency and age in the UK appears to be moderate in comparison to other European countries where the frequency of alcohol consumption increases at a much greater rate with age (Makela, 2006).

Drinking quantity

Considering the number of units that adults of all ages consumed on the day they drank most in the last week, the HSE (2009) is able to approximate an average consumption of 5.4 units for women and 8.3 units for men (Fuller, 2011).

UK evidence gathered using the GLS that questioned adult drinkers on the average number of units they consumed per week, was able to estimate that the mean number of units consumed per week had increased among women over time from 6.5 units in 1998 to 8.0 units in 2009 (Figure 9) (Robinson and Harris, 2011). In contrast, over the same time period the number of units has decreased among men from 17.2 units in 1998 to 16.4 units in 2009 (Figure 9) (Robinson and Harris, 2011).
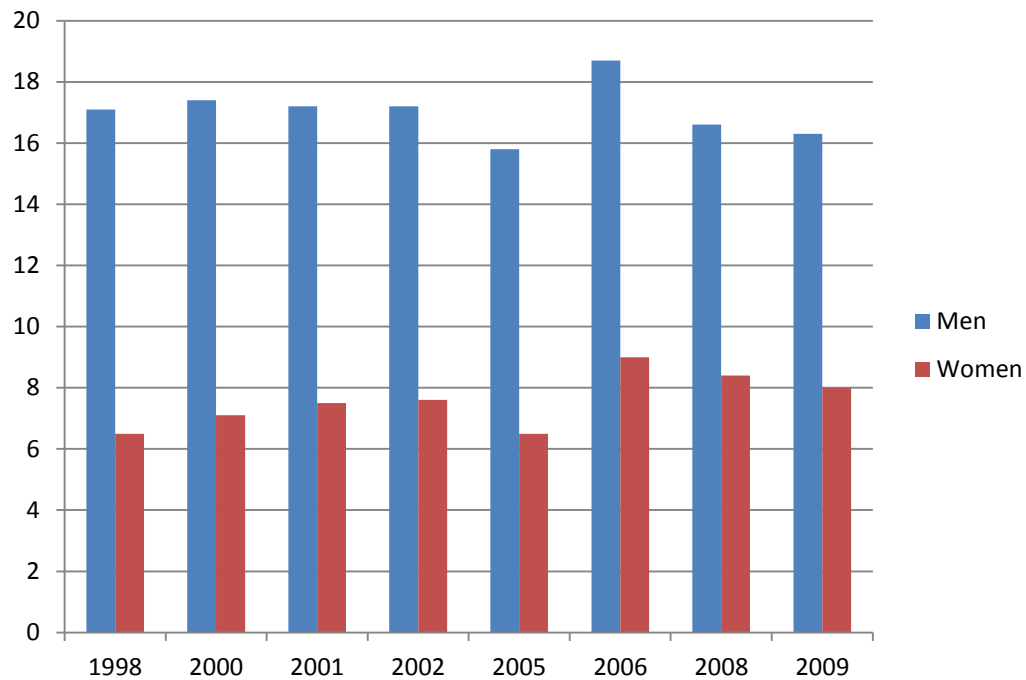
Figure 9 Mean weekly units consumed in the previous week by adults (aged 16 and over) in the general UK population who drank alcohol*.

Data source: Office for National Statistics report on the General Lifestyle Survey (2009). Table 2.1 "Average weekly alcohol consumption (units), by sex and age" (Robinson and Harris, 2011)

* Data are not available for 1999, 2003/2004 and 2007.

Focusing on the peak reproductive ages (16-44), a summary of large national surveys across the UK highlighted that the increase over time in the quantity of alcohol consumed by women was particularly evident in women aged 25 years and older. In contrast, the quantity of men's alcohol consumption decreased after 2000 in the 16-24 year age group (Smith and Foxcroft, 2009).

In comparison to national data on drinking quantity in the UK, two multinational studies and one smaller US study in my review found that men drank greater volumes of alcohol in comparison to women (Wilsnack et al., 2009; Rahav et al., 2006; Stewart and Power, 2003). In addition, a European study (including the UK) and one in New Zealand found that the quantity of alcohol use was negatively associated with increasing age (Makela, 2006). Likewise, research conducted in New Zealand suggests that the quantity of alcohol use was greater in men than women and that alcohol consumption peaked at the age of 21 (Casswell, 2003).

Binge/heavy drinking

Binge drinking is defined as; drinking more than twice the recommended limits on one occasion, thus exceeding 6 units for women and 8 units for men. The proportion of adults in the HSE across all age groups who binge drink in England has increased between 1998 and 2009 (Figure 10) (NHS Information Centre, 2010). The increase is most marked in women, where the proportion rose from 7% to 15% between 1998 and 2009, in comparison to men, where the proportion rose from 20% to 25% during the same time period (Figure 10) (NHS Information Centre, 2010).

With respect to the peak reproductive years (16-44), the rate at which binge drinking in England has increased is more marked amongst adults aged 25 and over (Figure 10) (NHS Information Centre, 2010). The proportion of women aged 16-24 who binge has risen from 17% to 24% between 1998 and 2009; a smaller increase was observed amongst men of the same age from 37% to 40% over the same time period (Figure 10) (NHS Information Centre, 2010). Binge drinking amongst women aged 25-34 has increased over time from 14% in 1998 to 21% in 2009. An increase from 35% to 44% has also been observed amongst men the same age during the same time period (Figure 10) (NHS Information Centre, 2010). The increasing trend continues and is particularly evident in older age groups, with the incidence of binge drinking in women aged 35-44 increasing from 8% in 1998 to 19% in 2009 and in men from 35% to 44% (Figure 10) (NHS Information Centre, 2010).

A summary of large national surveys across the UK supports this finding, quoting that there had been a 10% increase between 1998 and 2006 in the incidence of binge drinking amongst women aged 25-44 and only a 2% increase amongst men of the same age during the same time period (Smith and Foxcroft, 2009). The evidence points to an increased risk of alcohol dependence during the peak reproductive years (16-44), in particular amongst young women (Holdcraft, 2002).
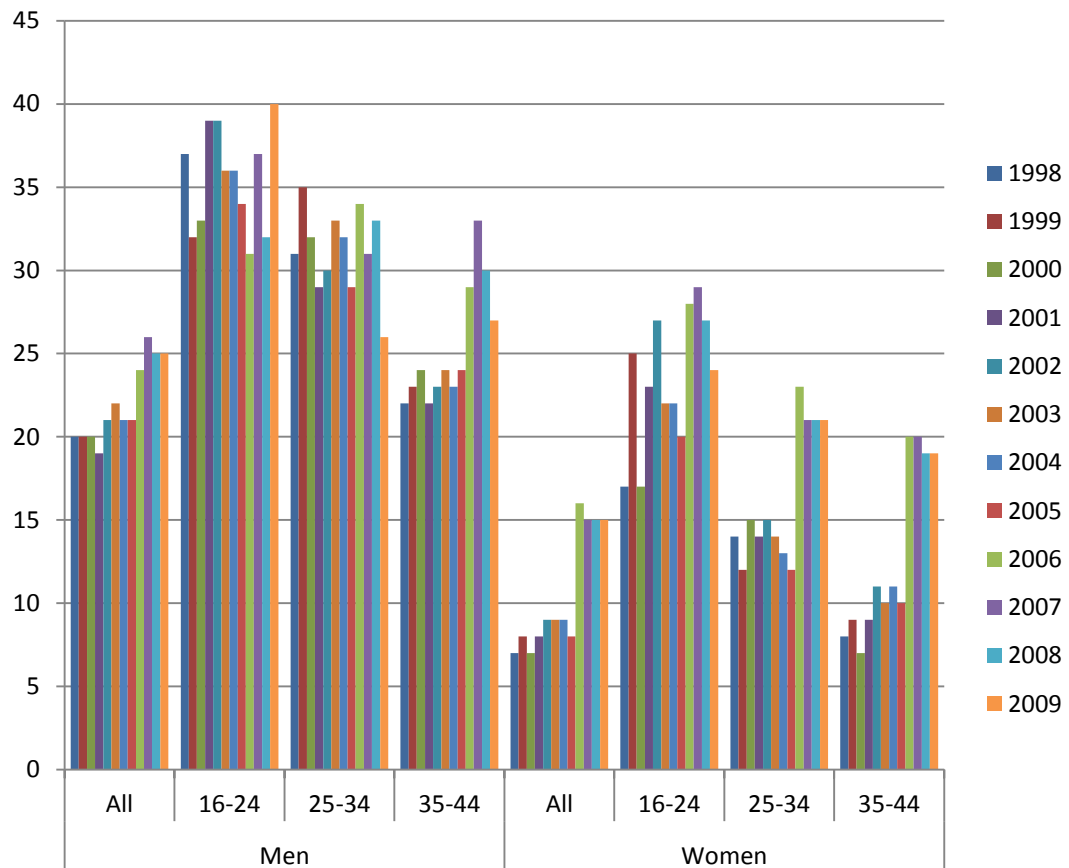
Figure 10 Proportion of the population in England who drank more than twice the recommendations (>6/8 units per day for women and men respectively) during the previous week.

Data source: Health Survey for England (2009) Trend Tables: Table 9 "Estimated alcohol consumption on heaviest drinking day in the last week, by survey year, age and sex" (NHS Information Centre, 2010).

My review of the literature identified similar patterns when compared to national survey data (GLS/ HSE) on binge/heavy drinking in the UK. For example, a smaller study of men and women in full-time employment in Scotland found that men were significantly more likely to be heavy drinkers than women (>21 units/week in men, and >14 units/week in women) (Emslie et al., 2002). Likewise, in a Scottish study of undergraduate students, more men than women exceeded the recommended limits (>4 units/day in men and >3 units/day in women) at least twice per week (Hassan and Shiu, 2007).

A more recent longitudinal survey conducted in Scotland examined men and women's hazardous drinking: heavy drinking (>21 units/week men and >14

units/week women), binge drinking (>10 units/day men and >7 units/day women), and problem drinking ($\geq$2 positive answers to 4 questions on the CAGE test – used to identify alcohol problems). It found that men's hazardous drinking was higher in three different birth cohorts (born 1970s, 1950s, 1930s) at two different time points (1999, 2000) (Emslie et al., 2009). Men were more likely to be heavy/binge drinkers and gender differences were smallest in the younger cohorts and largest in the oldest cohorts (Emslie et al., 2009). In addition, over the decade 1990-2000 more women became heavy drinkers whereas the number of men who were heavy drinkers decreased (Emslie et al., 2009).

Studies outside the UK also report similar findings, one French study found that more men than women reported alcohol abuse ($\geq$2 positive responses on DETA questionnaire) (Baumann et al., 2007). Furthermore, a number of papers described (using various definitions) how problematic alcohol use was more prevalent among men than women (Holdcraft, 2002; Lima et al., 2007; Mortensen et al., 2006; Rahav et al., 2006; Stewart and Power, 2003) and decreased with age in both men and women (Makela, 2006; Wilsnack et al., 2009; Kuntsche et al., 2006b; Jukkala et al., 2008).

There is further evidence from studies conducted outside the UK of increasing rates of binge drinking during the reproductive years, particularly amongst women. For example, Keyes et al (2008) found that bingeing ($\geq$5 drinks per occasion during heaviest period of drinking) is decreasing in the youngest cohort of men (aged 18-29), whereas it is increasing in the same cohort of women. Similarly, in an analysis of cross-sectional data from 18-44 year old women in the US, Tsai (2007) found that younger women aged 18-24 drank larger quantities and more often binged ($\geq$5 drinks on one occasion in the previous 30 days). Likewise, in their study of women of child-bearing age, Caetano (2006) found that women aged 21-29 were most likely to binge drink ($\geq$4 or more drinks on one occasion in the last 12 months). A US study that examined alcohol use among 18-39 year old women reported that, 7% of non-pregnant women of childbearing age exceeded the recommended guidelines ($\geq$5 drinks on one occasion/ >7 drinks per week in the past month), and 30% had exceeded guidelines in the past year (Nayak, 2004). In addition, a smaller study

carried out in the US showed an increase in the prevalence of women aged 21-50 who were intoxicated between 1981 and 2001 (Wilsnack et al., 2006).

Evidence for converging patterns of alcohol use among men and women in the UK

The previous section illustrated that, according to UK national survey data, patterns of alcohol use among men and women are different. Nevertheless, there appears to be evidence of gender convergence as a result of the rapid decline in the frequency and quantity of alcohol use among men; at the same time, among women, quantity of alcohol use and rates of binge/heavy drinking have increased over time across all age groups including the peak reproductive years (16-44).

In addition to national UK survey data (GLS 2009 and HSE 2009) that point to gender convergence, my broader review of the literature also found evidence to suggest that patterns of alcohol consumption in men and women are converging. There is evidence from the US to suggest that across all age groups there has been some gender convergence in the proportion of non-drinkers over time (Keyes et al., 2008). However, the reasons for not drinking appear to differ between men and women. A large multi-country study (8 countries excluding the UK) examined factors linked to rates of non-drinking amongst men and women, some of whom were lifetime abstainers and others whom had not drank alcohol during the preceding year (Bernards et al., 2009). Females were found to be more influenced by personal preferences, such as having no interest or disliking the taste, whereas men were more influenced by their fear of problems resulting from alcohol consumption and the effect it might have on their daily activities (Bernards et al., 2009).

There appears to be more evidence in relation to binge drinking. A longitudinal cohort study by Emslie et al (2009) in Scotland found that gender differences in heavy drinking, defined as drinking more than 14 units per week for women and more than 21 units per week for men, have decreased. Similarly, a quantitative study by Rahav et al (2006) found no difference between men and women in 29 European countries with respect to weekly drinking rates and heavy drinking, defined as 23.2g ethanol per day. However, methods of data collection varied by country, making direct comparison difficult.

In relation to the peak reproductive years (16-44), research has shown evidence of gender convergence in men and women aged 20-39 in relation to their drinking frequency and the quantities of alcohol they consumed on a typical drinking occasion and overall in the past year (McPherson, 2004). There is also evidence to suggest gender convergence in relation to drunkenness and problem drinking between men and women aged 20-39 (McPherson, 2004). A multinational study carried out in 14 European countries provides evidence of the closing gender gap between young men and women in terms of heavy episodic drinking (ranging from ≥3 to ≥8 drinks on one occasion/ 60g-110g ethanol) (Makela, 2006). Similarly, a study conducted in the USA that examined gender differences in alcohol dependence by age cohort also suggests that men and women are converging in terms of alcohol problems (Holdcraft, 2002), particularly in younger cohorts (Keyes et al., 2008).

It appears to be the changing drinking patterns of women that are responsible for the increasingly similar patterns of problematic alcohol use amongst men and women. For example, a study of 15 year olds in 24 European countries (including the UK) witnessed a decline in the rates of drunkenness and the decrease was greater in boys than in girls, any increments were as a result of increases in girls' rates of drunkenness (Simons-Morton et al., 2009). What compounds this is that the levels of alcohol consumption associated with 'risk' increases with age. For example, a 5% increase in risk is associated with women aged 16-24 who drink 5 units per week, and in women aged >65 who drink 20 units per week (White et al., 2002). In men a 5% increase in risk is associated with individuals aged 16-24 who drink 8 units a week, and aged >65 who drink 34 units a week (White et al., 2002) illustrating how low risk guidelines vary according to both age and sex. This is perhaps a concern when considering women's increased vulnerability to alcohol and faster progression to alcohol problems.

Additional evidence from studies identified in my broader review of the literature suggests that men and women may be converging in terms of the rates and age of alcoholic diagnosis. A small German study of alcohol dependant men and women found that the women in their sample had started to consume alcohol later in their life and were older at their first intoxication in comparison to men (Diehl et al., 2007). Nevertheless, more women are receiving a diagnosis of alcoholism (defined

using DSM-III-R criteria) at an earlier age, an age similar to that at which men become alcoholic (Holdcraft, 2002). Females have been shown to have a shorter time between the start of continuous alcohol consumption and the onset of alcohol dependence and subsequent need for inpatient treatment in comparison to men (Diehl et al., 2007). Furthermore, the risk of alcoholism (DSM-IV and ICD classification) was found at much lower levels in women compared to men (Diehl et al., 2007). Similarly, in a Danish study, the risk of developing alcoholism (ICD classification) was much greater for women in comparison to men who were not at risk until they drank substantially more frequently and in greater quantities than women, thus emphasising the increased risk of alcohol associated problems at much lower levels of consumption in women (Flensborg-Madsen et al., 2007).

Qualitative studies would provide much needed insight as to *why* alcohol consumption is converging, particularly during the peak reproductive years.

Alcohol use and constructions of gender

Alcohol has been described as a social lubricant that provides an opportunity to portray one's status and an image of one's self (Rudolfsdottir and Morgan, 2009). Moving beyond patterns of alcohol use, this section draws mainly upon qualitative research and cultural studies literature that describes how women are constructed as drinkers and how alcohol facilitates performances of gender.

Masculinity and femininity

In UK culture, women are constructed as carers; wives and mothers (McKie et al., 2001). Therefore, our perceptions of women's health behaviours, including their alcohol use, are framed by the normative values ascribed to this cultural image of femininity. Empirical research and evidence from market research shows that masculine drinking is typically associated with more frequent heavy alcohol use in comparison to feminine drinking, typified by infrequent light alcohol use (de Visser and Smith, 2007; Lyons et al., 2006). In consequence, women have to find a compromise between their enjoyment of drinking and their desire to portray themselves as feminine (Rolfe et al., 2009; Rudolfsdottir and Morgan, 2009; Lyons and Willott, 2008).

A study in Scotland in 1994 linked high masculinity scores amongst employed adults to heavy drinking, pointing to the importance of gender role orientation (Emslie et al., 2002). Likewise, a study of women aged 30-59 carried out in the Czech Republic found that non-traditional gender role orientation, specifically traits of egalitarianism and hedonism, were associated with a greater likelihood of hazardous drinking and consumption of quantities per occasion usually associated with male patterns of drinking (Kubicka and Csemy, 2008). However, Moller-Lumkuler et al (2002) challenge gender role orientation as an explanation for heavy drinking, noting that in their sample of 112 female German alcoholics (average age 42 years), nearly half (49%) were categorised as having an undifferentiated gender role orientation (Moller-Leimkuhler et al., 2002).

Evidence points to converging patterns of alcohol use in more economically equal countries and research suggests this may be the result of a broader shift away from

traditional gender roles (male breadwinner, female carer). A longitudinal study carried out in the US between 1979 and 1994 found that traditional gender role attitudes were associated with a lower frequency of drinking in both men and women (aged 14-22 years) (Christie-Mizell and Peralta, 2009). However, unlike drinking frequency, gender role attitudes were not found to be associated with drinking quantity (Christie-Mizell and Peralta, 2009).

Wells et al (2011) examined 14 different countries and discovered that gender differences in high income countries where alcohol is readily available were small and that men and women (aged 18-29 years) differed little in their first stages of alcohol use. Similarly, a multinational study (22 countries in Europe including the UK, the Americas, Asia, Australasia and Africa) showed that across all age groups, gender differences in the frequency of drinking in public domains were associated with greater gender equality in economic participation rates within a country, once country-level economic status had been controlled (Bond et al., 2010). Countries with greater economic equality between men and women like Sweden, Denmark and Iceland had smaller differences in public drinking frequency (Bond et al., 2010). Interestingly, this study also examined private drinking and found that, although men drank significantly more frequently in public than women, there were no significant gender differences in private drinking.

Problematising women's alcohol use

Despite evidence of gender convergence in patterns of alcohol use amongst men and women, women's alcohol use is often problematised, perhaps for fear of challenging the consensus that celebrates abstinence and non-public 'light' alcohol consumption amongst women, particularly mothers. The literature is particularly illuminating in this regard and illustrates how alcohol use amongst women is often portrayed as an immoral and dangerous pursuit whilst simultaneously promoting drinking amongst this group (Day et al., 2004).

Research that examines media portrayals of men and women's drinking suggests that alcohol use is a masculine trait and therefore a normative behaviour amongst men. In contrast, alcohol use amongst women is not aligned with femininity and is often viewed negatively (Day et al., 2004; Jackson and Tinkler, 2007; Lyons et al., 2006).

Drinking amongst women is rarely described as intrinsically pleasurable and is more often described in the media as a behavioural response to a problem in which women are portrayed as "neurotic self-medicating women" (Day et al., 2004).

In their review of national newspapers between 1995 and 2005, Jackson and Tinkler (2007) described the double standards evident in the discourse surrounding alcohol use behaviours of men and women. The language used included terms such as "ladette" and suggested that women wanted to be seen to be like men (Jackson and Tinkler, 2007). Similar results were reported in an earlier review of newspaper coverage in the UK between 1998 and 2000 (Day et al., 2004). This change in discourse may in part reflect the changing roles of women that negate traditional gender roles (male breadwinner, female carer) (Lyons et al., 2006). Evidence from a study that examined 18 UK magazines aimed at 18-25 year olds over a 3 month period (November 2001-January 2002) found that women's drinking was represented in terms of: "working hard, professional lives, out with friends, and relaxing - traditionally masculine ways" (Lyons et al., 2006). As a result of women's adoption of more "masculine ways", men's drinking was portrayed with increasingly stronger masculine images using "battle and war metaphors" (Lyons et al., 2006). Previous research has expressed the need for caution in terms of gender stereotyping alcohol use warning that it may only serve to increase health inequalities (Day et al., 2004).

Sexual behaviour and vulnerability

There is evidence to suggest alcohol use is associated with sexual behaviour and changing attitudes towards sex. A qualitative study by Abrahamson (2004) that combined a questionnaire with nine focus group discussions with Swedish men and women aged 20-25 years noted that women associated alcohol with more liberal sexual attitudes and men associated alcohol with increased social and sexual forwardness. Similarly, in their examination of newspaper articles between 1998 and 2000, Day et al (2004) described how women's sexual advances in the context of alcohol use were referred to as "predatory" and how women drank specifically to go "on the pull" and attract men which was seen as atypical feminine behaviour.

Research has highlighted that intoxication amongst women in particular was considered morally questionable (Abrahamson, 2004). Likewise, a qualitative study of men and women in New Zealand aged 20-29 years who took part in focus group discussions found that women's heavy drinking was perceived more negatively than men's (Lyons and Willott, 2008). Nevertheless, mixed methods and qualitative research amongst British students has shown that individuals are aware of the double standards associated with male and female alcohol consumption (de Visser and McDonnell, 2011; Rudolfsdottir and Morgan, 2009). In terms of sexual boundaries, evidence indicates that alcohol was often seen to be to blame for the "blurring" of such boundaries (Rudolfsdottir and Morgan, 2009). Similarly, qualitative research in the US described how women were able to maintain their status as 'good' women by using alcohol as an "excuse" to enact typically male behaviours at "bachelorette" parties (Montemurro and McClure, 2005).

Furthermore, evidence suggests that young women accept the fact that they are viewed more negatively when drunk and that excessive alcohol use entails both moral and sexual overtones, whilst acknowledging the vulnerability of drunken women (MacNeela and Bredin, 2011). Additional qualitative research in the UK found that normative beliefs and morals governed the drinking patterns of female students aged 18-23 who controlled their alcohol use to avoid the sexual promiscuity associated with drunkenness (Carpenter et al., 2007). Much of the negative discourse in the media surrounding alcohol use and, in particular, heavy alcohol consumption is framed as a concern for women's safety. However, putting the onus on women suggests that women who do not consume alcohol in a manner deemed appropriate are responsible for any violent consequences that result (Day et al., 2004).

Having reflected upon their findings drawn from a review of national newspapers between 1995 and 2005, Jackson and Tinkler (2007) ascribe the strong negative connotations associated with alcohol use amongst women to an innate fear of the disruptive effect on dominant feminine discourses (women as carers). This is supported by research that has shown how media and public health messages focus on feminine issues arising from alcohol use such as the effect of alcohol consumption on appearance, fertility and maternal health (Day et al., 2004).

Motherhood

Gender is intrinsically linked to women's mothering and caring role and it is important to consider motherhood as an additional dimension to the already complex relationship between gender and alcohol use. Research suggests that femininity equates to motherhood and heavy drinking among women, especially mothers, is viewed as "deviant" and breaking "traditional codes of femininity" (Lyons and Willott, 2008). The study by Lyons and Willott (2008) is one of the few studies that looks within the category of 'women' and identifies a woman's status as a mother as an important factor influencing perceptions of appropriate use of alcohol consumption.

One additional study involving alcohol dependant women in South Korea revealed how drinking was positively reinforced until they became married with children (Kim et al., 2010). Rolfe et al (2009) describes how the women in their sample had to negotiate their drinking practices in order to protect their status as a 'good woman' and that their alcohol consumption became a balancing act (Rolfe et al., 2009). Likewise, Lyons and Willott (2008) describe how women have to negotiate their alcohol use and are often criticized for drinking during pregnancy, while breastfeeding and throughout motherhood more generally. In a qualitative study carried out in the UK of 18-22 year old female students, there was a strong belief that parenthood necessitated reduced alcohol consumption and failure to do so was considered irresponsible (Rudolfsdottir and Morgan, 2009). Thus, alcohol use is woven into the construction of the 'good' responsible mother, with 'bad' irresponsible mothers distinguished by their drinking habits.

Summary - age and gender effects

Gender and age have been found to influence alcohol use. However, much of our understanding of patterns and perceptions of alcohol use derives primarily from quantitative studies; there is a scarcity of qualitative studies in this area that explore the meaning associated with alcohol use amongst men and women at different ages. Furthermore, the research to date is primarily on binge drinking and problematic drinking behaviour, thus offering little insight into alcohol use in the majority of the population who do not engage in problematic drinking behaviours. In addition,

changes in drinking patterns with age are likely to reflect and, potentially mask, the influence of major life transitions. With respect to women, becoming a mother is a major experience and may be a major contributor to differences in alcohol use by age. This suggests research could usefully focus on alcohol use at a crucial transitional point and life stage in women's lives, that of becoming and being a mother.

The social patterning of women's alcohol use

Having illustrated that patterns of alcohol use differ according to age and gender, this next section goes on to provide evidence from the broader review that highlights the influence of socio-economic and domestic circumstances on patterns and perceptions of alcohol use among women: non-drinkers, drinking frequency, drinking quantity and binge/heavy drinking (see p.10 and appendix 1 for details of the search strategy). It pays particular attention to evidence that encompasses women's peak reproductive years (16-44). What becomes apparent is the range of socio-economic markers used and the resulting need for caution in drawing conclusions across studies, as well as the lack of research that specifically relates to women's alcohol use during the peak reproductive years (16-44).

Non-drinking

Very few studies were identified in the broader review that reported rates of non-drinkers according to socio-economic circumstances ($n = 4$). In a multinational study that included 15 different countries, the UK was one of the few countries with different abstention rates between men and women, across all age groups according to their educational attainment (Bloomfield, 2006). Consistent with the findings of Mortensen et al (2006), educational attainment was not significantly associated with non-drinking for men; however, non-drinking was more likely in women with lower educational attainment (Bloomfield, 2006).

In relation to the peak reproductive years (16-44), one study carried out in Denmark found an association between men and women aged 29-34 who were non-drinkers (including individuals who drank very occasionally) and lower parental social status, educational attainment, and intelligence scores in women (Mortensen et al., 2006).

Drinking frequency

The search of studies indicated that a great deal more research has been carried on the frequency of alcohol consumption in relation to socio-economic circumstances ($n = 11$). Advantaged socio-economic and domestic circumstances are associated with increased frequency of drinking. Indeed, a postal questionnaire that investigated the drinking patterns of adults aged 18-77 years across 50 different neighbourhoods in

Melbourne Australia found that advantaged women, in terms of their educational attainment and household income, drank more frequently (Giskes et al., 2011). Consistent with the findings across all age groups, a study in New Zealand that examined the frequency of alcohol consumption within the peak reproductive years (18-26 year olds) found that high income resulted in increased frequency of drinking (Casswell, 2003). With regards to occupation, a longitudinal national survey of 14 to 22 year olds in the USA showed that employment and the transition to employment was linked to increased frequency of drinking (Christie-Mizell and Peralta, 2009).

Domestic circumstances were also investigated in this US study. Marriage and the transition to parenthood was found to be associated with decreased frequency of drinking amongst women but not men (Christie-Mizell and Peralta, 2009). However, this study only included young parents and may not be comparable to older parents or parents from different cultures. Moreover, a subsequent study went on to suggest that, although married people had a significantly lower frequency of public drinking, they had significantly higher rates of drinking in private (Bond et al., 2010). A French study investigated the weekly frequency of alcohol use amongst divorcees and widowers in comparison to married women (Zins et al., 2003). They discovered that divorcees and widowers drank less frequently than married women whose drinking increased 1 year prior to marriage and up to 4 years after marriage (Zins et al., 2003). Divorce reportedly led to a decrease in alcohol consumption for approximately 1 year after (Zins et al., 2003).

A family history of alcohol abuse has been associated with increased frequency of alcohol use in early adulthood, and an increased chance of becoming an adolescent parent (Little et al., 2009). Moreover, in their US study, adolescent parenthood (aged 11-18) was found to be associated with increased frequency of alcohol use in comparison to non-adolescent parents (Little et al., 2009).

Drinking quantity

The review of women's alcohol use resulted in a significant number of papers on the quantity of alcohol consumption and socio-economic circumstances ($n = 11$). The search suggested that, whilst there is an association between advantaged circumstances and increased frequency of drinking, the opposite appears to be true

concerning the quantity of alcohol consumed, with advantaged individuals tending to consume smaller quantities of alcohol. For instance, a cross-sectional Australian study found that disadvantaged men and women across all age groups, as measured by educational attainment and household income, drank greater quantities on each drinking occasion (Giskes et al., 2011).

The above findings concur with those of other studies whose focus is population groups aged within the peak reproductive years (16-44). For example, Casswell (2003) showed that lower educational attainment led to increased quantities consumed per drinking occasion among 18-26 year olds. Employment has also been linked to alcohol consumption patterns. Lower occupational groups and individuals who are unemployed have been found to drink increased quantities per drinking occasion at ages 18-21, but smaller quantities at age 26 (Casswell, 2003). A similar longitudinal study revealed differences between employed and unemployed men and women in terms of the quantity of alcohol they consumed (Christie-Mizell and Peralta, 2009). They discovered that employment increased the quantity of alcohol consumed in men but decreased the quantity of alcohol consumed in women aged 14-22 (Christie-Mizell and Peralta, 2009). The same study showed that marriage, compared to single people was associated with decreased drinking quantity in both men and women (Christie-Mizell and Peralta, 2009). Investigating the link between marital status and quantity of alcohol use, Zins et al (2003) found that divorcees and widowers drank smaller daily quantities than married women. However, the majority of studies that investigate the quantity of alcohol consumed favour young adults and therefore may not be applicable to the rest of the population, including older adults who are still aged within the peak reproductive years.

Research suggests that there is a link between a history of alcohol abuse in the family, increasing quantities of alcohol consumption during early adulthood, and an increased likelihood of adolescent parenthood (Little et al., 2009). In addition, adolescent parents (aged 11-18) have been found to consume greater quantities of alcohol in comparison to non-adolescent parents (Little et al., 2009).

Binge/ heavy drinking

The literature review of women's alcohol use found the most substantial number of quantitative papers relating to socio-economic circumstances were in relation to binge/heavy drinking ($n = 21$). The papers identified through the search indicate that individuals regard binge drinking and heavy alcohol consumption differently according to their age and level of deprivation (McMahon et al., 2007). A study in Scotland revealed that the general public defined binge drinking in accordance to levels of intoxication as oppose to referring to official guidelines (McMahon et al., 2007). Deprivation in relation to jobs and lack of entertainment were cited as reasons for binge drinking behaviour (McMahon et al., 2007). However, in a more recent Australian study, neighbourhood disadvantage was not found to be associated with high risk alcohol use ($\geq$11 and $\geq$7 drinks per week in men and women respectively) amongst the general public (Giskes et al., 2011).

Amongst French adults, increased deprivation in men and women, as measured by occupation, household income and employment status, has been associated with increased alcohol abuse ($\geq$2 positive responses on CAGE/DETA questionnaire), with evidence of social gradients (Baumann et al., 2007). Furthermore, comparing men and women with alcohol problems, one US study found that women were less likely to be employed and more likely to have lower incomes (Timko, 2005). Studies carried out in Australia have also found an association between disadvantage amongst men and women aged 18-76 and the risk of heavy alcohol use (drinking on average $\geq$7 drinks/day and $\geq$29 drinks/week in men, and $\geq$5 drinks/day and $\geq$15 drinks/week in women in the past year) (Giskes et al., 2011). However, contrary to the studies conducted by Bauman et al (2007) and Timko (2005), Giskes et al (2011) found that educational and household income disadvantage in Australian women aged 18-76 decreased the risk for short term harm associated with heavy alcohol use (drinking on average $\geq$7 drinks/day and $\geq$29 drinks/week in men, and $\geq$5 drinks/day and $\geq$15 drinks/week in women in the past year), and it was advantaged women who were at increased risk of short term harm from heavy alcohol use (Giskes et al., 2011).

Using educational attainment as a social measure, a multinational study across 15 countries (including the UK) found that the risk of heavy drinking (>20g

ethanol/day) was positively associated with increased educational attainment among women aged 25-59 in the following countries: Germany, Netherlands, France, Switzerland, and Austria (Bloomfield, 2006). In men, lower educational attainment was generally associated with increased risk of heavy drinking (>30g ethanol/day) irrespective of country of origin (Bloomfield, 2006; Kuntsche et al., 2006b). Other studies found that higher levels of educational attainment were associated with decreased incidence of binge drinking (>60g ethanol in women and >80g ethanol in men) (Jukkala et al., 2008). In a Scottish study, higher IQ scores at age 11 were associated with a decreased prevalence of hangover in middle aged men and women that was not attenuated by childhood socio-economic circumstances, measured using father's occupation, but was significantly attenuated by adult socio-economic position, measured by housing tenure, car ownership, educational attainment, income and occupation (Batty et al., 2006).

Occupation is a key measure of socio-economic circumstances and a number of studies have linked occupational status to patterns of alcohol use. In the UK, heavy drinking (>20g ethanol/day in women and >30g ethanol/day in men) has been associated with being in employment (Kuntsche et al., 2006b). Interestingly, in this multinational study, the UK had the highest rates of unemployment amongst women in comparison to men and this suggests that national data on alcohol use patterns that do not account for employment status may be skewed (Kuntsche et al., 2006b).

Employment type has been found to influence drinking patterns and associated health outcomes. A study conducted in Finland found that manual workers were twice as likely to suffer alcohol related death or hospitalisation in comparison to non-manual workers (Makela, 2008). However, they stated that drinking patterns only explained a small fraction of the excess hazard in the lower socio-economic group, thus suggesting that, among heavy drinkers, the outcomes are more severe for individuals in lower socio-economic groups (Makela, 2008). Research suggests that work drinking cultures as opposed to occupational status affects alcohol consumption and, in her study of doctors, Rosta (2008) found that female surgeons and surgeons overall, drank more than female doctors including hazardous drinking patterns (Score of 9+ on Modified Alcohol Use Disorders Test) (Rosta, 2008).

Income is another measure of socio-economic circumstances included in the alcohol research literature. A study carried out in Moscow by Jukkala et al (2008) identified a link between financial strain and bingeing (>60g ethanol/day in women, and >80g ethanol/day in men). Women with economic problems drank less whereas men drank more (Jukkala et al., 2008). A large US study of adults aged 18 and over cited income as the only social factor positively associated with hazardous drinking, defined as driving after drinking and driving whilst drinking (Keyes and Hasin, 2008). Income was not found to be associated with heavy drinking (>5 drinks on one occasion in the past year) in other countries such as Brazil (Lima et al., 2007). Income deprivation amongst mothers in the USA has been associated with neighbourhood disorder and stressful life events which are in turn associated with increased psychological stress and problematic alcohol use, defined as meeting 2 of the following criteria: drinking >5 drinks per day in one month, having ≥ 1 alcohol dependence symptom, and ≥ 1 tangible consequence of alcohol misuse (law, work, or social consequences) (Mulia, 2008). There was little evidence to suggest that social support buffered the effects of these stressors on subsequent problematic alcohol use (Mulia, 2008).

In terms of domestic circumstances, individuals dependant on alcohol, according to DSM-III-R criteria, are less likely to be married (Holdcraft, 2002). Being married has been found to have a protective effect against heavy drinking (>20g ethanol/day in women and >30g ethanol/day in men) (Kuntsche et al., 2006b). Jukkala et al (2008) went on to add that it was in fact only married women who drank less than non-married women whereas married men drank equal amounts to their unmarried counterparts. Furthermore, the incidence of heavy drinking (>5 drinks per occasion in the past year) has been found to be more closely associated with having a partner who is also a heavy drinker (Lima et al., 2007).

Much of the research on social circumstances and binge drinking behaviour includes participants aged within the peak reproductive years (16-44). The following section provides an overview of the research unearthed in my review that specifically relates to men and women who fall within this age group.

Increased neighbourhood poverty in the USA has been found to be associated with an increased risk of bingeing ($\geq$5 drinks on one occasion in the past month) amongst 18 to 30 year olds (Cerda et al., 2010). A number of studies have sought to further quantify the relationship between deprivation and binge drinking. In studies taking educational attainment as the measure of socio-economic position, adolescents and young adults (aged 18-27) in the USA whose parents had higher educational attainment and incomes were found to be at increased risk for binge drinking ($\geq$5 drinks on one occasion $\geq$1/month over the last year) (Humensky, 2010). In addition, heavy drinking ($\geq$6 drinks on one occasion) past and present has been found to be positively associated with the number of years of schooling amongst women aged 24-31 (Jones, 2002).

Having children was found to have a protective role in terms of heavy drinking (>60g ethanol in women and >80g ethanol in men) amongst men and women aged 25-49 (Kuntsche et al., 2006b). However, in a large cross-sectional study, Tsai et al (2007) found that 2% of pregnant and 13% of non-pregnant women had binged (drank 5 or more drinks on one occasion) in the last 30 days (Tsai et al., 2007). During pregnancy, women with higher educational attainment, those who were employed, unmarried, and in lower income groups were more likely to binge ($\geq$5 drinks on one occasion in the previous 30 days) (Tsai et al., 2007). A similar study by Caetano et al (2006) found pregnant and non-pregnant women, aged 30 years and under, who had never been married, with greater educational attainment, were at increased risk of heavy drinking ($\geq$4 drinks on one occasion in the past year/ meeting AUDADIS-IV criteria for alcohol abuse/ alcohol dependant according to social, physiological and legal consequences of alcohol misuse). Unemployed pregnant women were also found to be at increased risk of bingeing ($\geq$4 drinks on one occasion in the previous year) (Caetano, 2006).

Summary - social circumstances and alcohol use

The evidence on the link between social circumstances and alcohol use is predominantly quantitative. It paints a complex picture, often varying by the measure of social circumstances in question. In addition, qualitative research exploring the reasons behind any associations is largely absent. In particular, despite the centrality

of children in women's lives and the responsibility associated with bringing up children, the review suggests that research in the alcohol field has largely failed to explore alcohol consumption patterns amongst mothers. Furthermore, the circumstances in which parenthood is experienced are likely to influence drinking patterns, particularly in the UK with rates of single parenthood at 17.7%, the highest across 8 different countries (Kuntsche et al., 2006b).

Conclusion

Research has revealed patterns of alcohol use according to age, gender, and social circumstances. However, research on alcohol use is dominated by studies of specific groups within the population and, in particular, young adults and students, thus limiting the applicability of findings. Additional research is needed that examines under-investigated members of the population, for example mothers, in order to increase our breadth of understanding with regards to alcohol use in this key population group.

Drawing together evidence from two national surveys: the Health survey for England (2009) and the General Lifestyle Survey (2009), and the evidence uncovered through the review, it can be concluded that research on alcohol use is a developing field of study. Other than the two aforementioned surveys that examined age and gender effects on patterns of alcohol use, there were very few English studies identified in my broader review, which, given evidence of the importance of cultures and economic contexts, limits the applicability of non-UK studies to women in the UK. Furthermore, despite the wealth of research on alcohol use, the dominant research designs are quantitative with few qualitative studies. Qualitative research that investigates people's perceptions of alcohol use is necessary to increase our understanding of the complexities associated with individual alcohol use. More studies are needed that go beyond the simple quantitative patterning of alcohol use (Lindsay, 2006). The available research also favours the minority who engage in binge drinking behaviour and problematic alcohol use. What is missing is an examination of the majority who engage in habitual drinking patterns.

Chapter 2 prepares the way for the multi-methods study that forms the core of the thesis. Chapter 2 describes a scoping review on maternal alcohol use, undertaken in

order to identify research literature pertaining to the social patterning of alcohol use amongst mothers missed by the broader review presented in Chapter 1. Chapter 3 then provides an overview of the research on the experience of contemporary motherhood in an attempt to contextualise the research that follows.

Chapter 2: A scoping review of the literature on alcohol use in women with children

Background

Chapter 1 highlighted that, despite a wealth of research on alcohol use, studies in this area appear to have a restricted focus. As previously noted, much of the research is concerned with specific population groups, for example, adolescents, young adults and students, and with the minority who engage in problematic patterns of alcohol use. Less attention is given to other groups, or to the ways in which individuals who do not exceed recommended limits incorporate alcohol use into their everyday lives. In consequence, our understanding of women's alcohol use is skewed by the dominant research focus on the minority who engage in problematic alcohol use. In contrast, there is only limited evidence on the majority's patterns of alcohol use.

Against this backdrop, an exploratory scoping review of the literature was undertaken to identify research that sheds light on alcohol use among mothers and to highlight any gaps in the research literature (Arksey and O'Malley, 2005). In contrast to the narrative review in chapter 1, this scoping review provides a more systematic examination of the literature in order to identify papers with information on whether and how, mothers' alcohol use is related to their social circumstances.

Methods

Criteria for the inclusion of papers in this review

Study design

Scoping reviews aim to be inclusive (Tsai et al., 2007) with respect to research design; therefore, quantitative, qualitative and mixed/multi-methods research designs were included. All observational studies - cohort studies, case control studies, case series and cross-sectional studies - were included. Qualitative research obtained from focus groups and interviews were also included.

Types of participants

The main sample and sub-group of the population were mothers. One exception was papers that ran separate analyses for mothers despite them not being the main population group under study. Papers whose main population group consisted of non-mothers or pregnant/ breast-feeding mothers were excluded.

Socio-demographic measures

The socio-demographic measures include socio-economic and domestic markers of women's social circumstances identified as important in chapter 1 and are discussed in greater detail in the latter chapters of the thesis.

- Childhood circumstances, measured according to father's occupation
- Educational attainment, measured by age of leaving education or qualifications obtained
- Occupational status, measured by employment status or registrars general classification
- Equivalised household income
- Age of first live birth
- Relationship status (single, cohabiting, married)
- Number of children living in the household

Subjective measures of social circumstances, such as perceived social status, were excluded because of their subjective status which made it difficult to draw evidence together across studies with regards to mothers as a collective group.

Outcome measures

Alcohol use was the outcome of interest. Papers which reported the frequency and/ or quantity of alcohol use were included in this review, as were papers reporting the prevalence of specific drinking behaviours such as binge/heavy drinking. Papers whose main outcome did not relate to alcohol use were excluded, as were those whose measurement of alcohol use was ambiguous or unclear.

Search strategy for identification of papers

Electronic searches

Electronic searches of the following databases were conducted;

- EMBASE was searched for the period 1980 to 2011 (searched March 2010 and repeated on 29/06/2011 via Ovid interface)
- MEDLINE (R) was searched for the period 1948 to 2011 (searched March 2010 and repeated on 29/06/2011 via Ovid interface)
- PSYCINFO was searched for the period 1987 to 2011 (searched March 2010 and repeated on 29/06/2011 via Ovid interface)
- IBSS was searched for the period 1990 to 2011 (searched March 2010 and repeated on 29/06/2011 via Ovid interface)
- ASSIA was searched for the period 1990 to 2011 (searched March 2010 and repeated on 29/06/2011 via Ovid interface)

An initial search was carried out on Medline using a number of search terms (e.g. alcohol, drinking pattern, mother, housewife, parent, socio-economic, poverty, quantitative, qualitative). Following the initial search, search term vocabulary, Boolean logic, and syntax rules were adapted for each individual database, copies of which have been included in the appendix (Appendix 3).

Hand searching

A hand search was conducted of two specific journals whose content was likely to elicit appropriate papers; *Addiction* and *Alcohol and Alcoholism*. The search was limited to a five year period 2006 to 2011 due to time and resource limitations.

Grey literature

The following resources were searched for grey literature; Google Scholar, Index to Thesis, and the Health Management Information Consortium. Using the key words alcohol, alcoholism, mothers, parents, parenthood and motherhood, a search was conducted that spanned a ten year period 2001 to 2011. The search was conducted within this time frame in an attempt to manage the number of references and to

ensure that the articles retrieved were contemporary. One piece of relevant research was originally identified through the initial electronic search (Waterson et al., 2002), the primary source (Waterson, 1992) was retrieved from the grey literature.

Citation search

A citation search was conducted of those papers included in the review for additional papers of interest.

Search of other UK cohort data

I specifically searched for papers examining other UK cohort data: the 1946 National Survey of Health and Development (NSHD), 1958 National Child Development Study (NCDS), 1970 British Cohort Study (BCS70), 1998 Southampton Women's Survey (SWS), and the Avon Longitudinal Survey of Parents and Children (ALSPAC) for research on alcohol use among mothers with pre-school aged children. However, I was not able to identify any papers.

Data collection and analysis

Data extraction and management

Following each search, references were exported into Endnote X4, a reference management tool. A folder that contained all of the references ($n = 7913$) obtained from the combined searches was created and duplicates were removed ($n = 550$). Of the remaining papers, those considered not applicable following an initial screening of titles and abstracts were removed ($n = 7316$). A separate folder was created in Endnote to manage the papers whose full texts would be screened for eligibility using a pre-defined inclusion criteria ($n = 47$).

Inclusion criteria

After screening the titles and abstracts of papers identified through the initial search, a number of papers ($n = 47$) were highlighted as potentially relevant and requiring further examination. Full text copies of these papers were obtained and screened alongside a set of pre-defined inclusion criteria (Table 2).

Table 2 Pre-defined inclusion criteria to assess eligibility of papers for the review

		Yes	No
Q1.	Are non-pregnant/ non-breastfeeding mothers the <u>main</u> population sample?	1	0
Q2.	Has separate analysis been carried out on mothers if they were not the main population group?	1	0
Q3.	Is there an appropriate measure of social circumstances?	1	0
Q4.	Is there a comparable group of mothers?	1	0
Q5.	Is alcohol consumption one of the main outcomes of interest?	1	0

Nb. A minimum score of 4 is required to be eligible for inclusion in the review.

Excluded papers

A number of papers were excluded because they did not include an appropriate measure of social circumstances ($n = 3$), for example, measures included psychological distress including neighbourhood disorder and stressful life events, and other psychometric measures such as: mental health problems, social support, family cohesion and aggressiveness. One study included race/ethnicity, however, while used as a proxy in the US, the study was excluded because it is not a traditional measure of socio-economic circumstances in the UK. In addition, studies were excluded on the grounds that they did not have a comparable group of mothers ($n = 2$). For example, one study described disadvantaged mothers' alcohol use without comparison to non-disadvantaged mothers. The second study compared adolescent mothers with adolescent non-mothers. Alternatively, studies were excluded because they did not include alcohol use as their main outcome measure ($n = 8$). The majority of papers were excluded because the main population group did not consist of non-pregnant/ non-breastfeeding mothers ($n = 29$) (see Appendix 4 for a list of the excluded papers).

Flow chart of search results

EMBASE n = 186

MEDLINE (R) *n* = 392

PSYCINFO *n* = 1089

IBSS *n* = 2493

ASSIA *n* = 3745

Hand search *n* = 4

Search of references *n* = 4

Titles and abstracts identified and screened *n* = 7913

Duplicates *n* = 550

Excluded *n* = 7316

Primary source grey literature *n* = 1

Full copies retrieved and assessed for eligibility *n* = 47

Excluded *n* = 42
- Mothers not main population group *n* = 29
- Alcohol use not main outcome *n* = 8
- Inappropriate measure of social circumstances *n* = 3
- No comparable group of mothers *n* = 2

Papers meeting inclusion criteria *n* = 5

Assessment of methodological quality of included papers

One of the main limitations is that this review was carried out with only one reviewer and, as such, is subject to bias during the searching and selection process and also during the extraction and analysis of the selected papers. In an attempt to reduce bias, strict criteria were followed through which to select papers and assessment tools with pre-defined questions were utilised to assess the methodological quality of the selected papers (Table 3).

Quantitative study designs were assessed using a modified tool consisting of 16 questions that combined information from the CASP (Critical Appraisal Skills Programme) tool (CASP, 2004) (Appendix 5) relating to the methodological quality of cohort studies. The modified version enabled me to assess the quality of alternative study designs when there was no specific CASP tool for example, cross-sectional research. In addition, guidelines from Cochrane on the inclusion of non-randomised studies were used (Higgins and Green, 2011)

Qualitative research was assessed using a CASP tool (CASP, 2006). This tool consists of ten questions that relate to the methodological quality of qualitative research.

Table 3 Methodological quality of eligible papers.

	Study design				
	Quantitative*				**Qualitative****
Assessment criteria	*Avison and Davies (2005)*	*Kokko et al., (2009)*	*Maloney et al., (2010)*	*Stroup-Benham et al., (1990)*	*Waterson E.J, (1992)*
Criteria met	10	9	10	7	9
Criteria not met	6	7	6	9	1
% of criteria met	63%	56%	63%	44%	90%

*Quantitative studies were assessed using a modified tool consisting of 16 questions that combined information from the CASP tool on cohort study design and guidelines from Cochrane on the inclusion of non-randomised studies.

** Qualitative studies were assessed using the CASP tool for the appraisal of qualitative research.

Papers that met the pre-defined selection criteria (*n* = 5) were scrutinised and data from each of the papers were extracted on a data collection form. The type of data collected was adapted based on the Cochrane non-randomised studies data collection form (Higgins and Green, 2011) and included the following;

- The overall aim of the paper
- The study design
- The sample size
- The method of data collection
- The sample characteristics e.g. age and ethnicity of the participants
- The indicators of social circumstances
- The outcome measures
- The country in which the study was conducted

Table 4 provides a summary of the data collected from each of the eligible papers (*n* = 5). The results are summarised in a separate table later in the review.

On reflection, the limited number of studies considered eligible for the review may have been as a result of the tightly drawn inclusion criteria. In addition, evidence suggests that both quantitative and qualitative studies are less likely to be published if they report non-significant results or results that cannot easily be deciphered (Petticrew et al., 2008). Therefore, potentially relevant studies on patterns of alcohol use among mothers may have been missed, in particular, studies that are more descriptive. More comprehensive search strategies may have been able to counteract this to some extent. However, this was not possible because of time and financial constraints. Nevertheless, all research designs were included and the limited evidence uncovered by the scoping review points to a lack of research on alcohol use among mothers and provides some comparative data for this postgraduate study

The next section describes in detail each of the papers included in this review (*n* = 5). It describes a number of components in turn; the research design, results, and the methodological quality and bias associated with the research.

Table 4 Summary of data from each of the eligible papers

Paper:	Data:							
	Aim	Design	Sample size	Data collection technique	Sample characteristics	Measure of social circumstances	Outcome measures	Country
Domestic circumstances:								
Avison and Davies, 2005	To examine the influence of family structure (single/couple households) on alcohol consumption across different age groups.	Quantitative secondary analysis of a cross-sectional survey	*n* = 779 (Single mothers), and *n* = 2486 (Mothers in a couple)	Secondary data from the CNPHS Canadian National Population Health Survey	Canadian mothers aged 20-64 with at least one child living in the household	Domestic circumstances: Single versus couple (married or common-law couple) households	How often they drank ≥ 5 drinks on one occasion in the past year	Canada
Kokko et al., 2009	To shed light on the association between the timing of parenthood, life transitions, and social functioning including alcohol use. To examine the effect of early parenthood on binge and	Quantitative secondary analysis of a prospective longitudinal cohort study	*n* = 110.	Randomly selected data collected at ages; 14: Teacher ratings and peer nominations 27: Life questionnaire 36: Life questionnaire and	Finnish mothers that had been followed since 1968 from the age of ~ 8 years old.	Timing of parenthood: Early (19-24 years), on time (25-29 years), and Late (30+ years).	How often they drank at least 4 portions of alcohol per session and how often they had become intoxicated; not at all, once a year, less than once per month, 1-3 times a month, once a week and several	Finland

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	problematic drinking.			a semi-structured interview 42: Life questionnaire and a semi-structured interview including a Life history calendar (LHC)				times a week. 'Problem drinking' using the CAGE questionnaire 'Harmful drinking' using a test referred to as MmMast based on MAST (Michigan Alcoholism Screening Test) but modified for Scandinavian use.	
Maloney et al., 2010	To examine drinking patterns of Australian parents and examine whether these patterns differ by family type (single versus couples) To explore characteristics associated with regular problematic drinking amongst	Quantitative secondary data analysis of a cross-sectional self-completed questionnaire	n = 984 (Single mothers), and n = 3875 (Mothers in a couple)	Secondary data analysis of the National Drug Strategy Household Survey (NDSHS)	Australian parents aged 14+ with at least 1 dependent child living in the household	Domestic circumstances: Single versus couple households	>2 drinks per day = 'long term harm' >14 drinks/week = 'heavy drinker' >4 drinks per occasion = 'binge drinking' (categorised as 1-2 times/week or 2-3 times/month)	Australia

	parents							
Stroup-Benham et al., (1990)	To determine whether mothers and children in female headed households had a greater quantity and frequency of alcohol consumption than those households with both a mother and father present	Quantitative secondary data analysis of a cross-sectional questionnaire	*n* = 246 (Single headed households), *n* = 1022 (Dual headed households)	Secondary data from the HHANES Hispanic Health and Nutrition Examination	Mexican American mothers in the South Western United States. Families in which the mother had at least one child under the age of 19	Domestic circumstances: Single (no male headed of household) and dual headed households (both mother and father present)	Total number of drinks, total number of drinking days. Drinks per occasion (In previous 28 days).	USA
Socio-economic circumstances:								
Waterson E .J, (1992)	To account for the minority of mothers who drink heavily and determine whether different socio-economic groups have common features. To explain why heavy drinking was more typical of women in the professional/ managerial group.	Qualitative semi-structured interview lasting and an account of women's 'drinking stories'	*n* = 60. From this group a number of women were asked to recall their 'drinking stories' *n* = 8	This study sample was randomly selected from a larger clinical cohort of women.	First time mothers aged 18+ years, who had agreed to take part in a larger epidemiological study at the West London hospital between May 1981 and February 1982.	Social class based on the registrars 5 fold class (OPCS 1980) subdivided into two groups: Professional/ managerial and other.	Qualitative data obtained from interview and 'women's stories'.	UK

Eligible papers: Domestic circumstances

Avison and Davies (2005)

The aim of this study was to examine whether mothers who lived as part of a couple had significantly different levels of psychological distress and alcohol consumption in comparison to single mothers.

Study design

A secondary analysis of the Canadian National Population Health Survey (CNPHS) was carried out, a cross-sectional survey conducted in 1994.

The original survey gathered data from individuals across Canada ($n = 26429$) on a range of health measures. A subsample of single mothers (14%, $n = 779$) and mothers living as part of a couple (44%, $n = 2486$) aged 20-64 with children living in the household were identified.

The socio-demographic measure was defined as mothers' domestic circumstances dichotomised as; mothers who reported living as a single parent, and those who reported living as part of a two parent family. These two groups were further split by the authors into age categories: 20-34, 35-49, and 50-64 years.

The alcohol outcome measure was defined as the number of occasions participants had drunk ≥ 5 drinks at one sitting during the previous year.

Results

The mean number of occasions mothers drank ≥ 5 drinks at one sitting during the previous year was reported along with significant *p*-values ($p \leq 0.005$).

Single mothers (aged 20-64) more often drank ≥ 5 drinks on each drinking occasion (Mean 3.58) in comparison to mothers living in two parent households (Mean 1.91), $p \leq 0.005$. This difference was largely attributable to mothers in younger age groups (aged 20-34); single (Mean 4.14) versus couples (Mean 2.08), $p \leq 0.005$.

Methodological quality and bias

The sample size of this study ($n = 3265$) was substantial and comparable with that of Maloney et al (2010). Nevertheless, the cross-sectional design means that the study is likely to be subject to recall bias and it is not possible to identify the direction of causality. Very little information was provided on the original questionnaire making it difficult to determine the methodological quality of the survey design including issues such as sampling and recruitment.

Mothers were defined as either single parent families or two parent families. Two parent families included both married and cohabiting mothers and lacked sensitivity with regards to potential socio-economic differences between these two groups that may influence patterns of alcohol use.

The outcome measure (number of occasions drank ≥ 5 drinks at one sitting in the previous year) is a subjective measure reliant on participants being able to accurately recall their alcohol use over a substantial period of time. In addition, defining alcohol consumption according to number of drinks lacks precision since alcoholic drinks contain variable amounts of alcohol.

Despite these limitations, the sample from which the participants were drawn is applicable to the UK population and covers a range of different age groups. This study suggests that family structure has a significant effect on the frequency of heavy alcohol use (≥ 5 drinks on one occasion) and warrants further research.

Kokko et al., (2009)

The aim of this study was to shed light on the association between timing of parenthood and other life transitions (moving from the parental home, obtaining a degree, starting a full-time job, establishing an intimate relationship) and, to examine the consequences of early parenthood on social functioning (educational attainment, occupational status, stability of career line, binge drinking, problematic drinking).

Study design

The authors carried out a secondary data analysis of the Jyvaskyla longitudinal study of personality and social development (JYLS), a prospective longitudinal cohort study that began in 1968 in Jyvaskyla, Finland, when participants were ~ 8 years old up until they were ~42 years old.

A cohort of male (n = 196) and female (n = 173) school children aged ~8 years old was randomly selected from 12 classes across Jyvaskyla, Finland in 1968. The main data collection began when students were aged 14; 96% of boys (n = 189) and 97% of girls (n = 167) took part. At age 27, 85% of men (n = 166) and 90% of women (n = 155) completed a mailed life questionnaire. At age 36, in addition to the life questionnaire, 83% of men (n = 161) and 87% of women (n = 150) were asked to take part in a semi-structured interview, 75% of men (n = 146) and 79% of women (n = 137) responded. At age 42, the life questionnaire was repeated for 79% of men (n = 147) and 85% of women (n =133), as was the semi-structured interview for 70% of men (n = 131) and 80% of women (n = 126). In addition, a number of men (n = 131) and women (n = 125) completed a mailed Life History Calendar (LHC).

Participants eligible for this review include women who were mothers that had completed the LHC from which information on drinking patterns were drawn (n = 110).

The socio-demographic measure was defined as the timing of parenthood, grouped by the authors into three categories: early (19-24 years), on time (25-29 years), and late (30+ years). Originally, early parenthood had been defined as having a child between the ages of 15 and19 however, since fewer than 10% fell into this category, the age range was extended to include those experiencing parenthood up until the age of 24.

One of the outcome measures was the frequency of binge drinking, defined as the number of occasions the participants had consumed ≥4 portions of alcohol per session and the number of times they had been intoxicated during the previous year: not at all, once a year, less than once per month, 1-3 times a month, once a week, or several times a week. 'Problem drinking' was also assessed using the CAGE

questionnaire, a series of four questions to detect alcoholism that has been widely validated. Finally, 'harmful drinking' was assessed using a test referred to as MmMast, a questionnaire consisting of nine questions. The questions were based on the MAST (Michigan Alcoholism Screening Test) developed in 1971, that consists of 25 screening questions relating to individual drinking habits.

Results

Mean numbers engaging in 'binge drinking', 'problem drinking', and 'harmful drinking' were reported along with standard deviations and *p*-values.

Early motherhood was found to be associated with 'binge drinking' at age 36 (Mean 1.77, S.D 1.24) versus on time (Mean 1.48, S.D 1.20) versus late (Mean 0.85, S.D 1.05), $p<0.05$. Early motherhood was also associated with binge drinking at age 42 (Mean 1.79, S.D 1.43) versus on time (Mean 1.51, S.D 1.36) versus late (Mean 0.85, S.D 1.05) $p<0.05$. However, binge drinking differences at age 42 disappeared when average spread of grade scores or GPA (Grade point average) was controlled for $p0.237$. Early motherhood was associated with 'problem drinking' at age 42 (Mean 1.63, S.D 1.81) versus on time (Mean 0.91, S.D 1.74) versus late (Mean 0.42, S.D 0.78) $p<0.01$.

Methodological quality and bias

The sample from which findings about mothers' drinking patterns were drawn was small ($n = 110$). Furthermore, although the paper states that individuals were randomly selected from the general population, the method of sampling is unclear. Therefore, caution is required on interpreting the results obtained in this particular paper.

The socio-demographic measure was gathered using the LHC, a validated tool that relies on the subject's memory to recall the timing of life events including the 'timing of motherhood', a factor found to influence health behaviours and life chances in previous studies (Merryweather, 2009; Teddlie and Tashakkori, 2009). They also sought to validate individuals' responses using prospective data that had already been gathered. However, the resulting categories 'early' (19-24 years), 'on time' (25-29 years) and 'late' (30+ years) may be less applicable to the UK where

the incidence of teenage pregnancies is the highest in Western Europe (UNICEF, 2007).

The outcome measure 'binge drinking' (defined as '4 portions' of alcohol, and 'intoxication') is somewhat ambiguous, does not relate to the UK recommendations, and is open to interpretation. Therefore, measurement bias is likely to have occurred. For example, if one assumes that *a* portion is *a* drink, then it is assumed that 1 pint of beer is equal to a standard 35ml measure of a spirit, which is not the case. In addition, this measure of drinking is reliant on memory and subjects were asked to recall their alcohol intake over a year long time period. This raises the issue of recall bias whereby participants tend to recall past events or behaviours in a more positive light. Reliance on memory is likely to be subject to inaccuracies and it has been suggested that adults underestimate their alcohol consumption by approximately 50% (Smith and Foxcroft, 2009). However, it is a method widely used to determine an individual's alcohol consumption pattern, since more objective measures for instance, blood alcohol levels, are not possible on such a large scale and would be costly, time consuming, and likely to recruit fewer participants. However, the authors did make use of validated tools for the assessment of 'problem' and 'harmful' drinking.

Mean values for the alcohol outcome measures adjusted for educational attainment and stratified by age were reported for each group ('early', 'on time' and 'late'). However, rate differences between groups, that could be argued are most important, were not reported. Furthermore, a number of important confounders were not included in the analysis for example, relationship status, occupational status, and income.

Overall, the sample from which the data was obtained is small and not representative of the UK population. However, it does raise important questions with regards to the timing of motherhood and subsequent problematic alcohol use that require further culturally specific research.

Maloney et al., (2010)

The aim of this paper was to examine the drinking patterns of Australian parents to determine whether they differed according to family type (single versus couples).

Study design

The researchers conducted a secondary data analysis of the National Drug Strategy Household Survey (NDSHS) from 2007. The survey consisted of a set of 'drop and collect' self-completed questionnaires (n =19818) and telephone interview questionnaires (n =3538); response rates were 54% and 42% respectively. A multi-stage stratified random sample was utilised, whereby the sample was stratified into regions oversampling in some states and territories. Random digit dialling was used as the sampling technique for telephone interviews. The next birthday method was employed to select qualifying households from which cross-sectional data was collected. Participants eligible for this review included all women aged 14+ years who reported being a parent/guardian for at least one dependent child in their private household ($n = 4859$).

The socio-demographic measure of interest was mothers' domestic circumstances, defined as women who reported living as a single parent family ($n = 984$), and women who lived as part of a couple ($n = 3875$).

The outcome measures were based on the Australian Alcohol Guidelines (2009). These guidelines classify women who drink >2 drinks per day as being at risk of 'long term harm', those who drink >14 drinks/week as 'heavy drinkers', and >4 drinks per occasion is referred to as 'binge drinking'. Binge drinking was further classified into those women who engaged in bingeing 1-2 times/week and those who binged 2-3 times/month.

Results

Drinking >2 drinks per day has been linked to increasing long term harm according to the 2009 Australian guidelines. This paper found that more single mothers (16%) than mothers in couples (15%) were drinking this amount. However, the difference was not statistically significant. Significant differences were found between single

and couple mothers for binge drinking 1-2 times per week. More single mothers (21%) binge drank than partnered mothers (13%) OR: 1.72 (C.I: 1.32-2.24) $p<0.001$. This means that single mothers are 72% more likely than those in couples to engage in this particular drinking behaviour.

Methodological quality and bias

The sample size of this study ($n = 4859$) was significantly larger than that conducted by Kokko et al (2009). However, the cross-sectional design means we are unable to determine the direction of causality, and the study is likely to be subject to recall bias. Nevertheless, the authors did consider ways in which to improve their data collection, utilising 'drop and collect' questionnaires to reduce the risk of non-participation and interviewer effects, whereby the participants' answers are influenced by their environment and the interviewer themselves.

One disadvantage of this paper was the lack of consideration for confounding factors other than age which was adjusted for. For example, there was no consideration of the number of children living in the household, occupational status, income, education, or the age of the children, all of which are likely to influence patterns of alcohol use. The definition of single and couple households upon which the social circumstances were based also lacked precision. Women in couple households included married and cohabiting mothers, who may have different socio-economic circumstances and different patterns of alcohol use.

The outcome measures are based on subjective reports of alcohol use, but unlike the paper by Kokko et al (2009), the categories of alcohol use were less ambiguous and were classified according to the 2009 Australian guidelines (>2 drinks/day 'long term harm', >14 drinks/week 'heavy drinkers' and >4 drinks/occasion 'binge drinking'). However, measurement bias remains a concern since the amount of alcohol in one drink is not necessarily equal to the amount in another.

Notwithstanding these limitations, the sample representing parents ranged from 14 years and is more suited to the UK parent population. Furthermore, the results point to significant differences in the rate of binge drinking amongst mothers who live as part of a couple, and single mothers, which requires further investigation.

Stroup-Benham et al., (1990)

The aim of this paper was to determine whether the quantity and frequency of alcohol consumption was different in mothers and children in female headed households when compared to those households where the mother and father were present.

Study design

A secondary analysis of a cross-sectional questionnaire, HHANES (Hispanic Health and Nutrition Examination) conducted from 1982-1984 of approximately 12,000 Mexican American women who had at least one child under the age of 19 in the South Western United States; Dade County, Florida and the New York City metropolitan. Eligible participants were drawn from the South Western sample ($n = 1268$) since there were too few single mothers in the other geographical areas.

The socio-demographic measure of interest was mothers' domestic circumstances defined as either single headed household ($n = 246$) where no male head of household was present, or dual headed household ($n = 1022$), whereby both the mother and father were present.

The outcome variables were the total number of drinks, total number of drinking days, and drinks per occasion, in the 28 days prior to the questionnaire. Drinkers were classed as those who had had a drink in the 28 days prior to the questionnaire; those who had not consumed alcohol in the previous 28 days were classed as abstainers.

Results

Adjusted (acculturation, age, education, family income) and weighted mean number of drinks, number of drinking days and number of drinks per occasion in the 28 days prior to the questionnaire were reported. Standard errors were reported that illustrate the standard deviation of a population mean. Single mothers were found to have a greater mean number of drinks (Mean 21.91) in comparison to those in dual households (Mean 0.32). Single mothers were also found to have a greater mean number of drinking days (Mean 3.34) in comparison to women in dual households

(Mean 0.62), and they drank a greater mean number of drinks on each drinking occasion; single households (Mean 6.06) versus dual households (Mean 2.23).

Methodological quality and bias

As with the second paper by Maloney et al (2010), the aim of this paper was to determine whether single headed households drank more than dual headed households. It was unclear whether individuals in the dual headed household were married or cohabiting and also whether the father figure present was the biological father, adoptive father, or otherwise. Similarly, it was unclear whether single headed households had formed as a result of the father being deceased, divorced, or absent. Therefore, their analysis may have missed important differences associated with these increasingly complex family types.

The outcomes of interest were the total number of drinks, total number of drinking days, and number of drinks per occasion, consumed in the 28 days prior to the questionnaire. This type of subjective reporting of alcohol use and the use of drinks as a measure is ambiguous. For example, it cannot be assumed that one pint of beer is equal to one 35ml of spirit since they are different in terms of the amount of alcohol they contain.

One of the strengths of this particular paper was that it gave considerable consideration to a number of confounding variables for example, age, acculturation level, education level and socio-economic status according to combined household income. However, there are other confounding variables that may have warranted investigation such as equivalised household income that takes into account the composition of the household, age at first birth, occupational status, number of children, and the age of the children. The analysis reported weighted means for each group (single headed households versus dual headed households) and illustrated a number of weak associations. It would have been more useful to report the rate, or proportional difference between the groups. In addition, there were missing data in the analysis that was not accounted for (e.g. whether this was due to non-response, inappropriate response, or otherwise). Furthermore, it is important to note the high proportion of non-drinkers (55.6%) in the study, much higher than figures one might expect to find in a UK sample of mothers. Indeed, this study may only be

representative of a small population group of Mexican Americans from the South Western USA and therefore, of limited relevance to the UK population.

As with the first two papers, the paper was also subject to recall bias due to the cross-sectional nature of its design. Furthermore, timing bias may have been an issue. Participants were asked to recall the number of days they drank and the number of drinks per drinking occasion over the preceding 28 days, therefore, depending on the time of year this may have influenced their drinking habits. For instance, one might expect the participants to have reported consuming more alcohol during the holidays or the Christmas and New Year period. In addition, like the previous paper, the measure of alcohol consumed (drinks) is open to subjective interpretation and this may affect the reliability of the results.

With regards to the analysis, missing data appear to have not been accounted for in the sample of women eligible for this review. Therefore, the analysis may be biased if those women who did respond were fundamentally different to those women who did not. However, the overall finding that mothers' alcohol use differs according to whether they reside in a single or dual headed household warrants further exploration.

Eligible papers: Socio-economic circumstances

Waterson E.J, (1992)

The aim of this PhD thesis was to examine patterns of heavy alcohol use amongst mothers'. The researcher also sought to explain why 'heavy drinking' was more typical of women in professional/ managerial occupational groups in comparison to other occupational groups.

Study design

The participants were first time mothers aged 18+ years drawn from a larger clinical cohort of women who had taken part in an epidemiological study prior to, during, and after pregnancy, at the West London hospital between May 1981 and February 1982 ($n = 4807$). Ethnic minority groups and non-drinkers were excluded. Eligible cases ($n = 222$) were placed in numerical order and every *nth* case was selected. A sample of women ($n = 60$) were obtained for interview and a further group of women were asked to provide verbal accounts of their 'drinking stories' ($n = 8$).

The socio-demographic measure was social class obtained from medical notes based on the registrars 5 fold class (OPCS 1980). When women were married/ cohabiting, the male occupation represented the social class of the household, the female occupation represented the social class of the household otherwise. Social class was then subdivided into two groups: professional/ managerial and other. Drinkers were classified as 'Heavy drinkers' (>10 units per week), or 'Light drinkers' (<10 units per week). Four categories emerged; 'Professional/ managerial heavy' drinkers, 'Professional/ managerial light' drinkers, 'Other heavy' drinkers, and 'Other light' drinkers.

Thematic analysis was undertaken of the qualitative data obtained from the semi-structured questionnaires and 'women's stories'. Findings from the data were reported under two key themes; 'opportunities' to drink, and drinking as a result of 'difficulties.'

Results

In all groups, 'problem drinking' was described by the respondents as being offensive to social norms and was distinguished from 'heavy drinking'. All were influenced by previous drinking patterns prior to motherhood.

Professional/ managerial groups had the easiest access to alcohol. They reported increased time demands and pressure and were more dissatisfied with their social contact time. Professional/ managerial 'heavy drinkers' were most likely to drink alone, drank regularly at home and associated their heavy drinking with work related opportunities in their late 20s and employment and relationship difficulties in their 30s.

The 'Other' group (both light and heavy drinkers) had greater physical and psychological problems, had less contact with their peers and were more disappointed with their child care arrangements and overall roles. They were more affected by disadvantage in terms of finances, housing and transport. They had less practical help with housework and childcare. 'Other' 'heavy drinkers' drank less frequently as they had fewer opportunities to go out.

'Heavy drinkers' described using alcohol because it was readily available and to help them cope with difficulties and domestic problems. They moved in circles where social norms favoured drinking and viewed it as relaxing. They described more physical and psychological problems and were less satisfied with their family contact time and childcare arrangements.

Methodological quality and bias

The paper drew upon a much larger clinical epidemiological study and provides a much needed qualitative account of mothers' alcohol use. However, there are some criticisms with regards to how individuals were classified into groups for comparison. Firstly, a somewhat crude measure of socio-economic status was used to determine social class that differed between married/cohabiting women (male occupation), and single women (own occupation). The imprecision of the measure was increased by the use of dichotomous groups ('Professional/ managerial' and

'Other'). The measure of alcohol use was similarly crude, with a cut-off point of <10 units per week for 'light drinkers' and >10 units per week for 'heavy drinkers'. It could be argued that, depending on the frequency of consumption, both amounts could be within the current daily recommendations of 2-3 units per day or in excess of these amounts, they could even fall into the current 'binge drinkers' category (drinking >6 units in one session). Therefore, the analysis may have missed some of the complexities of women's drinking. However, some consideration should be given to the fact that the study was conducted in 1992 when weekly recommendations for the consumption of alcohol were in place; it was not until 1995 that the recommendations changed to daily units of alcohol.

Despite using random selection to select participants, selection bias may still be present if women who agreed to take part in the semi-structured interviews and who gave an account of their 'story' were fundamentally different to those who did not. The results of this paper may also be subject to bias, but unlike the other papers included in this review, it is more likely to have been as a result of the subject in question. Alcohol use in women with children is an emotive subject and social desirability bias is to be expected. However, every attempt was made to put the women at ease and the interviews took place in the participant's home.

Contamination bias may have occurred as a result of the way in which women were grouped according to their partner's occupation, unless they were single in which case their own occupation was used. For example, there were a number of women whose own occupation would have fallen into a different category to that of their partner's. It may have been prudent to have used an alternative measure of social circumstances that better reflects women's situation. Notwithstanding these limitations, this paper does provide insight into the reasons why mothers from different social classes may adopt 'heavy' patterns of alcohol use.

Having described in detail each of the papers included in this review ($n = 5$). The section that follows provides a summary of the overall quality of the evidence identified for the purpose of this review. Table 5 provides a summary of the results from each of the eligible papers ($n = 5$).

Table 5 Summary of results from each of the eligible papers

Paper	Socio-demographic measures	Outcome measures	Summary of results	Crude results	Adjusted results
Domestic circumstances:					
Avison and Davies, 2005	Single mothers versus mothers who were part of a couple (married/ cohabiting)	$\geq$5 drinks on one occasion in the past year	Mothers from single parent families had significantly higher mean scores than mothers in two parent families. This difference was largely attributable to mothers aged 20-34.		Mean number of occasions drinking $\geq$5 drinks in the past year (aged 20-64); single: 3.58 versus couples: 1.91 $p \leq 0.005$ Mean number of occasions drinking $\geq$5 drinks in the past year (aged 20-34); single: 4.14 versus couples: 2.08 $p \leq 0.005$
Kokko et al., (2009)	Timing of motherhood: early (19-24), on time (25-29) and late (30+)	>4 portions of alcohol in one session = 'Binge drinking' 'Harmful drinking' based on the Mm-Mast (Michigan Alcoholism Screening Test further modified for	Early motherhood was associated with binge drinking at age 36 and 42. It was also associated with problem drinking at age 42.	Early motherhood was associated with binge drinking at age 36: Mean 1.77 (S.D 1.24) versus on time: Mean 1.48 (S.D 1.20) versus late: Mean 0.85 (S.D 1.05) $p<0.05$ Early motherhood was associated with binge drinking at age 42: Mean 1.79 (S.D 1.43) versus on time: Mean 1.51 (S.D 1.36) versus late: Mean 0.85 (S.D 1.05) $p<0.05$ Early motherhood was associated with problem drinking at age 42: Mean 1.63 (S.D 1.81) versus on time: Mean 0.91	Binge drinking differences at age 42 disappeared when GPA (Grade point average) was controlled for p 0.237

		Scandinavian use) 'Problem drinking' identified using the CAGE questionnaire		(S.D 1.74) versus late: Mean 0.42 (S.D 0.78) $p<0.01$	
Maloney et al., (2010)	Single mothers versus mothers who were part of a couple	>2 drinks per day = 'long term harm' >4 drinks per occasion = 'binge drinking' (categorised as 1-2 times/week or 2-3 times/month)	Single mothers were significantly more likely to binge drink 1-2 times per week and 2-3 times per month than mothers who were part of a couple.		Drinking >2 drinks per day; Single: 16% versus Couples: 15% – not significant.* Total binge drinking 2-3 times per month; Single: 21% versus Couples: 13%, OR: 1.72 (C.I: 1.32-2.24) $p<0.001$* Total binge drinking 1-2 times per week; Single: 11% versus Couples: 7%, OR: 1.59 (C.I: 1.12-2.26) $p<0.05$*
Stroup-Benham et al., (1990)	Single mothers versus mothers who were part of dual headed households	Total drinks, total number of drinking days, drinks per occasion (Over preceding 28 days)	Single female headed households drank more than women in dual headed households	Total (mean) drinks; Single: 13.17 versus dual: 2.46 Total (mean) number of drinking days; Single: 2.12 versus dual: 0.92 Total (mean) number of drinks per occasion; Single: 4.83	Total (mean) drinks; Single: 21.91 versus Dual: 0.32** total (mean) number of drinking days; Single: 3.34 versus dual:

				versus dual: 2.76	0.62**
					Total (mean) number of drinks per occasion; Single: 6.06 versus dual: 2.23**

Socio-economic circumstances:

Waterson E.J, (1992)	'Professional/ managerial heavy' drinking mothers versus 'Professional/ managerial light' drinking mothers versus 'Other heavy' drinking mothers versus 'Other light' drinking mothers.	Themes; 'opportunities' to drink, and drinking as a result of 'difficulties.'	'Professional/managerial' mothers, and 'other' mothers, had different reasons for 'heavy' drinking. 'Heavy' drinkers shared a number of similar characteristics	In all groups 'problem drinking' was described as being offensive to social norms and was distinguished from 'heavy drinking'. All were influenced by previous drinking patterns prior to motherhood. Professional/ managerial groups had the easiest access to alcohol. They reported increased time demands and pressure and were more dissatisfied with their social contact time. Professional/ managerial 'heavy drinkers' were most likely to drink alone, drank regularly at home and associated their heavy drinking with work related opportunities in their late 20's and employment and relationship difficulties in their 30's. The 'Other' group had greater physical and psychological problems, had less contact with their peers and were more disappointed with their child care arrangements and overall roles. They were more affected by disadvantage in terms of finances, housing and transport. They had less practical	N/A

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				help with housework and childcare.	
				'Other' 'heavy drinkers' drank less frequently as they had fewer opportunities to go out.	
				'Heavy drinkers' described using alcohol because it was readily available and to help them cope with difficulties and domestic problems. They moved in circles where social norms favoured drinking and viewed it as relaxing. They described more physical and psychological problems and were less satisfied with their family contact time and childcare arrangements.	

*Age adjusted, **Weighted adjusted means for; acculturation, age, education, and combined family income.

The papers included in this review are so few ($n = 5$) and diverse in terms of their population, socio-demographic measures, and outcome measures, that they do not allow us to come to robust conclusions about mother's social circumstances and their patterns of alcohol use.

The general methodological quality of the quantitative papers was mediocre. Furthermore, it proved difficult to assess the consistency of the results since the papers were methodologically diverse. The one qualitative paper (Waterson, 1992) was more methodologically sound. However, the classification of mothers into groups based on their social circumstances and level of alcohol consumption lacked sensitivity and may have limited the validity of the results. In addition, two of the papers were published in the 1990s (Stroup-Benham et al., 1990; Waterson, 1992), and as such, may not reflect the drinking patterns of mothers in contemporary society.

Conclusion

This review confirms the lack of research into mother's drinking patterns. In addition, papers that it uncovered suggest that a mother's social circumstances may have an important role to play in the patterning of her alcohol use. However, methodological limitations means that their findings on social patterning should be treated as indicative rather than definitive.

Confirming the findings of the broader literature review summarised in chapter 1, this review points to the need for more contemporary UK-specific research on mothers' alcohol use. The outcome measures for alcohol use should reflect those used to define current UK recommendations (units) and appropriate consideration should be given to the different social circumstances that shape the context of motherhood. Specifically, more robust quantitative research on the patterning of mothers' alcohol use and, context-specific qualitative research that explores the attitudes towards alcohol use in mothers from different demographic backgrounds is needed. With this in mind, chapter 3 'sets the scene' for the multi-methods study

presented in chapters 5 to 9 by providing a brief overview of research that explores the ways in which contemporary motherhood is experienced. Chapter 4 outlines the research design with which I examined the patterns and perceptions of alcohol use amongst women with pre-school aged children.

Chapter 3: Women's experiences of motherhood. A contextual review

Introduction

Chapters 1 and 2 revealed that very little research has been carried out on the alcohol consumption patterns of women with children. Furthermore, the research that was identified was predominantly quantitative, favoured problematic drinking behaviour, certain population groups such as adolescents, young adults and students, and was not specific to the UK population. In consequence, we can say with confidence little about the drinking patterns of mothers in the UK or how their everyday contexts are related to their patterns of alcohol use.

The contexts of motherhood have undergone significant change over the last century. There has been a trend towards later age at first birth, with a standardised mean maternal age of 27.8 in 2010 compared with 26.5 in 2000 (Office for National Statistics., 2011a). There has been an increasing proportion of registered births outside marriage or civil partnerships, with only 53% of parents being married or in civil partnerships at the time of registering the birth in 2010 in comparison to 61% being married in 2000 (Office for National Statistics., 2011a). The proportion of parents cohabiting at the time of registration has increased from 25% in 2000 to 31% in 2010 (Office for National Statistics., 2011a) and the number of lone parents has decreased slightly from 7.6% in 2000 to 5.9% in 2010 (Office for National Statistics., 2011a).

The working status of mothers has also undergone substantial change. In 2010, 66.5% of all mothers were in employment compared with 67.3% of non-mothers and the gap in employment between mothers and non-mothers has fallen from 5.8% in 1996 to 0.8% in 2010 (Office for National Statistics., 2011b). Of those mothers in employment, 29% work full-time in comparison to 23.1% in 1996 (Office for National Statistics., 2011b). Part-time working has remained relatively stable and accounted for 37.4% of mothers in 2010 (Office for National Statistics., 2011b).

This chapter provides a brief overview of research which sheds light on the ways in which contemporary motherhood is experienced. Because the thesis' focus is on

mothers' alcohol use and not women's experience of motherhood, the review aims only to provide a backdrop against which to situate the quantitative MCS findings and qualitative focus group data described in chapter 7, and chapters 8 and 9 respectively. It emphasises the importance of motherhood as a life event and as a transition point during the life course that warrants further exploration in relation to health behaviours such as alcohol consumption.

Electronic searches of the following databases were conducted;

- EMBASE was searched for the period 1990 to 2012 (searched April 2010 and repeated on 18/01/12 via Ovid interface).
- HMIC (Health Management Information Consortium) was searched for the period 1990 to 2011 (searched April 2010 and repeated on 18/01/12 via Ovid interface).
- JOURNALS@OVID (Full Text) was searched for the 1990 to 2012 (searched April 2010 and repeated on 18/01/12 via Ovid interface).
- MATERNITY AND INFANT CARE was searched for the period 1990 to 2012– (searched April 2010 and repeated on 18/01/12 via Ovid interface).
- MEDLINE(R) was searched for the period 1990 to 2012 (searched April 2010 and repeated on 18/01/2012 via Ovid interface).
- PSYCINFO was searched for the period 1990 to 2012 (searched April 2010 and repeated on 18/01/12 via Ovid interface).
- SOCIAL POLICY AND PRACTICE was searched for the 1990 to 2012 (searched April 2010 and repeated on 18/01/12 via Ovid interface).

A number of search terms were included (experience, expectation, mother, maternal, parent, poverty, domestic, socio-economic) that identified papers in relation to the women's experiences of motherhood according to their social circumstances ($n = 40$). Details of the search strategy are included in Appendix 6.

Through the research accessed as part of the review, I identified and developed a four phased approach with which to describe women's experiences of contemporary motherhood.

1. The 'Transition phase': Routes to motherhood
2. The 'Realisation phase'
3. The 'Adjustment phase': Reconstructing identities
4. The 'Negotiation phase': Relationships and work-life balance

As well as a useful general framework for the literature review, it proved helpful in interpreting the qualitative data described in chapters 8 and 9, particularly where women contextualised their current patterns of alcohol use with reference to past occurrences associated with having their first child.

This chapter begins with what is labelled the 'transition phase' that denotes women's route to parenthood, followed by the 'realisation phase' as mothers reflect on their feelings about motherhood, the 'adjustment phase' when women attempt to make sense of their new identity, and finally the 'negotiation phase' whereby mothers change different aspects of their lives in order to incorporate additional roles associated with motherhood.

The 'Transition phase': Routes to motherhood

While there is general acknowledgment that women's experiences prior to motherhood will affect their experiences of becoming and being a mother, the review suggests that there is little research on the transition to motherhood. Studies identified through the searches undertaken for this chapter suggest that research focuses primarily on the age at which the transition to motherhood takes place, in particular the experiences of young mothers. Young parenthood is considered an distinct route to parenting and one that does not conform to society's dominant ideology of delayed childrearing to enable educational qualifications to be obtained (Whitley and Kirmayer, 2008) and a contribution to be made to the economy (Middleton, 2011). As a result, young mothers are often stigmatised and become marginalised financially (Rolfe, 2008) and socially (Whitley and Kirmayer, 2008). Furthermore, the shift in the age of motherhood, whereby more women are delaying

childrearing, means that women in their early twenties may now be more vulnerable to the type of stigma once associated with teenage motherhood.

Young motherhood is more likely in disadvantaged groups (Middleton, 2011), in part because women from more advantaged socio-economic groups are more likely to have an abortion if they become pregnant at a young age than those in more disadvantaged socio-economic groups (Rowlingson and McKay, 2005; Rolfe, 2008). Reasons for this pattern have been explored and qualitative research indicates that disadvantaged younger mothers find rewards through parenthood not available through employment (Rowlingson and McKay, 2005; Rolfe, 2008). Moreover, research has indicated that there is less stigma related to young motherhood in disadvantaged socio-economic groups than in advantaged socio-economic groups (Rolfe, 2008; Cherlin et al., 2008). Thus delaying childrearing in such circumstances appears to offer fewer material and social benefits (Rowlingson and McKay, 2005; Rolfe, 2008). Indeed, teenage pregnancy and young motherhood can in some instances be viewed as a rational choice, an opportunity for women to change their lives for the better after a life of adversity dominated by financial hardship and even abuse (Middleton, 2011). One qualitative study of 33 women in England who had become mothers under the age of 21 went as far as to say that young motherhood for them constituted a far safer route to adulthood than they might otherwise have had as a result of previous harmful lifestyles (Rolfe, 2008).

Other than age, the research literature provides some insight into the transitional experiences of single women entering motherhood. Overall, very few of the identified papers describe the experiences of single women as they transition to motherhood, other than to report that they are likely to be more disadvantaged than women who have partners. One interesting group of women who have been examined in a recent quantitative study are 'choice mothers' (Jadva et al., 2009). These are women who have entered parenthood alone through choice rather than circumstance and are distinctly different from mothers who become single via divorce or seperation (Jadva et al., 2009). They tend to be in full-time employment, well educated and without financial difficulty and speak of chosing to 'go it alone' rather than be with the wrong man, prioritising motherhood over relationships (Jadva et al., 2009). Such research emphasises that mothers are not a homogenous group

and the effect that women's social circumstances have in shaping their transition to motherhood marks only the start of the ways in which social influences continue to mould their experiences as they journey further into motherhood.

The 'Realisation phase'

Dominant discourses and ideologies mould our identities, and many of those surrounding motherhood are idealised representations rather than realistic accounts (Haynes, 2008). Conceptions of mothering are often based on white heterosexual middle class 'norms' that include delayed motherhood and emphasise the importance of education and career (Whitley and Kirmayer, 2008). Where women position themselves in relation to such idealised representations of motherhood and how they relate to them is likely to be influenced by their social circumstances and is likely to affect how they feel about motherhood.

Most of the literature identified through this review on women's experiences of motherhood refers to women as advantaged or disadvantaged, or specifically relates to either the age at which women had their children or whether or not they are lone parents. Furthermore, it was evident that disadvantaged mothers had received most research attention to date. However, what is less clear is how the factors associated with disadvantaged motherhood impact on mothers' experiences.

There is consistent evidence to suggest that mothers who experience disadvantage have different access to material and structural resources and are not privy to the transfer of privileges evident amongst advantaged groups (Attree, 2005; Gillies, 2006). For example, a qualitative study examining cumulative disadvantage amongst low income parents in the USA found that disadvantaged socio-economic groups were often constrained by their environment and became socially excluded, with fewer life choices and increased psychological distress (Arditti et al., 2010). In their study of mothers living in a deprived area of the UK, Mulhaney and Kendrick (2005) found that stress was associated with disadvantage as a result of living in a deprived area. Stress was also associated with lack of material resources, for example, being on means tested benefits (Mulvaney and Kendrick, 2005). In addition, fewer material resources were found to be a barrier to accessing support (Attree, 2005) and, stress

has been associated with disadvantage as a result of decreased social support (Mulvaney and Kendrick, 2005).

Attree (2005) asserts that support networks are closely related to women's ability to cope with adversity during motherhood and informal networks are usually female centred (Attree, 2005). However, research has also suggested that amongst disadvantaged groups of women, having to provide reciprocal support can be burdensome and, in the case of being unable to reciprocate, can lead to feelings of inadequacy and low self-esteem (Attree, 2005). Formal support systems amongst women in poverty are viewed with distrust and, in a systematic review of 12 qualitative studies that explored the experiences of impoverished women in the UK, the majority felt that their situation was not adequately understood (Attree, 2005). The same study found that both informal and formal support networks are often not beneficial to those who need them most. For example, Attree (2005) noted that middle class mothers perceived state benefits more favourably than working class mothers who were more likely to need them. Reasons for such differences in perception have been illuminated in a number of qualitative studies and include the perception by disadvantaged parents that their parenting will be brought into question if they are in need of support (Attree, 2005).

One qualitative study of 24 working class parents discovered that a common theme was the desire to prove themselves, and participants viewed parenthood as a second chance after past mistakes (Silva and Pugh, 2010). Parenthood had brought meaning and structure to their lives and was viewed as a means of achieving maturity and adulthood (Silva and Pugh, 2010). Not unlike those women becoming parents at an early age, working class parents aged in their mid twenties to early thirties were able to reflect on their past behaviour and 'clean up their act', concluding that not parenting may have been risky (Silva and Pugh, 2010). Working class parents saw parenting as a time to take care of themselves for the sake of their children and ceased unhealthy behaviour, for example, hazardous alcohol use (Silva and Pugh, 2010). They wanted to carve out new paths and break free from destructive family patterns, and negative childhood memories forced them to consider how they wanted to parent (Silva and Pugh, 2010). Parents were aware that they were accountable for

their own actions and it was the child whom they did not want to disappoint and who became judge and jury (Silva and Pugh, 2010).

As well as changing their lives for the better, working class parents reported having greater aspirations for their children than themselves. However, their desire for financial security, increased education and home ownership was thwarted as a result of the inequalities embedded in the social institutions that shaped their lives (Silva and Pugh, 2010). Moreover, in Silva & Pugh's study (2010), these structural barriers were often viewed as personal failures which may in consequence contribute to increased psychological distress amongst disadvantaged parents.

What is here characterised as 'the realisation phase' is also thought to be influenced by the age at which women become parents. A longitudinal study that examined the stress trajectories (chronically high/ increasing/ decreasing) of low income, young mothers aged between 14 and 19 years, found that the difference between mothers with chronically high and increasing stress trajectories compared to those with decreasing stress trajectories was associated with maternal resources such as self-efficacy and depression (Chang and Fine, 2007).

The study of young mothers in deprived areas of England by Rolfe (2008) is particularly illuminating in this regard. It suggests that women felt that the lack of material resources and career opportunities as a result of motherhood was the main drawback of having children at a young age. Furthermore, mothers in Rolfe's study (2008) spoke of the difficulty of reconciling the autonomy and self-focus they associated with youth and the selflessness and sacrifice associated with motherhood (Rolfe, 2008). Young mothers in Rolfe's study (2008) also described how they felt they had lost their personal freedom on becoming mothers but would be able to pick up where they had left off at a later date and that it was simply a matter of doing things in a different order. One might consider this rather naive and idealistic considering the structural barriers that hinder social mobility in those who find themselves in disadvantaged circumstances such as young mothers.

Not unlike younger mothers, older women also have to deal with conflicting discourses, and research suggests that they draw upon past experiences and use

"culturally prescribed ideas"; they follow modelled lives including those of their own parents and those portrayed as 'ideal' in society to reconstruct themselves (Hartrick, 1997). As a result, similar perhaps to the unrealistic future expectations of younger mothers, older mothers found that prior expectations shaped by dominant idealised representations of motherhood did not match reality (Miller, 2007; Choi et al., 2005). Furthermore, a number of qualitative UK studies have described how this led to feelings of inadequacy in older mothers and increased effort on their part often leading to depression rather than challenging the dominant ideologies concerned (Choi et al., 2005; Shelton and Johnson, 2006). Older mothers reported feeling unprepared (Carolan, 2005; Barclay et al., 1997; Choi et al., 2005) and felt pressurised to 'work it out', reflecting the ideology that they should not need help at their age (Choi et al., 2005). Moreover, older mums wanted to be seen to be 'doing it properly' and were aware of the expectation that they should be able to cope mentally whilst acknowledging their physical vulnerability (Carolan, 2005; Shelton and Johnson, 2006). Older mothers were found to be self-critical (Shelton and Johnson, 2006) and put on a facade whilst feeling vulnerable inside, as was found to be the case in a Canadian study of mothers aged 35 to 45 years (Hartrick, 1997). Interestingly, older mothers associated working outside the home with positive benefits such as developing a wider friendship network, in contrast to younger mothers who found greater rewards in areas of their lives other than work such as motherhood (Larson et al., 1994).

In their UK study of delayed motherhood, Shelton and Johnson (2006) recalled how older mothers aged over 30 years had often had previous successful careers and were dissatisfied with the role of motherhood as a result (Shelton and Johnson, 2006). They felt that the previous autonomy associated with their work had been lost and that they were giving their up their lives on becoming mothers (Shelton and Johnson, 2006). This loss of freedom has been cited in other UK studies and has been found to be associated with resentment of motherhood as a role amongst older mothers (Choi et al., 2005). One study that examined the self-rated health and psychological distress in mothers aged over 30 concluded that self-related health was closely related to socio-economic circumstances (Kostiainen et al., 2009).

Lone motherhood has a substantial impact on mother's socio-economic circumstances and, as Cairney et al's study (2003) of parents in Canada indicates, single mothers are more likely to be poor, younger, disadvantaged in terms of education, and to suffer from depression. Single mothers report higher levels of chronic stress, negative life events, childhood adversity, perceive to have less social support and fewer contacts with friends and family (Cairney et al., 2003). A quantitative study conducted in Australia found that single mothers had a lower quality of life score compared with the general population in terms of satsifaction with their own well-being, standard of living, health, achievements, relationships, safety, connectiveness with community, future security and life overall; their standard of living, relationships and future security were particularly significant in relation to their quality of life (Cook et al., 2009). Indeed, increased levels of distress in single women in comparison to married women have been explained in terms of income adequacy, psychosocial work quality and work-family conflict rather than marital staus per say (Dziak et al., 2010). Similar findings have been reported in a more recent German study that explored how financial hardship amongst single mothers increased strain and led to stress as a result of loneliness and living alone (Sperlich et al., 2011).

Studies that examine the experiences of lone motherhood, for example May (2006), often refer to the moral discourse associated with being a lone parent; namely, how it is against the normative beliefs and ideologies surrounding families. May's research (2006) was particularly enlightening and revealed how lone mothers, like young mothers, are stigmatised and socially excluded, condemned as a social problem or 'underclass' (May, 2006). In addition, stress and lack of social support were found to account for 40% of the relationship between single parent status and depression in a quantitative study of Canadian parents (Cairney et al., 2003). May's research (2006) also proposes that "the emphasis on individual agency fails to acknowledge the structural inequalities and constraints to social inclusion" (May, 2006). She concludes that women who are disadvantaged are unlikely to be able to escape the stereotype without the cultural, social and financial resources that are readily available to the middle class (May, 2006).

The 'Adjustment phase': Reconstructing identities

Following the initial transition and realisation phase of motherhood, the studies identified through this review suggested that women move through a phase of adjustment whereby they reconstruct their identity according to their early experiences of motherhood (Barclay et al., 1997). Women who have had positive experiences relating to motherhood are able to reinforce a sense of self as competent mothers, thus enhancing their self-esteem (Paris and Helson, 2002). In contrast, negative experiences are likely to reduce a mother's confidence and lead to identity confusion (Paris and Helson, 2002).

Rolfe (2008) examined the meaning of teenage motherhood for mothers living in deprived areas of England and discovered that, amongst this group of women, identity was defined through motherhood; it was often their sole source of identity since they had no paid work identity. This group of women associated not being a mother and being part of the work force with boredom (Rolfe, 2008). In contrast, research involving older mothers who previously worked full-time revealed that motherhood could mean the loss of a valued identity established through their careers, a feeling echoed by advantaged mothers discussed in chapter 8; in consequence they felt the need to somehow incorporate the mother role into their lives (Shelton and Johnson, 2006). They had to reconcile the gap between their previously established working identity and their new identity gained through motherhood (Shelton and Johnson, 2006). Reconciling one's identity on making the transition to motherhood is only one of the negotiations that women have to make. The multiple roles women combine on becoming mothers - parent, partner, and employee - all need to be carefully negotiated within the constraints of their socio-economic circumstances.

The 'Negotiation phase': Relationships and work-life balance

On becoming mothers, women's relationships with their friends, families and partners are likely to undergo a period of adjustment. Partnership dynamics are likely to change as women take responsibility for parenting as indicated in a qualitative analysis of in-depth interviews where mothers describe feeling constantly on call, often having to take responsibility for the father's involvement in parenting as well

as their own (Sevón, 2011). Disadvantaged women spoke of putting up boundaries to protect their children from unsuitable partners or effectively utilising the strength they had gained from motherhood to cut ties with individuals they considered inappropriate (Silva and Pugh, 2010). Indeed, disadvantaged single mothers in the USA aged 19 to 35 years, described a sense of loss in terms of their relationships with friends, family, and boyfriends (Keating-Lefler and Wilson, 2004). Despite this negativity, Rolfe (2008) notes that the young mothers in her study were explicit about their aspirations to get married and create a family rather than to go it alone. Likewise, mothers in disadvantaged circumstances cited financial constraints and lack of resources as the reason for not getting married as opposed to having a preference for having children prior to becoming married (Keating-Lefler and Wilson, 2004). Interestingly, single mothers from advantaged backgrounds are much more likely to re-marry than women from disadvantaged social groups (Rowlingson and McKay, 2005). On examining 3 large quantitative datasets and qualitative interview data from the UK, middle class women were found to have shorter periods of lone motherhood (Rowlingson and McKay, 2005) and were therefore able to escape the material deprivation associated with single motherhood.

Work-life balance is particularly important for the health and well-being of parents. Stress in childcare has been found to be associated with full-time mothering and increased educational attainment, perhaps as a result of increased expectations outside home and increased dissatisfaction with exclusive childcare (Rullo and Musatti, 2005). Furthermore, a wage penalty has been observed with motherhood resulting in decreased salaries and chance of promotion (Correll et al., 2007). Mothers were perceived differently to non-mothers and were considered less committed, competent, able, and efficient (Correll et al., 2007). Certainly, mothers more often than fathers have to negotiate conflicting roles such as caring for a sick child and undertaking paid work (Cunningham-Burley et al., 2006). Multiple roles such as these have been associated with stress and have been referred to as a 'balancing act' whereby women need to 'keep going' (Cunningham-Burley et al., 2006), reflecting the wider cultural expectation of mothers in the UK (Miller, 2007). Amongst disadvantaged mothers, women were found to construct and negotiate their mother and employee roles according to their own expectations and experiences and framed by structural and economic constraints (Hagelskamp et al., 2011).

Arrangements often conflicted with traditional gender ideologies and, rather than be the 'stay at home' mother, women found themselves in the position of the traditionally male 'breadwinner' role (Hagelskamp et al., 2011). Qualitative in-depth interviews with working class parents in the USA revealed that parents often felt tethered to their job as a result of the need to provide a safe and secure life for their children, even when they disliked their jobs and the hours were long and exhausting (Silva and Pugh, 2010).

Employment, rather than single parenthood per se, has been found to contribute most to the risk of depression amongst single mothers, and housewives were found to have the lowest risk of mental health issues across the general population in Germany (Sperlich et al., 2011). However, one cross national study found no effect on stress levels for single women transitioning to work, whereas for single women transitioning out of work increased financial strain was associated with lowered self-esteem and increased distress (Ali and Avison, 1997). In contrast, a multi-methods study carried out in Canada that examined the role of employment in the lives of single mothers found that women who were employed and had pre-school aged children experienced work strain with increased hours, a less positive attitude to work, less control over their work schedule and less satisfaction with their work overall (Campbell and Moen, 1992). Similarly, the quantitative research findings of low income single mothers revealed that they experienced increased work-family conflict as a result of inflexible working arrangements (Ciabattari, 2007). Moreover, work to family conflict amongst single mothers kept them out of the labor force and made it more difficult to maintain employment (Ciabattari, 2007). Social support lessened the risk of work-family conflict in unmarried mothers (Ciabattari, 2007). However, as discussed earlier in the chapter, accessing support may prove difficult and burdensome for disadvantaged mothers.

Mothers reconciled their employment status with their mothering ideology, constructing an ideal of 'good mothering' consistent with their own circumstances and the ways in which they negotiated their mother, employee and partner roles (Johnston and Swanson, 2006). In a qualitative study of 95 married mothers in the USA, 'at home mothers' considered themselves good mothers because they were accesible and self sacrificing, effectively excluding part-time and full-time working

mothers (Johnston and Swanson, 2006). However, full-time mothers felt they had lost other aspects of their identity and frequently lost their patience with mothering (Johnston and Swanson, 2006). Part-time mothers focused on the quality of time spent communicating with their children, disqualifying 'stay at home mothers' from their maternal ideal because they did not have an identity outside the home (Johnston and Swanson, 2006). However, they too had had to make compromises and felt that they had sacrificed their careers (Johnston and Swanson, 2006).

Mothers who worked full-time felt that it was their role to empower their children and enable them to be more self sufficient (Johnston and Swanson, 2006). Yet they felt that they lacked time with their children which resulted in feelings of guilt (Johnston and Swanson, 2006). A quantitative study of working class parents found that part-time workers had increased levels of depression in comparison to full-time workers (Goldberg and Perry-Jenkins, 2004). Goldberg and Perry-Jenkin's (2004) hypothesis was that parents felt unable to put their egalitarian ideologies into practice, whereby both parents contribute financially, and this led to disappointment and a sense that they were unable to fulfil either the role of parent or worker adequately. In addition, mothers who worked part-time felt they could not ask for help since they "only" worked part-time, even when part-time work offered them less autonomy than full-time work (Goldberg and Perry-Jenkins, 2004). Similarly, traditionalists were often left disappointed when their ideals could not be realised because of the need to earn money (Goldberg and Perry-Jenkins, 2004).

The effect of multiple roles on mother's mental health was moderated by their beliefs, preferences and actual arrangements (Goldberg and Perry-Jenkins, 2004), and role congruence has been cited as an important factor in well-being (Goldberg and Perry-Jenkins, 2004; Cast, 2004). Furthermore, a multi-national study involving 16 countries found that, in areas with high gender-income equity and with less traditional values, working mothers drank less, perhaps as a result of their increased social role. In contrast, working women residing in low gender-income equity countries with more traditional attitudes, drank more (Kuntsche et al., 2011). This research suggests that, for partnered women who live where there are fewer incentives to work, the protective effect of being a working mother with regards to alcohol use is diminished (Kuntsche et al., 2011).

Summary

This chapter has provided a broad overview of research on women's experiences of motherhood, as they make the journey into and through motherhood. It used a simple 4-staged representation of this journey, marshalling evidence from studies relating to the transition, realisation, adjustment, and negotiation phase of motherhood. In so doing, it highlighted differences in advantaged and disadvantaged mothers' circumstances and experiences, with respect to their working lives, marital status, age, and material and psychological resources.

The thesis now moves to provide evidence from a major UK study that enables examination of how alcohol consumption patterns differ amongst women with pre-school aged children according to their social circumstances. By utilising these data, it maps the quantitative patterns of mother's alcohol use. To this, the thesis adds data from qualitative focus groups which allow women to provide contextualised accounts of motherhood and insightful perceptions on alcohol use amongst mothers. Chapter 4 provides an overview of the multi-method research design employed to elucidate information on alcohol use amongst women with pre-school aged children that has been identified in chapters 1 and 2 as lacking in the research literature to date.

Chapter 4: Overview of research design

Introduction

Chapter 4 provides an overview of the research design. It begins by explaining how the research question was identified, followed by a description of how this led to a multi-methods approach detailing the benefits of this design. Finally, the ways in which the analysis and interpretation of the results provided insight and answers to the research questions are discussed. The quantitative (MCS analysis) and qualitative (focus group) constituents of the research design are discussed in detail in chapters 5 and 7 respectively.

Research question

The research question was informed by the literature review on women's alcohol use described in chapter 1. The review indicated that research on women's alcohol use was predominantly quantitative with very few qualitative or mixed/multi-methods studies; it focussed on a minority of individuals engaged in problematic alcohol use as opposed to the drinking habits of the majority, it revolved around data on adolescents, young adults and students and included relatively few studies on the UK. In addition, the review highlighted complex social patterns associated with alcohol use. For example, abstinence has been linked to lower parental social status and lower educational attainment. Increased drinking frequency has been associated with advantage in terms of education, income, and employment. The opposite is true of increased consumption which has been linked to disadvantage with regards to education, income and employment. Intricate and often divergent social patterns have also been found in binge drinking behaviour. However, social patterns relating to alcohol use have been little explored in the limited research literature on mothers. A scoping review of the literature on mother's alcohol use described in chapter 2 confirmed these findings and very few studies were identified that considered mothers as a separate group.

The following research question was established in order to address these gaps identified in the research literature:

- What are the everyday patterns and perceptions of alcohol use amongst mothers with pre-school aged children in England, and do they vary according to social circumstances?

Research design

Two distinct component questions emerged from the original research question that required different methodological approaches; the reasons for these are discussed in detail in chapters 5 and 7:

1. What are the everyday patterns of alcohol use among women with pre-school aged children, and do they differ according to their social background and current socio-economic and domestic circumstances?
2. What are mothers' perceptions of alcohol use, and do they differ according to their social background and current socio-economic and domestic circumstances?

In order to address these sub-questions, a multi-methods design was used that incorporated two self-contained studies, each designed to answer specific components of the research question (Morse, 2003). Rather than utilising either quantitative or qualitative methodology to answer the research question, a multi-method approach considers what design methodology is best suited to the research question (Doyle et al., 2009). It is the research question that drives the methodological approach (Teddlie and Tashakkori, 2009; Delaney et al., 2007). Quantitative analysis of cross-sectional data from an existing dataset was used to determine the everyday patterns of alcohol use among women with pre-school aged children and, whether these differed according to their social background and current socio-economic and domestic circumstances. Qualitative analyses shed light on factors influencing alcohol use not captured in the quantitative analysis, for example, how drinking location, drinking opportunities and reasons for drinking shape mothers' patterns of alcohol use and, how these differ according to their social

background and current socio-economic and domestic circumstances (Figure 11). This was provided through a focus group study.

Multi-methods rationale

The multi-method approach used in this thesis combined both quantitative and qualitative methodologies to examine the same phenomenon. In so doing, this study utilises the strengths to counteract the weaknesses of each methodological approach, thus providing a more holistic picture of the social patterning and perceptions of alcohol use amongst mothers (Doyle et al., 2009; Morse, 2003).

A sufficiently large sample of mothers was required in order to identify quantitative patterns of alcohol use according to social circumstances. Acquiring sufficient numbers necessitated using the MCS (Millennium Cohort Study), a birth cohort study that began in 2000/2001 (see chapter 5). Qualitative primary research conducted in 2011 utilised a different sample of mothers to provide insight into the quantitative patterns (see chapter 7). Mixed-method approaches primarily use a number of methods to examine a phenomenon within the same sample. Therefore, it was not deemed sensible to 'mix' the methods in this study; instead they are included as free-standing studies that examine the same phenomenon.

In order for multi-methods research to be effective, there needs to be some form of "parallelism" between the quantitative and qualitative data to enable more robust hypotheses to be developed (Castro and Coe, 2007; Curry et al., 2009). With this in mind, the quantitative analysis was carried out first (see chapter 5), the results (described in chapter 6) informed the recruitment strategy and the topic guide for the qualitative data collection (see chapter 7).

Analysis and interpretation

Quantitative and qualitative data were analysed separately, the results of which are described in chapters 6, 8 and 9. The quantitative results provided a statistical portrayal of mothers' overall patterns of alcohol use and according to their social circumstances. The qualitative results provided some insight into these quantitative patterns and increased the breadth of our understanding on alcohol use amongst women with pre-school aged children. Further details with regards to the

interpretation of the quantitative and qualitative results and emerging hypotheses are included in the discussion in chapter 10.

Research Question

What are the everyday patterns and perceptions of alcohol use amongst mothers with pre-school aged children in England, and do they vary according to social circumstances?

Sub Question 1

What are the everyday patterns of alcohol use among women with pre-school aged children, and do they differ according to their social background and current socio-economic and domestic circumstances?

Sub Question 2

What are mothers' perceptions of alcohol use, and do they differ according to their social background and current socio-economic and domestic circumstances?

1. Quantitative
Cross-sectional numerical data

4. Qualitative
Descriptive data

2. Analysis
STATA

5. Analysis
Thematic coding

3. Results
Descriptive statistics
Odds ratios

6. Results
Descriptive accounts
Themes

Figure 11 Research design

Summary

Multi-methods provide a justifiable means of collecting appropriate data on mothers' alcohol use. Utilising both quantitative and qualitative data improves the breadth and depth of our knowledge and enhances our understanding of alcohol use amongst women with children. It therefore provides a platform from which hypotheses for future research can be drawn.

Chapter 5: Quantitative analysis – Patterns of maternal alcohol use

Introduction

As previously described, this thesis aims to fill gaps in our understanding of patterns of alcohol use among women with pre-school children, gaps confirmed by the literature reviews (chapters 1 and 2) which also noted the dearth of information as to whether and how alcohol use varied according to mothers' social circumstances. The thesis therefore asks the following quantitative component of the research question:

- What are the everyday patterns of alcohol use among women with pre-school aged children, and do they differ according to their social background and current socio-economic and domestic circumstances?

Chapters 5 & 6 aim is to provide a quantitative answer to this question by interrogating a major contemporary national study of mothers with young children, namely the UK MCS (Millennium Cohort Study). This population-based sample of women provided information on alcohol use in the context of motherhood that has been neglected in research to date. It also enables analysis of the social patterning of alcohol use patterns and whether these vary according to women's social circumstances.

What follows is a brief overview of the MCS, a detailed description of the quantitative study design and methodology, and information on the statistical analysis. The results of the quantitative analysis are described in chapter 6.

Overview of the MCS (Millennium Cohort Study)

In 1999 the British Government decided to carry out a new birth cohort study to coincide with the new millennium, commissioned through the ESRC (Economic and Social Research Council). The aim of the Millennium Cohort Study (MCS) was to capture the conditions - social and economic, advantaged and disadvantaged - of children entering the new millennium (Dex and Joshi, 2005). It was envisaged that information captured would be valuable for future research and for comparisons between groups (Dex and Joshi, 2005).

The MCS is a longitudinal study that follows the progress of mothers and their babies; it is the 4th national longitudinal birth cohort study and the first to cover all four countries of the UK (England, Northern Ireland, Scotland and Wales). The sample was stratified by country then separately geographically clustered by electoral ward to provide a sampling frame from which families were recruited. To date, there have been four sweeps of data collection; MCS1 (age 9 months), MCS2 (3 years), MCS3 (5 years) and MCS4 (7 years), MCS5 (11 years) is in progress.

The first wave of data collection (MCS1) began in June 2001 and spanned 12 months to encompass seasonal variations up until July 2002. Therefore, babies born in September 2000 and the subsequent 12 months living in the UK at age 9 months were eligible for the study. Families moving to the area with children aged seven to eight months were also included. Families were found using Child Benefit records and "sensitive cases" removed (Dex and Joshi, 2005). This is in contrast to previous birth cohort studies that have relied upon NHS personnel to recruit mothers and their cohort children rather than administrative records, an approach to recruitment that resulted in lower response rates (Dex and Joshi, 2005). Health Visitors also recruited a small number of eligible participants (Dex and Joshi, 2005). In total, 18,552 families were recruited that amounted to 18,818 cohort children (Dex and Joshi, 2005). The original sample disproportionately represented disadvantaged socio-economic areas. For example, ethnically dense populations, areas associated with childhood poverty according to the Index of Deprivation 2000, and the proportion of families on means-tested benefits (Dex and Joshi, 2005). All analyses therefore use a variable developed by the MCS to correct the weight assigned to each response. A similar response rate was achieved in England by areas considered advantaged (73%) and disadvantaged (70%). Similarly, the field response rate was 86% and 82% for advantaged and disadvantaged respectively (Plewis and Ketende, 2007).

In England alone, there were 13,146 families of which 11,533 (11,695 cohort children) were successfully interviewed at wave 1 (Plewis, 2004). The overall response rate was 72% in wave 1 and dropped to 58% of the original sample in wave 2 (Plewis, 2007). It is therefore important to consider how the non-responders may differ from those who did participate (Plewis, 2007). Systematic differences were found to exist between responders and non-responders, most notably the refusal to

report family income and the refusal of a partner to be interviewed was predictive of non-participation at subsequent sweeps (Plewis, 2007). Missing participant responses could be assumed to be randomly occurring by researchers and this may not be the case. A variable was made available by the MCS team that enables researchers to adjust for missing data. However, only a small number of missing values were reported in wave 1 and 2 amongst the subgroup of mothers included in this study and therefore, missing values are unlikely to have had a significant effect on the analyses (Plewis, 2007).

Design and methodology of the quantitative analysis

The MCS provides the most contemporary and representative source of information on mothers with pre-school aged children with a range of measures of socio-demographic factors and of alcohol use. However, as described in chapter 1, patterns of alcohol use continue to evolve over time and research that examines more recent trends would provide comparative data on which to validate the applicability of these analyses. Moreover, as a birth cohort study, it inevitably excludes women without children and therefore cannot give insight into the differences between mothers and non-mothers. Therefore, the aim of the quantitative component of the thesis is to exploit the range of measures of alcohol use included in the MCS to enable a picture of mother's drinking habits to be constructed. Within the limits of the data collected in the MCS, an inclusive approach was adopted to map women's alcohol use in its entirety in an attempt to capture similarities and differences in maternal alcohol use, for example, the frequency and quantity of alcohol use amongst different socio-economic groups. Data in the MCS enabled an examination of both 'typical' and 'risky' alcohol use among mothers, thus shifting the research perspective from solely the minority of 'risky' drinkers to include majority patterns of alcohol use that has been neglected in research to date.

As a survey reliant on self-reported data, the MCS will inevitably under-represent mothers who are problematic drinkers who have disassociated themselves from societal institutions. Furthermore, mothers taking part in the MCS may have under-reported their alcohol consumption for fear of the consequences associated with excessive alcohol use during motherhood. Therefore, the patterns found in these

analyses are more likely to be conservative estimates as opposed to accurate accounts of mothers' alcohol use in the early years of motherhood.

It was not possible to exploit the longitudinal design of the MCS and examine individual patterns of alcohol use over time. Instead, mothers were examined according to groups formed on the basis of their socio-demographic information. The cross-sectional data from waves 1 and 2 of the MCS provide a 'snap-shot' of information in relation to mothers' patterns of alcohol use at two points in time when the cohort child was aged 9 months and 3 years respectively. Nevertheless, by only including mothers who took part in both waves, I was able to broadly outline the ways in which social circumstances may influence mothers' alcohol consumption patterns.

The quantitative analysis relates to maternal patterns of alcohol use when the cohort child was aged approximately 9 months (wave 1) and 3 years (wave 2), and focuses on white mothers living in England at the time of recruitment to the study. Alcohol measures and measures of social circumstances in wave 1 and 2 were limited but together provided greater richness of alcohol use data. For example, a number of questions considered relevant to the study were only asked during one of the two waves (household income in wave 1, and father's occupational status when cohort mother was aged 14 in wave 2). It is important to note that as a retrospective measure, answers to the question on this measure of childhood socio-economic position would not have changed had the question been asked in wave 1. The analysis was restricted to white mothers and to mothers living in England; the reasons for these restrictions are explained below.

Sample

The sub-sample comprised white, natural mothers recruited in England, who took part in waves 1 and 2 of the MCS. Since there were so few non-biological mothers, only data from women who were the natural mother resident in the house in which the cohort baby lived were included in the analyses. Only women from a white ethnic background (Office for National Statistics, 2003) were included in this analysis. Preliminary analysis showed variation in alcohol use according to socio-economic circumstances and ethnicity (Appendix 7). However, white ethnicity was

specified since detailed analysis by ethnic group was not possible due to the small numbers of mothers from non-white groups. In addition, only individuals recruited in England were included, in order to broadly match the population of women from which qualitative information obtained in focus group discussions was drawn (York and Hull). A more closely-matched sample, for example, restricted to mothers living in Yorkshire and Humberside, would have resulted in a sample size insufficient for the depth of analysis possible on the English sample. Figure 12 provides a graphical illustration of the selection process.
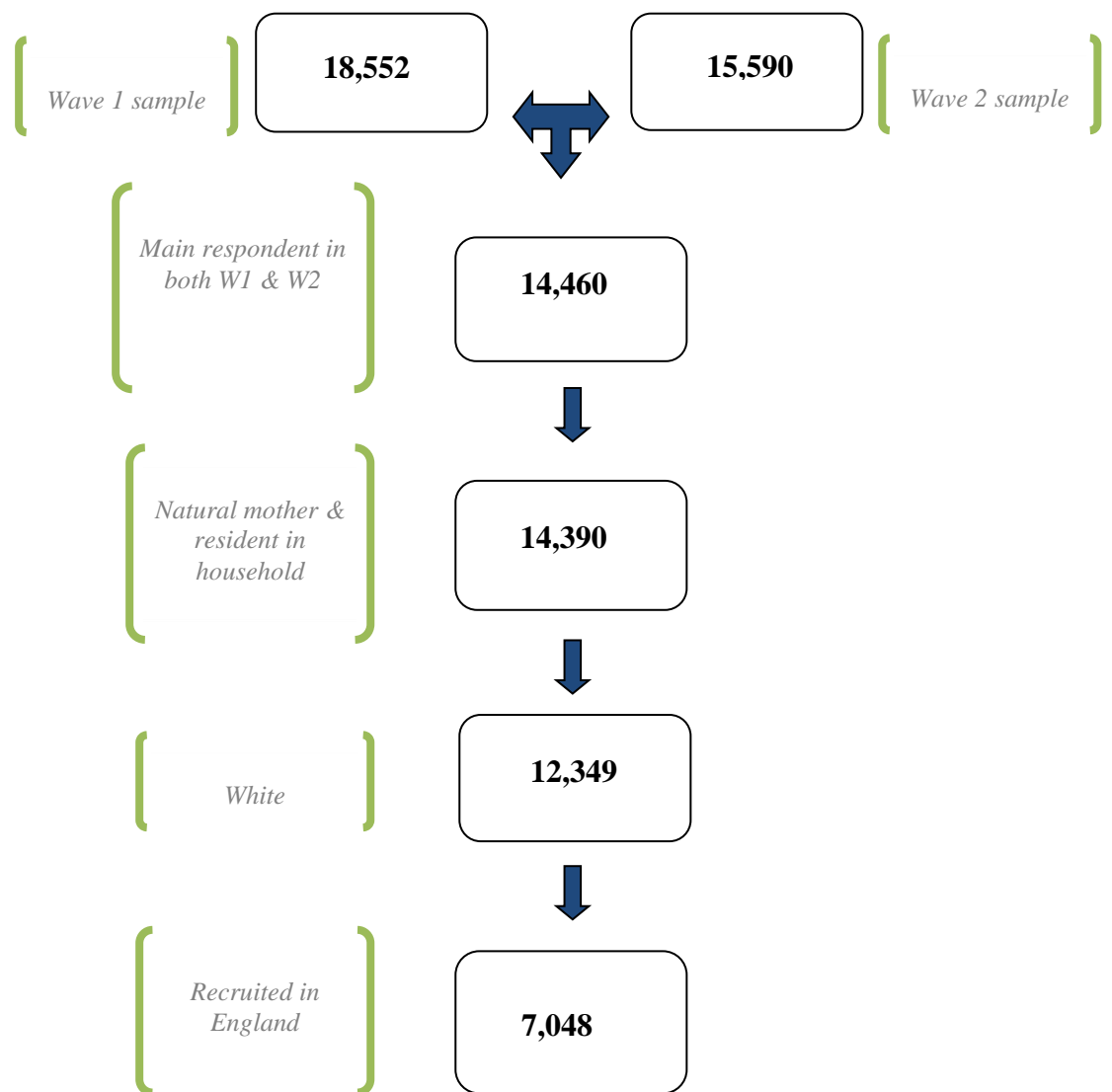
Figure 12 Selection criteria

Outcome measures

Alcohol use was the outcome measure of interest. Both the frequency and quantity of alcohol use was examined within the constraints of the survey questions and coding structure. Great care was taken to ensure that alcohol frequency and alcohol quantity were categorised in ways that adequately covered the spectrum of alcohol use of the women in this sample. The reason was to ensure that the categorisation reflected women's alcohol use in its entirety, in comparison to previous research that typically focused on problematic alcohol use.

Alcohol frequency

Mothers were asked a question relating to the frequency of alcohol use at wave 1 and 2;

Which of these best describes how often you drink alcohol?

- *every day, 5-6/wk, 3-4/wk, 1-2/wk, 1-2/month, <1/month, never*

Mothers who never drank and women who drank less than once per week, were combined since preliminary analysis confirmed that they had the same socio-economic distribution (Appendix 8). The categories '5-6/wk and 'everyday' were grouped together; this was as a result of small numbers drinking every day.

Alcohol quantity

Mothers were asked a question relating to the quantity of alcohol use at wave 1 only. The quantity of alcohol drank was recorded in units and an example of a unit was provided on which participants made their estimations.

In wave 1, mothers who drank less than once per week were asked the number of units of alcohol they consumed on an average drinking day;

On the days when you do drink alcohol, on average how many units do you drink in a day?

Mothers were categorised according to the 1995 DOH (Department of Health) recommendations which have remained unchanged to date; under (1 unit/day), within (2-3 units/day) and over (>3 units/day). The daily units of alcohol consumed were also checked separately, 2 units, 3 units and 2-3 units, to ensure that socio-economic gradients in quantity of alcohol use were not being obscured by the 3-fold categorisation; this was not the case (Appendix 9).

In wave 1, mothers who drank at least once per week were also asked the number of units of alcohol they consumed during an average week;

In an average week, how many units do you drink?

Over 90% of women drank <14 units per week. Therefore, the decision was taken not to split the categories according to the extrapolated weekly recommendations: under (<14 units/week), within (14-21 units/week) and over (>22 units/week). Instead, the categories were designed to ensure a more even distribution: <4 units/week, 4-7 units/week, and >7 units/week (Table 6).

'Risky' alcohol use

Responses to the questions on frequency and daily/weekly quantity were used to generate a broad measure of 'risky' alcohol use in wave 1. The categories of alcohol use related to the drinking recommendations specified by the DOH (Department of Health) in 1995 which, as noted above, have remained unchanged to date.

Recommendations are as follows;

1) 2-3 units of alcohol per day.

In order to account for those women who drank at least once per week whose alcohol consumption was measured in total weekly units, this figure was extrapolated to 14-21 units per week.

'Risky' alcohol use can be defined in terms of the recommendations:

1) Women are at "increasing risk" if they drink above the recommendations (>2-3 units/day) "regularly" (Anderson, 2008).

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2) Women are at "higher risk" if they drink more than twice the recommendations (>6 units/day) "regularly" (Anderson, 2008).

"Regularly" means drinking every day or most days of the week (Department Of Health, 2008b).

For analysis purposes, women drinking above the weekly recommendations (>21 units) who drank '5-6/everyday/wk' were classified as at 'increased risk', and those drinking more than twice the weekly recommendations (>42 units) who drank '5-6/everyday/wk' were classified as at 'high risk'. However, due to the small numbers of women in the 'increased risk' and 'high risk' categories, in this analysis 'risky' alcohol use included all women who, on average, drank above the daily or weekly recommendations (Table 6).

Table 6 Outcome measures

Alcohol use		Frequency		Weighted %	
		Wave 1	**Wave 2**	**Wave 1**	**Wave 2**
Frequency	**Never/<1/week**	3803	3580	51.6	49.1
	1-2/week	1996	2039	28.9	29.1
	3-4/week	771	860	11.9	13.0
	5-6/everyday/week	478	348	7.5	9.0
Quantity (daily)	**1 unit/day on each occasion**	1601		42.5	
	2-3 units/day on each occasion	1123		30.8	
	>3 units/day on each occasion	1079		26.7	
Quantity (weekly)	**<4 units/week**	1145		35.5	
	4-7/week	1081		33.7	
	>7/week	1019		30.9	
Risky	**>3 units/day/>21 units/week**	1124		14.4	

Socio-economic factors

A number of socio-economic factors (childhood circumstances, education, occupation, income) and domestic factors (age at first birth, cohabitation status, number of children) were identified in chapters 1 and 2 as related to women's alcohol use. For women, the distinction between socio-economic circumstances and domestic circumstances is somewhat blurred, since important dimensions of

domestic circumstances, like age at first birth and cohabitation status, are also markers of social dis/advantage (Joshi et al., 2004).

The following description of each of the socio-economic variables included in the analysis refers to the re-coded variables derived from the original answers to questions asked in the MCS study.

The relationship between multiple disadvantage (here defined to cover childhood disadvantage, educational disadvantage, occupational disadvantage, income disadvantage, age at first birth disadvantage, relationship disadvantage) and alcohol use was examined to explore potential cumulative effects of disadvantage on alcohol use.

Childhood circumstances

My review of the research literature (chapter 1) suggests that childhood circumstances are linked to women's alcohol use (Mortensen et al., 2006; Batty et al., 2006). At wave 2, the MCS included the following questions;

When you were 14 did your father work?

What did he do?

Only mothers who participated in both waves were included in the sample (

), and data on childhood circumstances from wave 2 were used for both the wave 1 and wave 2 analyses. Father's occupational class when the cohort mother was aged 14 was classified according to NS-SEC classification schema (3 groups) to provide a broad indicator of childhood socio-economic circumstances. Due to small numbers, not working and routine/ manual occupations were grouped together in the analysis. An unknown category was included for those women who did not know what job their father did (Table 7).

Age of leaving education

The literature review (chapter 1) showed that education has been consistently found to be associated with women's alcohol use (Mortensen et al., 2006; Bloomfield,

2006; Giskes et al., 2011; Jones, 2002; Tsai, 2007; Caetano, 2006; Jukkala et al., 2008). The MCS included the following question at wave 1 and 2;

How old were you when you left full-time continuous education?

Only mothers who participated in both waves were included in the sample, and data on the age of leaving education from wave 1 was used for both wave 1 and 2 analyses. Age of leaving full-time education is a standard proxy measure of educational attainment, regarded as a key influence on an individual's current and future socio-economic circumstances. The age groups represented traditional educational milestones, for example, completing secondary school, further education, degree level and advanced education over and above degree level. While it fails to capture the educational achievements of those who return to education, the number of women who go on to improve their educational attainment after becoming mothers has been found to be limited (Joshi et al., 2004). In addition, it does not capture educational attainment obtained through on the job training. Furthermore, it makes the assumption that leaving education at an older age equates with educational attainment and this may not be the case. Indeed, it does not consider the time taken to complete part-time study that may be more applicable to women with families (Table 7).

Employment status

Employment status has been associated with women's alcohol use, evident in my review of the literature (chapter 1) (Christie-Mizell and Peralta, 2009; Casswell, 2003; McMahon et al., 2007; Baumann et al., 2007; Tsai, 2007; Kuntsche et al., 2006b; Makela, 2008) and scoping review (chapter 2) (Waterson, 1992). The MCS included the following question at wave 1 and 2;

Are you currently in paid work or not?

Separate analysis was carried out on data gathered from wave 1 and wave 2 with regards to employment status. Approximately half of the women in the sample were not working when the cohort baby was nine months (wave 1) and 3 years old (wave 2), the aim was to determine the effect of current economic activity on current

alcohol use. As such it does not take into account previous working patterns that may have resulted in different social patterning of alcohol use (Table 7).

Household income

My review of the research literature (chapter 1) pointed to income as an important socio-economic measure with regards to women's alcohol use (Giskes et al., 2011; Casswell, 2003; Baumann et al., 2007; Mulia, 2008; Tsai, 2007). At wave 1, the MCS asked the following question;

This card shows incomes in weekly, monthly and annual amounts. Which of the groups on this card represents your total take-home income ....after tax and other deductions?

Only mothers who participated in both waves were included in the sample, and data on household income from wave 1 was used for both wave 1 and 2 analyses since the original question on total household income was omitted at wave 2. Household income, equivalised to take into account household composition, was employed as a measure of socio-economic circumstances. The income bands in this analysis relate to the original banded values in the MCS 2000/2001 data set and go up incrementally by £10,400. The unknown category was created to account for women who did not know their household income (Table 7).

Age at first live birth

As identified in my review of the literature (chapter 1) and scoping review (chapter 2), the age at which men and women become parents has been linked to patterns of alcohol use (Little et al., 2009; Kokko et al., 2009). Age at first live birth was a derived variable based on the age of the mother at the time of interview and the age of her eldest child. The age at which women first became mothers has been established as a pathway linking poor childhood circumstances and subsequent adult disadvantage (Joshi et al., 2004). Advantaged mothers tend to delay entry into motherhood in comparison to disadvantaged mothers who enter into motherhood at an earlier age (Merryweather, 2009) (Table 7).

Cohabitation status

Cohabitation status has been repeatedly associated with women's alcohol use as described in my review of the literature (chapter 1) (Christie-Mizell and Peralta, 2009; Kuntsche et al., 2006b; Jukkala et al., 2008; Tsai, 2007; Caetano, 2006) and scoping review (chapter 2) (Maloney et al., 2010; Stroup-Benham et al., 1990). The MCS included the following questions at wave 1 and 2;

Number of parents/carers in the household?

Relationship between parents/carers in the household?

Separate analysis was carried out on data gathered from wave 1 and wave 2 in relation to cohabitation status. Natural mothers were grouped into 3 categories of relationship: lone parents, cohabiting parents, and married parents. The partners of the married or cohabiting women were either biological fathers, or were considered parents/ carers to the cohort child. Other members of the household were not considered, for example, resident grandparents considered as carers of the cohort child. Moreover, the previous relationship status of the mother was not queried and may be important with regards to women's alcohol use. For example, divorce, number of previous marriages/cohabiting relationships, and the time line over which these relationships occurred were not included in this analysis (Table 7).

Number of children in the household

My review of the literature (chapters 1 and 2) did not identify any studies that examined how the numbers of children in the household affected women's alcohol use. Nevertheless, this measure was included since it was considered to be a potential factor that may influence mothers' patterns of alcohol use. The number of children in the household was a derived variable based on the total number of siblings in the household including the number of cohort children. Separate analysis was carried out on data gathered from wave 1 and wave 2 with regards to the number of children in the household. The analysis does not include children who are not resident in the household, nor does it take into account children who may have been born to the natural mother but have since been adopted, or children who may have died (Table 7).

Multiple disadvantage

The literature review (chapter 1) identified a number of studies that highlighted the importance of multiple disadvantage for understanding women's alcohol use (Mortensen et al., 2006; Giskes et al., 2011; Baumann et al., 2007; Tsai, 2007; Caetano, 2006). As a broad indicator of multiple disadvantage, a simple additive index was constructed of the total number of disadvantaged circumstances experienced by mothers from 0 to 6. The reference category (0) for this analysis refers to mothers advantaged on all of the 6 dimensions:

- No childhood disadvantage (father highest occupational class)
- No educational disadvantage (left education aged $\geq$22)
- No employment disadvantage (economically active)
- No income disadvantage (household income £31,200+)
- No age disadvantage (first live birth aged $\geq$30)
- No relationship disadvantage (married)

The index categories (1-6) for this analysis related to mothers who reported any number (1-6) of the most disadvantaged dimension:

- Childhood disadvantage (father economically inactive/lowest occupational class)
- Educational disadvantage (left education aged $\leq$16)
- Employment disadvantage (economically inactive)
- Income disadvantage (household income £0-10,400)
- Age disadvantage (first live birth aged 14-19)
- Relationship disadvantage (lone parent)

Mothers who fell into categories for each of the social variables other than the most advantaged and most disadvantaged (described above) were not included in this measure, thus explaining the missing values (*n* = 332) (Table 7). In addition, the measures of socio-economic circumstances were not weighted in terms of importance and each of the measures was considered equally important (Table 7). Nevertheless, as an additive measure, it captured dimensions of social disadvantage, enabling analysis of the association with patterns of maternal alcohol use.

Table 7 Social profile of the sample by socio-economic variable

Social profile of the sample		Frequency		Weighted %	
		Wave 1 $n = 7048$	Wave 2 $n = 7048$	Wave 1	Wave 2
Childhood circumstances	Managerial/ prof		1914		29.2
	Intermediate		1438		21.1
	Economically inactive/ lowest		2951		40.0
	Unknown		745		9.8
Age left education	≥22	722		11.5	
	19-21	837		13.0	
	17-18	2026		30.0	
	≤16	3463		45.5	
Employment status	Economically active	3696	3852	54.6	56.5
	Economically inactive	3352	3196	45.4	43.5
Household income	£31,200+	1640		27.0	
	£20,800-31,200	1587		24.2	
	£10,400-20,800	2113		29.2	
	£0-10,400	1291		15.5	
	Unknown	299		4.1	
	Missing	118			
Age at first live birth	≥30	1981		31.0	
	25-29	2109		31.7	
	20-24	1685		22.1	
	14-19	1238		15.3	
	Missing	35			
Cohabitation status	Married	4131	4003	62.8	66.8
	Cohabiting	1968	1247	26.3	18.0
	Lone parent	917	1107	10.9	15.2
	Missing	32	691		
Number of children	≥3	1438	1841	19.8	25.6
	2	2629	3471	37.9	50.2
	1	2981	1736	42.3	24.2
Age	≥30	3928	4908	59.0	72.8
	25-29	1722	1254	23.8	16.4
	20-24	1064	837	13.3	10.2
	14-19	332	47	3.9	0.5
	Missing	2	2		
Level of disadvantage	0	1386	1211	22.5	21.9
	1	1949	1772	30.5	30.7
	2	1510	1365	22.1	22.3
	3	939	849	12.6	12.5
	4	476	435	5.9	6.0
	5	297	387	4.8	5.2
	6	159	125	1.8	1.6
	Missing	332	904		

"0" No disadvantage (no childhood disadvantage (father highest occupational class), no educational disadvantage (left education aged ≥22), no employment disadvantage (economically active), no income disadvantage (£31,200+), no age disadvantage (first live birth aged ≥30), no relationship disadvantage (married) "**1 /2/3/4/5/6**" number of levels of disadvantage from either (childhood disadvantage (father economically inactive/lowest occupational class), educational disadvantage (left education aged ≤16), employment disadvantage (economically inactive), income disadvantage (£0-10,400), age disadvantage (first live birth aged 14-19), relationship disadvantage (lone parent).

Statistical analysis

STATA version 10.1 was used for the statistical analysis. As previously mentioned, the original sample disproportionately represented disadvantaged socio-economic groups. In order to account for this disproportionality, the MCS study team created a variable that could be used to correct the weight assigned to each response which was utilised in these analyses.

The Wald test was used to identify whether or not the social variables (childhood circumstances, age left education, employment status, household income, age at first live birth, cohabitation status, and number of children) were significantly associated with each of the outcome variables. The majority of the social variables were categorical, with the exception of the number of children in the household, which was re-coded as a categorical variable. Table 8 to Table 14 shows how dummy coding was used to identify each level within each given variable in comparison to a reference category.

Table 8 Dummy coding to identify levels within childhood circumstances variable

Level	Variable	Dummy coding		
	Childhood circumstances *Childhood*	L1 vs. L2	L1 vs. L 3	L1 vs. L4
1	Managerial/ prof*	0	0	0
2	Intermediate	1	0	0
3	Economically inactive/ lowest	0	1	0
4	Unknown	0	0	1

*Reference group

Table 9 Dummy coding to identify levels within age left education variable

Level	Variable	Dummy coding		
	Age left education *Education*	L1 vs. L2	L1 vs. L 3	L1 vs. L4
1	≥22*	0	0	0
2	19-21	1	0	0
3	17-18	0	1	0
4	≤16	0	0	1

*Reference group

Table 10 Dummy coding to identify levels within employment status variable

Level	Variable	Dummy coding
	Employment status *Employment*	L1 vs. L2
1	Economically active*	0
2	Economically inactive	1

*Reference group

Table 11 Dummy coding to identify levels within household income variable

Level	Variable	Dummy coding			
	Household income *Income*	L1 vs. L2	L1 vs. L 3	L1 vs. L4	L1 vs. L5
1	£31,200+*	0	0	0	0
2	£20,800-31,200	1	0	0	0
3	£10,400-20,800	0	1	0	0
4	£0-10,400	0	0	1	0
5	Unknown	0	0	0	1

*Reference group

Table 12 Dummy coding to identify levels within age at first birth variable

Level	Variable	Dummy coding		
	Age first birth *Agebirth*	L1 vs. L2	L1 vs. L 3	L1 vs. L4
1	≥30*	0	0	0
2	25-29	1	0	0
3	20-24	0	1	0
4	14-19	0	0	1

*Reference group

Table 13 Dummy coding to identify levels within cohabitation status variable

Level	Variable	Dummy coding	
	Cohabitation status *Relationship*	L1 vs. L2	L1 vs. L 3
1	Married*	0	0
2	Cohabiting	1	0
3	Lone parent	0	1

*Reference group

Table 14 Dummy coding to identify levels within number of children variable

Level	Variable	Dummy coding	
	Number of children *Children*	L1 vs. L2	L1 vs. L 3
1	≥3*	0	0
2	2	1	0
3	1	0	1

*Reference group

Tests for correlation allow us to determine how well we can estimate the value of a variable on the basis of another. Checks were carried out to determine whether the variables included in the analyses were independent or correlated (related) with one another, as well as the direction ('same' or 'opposite') and strength of any such relationship (the closer to 1, the stronger the relationship) (Appendix 10). Generally values of above 0.8 indicate that pair of variables is strongly correlated and in this instance, the removal of one of the variables would be considered appropriate. In these analyses, correlations ranged from 0.03-0.68, as a result no variables were excluded from the analyses on the grounds that they were highly correlated.

Outcome variables

Infrequent drinking (never/<1/week), infrequent light drinking (1 unit/day, <1/week), and frequent light drinking (<4 units/day) relate to those types of drinking that reflect the majority's pattern of alcohol use according to the categories used in my analyses (Figure 13 to Figure 15), 'risky' drinkers were in the minority.
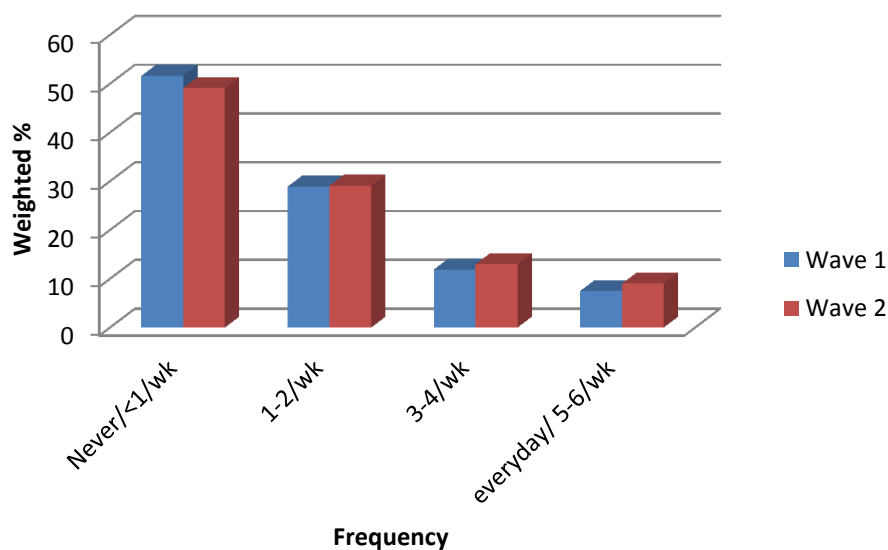
Figure 13 Frequency of alcohol use at wave 1 and 2

Note: Majority pattern – Infrequent drinking (never/<1/week)
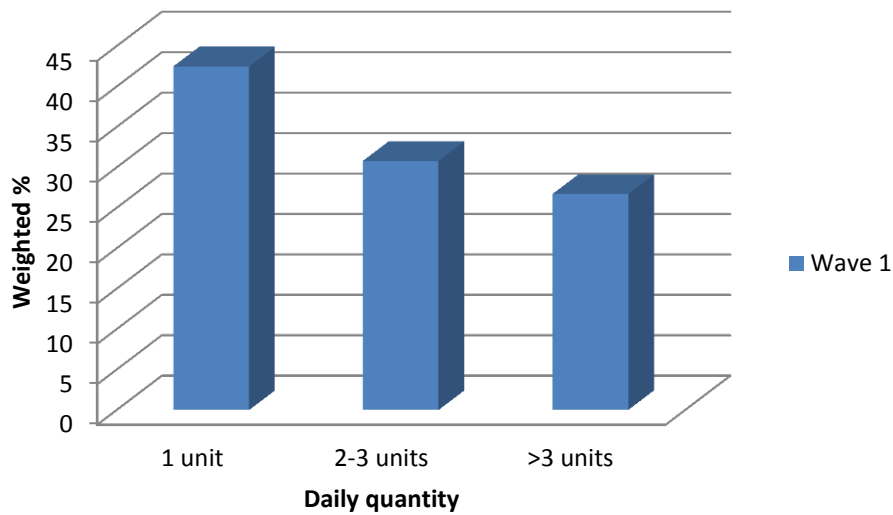
Figure 14 Daily quantity of alcohol use among infrequent drinkers (<1/week) at wave 1

Note: Majority pattern – Infrequent light drinking (1 unit/day on each drinking occasion)
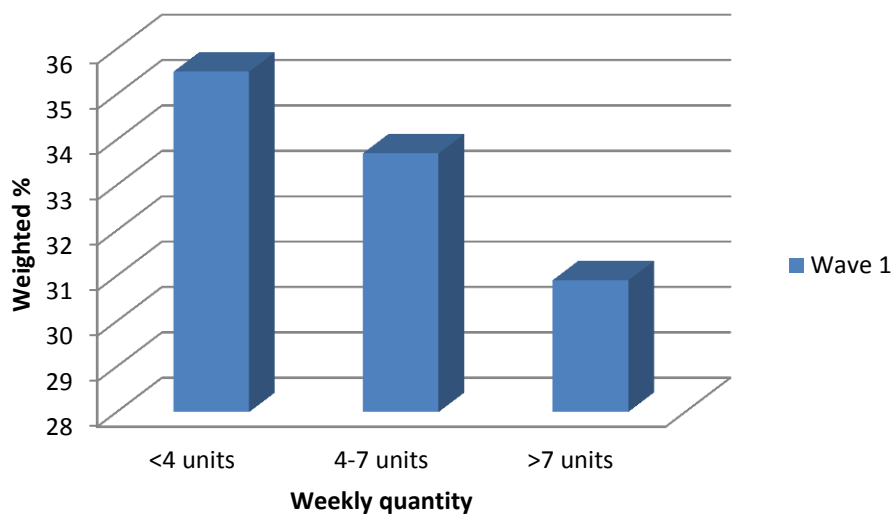
Figure 15 Weekly quantity of alcohol use among frequent drinkers (≥1/week) at wave 1

Note: Majority pattern – Frequent light drinkers (<4 units/week)

Frequent drinking (≥1/week), infrequent moderate drinking (>1 unit/day, <1/week), frequent moderate drinking (≥4 units/week), and 'risky' alcohol use (>3 units/day or >21 units/week) were the dependent variables, the outcomes of interest. In total there

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were four binary outcomes; infrequent drinkers/frequent drinkers, infrequent light drinkers/ infrequent moderate drinkers, frequent light drinkers/ frequent moderate drinkers, and non-risky/ 'risky' drinkers (Table 15).

Table 15 Binary outcomes for drinking frequency, infrequent and frequent drinking quantity, and 'risky' alcohol use

		Binary outcome	
	Wave	0	1
Model 1:	1	Infrequent drinkers (Never/<1/week)	Frequent drinkers ($\geq$1/week)
Model 2:	2	Infrequent drinkers (Never/<1/week)	Frequent drinkers ($\geq$1/week)
Model 3:	1	Infrequent light drinkers (1 unit/day, <1/week)	Infrequent moderate drinkers (>1 unit/day, <1/week)
Model 4:	1	Frequent light drinkers (<4 units/week)	Frequent moderate drinkers ($\geq$4 units/week)
Model 5:	1	Non-risky drinkers ($\leq$3 units/day or $\leq$21 units/week)	Risky drinkers (>3 units/day or >21 units/week)

Statistical modelling of alcohol use

A Chi^2 test was carried out to determine whether infrequent drinkers, infrequent light drinkers, frequent light drinkers, and 'risky' drinkers differed according to mothers' social background, current socio-economic and domestic circumstances, and level of disadvantage. Design based F-statistics that report Chi^2 values that have been corrected for survey designs (Rao and Scott, 1981) indicate whether the difference between the observed values and the expected values are significantly different to what would be expected by chance. Unlike odds ratios, Chi^2 tests do not provide information on the relationship between variables.

In order to generate models that best explained maternal patterns of alcohol use, binary logistic regression analyses were undertaken that included adjustment for age. Used for regression with a dichotomous dependent variable, it is a widely-used technique and as such provides results that can be compared with other studies. A simplified version of a binary logistic regression equation can be written as follows;

$$Y = \beta_0 + \beta_1 \text{Var1}_2 + \beta_2 \text{Var2}_2 + \beta_3 \text{Var3}_2 + \beta_4 \text{Var4}_2 + \beta_5 \text{Var5}_2 + \beta_6 \text{Var6}_2 + e$$

Y is the dependent variable, the outcome of interest (frequent drinking, infrequent moderate drinking, frequent moderate drinking, and 'risky' alcohol use). β_0 is the constant, whereby all variables are constant at the first level. β_1, β_2, β_3, β_4..... represent the regression coefficients, and Var1_2, Var2_2, Var3_2...... represent the different social variables and levels within each independent social variable. In addition, because the social patterning of multiple dimensions of maternal alcohol use is so under-researched, an inclusive approach to testing for interactions was taken (Table 16). Interaction effects exist when the simple main effect of one independent (predictor) variable differs depending on the level of another independent (predictor) variable (Figure 16). Interaction terms were included in the models when necessary. However, as is the case in the current study, it is important to acknowledge that in order to detect interaction effects, particularly those with small effect sizes (1-10% variance) (Rutledge and Loh, 2004), large sample sizes ($n = \geq 1000$) are required to ensure adequate statistical power (Jaccard, 2001). Further information with regards to the interaction effects included in the analyses (chapter 6) can be found in Appendix 11.

Ordinal logistic regression would not have been appropriate since it assumes there is proportional disparity between any two levels within each dependant variable and the independent outcome variable. For example, ordinal logistic regression would make the assumption that the difference between the odds of 'risky' drinking and having left education at ≤ 16 versus having left at age 17-18, would be the same as the difference between the odds of 'risky' drinking amongst mothers who left education at ≤ 16 and those who left at ≥ 22. Similarly, multinomial regression would not have been appropriate since this method is used when the outcome variable has three or more unordered levels and the outcome variables in question only have two.

Table 16 Tests for two way interactions

	Education	Employment	Income	Agebirth	Relationship	Children
Childhood	Childhood x Education	Childhood x Employment	Childhood x Income	Childhood x Age at 1st birth	Childhood x Relationship	Childhood x No. children
Education		Education x Employment	Education x Income	Education x Age at 1st birth	Education x Relationship	Education x No. children
Employment			Employment x Income	Employment x Age at 1st birth	Employment x Relationship	Employment x No. children
Income				Income x Age at 1st birth	Income x Relationship	Income x No. children
Age at 1st birth					Age at 1st birth x Relationship	Age at 1st birth x No. children
Relationship						Relationship x No. children

Predictor Variables
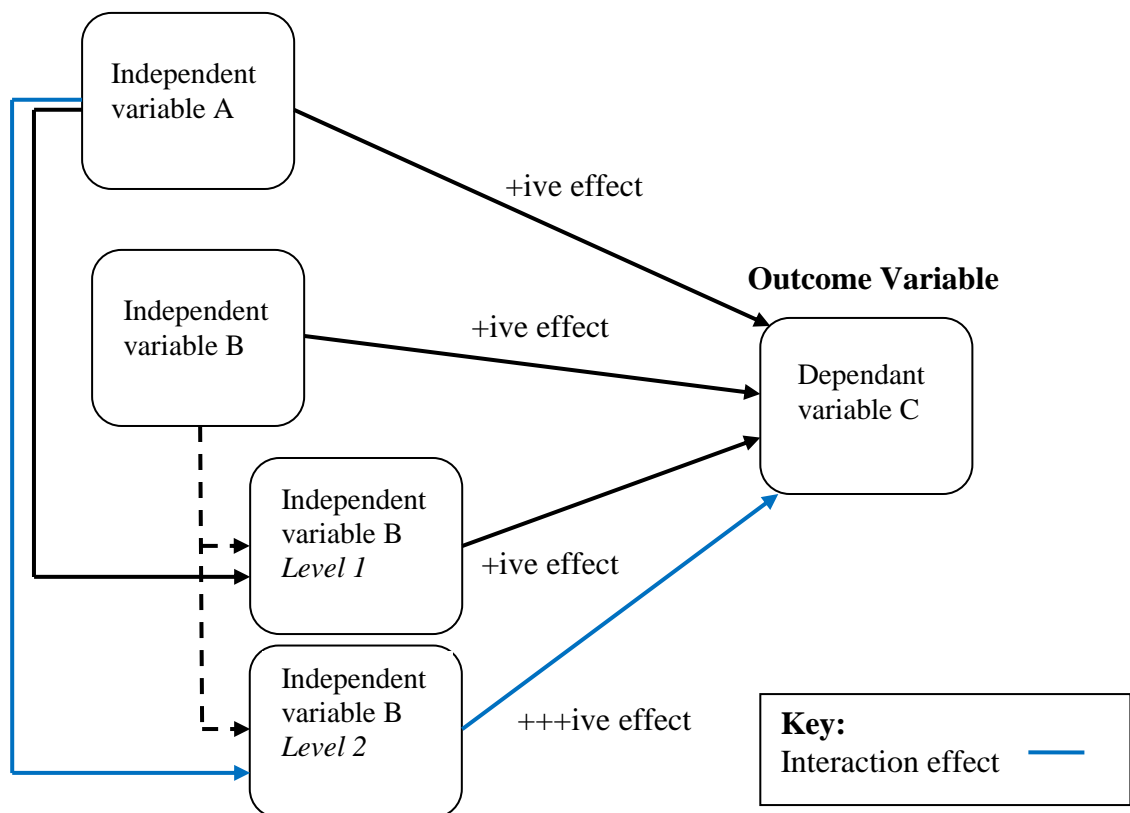
Figure 16 Example of an interaction effect between variable A and B

Firstly, age adjusted bivariate models were examined whereby one socio-demographic variable at a time was checked to determine whether it significantly predicted patterns of maternal alcohol (Table 17). Secondly, two mutually adjusted interim models that included all of the age adjusted socio-economic (childhood circumstances, age of leaving education, employment status, household income) or domestic variables (age at first live birth, cohabitation status, number of children in household) were included to assess which best explained patterns of maternal alcohol use (Table 17). Finally, a mutually adjusted model that included all of the age adjusted socio-economic measures and measures of domestic circumstances was carried out to see which variables remained significantly associated with patterns of alcohol use among mothers with pre-school aged children (Table 17).

Separate analyses were carried out to determine the effect of level of disadvantage having adjusted for age on patterns of maternal alcohol use (Table 18).

Table 17 Modelling social background and current socio-economic and domestic circumstances with alcohol use.

Bivariate analyses
i. Adjusted for age

Model a:	$Y = \beta_0 + \beta_1 \text{Childhood}_2 + \beta_2 \text{Childhood}_3 + \beta_3 \text{Childhood}_4 + \beta_4 \text{Age}_2 + \beta_5 \text{Age}_3 + \beta_6 \text{Age}_4 + e$
Model b:	$Y = \beta_0 + \beta_1 \text{Education}_2 + \beta_2 \text{Education}_3 + \beta_3 \text{Education}_4 + \beta_4 \text{Age}_2 + \beta_5 \text{Age}_3 + \beta_6 \text{Age}_4 + e$
Model c:	$Y = \beta_0 + \beta_1 \text{Employment}_2 + \beta_2 \text{Age}_2 + \beta_3 \text{Age}_3 + \beta_4 \text{Age}_4 + e$
Model d:	$Y = \beta_0 + \beta_1 \text{Income}_2 + \beta_2 \text{Income}_3 + \beta_3 \text{Income}_4 + \beta_4 \text{Income}_{5} + \beta_5 \text{Age}_2 + \beta_6 \text{Age}_3 + \beta_7 \text{Age}_4 + e$
Model e:	$Y = \beta_0 + \beta_1 \text{Agebirth}_2 + \beta_2 \text{Agebirth}_3 + \beta_3 \text{Agebirth}_4 + \beta_4 \text{Age}_2 + \beta_5 \text{Age}_3 + \beta_6 \text{Age}_4 + e$
Model f:	$Y = \beta_0 + \beta_1 \text{Relationship}_2 + \beta_2 \text{Relationship}_3 + \beta_3 \text{Age}_2 + \beta_4 \text{Age}_3 + \beta_5 \text{Age}_4 + e$
Model g:	$Y = \beta_0 + \beta_1 \text{Children}_2 + \beta_2 \text{Children}_3 + \beta_3 \text{Age}_2 + \beta_4 \text{Age}_3 + \beta_5 \text{Age}_4 + e$

Mutually adjusted analyses
i. Adjusted for socio-economic measures and age

Model h:	$Y = \beta_0 + \beta_1 \text{Childhood}_2 + \beta_2 \text{Childhood}_3 + \beta_3 \text{Childhood}_4 + \beta_4 \text{Education}_2 + \beta_5 \text{Education}_3 + \beta_6 \text{Education}_4 + \beta_7 \text{Employment}_2 + \beta_8 \text{Income}_2 + \beta_9 \text{Income}_3 + \beta_{10} \text{Income}_4 + \beta_{11} \text{Income}_5 + \beta_{12} \text{Age}_2 + \beta_{13} \text{Age}_3 + \beta_{14} \text{Age}_4 + \text{Interactions} + e$

ii. Adjusted for domestic circumstances and age

Model i:	$Y = \beta_0 + \beta_1 \text{Agebirth}_2 + \beta_2 \text{Agebirth}_3 + \beta_3 \text{Agebirth}_4 + \beta_4 \text{Relationship}_2 + \beta_5 \text{Relationship}_3 + \beta_6 \text{Children}_2 + \beta_7 \text{Children}_3 + \beta_8 \text{Age}_2 + \beta_9 \text{Age}_3 + \beta_{10} \text{Age}_4 + \text{Interactions} + e$

iii. Adjusted for socio-economic measures, domestic circumstances, and age

Model j:	$Y = \beta_0 + \beta_1 \text{Childhood}_2 + \beta_2 \text{Childhood}_3 + \beta_3 \text{Childhood}_4 + \beta_4 \text{Education}_2 + \beta_5 \text{Education}_3 + \beta_6 \text{Education}_4 + \beta_7 \text{Employment}_2 + \beta_8 \text{Income}_2 + \beta_9 \text{Income}_3 + \beta_{10} \text{Income}_4 + \beta_{11} \text{Income}_5 + \beta_{12} \text{Agebirth}_2 + \beta_{13} \text{Agebirth}_3 + \beta_{14} \text{Agebirth}_4 + \beta_{15} \text{Relationship}_2 + \beta_{16} \text{Relationship}_3 + \beta_{17} \text{Children}_2 + \beta_{18} \text{Children}_3 + \beta_{19} \text{Age}_2 + \beta_{20} \text{Age}_3 + \beta_{21} \text{Age}_4 + \beta_{22} \text{Age}^2 + \text{Interactions} + e$

Table 18 Modelling multiple disadvantage and alcohol use.

Bivariate analyses
i. Adjusted for age
Model k: $Y = \beta_1 Disadvantage_2 + \beta_2 Disadvantage_3 + \beta_3 Disadvantage_4 + \beta_4 Disadvantage_5 + \beta_5 Disadvantage_6 + \beta_6 Disadvantage_7 + \beta_7 Age_2 + \beta_8 Age_3 + \beta_9 Age_4 + e$

Odds Ratios

Odds ratios (OR) were calculated for the likelihood of frequent drinking ($\geq$1/week), infrequent moderate drinking (>1 unit/day, <1/week), frequent moderate drinking ($\geq$4 units/week), and 'risky' alcohol use (>3 units/day or >21 units/week) according to mothers' social circumstances. Each of these outcome variables represent drinking in excess of majority patterns since it was deemed more intuitive to discuss the odds in this way.

The odds of achieving a particular outcome refers to the ratio between the probability that the outcome is achieved compared with the probability that the outcome is not achieved, illustrated in the example below;

Group 1: Odds of achievement = $\underline{\text{Probability of achievement}}$ $4.0 = \underline{0.8}$

                         Probability of non-achievement   0.2

Group 2: Odds of achievement = $\underline{\text{Probability of achievement}}$ $1.5 = \underline{0.6}$

                         Probability of non-achievement   0.4

The odds ratio (OR) is used to determine the probability (P_1) of a particular outcome in one group (1) compared with the probability (P_2) of the same outcome in another group (2).

OR = $\underline{P_1 / (1-P_1)}$ $2.67 = \underline{0.8 / (1-0.8)}$

       $P_2 / (1-P_2)$ $0.6 / (1-0.6)$

An odds ratio of 1 indicates that there is an equal chance between the two groups of achieving the outcome. An odds ratio above one indicates that that particular group is more likely to achieve the outcome and an odds ratio below one indicates that that group is less likely to achieve the outcome. In the example above, the odds of group 1 achieving the outcome is 2.67 times the odds of group 2.

The significance level for these analyses was set at $p<0.05$. This denotes that one can be 95% confident that the results are correct. However, at this level of significance there is also a 5% chance of a type I error, a false positive, concluding that a relationship between a variable and a specific outcome exists when in fact it does not. Nevertheless, significance levels of $p<0.05$ are commonly used in the social sciences. More stringent levels of significance ($p<0.01$) would have increased the probability that the results were correct, and it is important to bear in mind how the results may have changed as a result of this.

In these analyses, the odds of achieving each of the alcohol outcome variables: frequent drinking ($\geq$1/week), infrequent moderate drinking (>1 unit/day, <1/week), frequent moderate drinking ($\geq$4 units/week), and 'risky' alcohol use (>3 units/day or >21 units/week) were computed for each socio-demographic variable included in the model. The categories within each socio-economic variable were compared with a reference category as illustrated earlier in the chapter (Table 8 to Table 14).

Summary

Chapter 5 provided a detailed description of the quantitative analysis carried out in STATA undertaken to determine the everyday patterns of alcohol use among women with pre-school aged children according to their social background, current socio-economic and domestic circumstances, and multiple disadvantage. The results of these analyses are included in chapter 6.

Chapter 6: Quantitative results – Patterns of maternal alcohol use

Introduction

Chapter 5 provided a detailed account of the quantitative analysis. The following chapter presents the results of these analyses with the aim of identifying whether or not patterns of maternal alcohol use differ amongst mothers with pre-school aged children according to their social background and current circumstances.

Looking at patterns of drinking frequency, quantity, and 'risky' alcohol use in turn, the analysis is presented in the following stages. Firstly, descriptive statistics summarise the majority patterns of alcohol use among mothers with pre-school aged children: infrequent drinking (never/<1/week), infrequent light drinking (1 unit/day, <1/week), frequent light drinking (<4 units/week), and minority patterns of 'risky' alcohol use, according to mothers' social background, current socio-economic and domestic circumstances, and drawing these different dimensions together, their exposure to multiple disadvantages.

Odds ratios are then reported for each of the bivariate models, and a number of mutually adjusted models (as described in chapter 5) to determine how strongly the social measures are associated with drinking in excess of majority patterns: frequent drinking (≥1/week), infrequent moderate drinking (>1 unit/day <1/week), and frequent moderate drinking (≥4 units/week) amongst mothers with pre-school aged children. Likewise, descriptive statistics and odds ratios are then reported for 'risky' alcohol use amongst mothers.

Drinking frequency

Drinking frequency according to social background and current socio-economic and domestic circumstances

Infrequent drinking (never/<1/week) relates to the category of drinking frequency that reflects the majority's pattern of alcohol use. The majority of mothers in both waves 1 and 2 of the MCS never drank or drank less than once per week (see chapter 5).

As previously discussed in chapter 5, my review of the literature (chapter 1) found a number of studies that considered socio-demographic measures in terms of women's drinking frequency. Within these studies a number of social measures were found to be important: childhood circumstances (Mortensen et al., 2006), education (Giskes et al., 2011), employment status (Christie-Mizell and Peralta, 2009), income (Giskes et al., 2011; Casswell, 2003) and marital status (Christie-Mizell and Peralta, 2009; Stroup-Benham et al., 1990).

In both waves 1 and 2 of my analyses, other than the number of children living in the household, social gradients in the proportion of infrequent drinkers (never/<1/week) were evident for all social dimensions: social background, employment status, household income, age at first birth, and cohabitation status (Table 19 and Figure 17).

Table 19 Infrequent drinkers (never/<1/week) according to social background and current socio-economic and domestic circumstances in wave 1 and wave 2

Socio-economic Variable		Infrequent drinkers (wave 1) _n_ = 3803		Infrequent drinkers (wave 2) _n_ = 3580	
		N	Weighted %	N	Weighted %
Childhood circumstances	Managerial/ prof	796	39.8	777	39.2
	Intermediate	745	50.0	715	48.4
	Economically inactive/ routine	1805	59.2	1675	55.5
	Unknown	457	59.4	413	53.0
		F (2.55,502.55) = 52.3 _p_0.000		F (2.75,541.74) = 34.4 _p_0.000	
Age left education	>=22	224	30.4	227	30.4
	19-21	344	38.8	348	40.0
	17-18	1064	60.0	1006	48.2
	<=16	2171	70.1	1999	56.8
		F (2.70,531.46) = 60.5 _p_0.000		F (2.71,533.62) = 46.7 _p_0.000	
Employment status	Working	1790	46.8	1767	44.8
	Not working	2013	57.5	1813	54.5
		F (1,197) = 85.1 _p_0.000		F (1,197) = 57.0 _p_0.000	
Household income	£31,200+	550	32.6	553	32.6
	£20,800-31,200	810	49.8	750	46.8
	£10,400-20,800	1323	62.0	1219	57.1
	£0-10,400	889	68.2	841	65.4
	Unknown	165	52.5	161	52.4
	Missing	66		56	
		F (3.28,645.76) = 82.4 _p_0.000		F (3.38,666.72) = 71.9 _p_0.000	
Age at first live birth	30+	740	35.7	727	35.3
	25-29	1118	51.5	1045	48.8
	20-24	1083	63.2	993	58.2
	14-19	844	67.4	799	64.2
	Missing	18		16	
		F (2.67,525.19) = 105.6 _p_0.000		F (2.84,558.98) = 78.3 _p_0.000	
Cohabitation status	Married	2009	46.7	1844	44.4
	Cohabiting	1156	57.2	711	55.8
	Lone parent	614	66.3	638	57.6
	Missing	24		387	
		F (1.98,393.75) = 50.9 _p_0.000		F (2.0,394.00) = 33.9 _p_0.000	
Number of children	3+	852	56.9	980	51.3
	2	1384	50.0	1670	45.9
	1	1567	50.6	930	53.1
		F (2.0,393.75) = 8.1 _p_0.000		F (1.99,392.94) = 11.2 _p_0.000	
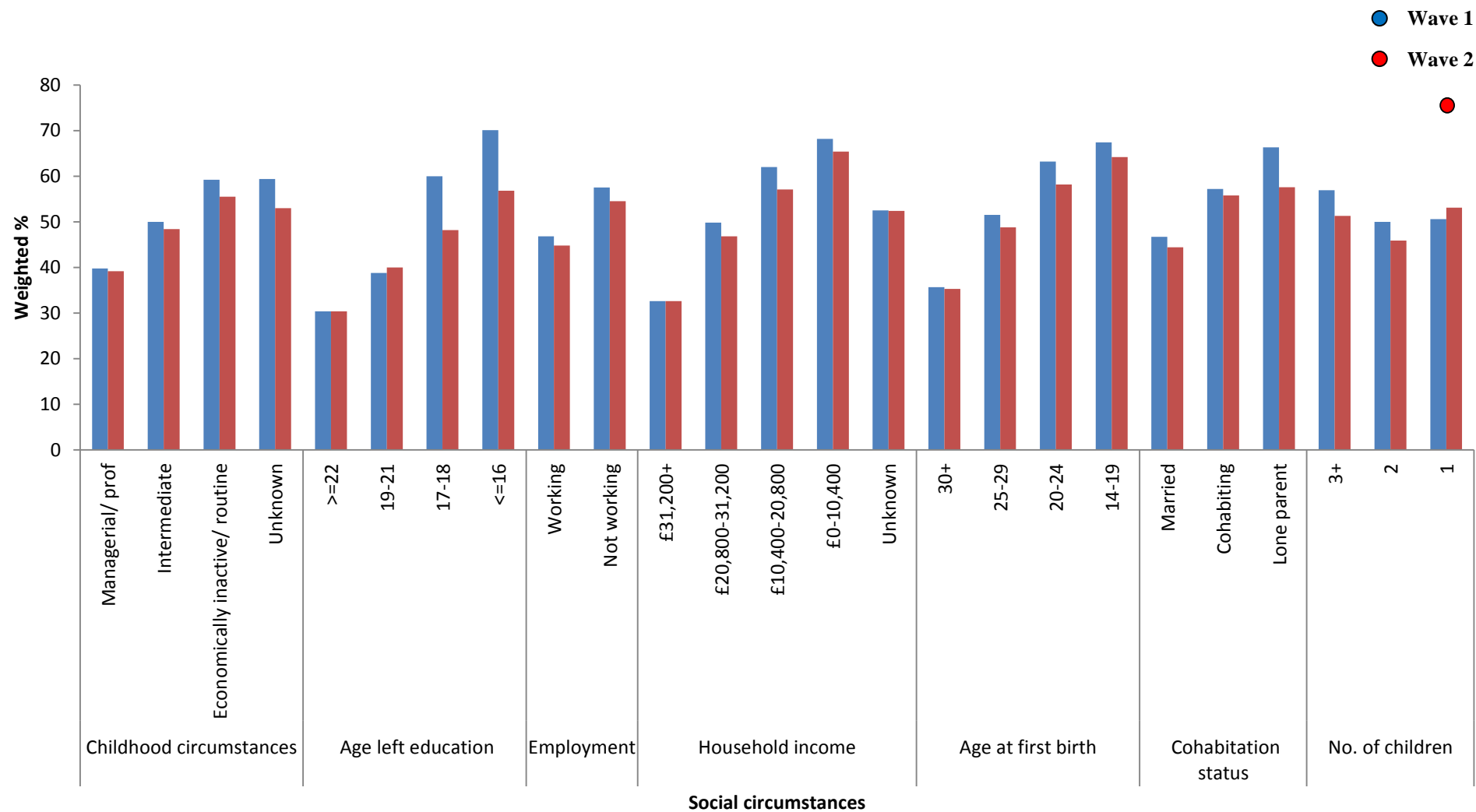
Figure 17 The proportion of infrequent drinkers (never/<1/week) according to social background and current socio-economic and domestic circumstances in wave 1 and wave 2

The next section reports the findings of each of the analysis stages described in chapter 5 that examine patterns of frequent drinking ($\geq$1/week); age adjusted bivariate analyses, analyses adjusted for socio-economic circumstances, analyses adjusted for domestic circumstances, and fully adjusted analyses.

Bivariate analyses

Adjusted for age

In age adjusted bivariate analyses of waves 1 and 2, the odds of frequent drinking ($\geq$1/week) decreased in line with increasingly disadvantaged childhood circumstances (Wave 1: n = 7046, OR: 0.51, C.I: 0.43-0.59, p0.000, Wave 2: n = 7046, OR: 0.57, C.I: 0.49-0.65, p0.000), lower educational attainment (Wave 1: n = 7046, OR: 0.34, C.I: 0.27-0.43, p0.000, Wave 2: n = 7046, OR: 0.41, C.I: 0.32-0.51, p0.000), lower household income (Wave 1: n = 6928, OR: 0.29, C.I: 0.23-0.37, p0.000, Wave 2: n = 6928, OR: 0.35, C.I: 0.28-0.43, p0.000), and younger age at first birth (Wave 1: n = 7011, OR: 0.34, C.I: 0.27-0.43, p0.000, Wave 2: n = 7011, OR: 0.45, C.I: 0.36-0.56, p0.000). Similarly, odds were lower for mothers who were economically inactive (Wave 1: n = 7046, OR: 0.74, C.I: 0.67-0.81, p0.000, Wave 2: n = 7046, OR: 0.77, C.I: 0.69-0.85, p0.000) compared to those who were economically active and, for cohabiting (Wave 1: n = 7014, OR: 0.82, C.I: 0.73-0.93, p0.002, Wave 2: n = 6355, OR: 0.78, C.I: 0.67-0.91, p0.002) and lone mothers (Wave 1: n = 7014, OR: 0.62, C.I: 0.51-0.75, p0.000, Wave 2: n = 6355, OR: 0.82, C.I: 0.69-0.96, p0.016) compared to married mothers. The odds of frequent drinking ($\geq$1/week) significantly increased as the number of children in the household decreased in wave 1 (n = 7046, OR: 1.71, C.I: 1.47-1.99, p0.000) (Table 20 and Table 21).

Mutually adjusted analyses

Adjusted for socio-economic measures and age

Analysis adjusted for socio-economic measures in wave 1 found the odds of frequent drinking ($\geq$1/week) no longer significantly decreased in line with increasingly disadvantaged childhood circumstances, lower educational attainment and economic inactivity. Lower household income was the only socio-economic measure that remained negatively associated with frequent drinking ($\geq$1/week) after adjustment (*n* = 6928, OR: 0.42, C.I: 0.33-0.54, *p*0.000) (Table 20).

The picture for wave 2 is different, the negative association with frequent drinking ($\geq$1/week) and increasingly disadvantaged childhood circumstances (*n* = 6928, OR: 0.70, C.I: 0.62-0.79, *p*0.000) and lower educational attainment (*n* = 6928, OR: 0.60, C.I: 0.48-0.74, *p*0.000) both remained, economic inactivity and lower household income were no longer significant predictors (Table 21).

Adjusted for domestic circumstances and age

Analysis adjusted for domestic measures in both waves 1 and 2 found the odds of frequent drinking ($\geq$1/week) became significantly less likely with: younger age at first birth (Wave 1: *n* = 6980, OR: 0.07 C.I: 0.34-0.13 *p*0.000, Wave 2: *n* = 6325, OR: 0.11, C.I: 0.06-0.20 *p*0.000), amongst lone (Wave 1: *n* = 6980, OR: 0.28, C.I: 0.16-0.48, *p*0.000, Wave 2: *n* = 6325, OR: 0.39, C.I: 0.17-0.87, *p*0.021) and cohabiting mothers (Wave 1: *n* = 6980, OR: 0.61, C.I: 0.48-0.77, *p*0.000, Wave 2: *n* = 6325, OR: 0.58, C.I: 0.39-0.86, *p*0.008) in comparison to married mothers, and with fewer children in the household (Wave 1: *n* = 6980, OR: 0.52, C.I: 0.35-0.77, *p*0.001, Wave 2: *n* = 6325, OR: 0.30, C.I: 0.19-0.48, *p*0.000) (Table 20 and Table 21).

Adjusted for socio-economic measures, domestic circumstances, and age

Mutually adjusted analyses revealed that at wave 1, frequent drinking ($\geq$1/week) remained less likely with lower household income (*n* = 6865, OR: 0.43, C.I: 0.33-0.55, *p*0.001) as has been found to be the case in previous studies looking at alcohol use amongst women (Giskes et al., 2011; Casswell, 2003). Household income was the only socio-economic measure that endured having controlled for other socio-economic measures, domestic circumstances, and age. In contrast, all of the domestic measures of mothers social circumstances: younger age at first birth (*n* = 6865, OR: 0.13, C.I: 0.05-0.33, *p*0.031), lone (*n* = 6865, OR: 0.37, C.I: 0.16-0.83, *p*0.009) and cohabiting mothers (*n* = 6865, OR: 0.66, C.I: 0.45-0.96, *p*0.017) in comparison to married mothers, and decreasing numbers of children in the household (*n* = 6865, OR: 0.36, C.I: 0.19-0.66, *p*0.001), remained negatively associated with frequent drinking ($\geq$1/week) amongst mothers (Table 20 and Figure 18), having adjusted for socio-economic measures, domestic circumstances, and age. This suggests that significant differences in mothers' drinking frequency are more evident according to mothers' domestic as opposed to socio-economic circumstances when their child is 9 months old.

In wave 2, mutually adjusted analyses having adjusted for socio-economic measures, domestic circumstances, and age, indicated that frequent drinking ($\geq$1/week) remained less likely with increasing childhood disadvantage (*n* = 6225, OR: 0.62,

C.I: 0.47-0.81, *p*0.001), younger age at first birth (*n* = 6225, OR: 0.18, C.I: 0.07-0.46, *p*0.000) and fewer children in the household (*n* = 6225, OR: 0.30, C.I: 0.17-0.55, *p*0.000). Frequent drinking ($\geq$1/week) was found to be more likely amongst economically inactive mothers (*n* = 6225, OR: 1.57, C.I: 1.08-2.28, *p*0.018) in line with earlier research on women's alcohol use (Christie-Mizell and Peralta, 2009) (Table 21 and Figure 18). Furthermore, despite being significant in the bivariate analysis and analysis adjusted for socio-economic circumstances, neither childhood circumstances, employment status, nor cohabitation status remained significant having adjusted for socio-economic measures, domestic circumstances, and age.

Reasons for similarities and differences between waves 1 and 2 when the cohort child was aged 9 months and 3 years respectively need further investigation. One hypothesis is that lower income households are more greatly affected when children are very young and financial demands at their highest. In addition, economic inactivity may be a more important factor when children are older and a greater proportion of mothers are actively seeking employment. Furthermore, what is apparent as a result of these analyses is the relative influence of domestic circumstances in relation to the frequency of alcohol use that warrants further investigation.

Table 20 Odds of frequent drinking (≥1/week) according to social background and current socio-economic and domestic circumstances in wave 1

Wave 1: Frequent drinking	Bivariate analyses	Mutually adjusted analyses		
(OR 95% C.I)	Adjusted for age	Adjusted for socio-economic measures and age	Adjusted for domestic circumstances and age	Adjusted for socio-economic measures, domestic circumstances, and age
Childhood circumstances	***Model: 1a*** (*n* = 7046)	***Model: 1h*** (*n* = 6928)	***Model: 1i*** (*n* =6980)	***Model: 1j***(*n* =6865)
Highest	1.00	1.00		1.00
Intermediate	OR: 0.72 (C.I: 0.63-0.82) *p* 0.000	OR: 0.94 (C.I: 0.76-1.16) *p* 0.559		OR: 0.85 (C.I: 0.68-1.06) *p* 0.156
Lowest/ Economically inactive	OR: 0.51 (C.I: 0.43-0.59) *p* 0.000	OR: 0.87 (C.I: 0.61-1.24) *p* 0.441		OR: 0.70 (C.I: 0.48-1.01) *p* 0.056
Unknown	OR: 0.51 (C.I: 0.42-0.63) *p* 0.000	OR: 1.02 (C.I: 0.60-1.76) *p* 0.929		OR: 0.70 (C.I: 0.40-1.24) *p* 0.221
Age of leaving education	***Model: 1b*** (*n* =7046)			
22 and over	1.00	1.00		1.00
19-21	OR: 0.76 (C.I: 0.60-0.98) *p* 0.032	OR: 0.93 (C.I: 0.70-1.25) *p* 0.645		OR: 0.82 (C.I: 0.55-1.20) *p* 0.301
17-18	OR: 0.48 (C.I: 0.38-0.60) *p* 0.000	OR: 0.78 (C.I: 0.53-1.14) *p* 0.195		OR: 0.60 (C.I: 0.32-1.13) *p* 0.114
16 and under	OR: 0.34 (C.I: 0.27-0.43) *p* 0.000	OR: 0.77 (C.I: 0.44-1.32) *p* 0.337		OR: 0.52 (C.I: 0.20-1.35) *p* 0.179
Employment status	***Model: 1c*** (*n* = 7046)			
Economically active	1.00	1.00		1.00
Economically inactive	OR: 0.74 (C.I: 0.67-0.81) *p* 0.000	OR: 1.56 (C.I: 0.99-2.46) *p* 0.054		OR: 1.27 (C.I: 0.68-2.36) *p* 0.447
Household income	***Model: 1d*** (*n* = 6928)			
£31,200+	1.00	1.00		1.00
£20,800-31,200	OR: 0.52 (C.I: 0.43-0.62) *p* 0.000	OR: 0.59 (C.I: 0.50-0.70) *p* 0.000		OR: 0.62 (C.I: 0.52-0.73) *p* 0.000
£10,400-20,800	OR: 0.35 (C.I: 0.29-0.42) *p* 0.000	OR: 0.44 (C.I: 0.37-0.53) *p* 0.000		OR: 0.48 (C.I: 0.40-0.57) *p* 0.000
£0-10,400	OR: 0.29 (C.I: 0.23-0.37) *p* 0.000	OR: 0.42 (C.I: 0.33-0.54) *p* 0.000		OR: 0.43 (C.I: 0.33-0.55) *p* 0.001
Unknown	OR: 0.47 (C.I: 0.35-0.64) *p* 0.000	OR: 0.57 (C.I: 0.42-0.77) *p* 0.000		OR: 0.59 (C.I: 0.44-0.80) *p* 0.000
Age at first live birth	***Model: 1e*** (*n* = 7011)			
30+	1.00		1.00	1.00
25-29	OR: 0.57 (C.I: 0.49-0.66) *p* 0.000		OR: 0.30 (C.I: 0.23-0.39) *p* 0.000	OR: 0.38 (C.I: 0.27-0.54) *p* 0.000
20-24	OR: 0.40 (C.I: 0.33-0.48) *p* 0.000		OR: 0.13 (C.I: 0.08-0.20) *p* 0.000	OR: 0.22 (C.I: 0.12-0.40) *p* 0.000
14-19	OR: 0.34 (C.I: 0.27-0.43) *p* 0.000		OR: 0.07 (C.I: 0.34-0.13) *p* 0.000	OR: 0.13 (C.I: 0.05-0.33) *p* 0.031
Cohabitation status	***Model: 1f*** (*n* = 7014)			
Married	1.00		1.00	1.00
Cohabiting	OR: 0.82 (C.I: 0.73-0.93) *p* 0.002		OR: 0.61 (C.I: 0.48-0.77) *p* 0.000	OR: 0.66 (C.I: 0.45-0.96) *p* 0.017
Lone parent	OR: 0.62 (C.I: 0.51-0.75) *p* 0.000		OR: 0.28 (C.I: 0.16-0.48) *p* 0.000	OR: 0.37 (C.I: 0.16-0.83) *p* 0.009
Number of children in household	***Model: 1g*** (*n* = 7046)			
3+	1.00		1.00	1.00
2	OR: 1.50 (C.I: 1.30-1.74) *p* 0.000		OR: 0.73 (C.I: 0.58-0.94) *p* 0.013	OR: 0.63 (C.I: 0.45-0.89) *p* 0.009
1	OR: 1.71 (C.I: 1.47-1.99) *p* 0.000		OR: 0.52 (C.I: 0.35-0.77) *p* 0.001	OR: 0.36 (C.I: 0.19-0.66) *p* 0.001
Interactions				

Childhood/employment		OR: 0.90 (C.I: 0.81-1.01) p 0.084		OR: 0.87 (C.I: 0.77-0.99) p 0.034
Childhood/age 1st birth				OR: 1.05 (C.I: 0.99-1.11) p 0.105
Childhood/Cohab				OR: 1.05 (C.I: 0.96-1.15) p 0.277
Education/employment		OR: 0.91 (C.I: 0.80-1.03) p 0.133		OR: 0.94 (C.I: 0.82-1.07) p 0.325
Education/Cohab				OR: 1.03 (C.I: 0.93-1.13) p 0.574
Education/No. children				OR: 1.04 (C.I: 0.95-1.13) p 0.398
Employment/ No. children				OR: 1.10 (C.I: 0.96-1.26) p 0.178
Age 1st birth/ Cohab			OR: 1.19 (C.I: 1.08-1.31) p 0.000	OR: 1.12 (C.I: 1.02-1.25) p 0.025
Age 1st birth/ No. children			OR: 1.21 (C.I: 1.11-1.32) p 0.000	OR: 1.15 (C.I: 1.04-1.26) p 0.007
		$F_{(16, 182)} = 21.10$ p.0.000	$F_{(12, 186)} = 20.07$ p.0.000	$F_{(30, 166)} = 12.91$ p.0.000

Table 21 Odds of frequent drinking (≥1/week) according to social background and current socio-economic and domestic circumstances in wave 2

Wave 2: Frequent drinking	Bivariate analyses	Mutually adjusted analyses		
(OR 95% C.I)	Adjusted for age	Adjusted for socio-economic measures and age	Adjusted for domestic circumstances and age	Adjusted for socio-economic measures, domestic circumstances, and age
Childhood circumstances	**Model: 2a** (n = 7046)	**Model: 2h** SE measures (n = 6928)	**Model: 2i** Domestic measures (n = 6325)	**Model: 2j** (n = 6225)
Highest	1.00	1.00		1.00
Intermediate	OR: 0.72 (C.I: 0.62-0.84) p 0.000	OR: 0.81 (C.I: 0.70-0.93) p 0.004		OR: 0.76 (C.I: 0.62-0.92) p 0.004
Lowest/ Economically inactive	OR: 0.57 (C.I: 0.49-0.65) p 0.000	OR: 0.70 (C.I: 0.62-0.79) p 0.000		OR: 0.62 (C.I: 0.47-0.81) p 0.001
Unknown	OR: 0.66 (C.I: 0.53-0.81) p 0.000	OR: 0.84 (C.I: 0.68-1.03) p 0.090		OR: 0.63 (C.I: 0.42-0.95) p 0.026
Age of leaving education	**Model: 2b** (n =7046)			
22 and over	1.00	1.00		1.00
19-21	OR: 0.70 (C.I: 0.56-0.88) p 0.003	OR: 0.76 (C.I: 0.61-0.96) p 0.023		OR: 0.78 (C.I: 0.59-1.05) p 0.101
17-18	OR: 0.53 (C.I: 0.42-0.67) p 0.000	OR: 0.66 (C.I: 0.53-0.82) p 0.000		OR: 0.64 (C.I: 0.42-0.99) p 0.044
16 and under	OR: 0.41 (C.I: 0.32-0.51) p 0.000	OR: 0.60 (C.I: 0.48-0.74) p 0.000		OR: 0.59 (C.I: 0.33-1.06) p 0.075
Employment status	**Model: 2c** (n =7046)			
Economically active	1.00	1.00		1.00
Economically inactive	OR: 0.77 (C.I: 0.69-0.85) p 0.000	OR: 1.22 (C.I: 0.92-1.63) p 0.167		OR: 1.57 (C.I: 1.08-2.28) p 0.018
Household income	**Model: 2d** (n =6928)			
£31,200+	1.00	1.00		1.00
£20,800-31,200	OR: 0.58 (C.I: 0.49-0.68) p 0.000	OR: 0.77 (C.I: 0.63-0.93) p 0.008		OR: 0.75 (C.I: 0.55-1.02) p 0.069
£10,400-20,800	OR: 0.42 (C.I: 0.35-0.50) p 0.000	OR: 0.73 (C.I: 0.54-0.98) p 0.037		OR: 0.64 (C.I: 0.37-1.10) p 0.105
£0-10,400	OR: 0.35 (C.I: 0.28-0.43) p 0.000	OR: 0.85 (C.I: 0.52-1.39) p 0.520		OR: 0.64 (C.I: 0.28-1.46) p 0.288
Unknown	OR: 0.47 (C.I: 0.35-0.64) p 0.000	OR: 1.18 (C.I: 0.62-2.23) p 0.614		OR: 0.82 (C.I: 0.27-2.49) p 0.721
Age at first live birth	**Model: 2e** (n =7011)			
30+	1.00		1.00	1.00
25-29	OR: 0.60 (C.I: 0.51-0.70) p 0.000		OR: 0.35 (C.I: 0.27-0.46) p 0.000	OR: 0.42 (C.I: 0.30-0.59) p 0.000
20-24	OR: 0.48 (C.I: 0.40-0.57) p 0.000		OR: 0.19 (C.I: 0.12-0.28) p 0.000	OR: 0.28 (C.I: 0.15-0.51) p 0.000
14-19	OR: 0.45 (C.I: 0.36-0.56) p 0.000		OR: 0.11 (C.I: 0.06-0.20) p 0.000	OR: 0.18 (C.I: 0.07-0.46) p 0.000
Cohabitation status	**Model: 2f** (n =6355)			
Married	1.00		1.00	1.00
Cohabiting	OR: 0.78 (C.I: 0.67-0.91) p 0.002		OR: 0.58 (C.I: 0.39-0.86) p 0.008	OR: 0.99 (C.I: 0.61-1.61) p 0.979
Lone parent	OR: 0.82 (C.I: 0.69-0.96) p 0.016		OR: 0.39 (C.I: 0.17-0.87) p 0.021	OR: 1.25 (C.I: 0.47-3.32) p 0.659
Number of children in household	**Model: 2g** (n =7046)			
3+	1.00		1.00	1.00
2	OR: 1.33 (C.I: 1.16-1.51) p 0.000		OR: 0.61 (C.I: 0.46-0.81) p 0.001	OR: 0.60 (C.I: 0.42-0.86) p 0.005
1	OR: 1.14 (C.I: 0.98-1.33) p 0.096		OR: 0.30 (C.I: 0.19-0.48) p 0.000	OR: 0.30 (C.I: 0.17-0.55) p 0.000
Interactions				

Childhood/age 1st birth				OR: 1.05 (C.I: 0.99-1.11) *p* 0.080
Education/No. children				OR: 1.03 (C.I: 0.94-1.12) *p* 0.542
Income/Employment		OR: 0.87 (C.I:0.79-0.96) *p* 0.007		OR: 0.91 (C.I: 0.80-1.04) *p* 0.153
Income/ No. children				OR: 1.01 (C.I: 0.94-1.09) *p* 0.749
Employment/age 1st birth				OR: 0.95 (C.I: 0.85-1.07) *p* 0.408
Employment/ Cohab				OR: 0.81 (C.I: 0.67-0.98) *p* 0.029
Age 1st birth/ Cohab			OR: 1.10 (C.I: 1.01-1.20) *p* 0.032	OR: 1.09 (C.I: 0.99-1.19) *p* 0.078
Age 1st birth/ No. children			OR: 1.21 (C.I: 1.09-1.33) *p* 0.000	OR: 1.16 (C.I: 1.05-1.30) *p* 0.006
Cohab/ No. children			OR: 1.10 (C.I: 0.98-1.23) *p* 0.116	OR: 1.05 (C.I: 0.92-1.18) *p* 0.478
		$F_{(15, 183)} = 17.69$ *p*.0.000	$F_{(13, 185)} = 18.71$ *p*.0.000	$F_{(30, 168)} = 11.30$ *p*.0.000
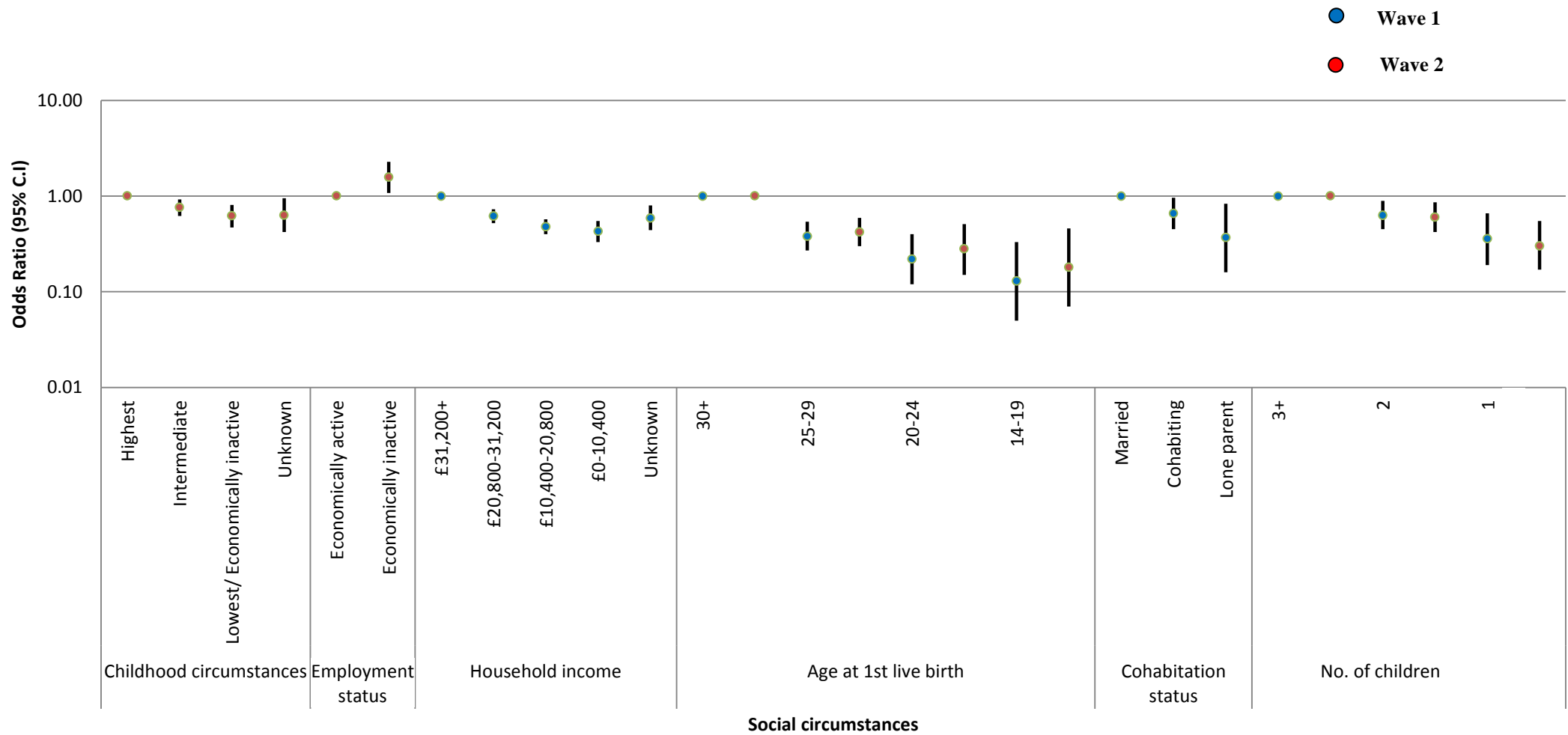
Figure 18 Significant odds of frequent drinking (≥1/week) according to social background and current socio-economic and domestic circumstances in wave 1 and wave 2*

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

My inclusive approach to testing found a number of significant two-way interactions in relation to the frequency of alcohol use in wave 1 and wave 2 (Figure 19 to Figure 22 and Appendix 11).

Interactions (wave 1)

Childhood circumstances and employment status
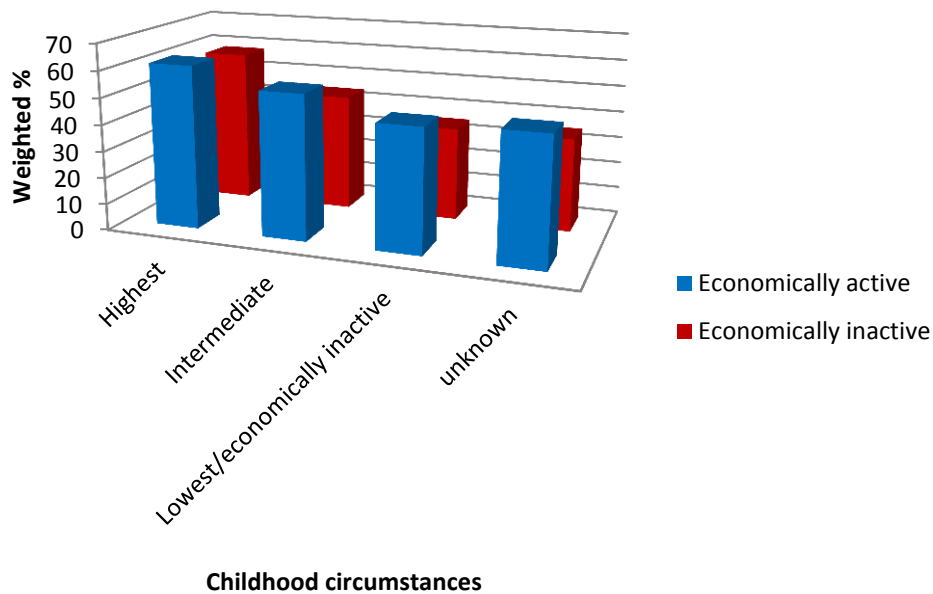
Figure 19 Interaction effect of childhood circumstances and employment status on frequent drinking ($\geq$1/week) in wave 1*

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

The proportion of mothers who were frequent drinkers (>1/week) in wave 1 decreased in a stepwise fashion from those who had the most advantaged childhood to those who had the most disadvantaged childhood. This effect was attenuated across all dimensions of childhood circumstances when mothers were economically inactive.

Age at first birth and cohabitation status
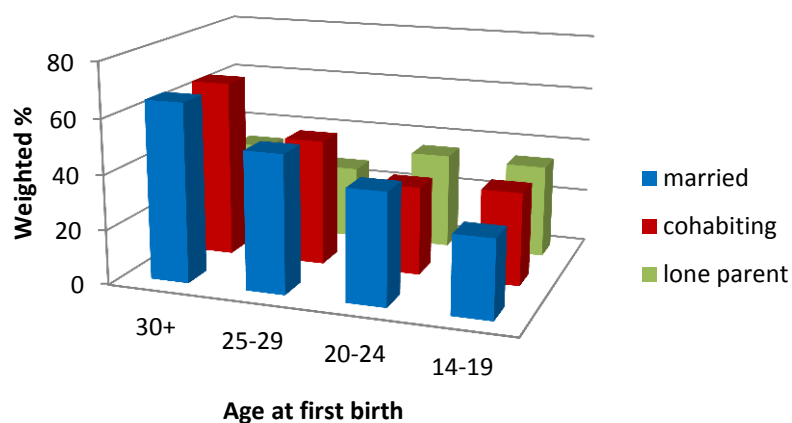
Figure 20 Interaction effect of age at first birth and cohabitation status on frequent drinking ($\geq$1/week) in wave 1*

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

There was a decline in the proportion of mothers who were frequent drinkers (>1/week) as age at first birth decreased. However, this trend was exacerbated when mothers were married or cohabiting and had had their first child at an older age.

Age at first birth and number of children in household
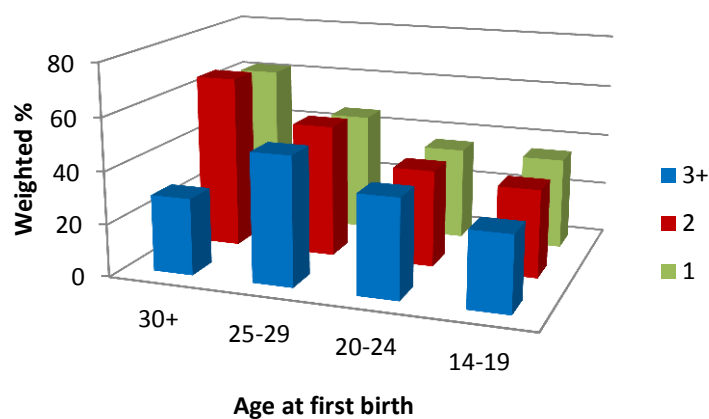
Figure 21 Interaction effect of age at first birth and number of children in household on frequent drinking (>1/week) in wave 1*

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

The proportion of mothers in wave 1 who were frequent drinkers (>1/week) decreased in line with decreasing age at first birth. This effect was attenuated as the number of children in the household increased.

Interactions (wave 2)

Cohabitation status and employment status
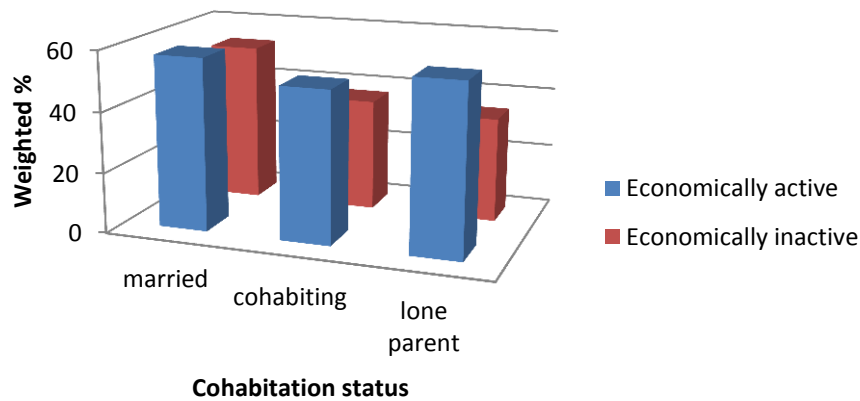
Figure 22 Interaction effect of cohabitation status and employment status on frequent drinking ($\geq$1/week) at least once per week in wave 2*

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

Mothers who were economically inactive were proportionally less likely to be frequent drinkers (>1/week) in wave 2 in comparison to mothers who were economically active. This discrepancy in terms of employment status was exacerbated with lone parenthood.

Age at first birth and number of children

See wave 1

Drinking frequency according to multiple disadvantage

As previously discussed in chapter 5, multiple disadvantage has been identified as an important measure with which to understand women's alcohol use (Mortensen et al., 2006; Giskes et al., 2011; Baumann et al., 2007; Tsai, 2007; Caetano, 2006). A simple additive index was constructed of the total number of disadvantaged circumstances experienced by mothers from 0 (no disadvantage) through 1-6 of the following types of disadvantage: childhood circumstances (father economically inactive/lowest NS-SEC category), and/or age left education ($\leq$16), and/or employment status (economically inactive), and/or household income (£0-10,400), and/or age at first live birth (14-19), and/or cohabitation status (lone parent).

At both wave 1 and wave 2 of my analyses, there was a clear social gradient between infrequent drinking (never/<1/week) and increasing disadvantage. The proportion of infrequent drinkers (never/<1/week) was at its lowest among mothers in the advantaged group (37% and 36% respectively at wave 1 and wave 2) and increased in a broadly step-wise fashion in line with increasing disadvantage. The proportion of infrequent drinkers (never/<1/week) was broadly similar at higher levels of disadvantage at both wave 1 (levels 4, 5, and 6) and wave 2 (levels 5 and 6) (Table 22 and Figure 23).

Table 22 Infrequent drinking (never/<1/week) according to level of disadvantage

Level of disadvantage (weighted % in brackets)	Infrequent drinkers (wave 1) $n = 3803$		Infrequent drinkers (wave 2) $n = 3580$	
	N	Weighted %	N	Weighted %
0	517	36.6	448	36.1
1	907	45.0	775	42.7
2	893	57.8	729	51.9
3	623	64.4	514	59.9
4	336	70.4	266	61.1
5	272	68.3	264	69.7
6	111	70.4	86	68.4
Missing	144		498	
	F (5.36,1056.73) = 50.6 p0.000		F (5.27,1037.31) = 13.3 p0.000	

 "0" No disadvantage (no childhood disadvantage (father highest occupational class), no educational disadvantage (left education aged ≥22), no employment disadvantage (economically active), no income disadvantage (£31,200+), no age disadvantage (first live birth aged ≥30), no relationship disadvantage (married) "**1 /2/3/4/5/6**" number of levels of disadvantage from either (childhood disadvantage (father economically inactive/lowest occupational class), educational disadvantage (left education aged ≤16), employment disadvantage (economically inactive), income disadvantage (£0-10,400), age disadvantage (first live birth aged 14-19), relationship disadvantage (lone parent).

Figure 23 The proportion of mothers who were infrequent drinkers (never/<1/week) according to level of disadvantage in wave 1 and wave 2

The next section reports the findings of the analysis described in chapter 5 that examines patterns of frequent drinking ($\geq$1/week) in relation to multiple disadvantage adjusted for age.

Bivariate analyses

Adjusted for age

Consistent with a number of previous studies identified in my review (Mortensen et al., 2006; Bloomfield, 2006), bivariate analysis of wave 1 showed the odds of frequent drinking ($\geq$1/week) significantly decreased as the number of disadvantaged circumstances experienced by mothers increased ($n = 6827$, OR: 0.33, C.I: 0.21-0.51, p0.000) (Table 23 and Figure 24).

My analysis of wave 2 did not show a significant step-wise decrease in the odds of frequent drinking ($\geq$1/week) in line with increasing disadvantage. Only mothers who experienced 4 disadvantaged circumstances out of a possible 6 differed significantly in comparison to advantaged mothers ($n = 6104$, OR: 0.52, C.I: 0.37-0.73, p0.000) (Table 24).

The reasons for differences at wave 1 and 2 when the cohort child was aged 9 months and 3 years respectively are not fully understood and need additional research. It could be argued that, as multiple disadvantage increases alcohol consumption becomes de-prioritised and as previously mentioned, financial demands may have been higher when the cohort child was a baby.

Table 23 Odds of frequent drinking (≥1/week) according to level of disadvantage in wave 1

Wave 1: Frequent drinking	Bivariate analyses
(OR 95% C.I)	Adjusted for age
Level of disadvantage	Model: 1m (n = 6827)
0	1.00
1	OR: 0.73 (C.I: 0.63-0.85) p 0.000
2	OR: 0.46 (C.I: 0.39-0.53) p 0.000
3	OR: 0.38 (C.I: 0.31-0.47) p 0.000
4	OR: 0.31 (C.I: 0.23-0.41) p 0.000
5	OR: 0.35 (C.I: 0.27-0.47) p 0.000
6	OR: 0.33 (C.I: 0.21-0.51) p 0.000
	F (9, 189) = 28.17 p.0.000

Table 24 Odds of frequent drinking (≥1/week) according to level of disadvantage in wave 2

Wave 2: Frequent drinking	Bivariate analyses
(OR 95% C.I)	Adjusted for age
Level of disadvantage	Model: 2m (n = 6104)
0	1.00
1	OR: 0.84 (C.I: 0.60-1.19) p 0.333
2	OR: 0.87 (C.I: 0.64-1.19) p 0.388
3	OR: 0.74 (C.I: 0.53-1.03) p 0.077
4	OR: 0.52 (C.I: 0.37-0.73) p 0.000
5	OR: 0.60 (C.I: 0.36-1.02) p 0.061
6	*Dropped predicts failure perfectly*
	F (8, 190) = 22.28 p.0.000

 "0" No disadvantage (no childhood disadvantage (father highest occupational class), no educational disadvantage (left education aged ≥22), no employment disadvantage (economically active), no income disadvantage (£31,200+), no age disadvantage (first live birth aged ≥30), no relationship disadvantage (married) "**1 /2/3/4/5/6**" number of levels of disadvantage from either (childhood disadvantage (father economically inactive/lowest occupational class), educational disadvantage (left education aged ≤16), employment disadvantage (economically inactive), income disadvantage (£0-10,400), age disadvantage (first live birth aged 14-19), relationship disadvantage (lone parent).

Figure 24 Significant odds of frequent drinking (≥1/week) according to level of disadvantage in wave 1*

* Adjusted for age.

Drinking quantity

Drinking quantity according to social background and current socio-economic and domestic circumstances

Infrequent light drinking (1 unit/day, <1/week) and frequent light drinking (<4 units/day) relates to the majority daily and weekly patterns of alcohol use among mothers respectively. The majority of mothers in wave 1 of the MCS who drank infrequently (<1/week) drank one unit of alcohol during each drinking occasion. Among mothers who drank frequently (>1/week), the majority drank less than 4 units per week, according to the categories used in this research (see chapter 5).

As mentioned previously in chapter 5, the literature review (chapter 1) identified a number of studies that considered socio-economic measures in relation to the quantity of alcohol consumed by women. A number of socio-economic measures were highlighted as important: education (Giskes et al., 2011; Casswell, 2003), employment status (Christie-Mizell and Peralta, 2009; Casswell, 2003), income (Giskes et al., 2011; Casswell, 2003) and marital status (Christie-Mizell and Peralta, 2009; Stroup-Benham et al., 1990).

In wave 1 positive social gradients were evident for infrequent light drinking (1 unit/day, <1/week) in relation to economic inactivity and increasing numbers of children in the household. Lower educational attainment, younger age at first birth, and cohabiting and lone parents were negatively associated with infrequent light drinking (1 unit/day, <1/week) (Table 25 and Figure 25).

Table 25 Infrequent light drinking (1 unit/day, <1/week) and frequent light drinking (<4 units/week) according to social background and current socio-economic and domestic circumstances in wave 1

Socio-economic Variable		Infrequent light drinking (Wave 1) $n = 1601$		Frequent light drinking (Wave 1) $n = 1145$	
		N	Weighted %	N	Weighted %
Childhood circumstances	Managerial/ prof	340	43.2	372	33.7
	Intermediate	324	43.9	273	39.4
	Economically inactive/ routine	742	41.4	419	36.7
	Unknown	195	43.2	81	27.3
		F (2.94,575.89) = 0.5 p0.702		F (2.92,571.66) = 4.5 p0.005	
Age left education	>=22	120	53.9	175	34.9
	19-21	166	46.8	165	33.7
	17-18	461	44.0	363	38.0
	<=16	854	39.5	442	34.4
		F (2.90,568.86) = 7.3 p0.000		F (2.84,556.11) = 1.2 p0.297	
Employment status	Working	681	38.8	667	34.7
	Not working	920	46.2	478	36.6
		F (1,196) = 17.7 p0.000		F (1,196) = 1.2 p0.273	
Household income	£31,200+	250	45.6	360	32.9
	£20,800-31,200	322	40.3	303	39.6
	£10,400-20,800	559	43.0	300	38.4
	£0-10,400	371	41.7	116	28.8
	Unknown	73	42.4	54	39.8
	Missing	26		12	
		F (3.90,764.31) = 1.0 p0.380		F (3.87,757.55) = 4.7 p0.001	
Age at first live birth	30+	358	47.9	433	34.8
	25-29	473	43.2	373	37.9
	20-24	438	40.9	215	35.7
	14-19	322	37.6	118	30.7
	Missing	10		6	
		F (2.94,575.83) = 5.6 p0.001		F (2.92,571.83) = 2.0 p0.117	
Cohabitation status	Married	911	45.7	803	37.6
	Cohabiting	446	38.5	259	32.3
	Lone parent	232	37.9	82	26.1
	Missing	0		1	
		F (1.98,387.89) = 10.1 p0.000		F 1.91,373.41) = 8.1 p0.000	
Number of children	3+	401	48.5	188	31.7
	2	578	41.9	433	35.4
	1	622	40	524	37.1
		F (1.97,386.70) = 6.6 p0.002		F (1.98,389.06) = 2.5 p0.083	
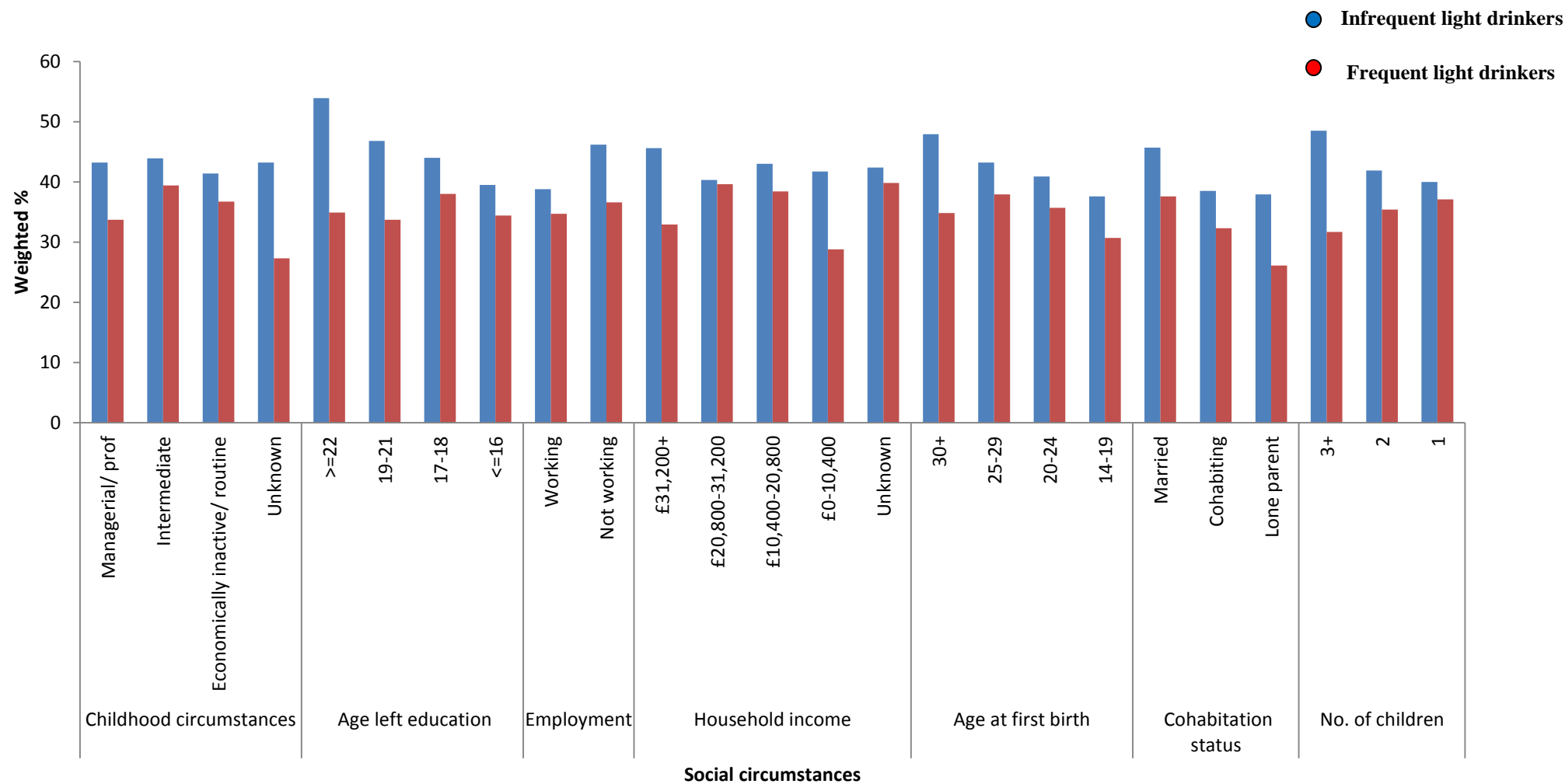
Figure 25 The proportion of mothers who were Infrequent light drinkers (1 unit/day, <1/week), and frequent light drinkers (<4 units/week) according to social background and current socio-economic and domestic circumstances in wave 1

The next section reports the findings of each of the analysis stages described in chapter 5 that examine patterns of infrequent moderate drinking (>1 unit/day, <1/week) and frequent moderate drinking (≥4 units/week); age adjusted bivariate analyses, analyses adjusted for socio-economic circumstances, analyses adjusted for domestic circumstances, and fully adjusted analyses.

Bivariate analyses

Adjusted for age

Bivariate analyses of wave 1 showed the odds of infrequent moderate drinking (>1 unit/day, <1/week) was significantly less likely with economic inactivity (*n* = 3802, OR: 0.67, C.I: 0.58-0.79, *p*0.000) (Table 26).

The odds of frequent moderate drinking (≥4 units/week) were significantly higher amongst cohabiting (*n* = 3236, OR: 1.34, C.I: 1.09-1.66, *p*0.007) and particularly lone mothers (*n* = 3236, OR: 1.97, C.I: 1.37-2.83, *p*0.000) in comparison to mothers who were married (Table 27).

Mutually adjusted analyses

Adjusted for socio-economic measures and age

Analysis adjusted for socio-economic measures in wave 1 found that the odds of infrequent moderate drinking (>1 unit/day, <1/week) remained significantly less likely with economic inactivity (*n* = 3736, OR: 0.66, C.I: 0.56-0.77, *p*0.000). Childhood circumstances, age of leaving education, and household income remained insignificant (Table 26).

With regards to the odds of frequent moderate drinking (≥4 units/week), none of the socio-economic measures were found to be significantly predictive (Table 27).

Analysis adjusted for domestic measures in wave 1 found that the odds of infrequent moderate drinking (>1 unit/day, <1/week) was significantly more likely with younger age at first birth (*n* = 3761, OR: 3.14, C.I: 1.52-6.49, *p*0.002), and with fewer children living in the household (*n* = 3761, OR: 2.75, C.I: 1.52-4.99, *p*0.001) (Table 26).

The odds of frequent moderate drinking (≥4 units/week) were significantly higher amongst cohabiting (*n* = 3168, OR: 1.35, C.I: 1.08-1.68, *p*0.009) and lone mothers (*n* = 3168, OR: 1.86, C.I: 1.26-2.74, *p*0.002) in comparison to married mothers. Age at first birth and the number of children in the household remained insignificant (Table 27).

Adjusted for socio-economic measures, domestic circumstances, and age

Mutually adjusted analyses having controlled for socio-economic measures, domestic circumstances, and age revealed that infrequent moderate drinking (>1 unit/day, <1/week) was increasingly likely with lower levels of educational attainment (*n* = 3697, OR: 3.42, C.I: 1.79-6.53, *p*0.000) mirroring previous research (Giskes et al., 2011; Casswell, 2003), younger age at first birth (*n* = 3697, OR: 9.99, C.I: 2.80-35.63, *p*0.000), among cohabiting (*n* = 3697, OR: 1.21, C.I: 1.01-1.44, *p*0.036) and lone mothers (*n* = 3697, OR: 1.45, C.I: 1.10-1.92, *p*0.008) in comparison to married mothers, and fewer children living in the household (*n* = 3697, OR: 2.49, C.I: 1.34-4.64, *p*0.004). In contrast to earlier research on women that found an association between unemployment and greater quantities of alcohol consumption (Giskes et al., 2011; Casswell, 2003), my analysis found that economically inactive mothers remained less likely to be infrequent moderate drinkers (>1 unit/day, <1/week) (*n* = 3697, OR: 0.67, C.I: 0.57-0.79, *p*0.000) having adjusted for socio-economic measures, domestic circumstances, and age (Table 26 and Figure 26).

In line with previous research on women (Christie-Mizell and Peralta, 2009) and mothers (Stroup-Benham et al., 1990), frequent moderate drinking (≥4 units/week) was increasingly likely amongst cohabiting (*n* = 3168, OR: 1.42, C.I: 1.12-1.79, *p*0.003) and lone parents (*n* = 3168, OR: 1.70, C.I: 1.07-2.71, *p*0.025) when

compared to married women. Mothers who were economically inactive were less likely to be frequent moderate drinkers ($\geq$4 units/week) ($n = 3168$, OR: 0.83, C.I: 0.69-0.99, p0.034) once adjusted for socio-economic measures, domestic circumstances, and age (Table 27 and Figure 26).

Reasons for different social influences on mothers who drink moderate amounts of alcohol infrequently or frequently need further exploration. However, it appears that lone parenthood and economic inactivity have an enduring association with increased and decreased quantities of alcohol consumption respectively, amongst mothers who drink moderate amounts of alcohol infrequently and frequently.

Table 26 Odds of infrequent moderate drinking (>1 unit/day, <1/week) according to social background and current socio-economic and domestic circumstances in wave 1

Wave 1: Infrequent moderate drinking	Bivariate analyses	Mutually adjusted analyses		
(OR 95% C.I)	Adjusted for age	Adjusted for socio-economic measures and age	Adjusted for domestic circumstances and age	Adjusted for socio-economic measures, domestic circumstances, and age
Childhood circumstances	*Model: 3a* (n = 3802)	*Model:3h* (n = 3736)	*Model: 3i* (n = 3761)	*Model: 3j* (n = 3697)
Highest	1.00	1.00		1.00
Intermediate	OR: 0.93 (C.I: 0.75-1.16) p 0.524	OR: 0.88 (C.I: 0.71-1.10) p 0.255		OR: 0.88 (C.I: 0.71-1.11) p 0.280
Lowest/ Economically inactive	OR: 1.03 (C.I: 0.86-1.24) p 0.730	OR: 0.98 (C.I: 0.82-1.19) p 0.869		OR: 0.99 (C.I: 0.82-1.19) p 0.895
Unknown	OR: 0.94 (C.I: 0.71-1.24) p 0.647	OR: 0.90 (C.I: 0.68-1.19) p 0.460		OR: 0.89 (C.I: 0.67-1.19) p 0.431
Age of leaving education	*Model: 3b* (n = 3802)			
22 and over	1.00	1.00		1.00
19-21	OR: 1.23 (C.I: 0.85-1.77) p 0.270	OR: 1.31 (C.I: 0.90-1.89) p 0.158		OR: 1.53 (C.I: 1.06-2.22) p 0.025
17-18	OR: 1.36 (C.I: 1.00-1.85) p 0.053	OR: 1.45 (C.I: 1.06-1.98) p 0.019		OR: 2.09 (C.I: 1.36-3.21) p 0.001
16 and under	OR: 1.60 (C.I: 1.17-2.18) p 0.003	OR: 1.84 (C.I: 1.33-2.54) p 0.000		OR: 3.42 (C.I: 1.79-6.53) p 0.000
Employment status	*Model: 3c* (n = 3802)			
Economically active	1.00	1.00		1.00
Economically inactive	OR: 0.67 (C.I:0.58-0.79) p 0.000	OR: 0.66 (C.I: 0.56-0.77) p 0.000		OR: 0.67 (C.I: 0.57-0.79) p 0.000
Household income	*Model: 3d* (n = 3736)			
£31,200+	1.00	1.00		1.00
£20,800-31,200	OR:1.18 (C.I: 0.94-1.47) p 0.154	OR: 1.13 (C.I: 0.90-1.42) p 0.286		OR: 1.12 (C.I: 0.89-1.41) p 0.313
£10,400-20,800	OR: 0.96 (C.I: 0.78-1.17) p 0.661	OR: 0.93 (C.I: 0.75-1.15) p 0.515		OR: 0.88 (C.I: 0.71-1.09) p 0.234
£0-10,400	OR: 0.89 (C.I: 0.69-1.15) p 0.383	OR: 0.95 (C.I: 0.72-1.25) p 0.712		OR: 0.78 (C.I: 0.56-1.08) p 0.130
Unknown	OR: 1.04 (C.I: 0.74-1.48) p 0.812	OR: 1.00 (C.I: 0.70-1.42) p 0.983		OR: 1.01 (C.I: 0.70-1.46) p 0.973
Age at first live birth	*Model: 3e* (n = 3784)			
30+	1.00		1.00	1.00
25-29	OR: 1.10 (C.I: 0.88-1.36) p 0.402		OR: 1.72 (C.I: 1.20-2.47) p 0.003	OR: 2.31 (C.I: 1.43-3.73) p 0.001
20-24	OR: 1.01 (C.I: 0.80-1.27) p 0.942		OR: 2.22 (C.I: 1.26-3.91) p 0.006	OR: 4.42 (C.I: 1.86-10.50) p 0.001
14-19	OR: 1.12 (C.I: 0.86-1.46) p 0.398		OR: 3.14 (C.I: 1.52-6.49) p 0.002	OR: 9.99 (C.I: 2.80-35.63) p 0.000
Cohabitation status	*Model: 3f* (n = 3778)			
Married	1.00		1.00	1.00
Cohabiting	OR: 1.18 (C.I: 1.00-1.39) p 0.051		OR: 1.17 (C.I: 0.99-1.38) p 0.070	OR: 1.21 (C.I: 1.01-1.44) p 0.036
Lone parent	OR: 1.22 (C.I: 0.99-1.50) p 0.065		OR: 1.19 (C.I: 0.96-1.47) p 0.110	OR: 1.45 (C.I: 1.10-1.92) p 0.008
Number of children in household	*Model: 3g* (n = 3802)			
3+	1.00		1.00	1.00
2	OR: 1.22 (C.I: 0.99-1.51) p 0.064		OR: 1.94 (C.I: 1.32-2.84) p 0.001	OR: 1.87 (C.I: 1.26-2.79) p 0.002
1	OR: 1.27 (C.I: 1.04-1.55) p 0.021		OR: 2.75 (C.I: 1.52-4.99) p 0.001	OR: 2.49 (C.I: 1.34-4.64) p 0.004
Interactions				

Education/age 1st birth				OR: 0.89 (C.I: 0.81-0.98) *p* 0.019
		F (14, 183) = 5.14 *p*.0.000	F (11, 186) = 5.11 *p*.0.000	F (23, 174) = 3.59 *p*.0.000

Table 27 Odds of frequent moderate drinking ($\geq$4 units/week) according to social background and current socio-economic and domestic circumstances in wave 1

Wave 1: Frequent moderate drinking	Bivariate analyses	Mutually adjusted analyses		
(OR 95% C.I)	Adjusted for age	Adjusted for socio-economic measures and age	Adjusted for domestic circumstances and age	Adjusted for socio-economic measures, domestic circumstances, and age
Childhood circumstances	*Model: 4a (n = 3244)*	*Model: 4h SE measures (n = 3192)*	*Model: 4i Domestic measures (n = 3168)*	*Model: 4j (n = 3168)*
Highest	1.00	1.00		1.00
Intermediate	OR: 0.79 (C.I: 0.63-0.98) *p* 0.032	OR: 0.80 (C.I: 0.64-1.00) *p* 0.049		OR: 0.79 (C.I: 0.63-0.99) *p* 0.037
Lowest/ Economically inactive	OR: 0.88 (C.I: 0.74-1.06) *p* 0.178	OR: 0.89 (C.I: 0.74-1.07) *p* 0.205		OR: 0.87 (C.I: 0.73-1.05) *p* 0.137
Unknown	OR: 1.36 (C.I: 1.01-1.84) *p* 0.046	OR: 1.34 (C.I: 0.99-1.82) *p* 0.060		OR: 1.29 (C.I: 0.95-1.77) *p* 0.103
Age of leaving education	*Model: 4b (n = 3244)*			
22 and over	1.00	1.00		1.00
19-21	OR: 1.07 (C.I: 0.84-1.37) *p* 0.587	OR: 1.08 (C.I: 0.84-1.38) *p* 0.569		OR: 1.06 (C.I: 0.83-1.37) *p* 0.630
17-18	OR: 0.88 (C.I: 0.69-1.13) *p* 0.310	OR: 0.94 (C.I: 0.73-1.22) *p* 0.654		OR: 0.92 (C.I: 0.71-1.19) *p* 0.518
16 and under	OR: 1.03 (C.I: 0.83-1.29) *p* 0.780	OR: 1.11 (C.I: 0.87-1.41) *p* 0.415		OR: 1.03 (C.I: 0.80-1.31) *p* 0.843
Employment status	*Model: 4c (n = 3244)*			
Economically active	1.00	1.00		1.00
Economically inactive	OR: 0.91 (C.I: 0.79-1.06) *p* 0.244	OR: 0.86 (C.I: 0.73-1.01) *p* 0.069		OR: 0.83 (C.I: 0.69-0.99) *p* 0.034
Household income	*Model: 4d (n = 3192)*			
£31,200+	1.00	1.00		1.00
£20,800-31,200	OR: 0.76 (C.I: 0.62-0.94) *p* 0.010	OR: 0.77 (C.I: 0.63-0.94) *p* 0.010		OR: 0.76 (C.I: 0.62-0.93) *p* 0.008
£10,400-20,800	OR: 0.81 (C.I: 0.66-1.00) *p* 0.050	OR: 0.83 (C.I: 0.67-1.03) *p* 0.091		OR: 0.78 (C.I: 0.63-0.97) *p* 0.024
£0-10,400	OR: 1.24 (C.I: 0.94-1.65) *p* 0.131	OR: 1.26 (C.I: 0.93-1.73) *p* 0.140		OR: 0.95 (C.I: 0.66-1.37) *p* 0.777
Unknown	OR: 0.74 (C.I: 0.52-1.06) *p* 0.102	OR: 0.75 (C.I: 0.52-1.07) *p* 0.115		OR: 0.71 (C.I: 0.49-1.02) *p* 0.064
Age at first live birth	*Model: 4e (n = 3227)*			
30+	1.00		1.00	1.00
25-29	OR: 0.95 (C.I: 0.78-1.15) *p* 0.584		OR: 0.89 (C.I: 0.73-1.08) *p* 0.242	OR: 0.95 (C.I: 0.77-1.18) *p* 0.653
20-24	OR: 1.10 (C.I: 0.86-1.40) *p* 0.447		OR: 0.89 (C.I: 0.67-1.17) *p* 0.408	OR: 1.01 (C.I: 0.75-1.35) *p* 0.960
14-19	OR: 1.41 (C.I: 1.02-1.96) *p* 0.037		OR: 1.02 (C.I: 0.69-1.50) *p* 0.938	OR: 1.14 (C.I: 0.75-1.71) *p* 0.543
Cohabitation status	*Model: 4f (n = 3236)*			
Married	1.00		1.00	1.00
Cohabiting	OR: 1.34 (C.I: 1.09-1.66) *p* 0.007		OR: 1.35 (C.I: 1.08-1.68) *p* 0.009	OR: 1.42 (C.I: 1.12-1.79) *p* 0.003
Lone parent	OR: 1.97 (C.I: 1.37-2.83) *p* 0.000		OR: 1.86 (C.I: 1.26-2.74) *p* 0.002	OR: 1.70 (C.I: 1.07-2.71) *p* 0.025
Number of children in household	*Model: 4g (n = 3244)*			
3+	1.00		1.00	1.00
2	OR: 0.85 (C.I: 0.68-1.06) *p* 0.155		OR: 0.86 (C.I: 0.68-1.09) *p* 0.212	OR: 0.85 (C.I: 0.66-1.09) *p* 0.194
1	OR: 0.78 (C.I: 0.63-0.98) *p* 0.031		OR: 0.77 (C.I: 0.60-1.00) *p* 0.049	OR: 0.74 (C.I: 0.56-0.98) *p* 0.038
		F (14, 183) = 2.85 *p*.0.001	F (10, 187) = 2.69 *p*.0.004	F (21, 176) = 2.58 *p*.0.000
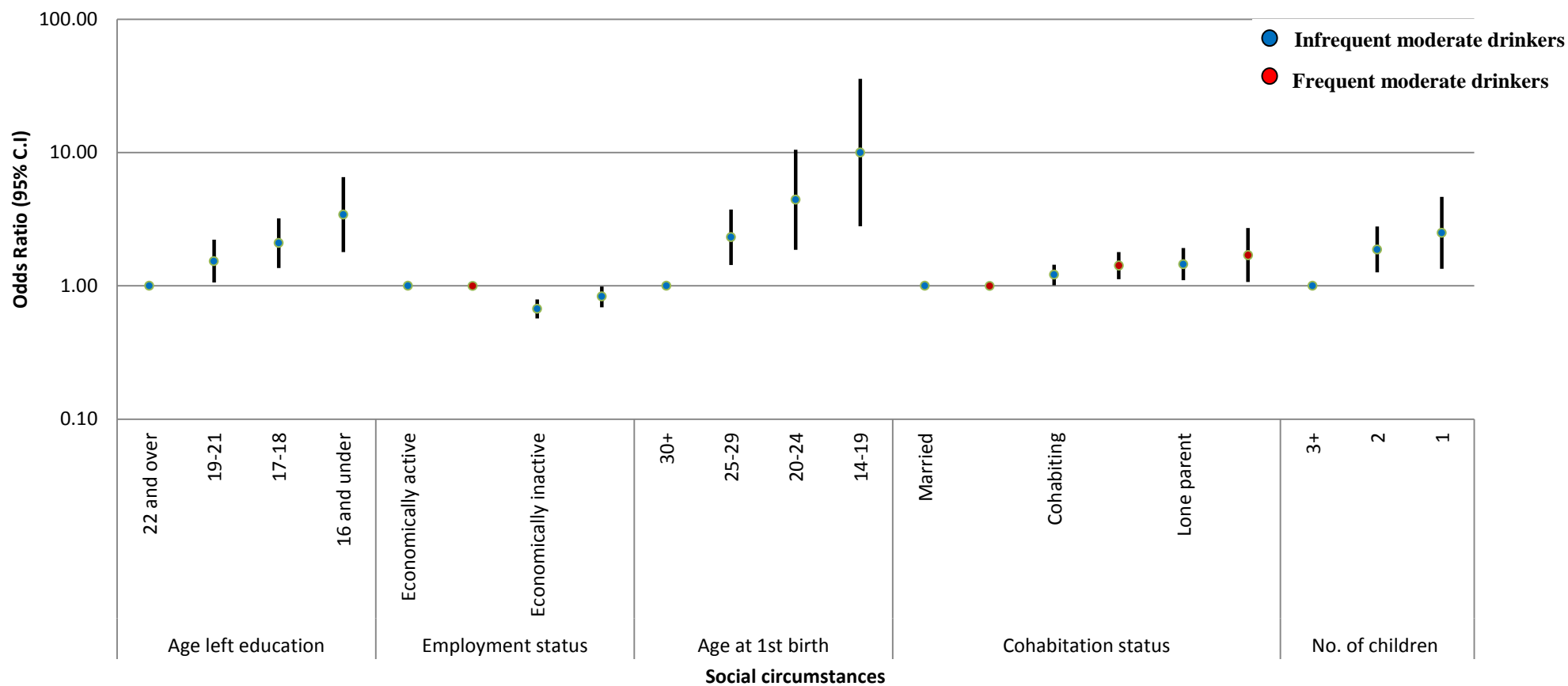
Figure 26 Significant odds of infrequent moderate drinking (>1 unit/day, <1/week) and frequent moderate drinking (≥4 units/week) according to social background and current socio-economic and domestic circumstances in wave 1*

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

My inclusive approach to testing found one significant two-way interaction in relation to the quantity of alcohol use in wave 1 (Figure 27 and Appendix 11).

Interactions (wave 1)

Age left education and age at first birth
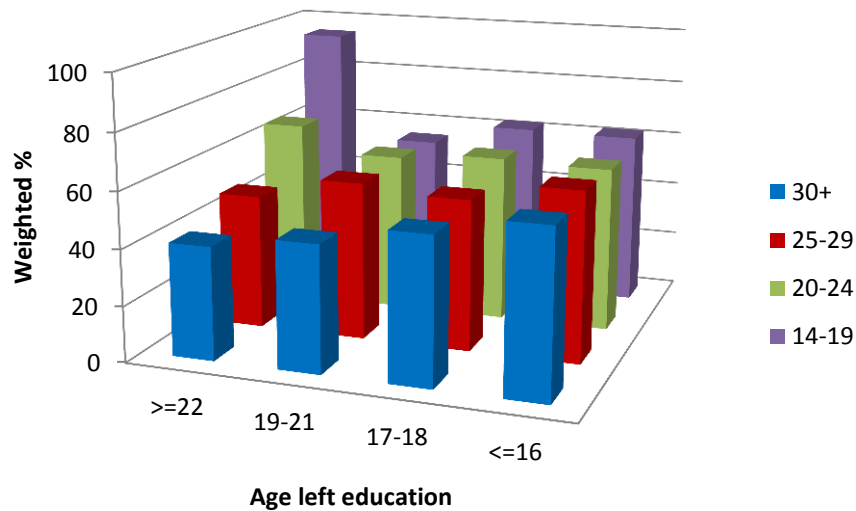
Figure 27 Interaction effect of age left education and age at first birth on infrequent moderate drinking (>1 unit/day, <1/week) in wave 1*

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

The proportion of mothers who were infrequent moderate drinkers (>1 unit/day, <1/week) increased as age at first birth decreased. The proportional difference between mothers who had their children at a young age and those who had their children when they were older was greater amongst mothers with higher levels of educational attainment.

Drinking quantity according to multiple disadvantage

At wave 1, there was no evidence of social gradients for infrequent light drinking (1 unit/day, <1/week), or frequent light drinking (<4 units/week) in relation to increasing disadvantage (Table 28 and Figure 28).

Table 28 Infrequent light drinking (1 unit/day, <1/week), and frequent light drinking (<4 units/week) according

Level of disadvantage	Infrequent light drinking (Wave 1) $n = 1601$		Frequent light drinking (Wave 1) $n = 1145$	
	N	Weighted %	N	Weighted %
0	227	43.8	299	34.1
1	395	44.2	393	37.6
2	365	41.7	224	37.0
3	257	41.0	116	38.7
4	141	41.3	44	29.7
5	109	41.9	34	27.5
6	47	39.4	13	23.4
Missing	60		22	
	F (5.38,1054.2) = 0.5 p0.817		F (5.64,1107.77) = 2.0 p0.066	

to level of disadvantage in wave 1

"0" No disadvantage (no childhood disadvantage (father highest occupational class), no educational disadvantage (left education aged ≥22), no employment disadvantage (economically active), no income disadvantage (£31,200+), no age disadvantage (first live birth aged ≥30), no relationship disadvantage (married) "**1 /2/3/4/5/6"** number of levels of disadvantage from either (childhood disadvantage (father economically inactive/lowest occupational class), educational disadvantage (left education aged ≤16), employment disadvantage (economically inactive), income disadvantage (£0-10,400), age disadvantage (first live birth aged 14-19), relationship disadvantage (lone parent).

Figure 28 The proportion of mothers who were infrequent light drinkers (1 unit/day, <1/week), and frequent light drinkers (<4 units/week) according to level of disadvantage in wave 1

The next section reports the findings of the analysis described in chapter 5 that examines patterns of infrequent moderate drinking (>1 unit/day, <1/week) and frequent moderate drinking (≥4 units/week) in relation to multiple disadvantage adjusted for age.

Bivariate analyses

Adjusted for age

Bivariate analyses of wave 1 showed level of disadvantage amongst mothers did not significantly predict the odds of infrequent moderate drinking (>1 unit/day, <1/week), or frequent moderate drinking (≥4 units/week) (Table 29 and Table 30). This contradicts earlier research that points to increased quantities of alcohol consumption amongst disadvantaged groups (Giskes et al., 2011).

Table 29 Odds of infrequent moderate drinking (>1 unit/day, <1/week) according to level of disadvantage in wave 1

Wave 1: Infrequent moderate drinking	Bivariate analyses
(OR 95% C.I)	Adjusted for age
Level of disadvantage	*Model: 3k (n* = 3670)
0	1.00
1	OR: 0.97 (C.I 0.76-1.23) *p* 0.798
2	OR: 1.05 (C.I: 0.85-1.29) *p* 0.655
3	OR: 0.99 (C.I: 0.77-1.30) *p* 0.969
4	OR: 0.92 (C.I: 0.66-1.26) *p* 0.590
5	OR: 0.87 (C.I:0.65-1.17) *p* 0.343
6	OR: 0.93 (C.I:0.57-1.54) *p* 0.781
	F (9, 188) = 4.34 *p*.0.000

Table 30 Odds of frequent moderate drinking (≥4 units/week) according to level of disadvantage in wave 1

Wave 1: Frequent moderate drinking	Bivariate analyses
(OR 95% C.I)	Adjusted for age
Level of disadvantage	*Model: 4k (n* = 3157)
0	1.00
1	OR: 0.87 (C.I:0.72-1.06) *p* 0.156
2	OR: 0.90 (C.I:0.72-1.14) *p* 0.402
3	OR: 0.86 (C.I:0.64-1.16) *p* 0.329
4	OR: 1.38 (C.I:0.90-2.13) *p* 0.141
5	OR: 1.48 (C.I:0.95-2.33) *p* 0.086
6	OR: 1.85 (C.I:0.94-3.66) *p* 0.077
	F (9, 188) = 1.55 *p*.0.135

Risky alcohol use

'Risky' drinking according to social background and current socio-economic and domestic circumstances

'Risky' alcohol use amongst mothers included in these analyses refers to mothers whose average daily or weekly alcohol consumption was above the recommendations (>3 units/day, or >21 units/week) in wave 1 of the MCS (see chapter 5).

In chapter 5, I described how in my review of the literature (chapter 1) and scoping review (chapter 2) I found a number of studies that considered socio-economic measures and their association with problematic alcohol use amongst women. A number of these socio-economic measures were found to be important: education (Giskes et al., 2011; Jones, 2002; Bloomfield, 2006; Tsai, 2007; Caetano, 2006; Jukkala et al., 2008), employment status (Kuntsche et al., 2006b; Tsai, 2007; Caetano, 2006), income (Giskes et al., 2011; Keyes and Hasin, 2008), marital status (Kuntsche et al., 2006b; Caetano, 2006), and timing of motherhood (Kokko et al., 2009)

In wave 1 of my analyses, social gradients of 'risky' alcohol use (>3 units/day, or >21 units/week) were evident amongst mothers. Increasingly disadvantaged childhood circumstances, lower educational attainment, economic inactivity, lower household income, younger age at first birth, lone and cohabiting mothers, and fewer children living in the household were positively associated with the proportion of 'risky' drinkers (>3 units/day, or >21 units/week) (Table 31 and Figure 29).

Table 31 'Risky' alcohol use (>3 units/day or >21 units/week) according to social background and current socio-economic and domestic circumstances in wave 1

Socio-economic Variable		'Risky' alcohol use (Wave 1) $n = 1124$	
		N	**Weighted %**
Childhood circumstances	Managerial/ prof	209	10.0
	Intermediate	202	13.0
	Economically inactive/ routine	572	17.6
	Unknown	141	17.1
		F (2.90,571.21) = 20.5p0.000	
Age left education	>=22	39	5.0
	19-21	73	8.1
	17-18	260	11.6
	<=16	752	20.4
		F (2.27,556.11) = 52.1 p0.000	
Employment status	Working	514	12.5
	Not working	610	16.6
		F (1,197) = 24.1 p0.000	
Household income	£31,200+	107	6.0
	£20,800-31,200	216	12.2
	£10,400-20,800	394	17.6
	£0-10,400	338	26.1
	Unknown	48	15.2
	Missing	21	
		F (3.78,745.45) = 60.3 p0.000	
Age at first live birth	30+	121	5.8
	25-29	299	12.9
	20-24	357	19.3
	14-19	340	27.4
	Missing	7	
		F (2.88,566.78) = 98.99 p0.000	
Cohabitation status	Married	439	9.6
	Cohabiting	421	20.2
	Lone parent	255	27.3
	Missing	9	
		F (1.84,361.69) = 107.5 p0.000	
Number of children	3+	225	13.4
	2	402	14.0
	1	497	15.2
		F (1.96,387.02) = 1.24 p0.291	

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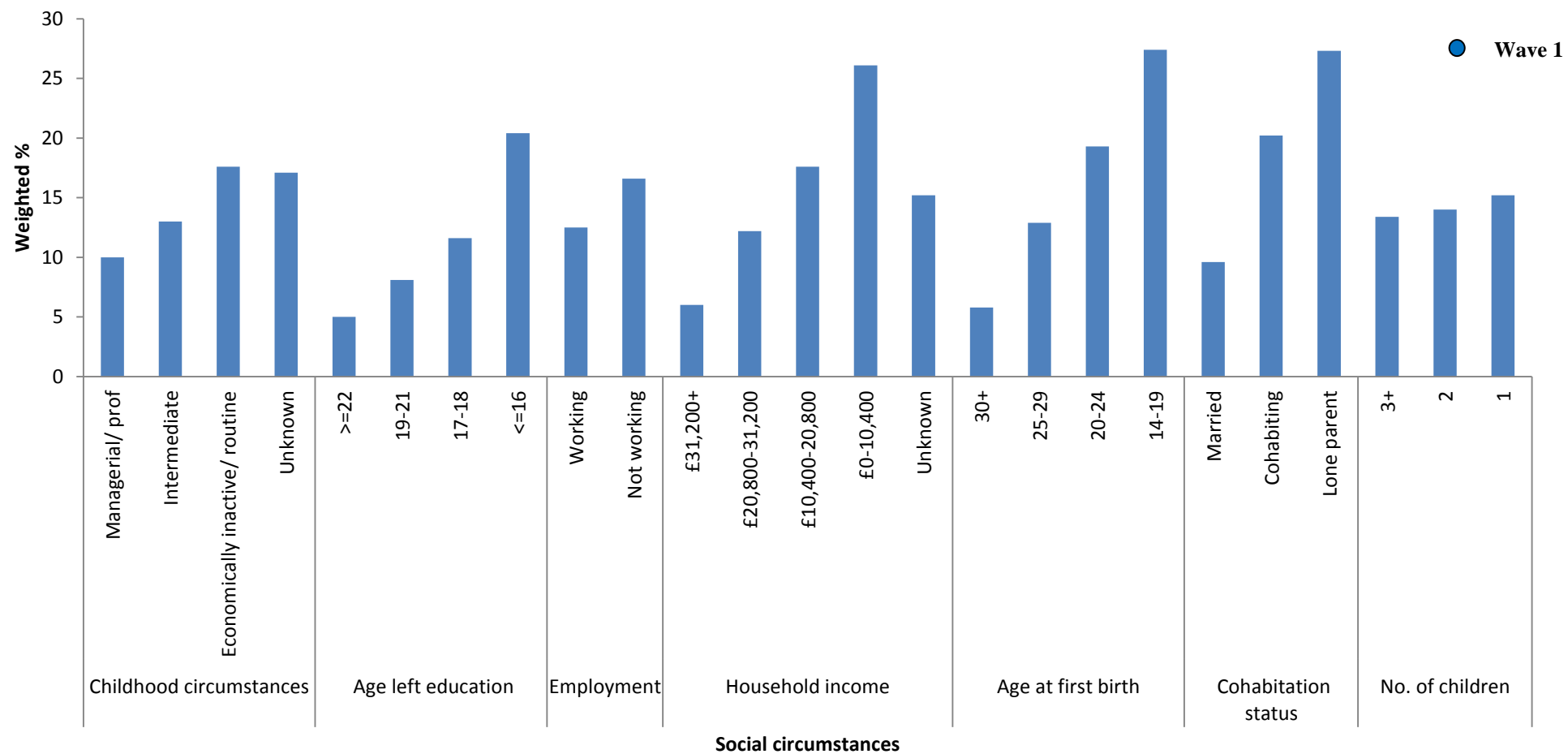
Figure 29 The proportion of mothers who are 'risky' drinkers (>3 units/day or >21 units/week) according to social background and current socio-economic and domestic circumstances in wave 1

The next section reports the findings of each of the analysis stages described in chapter 5 that examine patterns of 'risky' alcohol use (>3 units/day or >21 units/week); age adjusted bivariate analyses, analyses adjusted for socio-economic circumstances, analyses adjusted for domestic circumstances, and fully adjusted analyses.

Bivariate analyses

Adjusted for age

Bivariate analyses of wave 1 showed that the odds of 'risky' drinking (>3 units/day, or >21 units/week) significantly increased with decreasing household income ($n =$ 6928, OR: 3.25, C.I: 2.45-4.32, p0.000), younger age at first birth ($n =$ 7011, OR: 3.61, C.I: 2.71-4.83, p0.000), and lone ($n =$ 7014, OR: 2.34, C.I: 1.89-2.90, p0.000) and cohabiting mothers ($n =$ 7014, OR: 1.77, C.I: 1.49-2.11, p0.000) in comparison to married mothers (Table 32).Mutually adjusted analyses

Adjusted for socio-economic measures and age

Analysis adjusted for socio-economic measures in wave 1 found that the odds of 'risky' drinking (>3 units/day, or >21 units/week) increased with decreasing educational attainment ($n =$ 6928, OR: 4.92, C.I: 2.46-9.88, p0.000). The increased likelihood of 'risky' drinking (>3 units/day, or >21 units/week) with lower household income also remained significant ($n =$ 6928, OR: 2.50, C.I: 1.87-3.34, p0.000) (Table 32).

Adjusted for domestic circumstances and age

Analysis adjusted for domestic measures in wave 1 found that the odds of 'risky' drinking (>3 units/day, or >21 units/week) remained significantly more likely with younger age at first birth ($n =$ 6980, OR: 3.58, C.I: 2.59-4.97, p0.000), and amongst lone ($n =$ 6980, OR: 2.06, C.I: 1.66-2.55, p0.000) and cohabiting mothers ($n =$ 6980, OR: 1.65, C.I: 1.39-1.96, p0.000) in comparison to married mothers (Table 32).

Adjusted for socio-economic measures, domestic circumstances, and age

Mutually adjusted analyses having controlled for socio-economic measures, domestic circumstances, and age showed that lower levels of educational attainment

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had an enduring and significant positive association with 'risky' alcohol use (>3 units/day, or >21 units/week) (n = 6865, OR: 30.33, C.I: 6.56-140.27, p0.000). This has been found to be the case by Jukkala et al (2008), but is in contrast to other studies that found the opposite to be true whereby higher levels of educational attainment were associated with problematic alcohol use in women (Giskes et al., 2011; Jones, 2002; Bloomfield, 2006; Tsai, 2007; Caetano, 2006). In my analyses, the association between lower household income and 'risky' alcohol use (>3 units/day, or >21 units/week) also remained (n = 6865, OR: 1.80, C.I: 1.35-2.41, p0.000). Once again these findings are in agreement with Jukkala et al (2008), but in opposition to a number of previous studies (Giskes et al., 2011; Keyes and Hasin, 2008).

My quantitative analyses also point to younger age at first birth as an important predictor of 'risky' alcohol use (>3 units/day, or >21 units/week) amongst mothers (n = 6865, OR: 27.82, C.I: 6.99-110.68, p0.000) in support of earlier research (Kokko et al., 2009). Similarly, lone (n = 6865, OR: 3.85, C.I: 1.23-12.06, p0.021) and cohabiting mothers (n = 6865, OR: 2.14, C.I: 1.24-3.69, p0.007) remained increasingly likely to engage in 'risky' alcohol use (>3 units/day, or >21 units/week), having adjusted for socio-economic measures, domestic circumstances, and age, as has been found to be the case in previous studies (Maloney et al., 2010). In addition, despite being insignificant having controlled for domestic circumstances and age, my analysis also showed that 'risky' alcohol use (>3 units/day, or >21 units/week) was increasingly likely as the number of children living in the household decreased (n = 6865, OR: 5.94, C.I: 1.89-18.61, p0.002) once adjusted for socio-economic measures, domestic circumstances, and age (Table 32 and Figure 30).

My analysis suggests that, other than childhood circumstances, both socio-economic and domestic circumstances are useful measures with which to examine 'risky' patterns of alcohol use (>3 units/day, or >21 unit/week) amongst mothers with pre-school aged children. In addition, despite the association between economic status and the frequency and quantity of alcohol use, economic status was not significantly predictive of 'risky' alcohol use (>3 units/day, or >21 unit/week) in these analyses.

Table 32 Odds of 'risky' drinking (>3 units/day or >21 units/week) according to social background and current socio-economic and domestic circumstances in wave 1

Wave 1: Risky drinking	Bivariate analyses	Mutually adjusted analyses		
(OR 95% C.I)	Adjusted for age	Adjusted for socio-economic measures and age	Adjusted for domestic circumstances and age	Adjusted for socio-economic measures, domestic circumstances, and age
Childhood circumstances	***Model: 5a*** (*n* = 7046)	***Model: 5h*** (*n* = 6928)	***Model: 5i*** (*n* = 6980)	***Model: 5j*** (*n* = 6865)
Highest	1.00	1.00		1.00
Intermediate	OR: 1.18 (C.I: 0.97-1.45) *p*0.100	OR:1.36 (C.I: 0.98-1.90) *p* 0.064		OR: 1.28 (C.I:0.91-1.80) *p* 0.156
Lowest/ Economically inactive	OR: 1.62 (C.I: 1.37-1.91) *p*0.000	OR: 2.35 (C.I: 1.33-4.17) *p* 0.004		OR: 2.10 (C.I: 1.15-3.85) *p* 0.016
Unknown	OR: 1.49 (C.I: 1.14-1.93) *p*0.003	OR: 3.05 (C.I: 1.28-7.25) *p* 0.012		OR: 2.61 (C.I: 1.05-6.51) *p* 0.039
Age of leaving education	***Model: 5b*** (*n* = 7046)			
22 and over	1.00	1.00		1.00
19-21	OR: 1.43 (C.I: 0.95-2.16) *p*0.088	OR: 1.60 (C.I: 1.04-2.47) *p* 0.033		OR: 2.78 (C.I: 1.53-5.07) *p* 0.001
17-18	OR: 1.97 (C.I: 1.30-2.98) *p*0.001	OR: 2.44 (C.I: 1.41-4.23) *p* 0.002		OR: 7.91 (C.I: 2.74-22.83) *p* 0.000
16 and under	OR: 3.42 (C.I: 2.27-5.16) *p*0.000	OR: 4.92 (C.I: 2.46-9.88) *p* 0.000		OR: 30.33 (C.I: 6.56-140.27) *p* 0.000
Employment status	***Model: 5c*** (*n* = 7046)			
Economically active	1.00	1.00		1.00
Economically inactive	OR: 1.11 (C.I: 0.97-1.27) *p*0.122	OR: 0.88 (C.I: 0.76-1.02) *p* 0.097		OR: 0.88 (C.I: 0.76-1.03) *p* 0.117
Household income	***Model: 5d*** (*n* = 6928)			
£31,200+	1.00	1.00		1.00
£20,800-31,200	OR: 1.92 (C.I: 1.48-2.49) *p* 0.000	OR: 1.66 (C.I: 1.29-2.15) *p* 0.000		OR: 1.55 (C.I: 1.20-1.99) *p* 0.001
£10,400-20,800	OR: 2.45 (C.I: 1.87-3.23) *p* 0.000	OR: 1.96 (C.I: 1.48-2.59) *p* 0.000		OR: 1.64 (C.I: 1.25-2.15) *p* 0.000
£0-10,400	OR: 3.25 (C.I: 2.45-4.32) *p* 0.000	OR: 2.50 (C.I: 1.87-3.34) *p* 0.000		OR: 1.80 (C.I: 1.35-2.41) *p* 0.000
Unknown	OR: 2.37 (C.I: 1.62-3.46) *p* 0.000	OR: 1.95 (C.I: 1.33-2.85) *p* 0.001		OR: 1.75 (C.I: 1.19-2.56) *p* 0.004
Age at first live birth	***Model: 5e*** (*n* = 7011)			
30+	1.00		1.00	1.00
25-29	OR: 2.02 (C.I: 1.60-2.55) *p* 0.000		OR: 2.12 (C.I:1.68-2.68) *p* 0.000	OR: 3.98 (C.I: 2.43-6.50) *p* 0.000
20-24	OR: 2.54 (C.I: 1.92-3.37) *p* 0.000		OR: 2.58 (C.I:1.92-3.46) *p* 0.000	OR: 8.95 (C.I: 3.50-22.93) *p* 0.000
14-19	OR: 3.61 (C.I: 2.71-4.83) *p* 0.000		OR: 3.58 (C.I:2.59-4.96) *p* 0.000	OR: 27.82 (C.I: 6.99-110.68) *p* 0.000
Cohabitation status	***Model: 5f*** (*n* = 7014)			
Married	1.00		1.00	1.00
Cohabiting	OR: 1.77 (C.I: 1.49-2.11) *p* 0.000		OR: 1.65 (C.I:1.39-1.96) *p* 0.000	OR: 2.14 (C.I: 1.24-3.69) *p* 0.007
Lone parent	OR: 2.34 (C.I: 1.89-2.90) *p* 0.000		OR: 2.06 (C.I:1.66-2.55) *p* 0.000	OR: 3.85 (C.I: 1.23-12.06) *p* 0.021
Number of children in household	***Model: 5g*** (*n* = 7046)			
3+	1.00		1.00	1.00
2	OR: 0.87 (C.I: 0.71-1.06) *p* 0.177		OR: 1.21 (C.I:0.99-1.61) *p* 0.064	OR: 2.80 (C.I: 1.48-5.30) *p* 0.002
1	OR: 0.77 (C.I: 0.62-0.95) *p* 0.015		OR: 1.26 (C.I: 0.99-1.66) *p*0.056	OR: 5.94 (C.I: 1.89-18.61) *p* 0.002

Interactions				
Childhood/Education		OR: 0.87 (C.I: 0.81-1.18) p 0.112		OR: 0.91 (C.I: 0.84-1.09) p 0.134
Education/Age 1st birth				OR: 0.87 (C.I: 0.78-0.98) p 0.020
Education/Cohab				OR: 0.97 (C.I: 0.83-1.13) p 0.690
Education/No. children				OR: 0.86 (C.I: 0.75-1.00) p 0.044
Age 1st birth/Cohab			OR: 0.96 (C.I: 0.87-1.11) p 0.062	OR: 0.90 (C.I: 0.80-1.01) p 0.068
Age 1st birth/No. children			OR: 0.94 (C.I: 0.83-1.15) p 0.139	OR: 0.92 (C.I: 0.81-1.03) p 0.143
		$F_{(14, 184)} = 21.82$ $p.0.000$	$F_{(10, 188)} = 30.36$ $p.0.000$	$F_{(27, 171)} = 13.51$ $p.0.000$
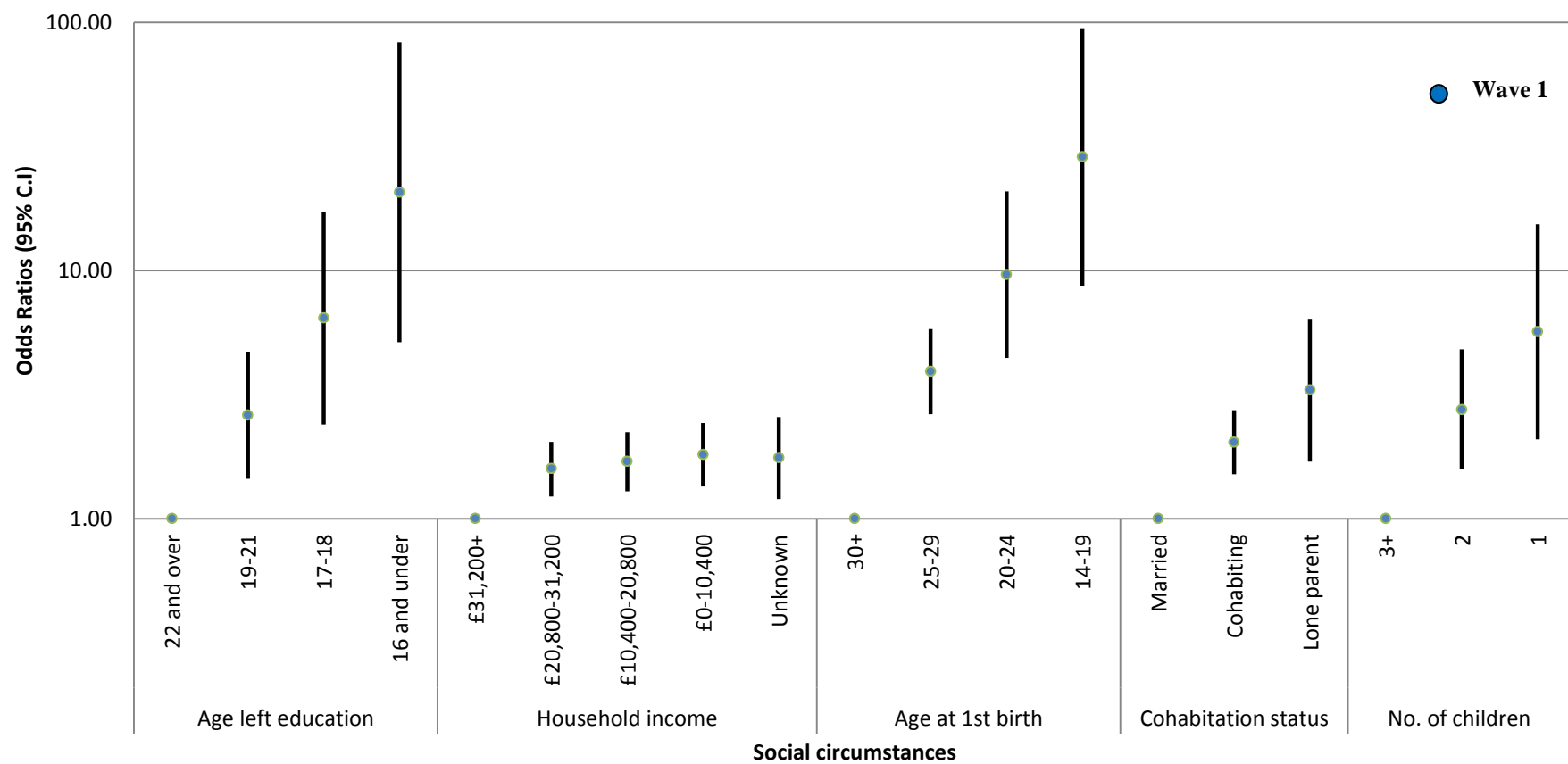
Figure 30 Significant odds of 'risky' drinking (>3 units/day or >21 units/week) according to social background and current socio-economic and domestic circumstances in wave 1*

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

My inclusive approach to testing found two significant two-way interactions in relation to 'risky' alcohol use (>3 units/day, or >21 units/week) in wave 1 (Figure 31 and Figure 32 and Appendix 11).

Interactions (wave 1)

Age first birth and age left education
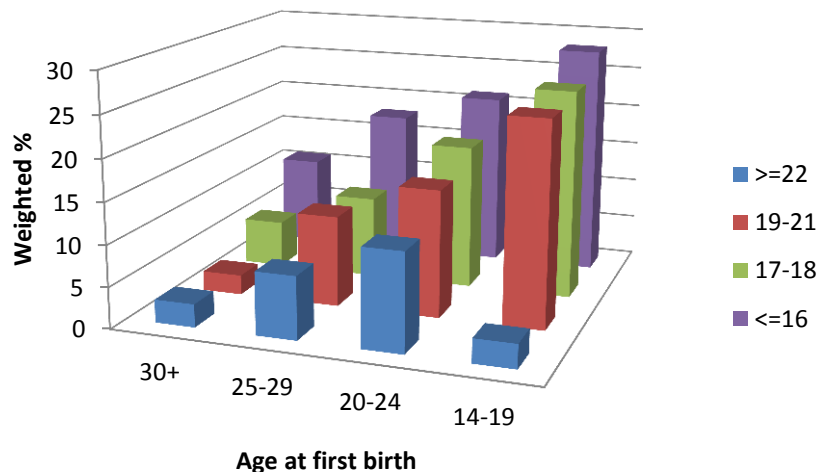
Figure 31 Interaction effect of age left education and age at first birth on 'risky' alcohol use (>3 units/day, or >21 units/week) in wave 1*

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

The proportion of mothers who were 'risky' drinkers (>3 units/day, or >21 units/week) increased as educational attainment decreased. The proportion of mothers who engaged in 'risky' drinking (>3 units/day, or >21 units/week) and had had their first child aged 14-19 was substantially increased when mothers had left education aged 21 or under.

Age left education and number of children
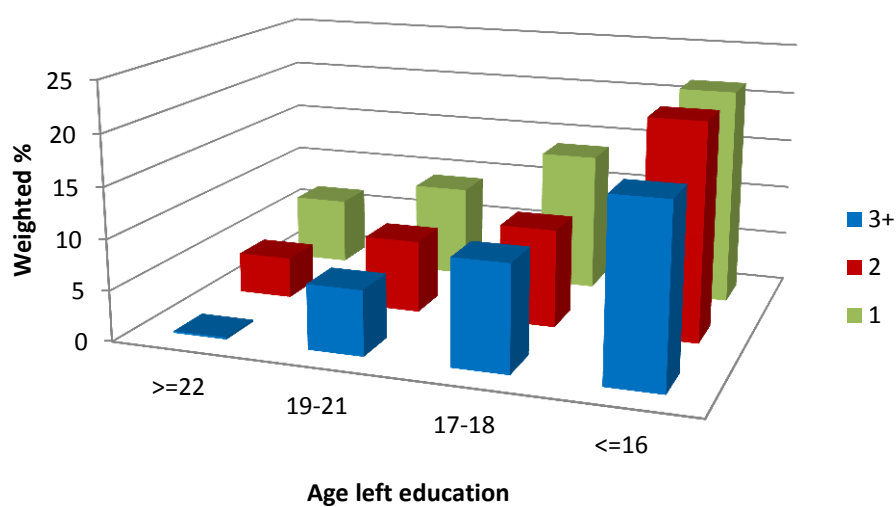
Figure 32 Interaction effect of age left education and number of children in household on 'risky' alcohol use in wave 1*

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

The proportion of mothers with 'risky' patterns of alcohol use increased in line with decreasing educational attainment. However, this association was attenuated as the number of children in the household increased.

'Risky' drinking according to multiple disadvantage

In wave 1, descriptive statistics revealed an association between 'risky' alcohol use (>3 units/day or >21 units/week) and increasing disadvantage. Mothers in the advantaged group had the lowest proportion of 'risky' drinkers (7%) and this increased gradually in line with increasing disadvantage to mothers in the most disadvantaged group who had the highest proportion of 'risky' drinkers (34%) (Table 33 and Figure 33).

Table 33 'Risky' alcohol use (>3 units/day or >21 units/week) according to level of disadvantage in wave 1

Level of disadvantage	'Risky' alcohol use (Wave 1) $n = 1124$	
	N	**Weighted %**
0	99	7.0
1	220	10.2
2	270	16.2
3	200	20.1
4	121	25.9
5	111	27.6
6	50	33.7
Missing	53	
	F (5.40,1063.51) = 46.8 p0.000	

"0" No disadvantage (no childhood disadvantage (father highest occupational class), no educational disadvantage (left education aged ≥22), no employment disadvantage (economically active), no income disadvantage (£31,200+), no age disadvantage (first live birth aged ≥30), no relationship disadvantage (married) "1 /2/3/4/5/6" number of levels of disadvantage from either (childhood disadvantage (father economically inactive/lowest occupational class), educational disadvantage (left education aged ≤16), employment disadvantage (economically inactive), income disadvantage (£0-10,400), age disadvantage (first live birth aged 14-19), relationship disadvantage (lone parent).

Figure 33 The proportion of mothers who were 'risky' drinkers (>3 units/day, or >21 units/week) according to level of disadvantage in wave 1

The next section reports the findings of each of the analysis stages described in chapter 5 that examine patterns of 'risky' drinking (>3 units/day or >21 units/week) in relation to multiple disadvantage adjusted for age.

Bivariate analyses

Adjusted for age

Bivariate analysis of wave 1 showed the odds of 'risky' drinking (>3 units/day, or >21 units/week) significantly increased as mothers' level of disadvantage increased ($n = 6827$, OR: 3.98, C.I: 2.57-6.14, $p0.000$) (Table 34 and Figure 34), inconsistent with previous research on women that found an association between problematic alcohol use and advantaged social circumstances (Humensky, 2010; Giskes et al., 2011; Baumann et al., 2007). However, the socio-economic measures used in these studies to define disadvantage were limited in comparison to my research that incorporated socio-economic and domestic measures of mothers' circumstances.

Table 34 Odds of 'risky' drinking (>3 units/day or >21 units/week) according to level of disadvantage in wave 1

Wave 1: Risky drinking	Bivariate analyses
(OR 95% C.I)	**Adjusted for age**
Level of disadvantage	***Model: 5k*** (*n* = 6827)
0	1.00
1	OR: 1.43 (C.I: 1.11-1.85) *p* 0.006
2	OR: 2.28 (C.I: 1.73-2.98) *p* 0.000
3	OR: 2.51 (C.I: 1.88-2.36) *p* 0.000
4	OR: 3.17 (C.I: 2.29-4.41) *p* 0.000
5	OR: 3.13 (C.I 2.29-4.28) *p* 0.000
6	OR: 3.98 (C.I: 2.57-6.14) *p* 0.000
	F (9, 189) = 29.20 *p*.0.000

"**0**" No disadvantage (no childhood disadvantage (father highest occupational class), no educational disadvantage (left education aged ≥22), no employment disadvantage (economically active), no income disadvantage (£31,200+), no age disadvantage (first live birth aged ≥30), no relationship disadvantage (married) "**1 /2/3/4/5/6**" number of levels of disadvantage from either (childhood disadvantage (father economically inactive/lowest occupational class), educational disadvantage (left education aged ≤16), employment disadvantage (economically inactive), income disadvantage (£0-10,400), age disadvantage (first live birth aged 14-19), relationship disadvantage (lone parent).

Figure 34 Significant odds of 'risky' drinking (>3 units/day or >21 units/week) according to level of disadvantage in wave 1*

* Adjusted for age.

Summary

My analyses have contributed new insight into the patterns of alcohol use during early motherhood. Among mothers with pre-school aged children in England who took part in the MCS, social gradients were evident for majority patterns of alcohol use: infrequent drinking (never/<1/week), infrequent light drinking (1 unit/day, <1/week), and frequent light drinking (<4 units/week).

In the MCS analyses, adjusted for socio-economic measures, domestic measures and age, the odds of frequent drinking (≥1/week), infrequent moderate drinking (>1 unit/day, <1/week), frequent moderate drinking (≥4 units/week), and 'risky' alcohol use (>3 units/day or >21 units/week) varied depending on the socio-economic measure used.

Frequent drinking (≥1/week) in wave 1 (cohort child aged 9 months) was less likely with lower household income (*n* = 6865, OR: 0.43, C.I: 0.33-0.55, *p*0.001), younger age at first birth (*n* = 6865, OR: 0.13, C.I: 0.05-0.33, *p*0.031), among lone (*n* = 6865, OR: 0.37, C.I: 0.16-0.83, *p*0.009) and cohabiting mothers (*n* = 6865, OR: 0.66, C.I: 0.45-0.96, *p*0.017), and with fewer children living in the household (*n* = 6865, OR: 0.36, C.I: 0.19-0.66, *p*0.001).

Frequent drinking (≥1/week) in wave 2 (cohort child aged 3 years) was less likely with increasing childhood disadvantage (*n* = 6225, OR: 0.62, C.I: 0.47-0.81, *p*0.001), younger age at first birth (*n* = 6225, OR: 0.18, C.I: 0.07-0.46, *p*0.000) and with fewer children living in the household (*n* = 6225, OR: 0.30, C.I: 0.17-0.55, *p*0.000). In addition, frequent drinking (≥1/week) was found to be more likely amongst economically inactive (*n* = 6225, OR: 1.57, C.I: 1.08-2.28, *p*0.018).

By combining different components of disadvantage, my analysis indicates how multiple disadvantage decreases the likelihood of frequent drinking (≥1/week) amongst mothers with children aged 9 months (*n* = 6827, OR: 0.33, C.I: 0.21-0.51, *p*0.000). To my knowledge, this issue has not been investigated before.

These analyses provide a more detailed understanding with regards to the frequency and quantity of alcohol consumed by mothers' by distinguishing infrequent drinkers (<1/week) and frequent drinkers (>1/week). In wave 1 (cohort child aged 9 months),

infrequent moderate drinking (>1 unit/day, <1/week) was more likely with lower levels of educational attainment (n = 3697, OR: 3.42, C.I: 1.79-6.53, p0.000), younger age at first birth (n = 3697, OR: 9.99, C.I: 2.80-35.63, p0.000), fewer children living in the household (n = 3697, OR: 2.49, C.I: 1.34-4.64, p0.004), and among lone (n = 3697, OR: 1.45, C.I: 1.10-1.92, p0.008) and cohabiting mothers (n = 3697, OR: 1.21, C.I: 1.01-1.44, p0.036) when compared to married mothers. It was less likely with economic inactivity (n = 3697, OR: 0.67, C.I: 0.57-0.79, p0.000).

Frequent moderate drinking ($\geq$4 units/week) in wave 1 (cohort child aged 9 months) was more likely among cohabiting (n = 3168, OR: 1.42, C.I: 1.12-1.79, p0.003) and lone parents (n = 3168, OR: 1.70, C.I: 1.07-2.71, p0.025) when compared to married women. It was less likely with economic inactivity (n = 3168, OR: 0.83, C.I: 0.69-0.99, p0.034).

By examining how different dimensions of disadvantage affect the quantities of alcohol consumed I was able to illustrate that, in contrast to drinking frequency, multiple disadvantage was not associated with moderate drinking quantity amongst mothers with children aged 9 months.

My results reflect 'risky' alcohol use in relation to the recommendations for the UK population thus addressing the gap in context specific research on mothers' alcohol use. My research suggests that in wave 1 (cohort child aged 9 months), 'risky' alcohol use (>3 units/day, or >21 units/week) was more likely with lower levels of educational attainment (n = 6865, OR: 30.33, C.I: 6.56-140.27, p0.000), lower household income (n = 6865, OR: 1.80, C.I: 1.35-2.41, p0.000), younger age at first birth (n = 6865, OR: 27.82, C.I: 6.99-110.68, p0.000), amongst cohabiting (n = 6865, OR: 2.14, C.I: 1.24-3.69, p0.007) and lone parents (n = 6865, OR: 3.85, C.I: 1.23-12.06, p0.021), and with fewer children living in the household (n = 6865, OR: 5.94, C.I: 1.89-18.61, p0.002).

By examining different dimensions of disadvantage and their effect on 'risky' alcohol use, I have been able to show that multiple disadvantage at wave 1 (cohort child aged 9 months), is positively associated with 'risky' patterns of alcohol use amongst mothers with pre-school aged children (n = 6827, OR: 3.98, C.I: 2.57-6.14,

*p*0.000), a group identified as under-researched in my review of the literature (chapters 1 and 2).

Chapter 7 builds on the quantitative analysis of the patterning of mothers' alcohol use and describes the qualitative component of this thesis that utilises focus group data to examine mothers' attitudes to maternal alcohol use. Furthermore, the qualitative research provides some explanation for the statistical portrayal of mothers' alcohol use according to their social circumstances thus, increasing the breadth of our understanding on alcohol use amongst women with pre-school aged children.

Chapter 7: Qualitative analysis

Introduction

The narrative review of women's alcohol use (Chapter 1) and the scoping review on patterns of alcohol use among mothers (chapter 2) pointed to a range of socio-demographic factors linked to women's alcohol consumption. For example, age was found to influence drinking patterns amongst women and younger women were more likely to abstain or drink less frequently. However, they also drank greater quantities during each drinking occasion and were more likely to engage in problematic alcohol use. Research on patterns of alcohol consumption with regards to social background and current socio-economic and domestic circumstances was less consistent amongst women and evidence was insubstantial in relation to mothers.

The quantitative analysis of mothers' patterns of alcohol use using the MCS (chapter 6) addressed this issue. It pointed to social gradients in alcohol use and an association between social disadvantage and frequent drinking ($\geq$1/week), infrequent moderate drinking (>1 unit/day, <1/week), frequent moderate drinking ($\geq$4 units/week), and 'risky' alcohol use (>3 units/day or >21 units/week) thus answering the quantitative component of the research question;

- What are the everyday patterns of alcohol use among women with pre-school aged children, and do they differ according to their social background and current socio-economic and domestic circumstances?

The narrative review (chapter 1) and scoping review (chapter 2) identified a few studies that explored potential reasons why divergent patterns of alcohol use exist amongst women from different social backgrounds; no studies were found that sought to understand why differences in alcohol use exist amongst mothers. However, a number of potential hypotheses have been postulated with regards to women that may be applicable to mothers. For example, studies suggest that normative beliefs and ideological representations of womanhood influence the ways in which alcohol use amongst women is viewed and may influence alcohol consumption behaviour (Zimmermann and Sieverding, 2010; Neighbors et al., 2010;

Rudolfsdottir and Morgan, 2009; O'Hara et al., 2008; MacNeela and Bredin, 2011). It is therefore possible that the social context in which motherhood is experienced and, the cultural norms that individuals are exposed to, exert an influence on an individual's perceptions and patterns of alcohol use.

Building on the quantitative analysis of the patterning of mothers' alcohol use (chapter 6), a qualitative study was conducted to provide broader contextual data and to capture mothers' attitudes to alcohol use (Doyle et al., 2009). Specifically, the qualitative study was designed to examine mother's perceptions of maternal alcohol use in the context of advantaged and disadvantaged motherhood in order to provide a greater depth of understanding with regards to why differences in alcohol use exist according to social background, and current socio-economic and domestic circumstances. Furthermore, subjective perceptions of maternal alcohol use have not been adequately captured in previous research.

Chapter 7 describes how qualitative data from focus group discussions facilitated the exploration of mothers' perceptions of maternal alcohol use according to their social background. Findings are described in chapters 8 and 9, thus answering the qualitative component of the research question;

- What are mothers' perceptions of alcohol use, and do they differ according to their social background and current socio-economic and domestic circumstances?

What follows is a detailed description of the qualitative study design and methodology, and information on the thematic analysis. The results of the qualitative analysis span two chapters: Chapter 8 describes the context in which mothers from advantaged and disadvantaged circumstances experienced motherhood, and chapter 9 explores advantaged and disadvantaged mother's perceptions of their own alcohol use and their perceptions of how other mothers should, and do, use alcohol.

Design and methodology of the qualitative study

This section describes in turn the focus group design, the recruitment strategy, the study participants, and the analysis.

Focus group design

The qualitative study was based on four focus groups with purposively selected groups of mothers living in advantaged ($n = 2$) and disadvantaged ($n = 2$) circumstances. Focus groups have been described as an accumulation of observational and interview techniques (Morgan and Spanish, 1984; Teddlie and Tashakkori, 2009). However, unlike focus groups, interviews are not able to capture the group narratives and observational interactions necessary in our understanding of alcohol use. One of the greatest strengths of focus group methodology in comparison to individual interviews is that it allows researchers to observe the effects of group interaction (Campbell, 2007; Krueger, 1994).

Focus groups are useful in qualitative research as a means of exploring commonly held group beliefs and differences of opinion within groups. They can be particularly important in studies whereby the aim is to "illuminate subjective experience" (Barbour, 2007; Delaney et al., 2007). Focus groups facilitate the gathering of information with regards to individual beliefs and opinions, whilst investigating the impact of the socio-cultural context in which they are formed (Seal et al., 1998; Delaney et al., 2007; Castro and Coe, 2007; Merryweather, 2009). Focus groups are a particularly useful method for collecting information on mothers' perceptions of alcohol use since they utilise group interactions to explore collective meanings and shared knowledge according to the context in which they are experienced. Mothers who took part in the focus group discussions sought to validate their opinions by seeking approval and challenging the opposing opinions of others within the group. By examining advantaged and disadvantaged mothers' perceptions of maternal alcohol use separately, I was able to increase the external validity of any between group comparisons (Krueger, 1994). Moreover, I was able to identify similarities and differences within, and between, advantaged and disadvantaged groups with regards to mothers' experiences of motherhood and perceptions of maternal alcohol use. Therefore, enhancing our understanding of the context in which motherhood is

experienced and, generating hypotheses as to why social gradients in alcohol use exist amongst mothers with pre-school age children (Barbour, 2007; Merryweather, 2009).

In practical terms, focus groups can elicit a wealth of information in a relatively short period of time at low cost (Stewart et al., 2007) and do not require participants to be literate in order to take part (Seal et al., 1998). Furthermore, focus groups are flexible and researchers are able to respond to unexpected themes of discussion as well as clarify participants' responses (Krueger, 1994). During the focus group discussions there were a number of occasions when participant's responses required clarification to ensure that important information was not missed or misinterpreted.

Focus groups have proved to be a suitable means of eliciting information on subjects that may be considered sensitive. Barbour (2007) describes a number of subjects in which focus groups have proved successful such as; end of life care, sexual behaviour and views on abortion. Maternal alcohol use is likely to be considered a sensitive issue. Therefore, mothers were invited to discuss their perceptions of maternal alcohol use rather than their own alcohol use. Nevertheless, mothers referred to their own experiences of negotiating alcohol use into their daily lives in order to illustrate their points. Women are more often than men participants in focus group discussions and this is thought to reflect their propensity to interact and communicate their views in a more open fashion (Barbour, 2007).

Each focus group consisted of between 4 and 5 individuals, allowing me to generate a greater depth of meaning from few, as opposed to less detailed information from many (Barbour, 2007). Limited numbers ensured that the group was "small enough for everyone to have opportunity to share insights and yet large enough to provide diversity of perceptions" (Krueger, 1994). Since participants formed two groups dependant on their postcode, they may well have been known to one another. The advantage of this was that the focus group discussions were more likely to reflect real life interactions and social meanings (Barbour, 2007). In addition, separating individuals into groups more similar to themselves is likely to encourage participation (Krueger, 1994) and enhance interaction amongst participants (Stewart et al., 2007; Barbour, 2007; Merryweather, 2009). However, it should be

acknowledged that using postcodes as a marker of social disadvantage has its limitations and there are likely to be some women who live in a deprived area who are not disadvantaged and vice versa. In order to take account of this, women were invited to complete a brief questionnaire that related to the questions asked in the MCS about household income, employment status, age of leaving education, marital status and age at first live birth. This provided additional (individual-level) measures of their social circumstances (see section on 'study participants').

Ethics

Mothers of young children, particularly those who are socially disadvantaged are a vulnerable population group. Furthermore, maternal alcohol use is an emotive and sensitive topic of research. With this in mind, my recruitment strategy included the use of a "gatekeeper", an individual who effectively provides a link between the researcher and the participants (Oliver, 2010). The gatekeepers who facilitated the recruitment for my focus groups had a vested interest in the well-being of those who participated in the focus group discussions and as such provided additional research governance.

A pilot study was carried out to determine the acceptability of the research materials and format of the focus group discussions (Oliver, 2010). In addition, those who participated in the pilot focus group were able to reflect on their experiences and highlight potential effects of the research on the proposed participants. For example, whilst talking about alcohol use, issues may be uncovered that mothers were only partially aware of. As a result, information and sources of help were made available to women at the end of each focus group discussion.

Mothers were given at least 24 hours in which to digest written information about the study Appendix 12 and provide written consent Appendix 13. Mothers were asked to take part in focus group discussions and describe how they perceived patterns of maternal alcohol use in general, as opposed to having to describe their own patterns of alcohol use. A £10 voucher was offered to mothers as an incentive to take part in the focus group discussions. Consideration was given with regards to the value of the voucher. The aim was to provide a small monetary gesture of appreciation whilst not being sufficient in value to coerce mothers to take part.

During the focus group discussions, care was taken to ensure that the research was participant driven and not skewed to defend any perceived ideological interest of either myself (the researcher) or the funding body (ESRC) (Plant et al., 1996).

Ethics approval was obtained from the University of York research ethics and governance committee.

Recruitment strategy

Women with pre-school aged children were recruited from a childcare provider in York ($n = 9$) and a charity organisation in Hull ($n = 9$), based on LSOA (lower super output area) IMD (index of multiple deprivation) score. The aim was to recruit sufficient women from a deprived area of Hull (high IMD score) and a non-deprived area of York (low IMD score) to conduct four focus groups, two at each site. The following recruitment areas were identified:

- Area 1: York (Non-deprived area, IMD score: 3.05)
- Area 2: Hull (Deprived area, IMD score: 41.14)

Initially the managers of the agencies were approached and given information about the study. Managers then identified and approached eligible participants providing them with written information about the study Appendix 12 and a consent form Appendix 13. Participants who had consented to take part in the study were then contacted by their preferred method of communication (telephone/ email) with details of the focus group venue, time and date. As an incentive to take part in the study all participants who complete the focus group discussion received a £10 voucher.

Inclusion/ exclusion criteria

The research was intended to be inclusive; therefore, the only inclusion criterion was that the participants were mothers of pre-school aged children recruited from one of two specified childcare providers that represented areas of low and high deprivation according to their postcode.

It became apparent during the focus group discussions that a number of mothers in the disadvantaged group no longer had children who were pre-school age. However, it would have been inappropriate to exclude them at that stage. Therefore, some of the disadvantaged mothers' accounts are more heavily reliant on memory and perhaps subject to a greater extent to recall bias, whereby participants more often recall positive events. Similarly, a number of mothers who have pre-school aged children referred to their older children during the focus group discussions.

Recruiting two groups of mothers according to their level of deprivation was a pragmatic decision, based on literature that recommended the use of both individual and area level deprivation to capture the complexities of health inequality (Smith et al., 1998). In addition, it enabled comparisons to be made between groups, as opposed to the individualistic approach taken by the overwhelming majority of alcohol related research identified in the literature (chapters 1 and 2). Moreover, it allowed us to contextualise mother's perceptions of maternal alcohol use which may contribute to their resulting health behaviours (Curry et al., 2009), thus elucidating the relationship between social circumstances and patterns of alcohol use identified in the MCS analysis (Chapter 6).

Direct quotations obtained during the focus group discussions with mothers are used in chapters 8 and 9 to support theories relating to the concept of motherhood and perceptions of maternal alcohol use. Quotations were chosen on the basis that they were particularly illuminating of similarities and differences, within and between mothers from divergent socio-economic backgrounds, in relation to the key themes. Care was taken to ensure that there was sufficient evidence by means of supporting quotes to warrant the inclusion of the information highlighted in chapters 8 and 9.

Conducting the focus groups

The focus groups lasted between 1 and 2 hours; 15 minutes for introductions, 15 minute ice breaker, 50 minutes discussion and a 15 minute debrief. Light refreshments were provided and childcare facilities were in place to overcome this potential barrier to participation. The focus groups took place at a time and place that was convenient for participants and that suited their childcare arrangements so that mothers were in a familiar environment and able to relax and enjoy the experience.

Ideally group sessions would have been video and audio recorded so that both verbal and non-verbal channels of communication information could be captured and analysed (Stewart et al., 2007). However due to time and economic constraints, focus group discussions were only audio recorded. Notes were taken by a fellow researcher to capture subtleties in body language and group dynamics to help make sense of the transcribed data (Barbour, 2007).

The atmosphere was relaxed during each of the focus group discussions, likely to be a result of mothers being familiar with one another. Nevertheless, as a result of their familiarity there were a number of occasions when mothers needed encouragement to elaborate on points they felt were obvious to other group members. Furthermore, group dynamics were evident with some members of the group more dominant than others and it was necessary to engineer opportunities for those individuals less forthright to discuss their thoughts.

Children were present during one of the focus group discussions with a group of disadvantaged mothers which resulted in a number of interruptions. However, this was a necessary compromise that allowed mothers to take part who might otherwise have been unable to do so. One disadvantage was that the fellow researcher was unable to take notes and became otherwise engaged with childcare to prevent mothers from getting too distracted which may have resulted in lost information.

Focus group materials

A pre-defined topic guide was developed to aid the structure of the focus group discussions (see appendix 3). Prompt questions were designed to elicit contextual information in relation to advantaged and disadvantaged motherhood and provide insight with regards to mothers' perceptions of maternal alcohol use. A pilot study of four women with and without pre-school age children was carried out in order to assess how well the focus group questions were received and a number of questions were amended as necessary.

Discussions relating to the context of motherhood, and mothers' perceptions of maternal alcohol use formed two distinct parts of the focus group discussion. During the first part of the focus group discussions, mothers were asked to work as a group

and write down on separate reference cards the ways in which motherhood had changed their lives and then place them in order of importance. This technique was used to ease participants into the discursive format of the focus group discussions and allow them time to orientate themselves with the topic. Information gleaned from this introductory task was not used to inform my initial coding framework. Mothers were then asked a number of questions in relation to their experiences of motherhood and home life (domestic chores, childcare arrangements, and leisure time) in an attempt to contextualise the discussions on maternal alcohol use that followed. These discussions were presented in accordance with the theoretical framework that I identified from the research literature that described mothers' experiences of motherhood (chapter 3). Within this framework, chapter 8 provides a detailed description of the context in which advantaged and disadvantaged motherhood was realised and identifies both similarities and differences between the two groups.

In the second part of the focus group discussions, mothers were invited to discuss their perceptions of maternal alcohol use. In this instance, the theoretical framework emerged from the data, a process that is described in more detail in the analysis section later in this chapter. A number of images relating to maternal alcohol use were employed to portray various patterns of alcohol use (Figure 35 and Figure 36) Images were chosen on the basis that they were appropriate to the research question (Rose, 2012) and that they represented patterns of alcohol use found in my analysis of the MCS (chapter 6).

Using images rather than verbal descriptions meant that mothers did not have to interpret any descriptive language. The images provided a platform from which discussions in relation to maternal alcohol use flourished with very little intervention from the focus group facilitator, thus minimising their influence. Mothers were simply asked;

1. What do you think?

2. Is it a concern?

3. Are there any implications?

4. Who do you think drinks like this?

In addition, the images provided mothers a visual reference through which to articulate their own view point. However, despite all efforts to avoid bias, it has to be acknowledged that the choice of images included in the focus group discussions may have been influenced by the prior assumptions of the researcher.

Figure 35 Prompt 1 (P1)

Figure 36 Prompt 2 (P2)

Drinking diaries were also used as a method of illustrating a range of different maternal drinking patterns (Figure 37 to Figure 40) evident from my analysis of the MCS (Chapter 6). Mothers were asked to comment on the drinking patterns illustrated in the diaries and to discuss how motherhood may have influenced them.

1. What are your immediate thoughts?
2. What do you think influences a mother to drink in this pattern?

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The diaries provided a clear representation of the variety of drinking patterns amongst mothers who took part in the MCS. However, there was some confusion as to what a unit of alcohol amounted to in terms of alcoholic beverages, and mothers occasionally struggled with the concept of units as a measure of alcohol intake. Nevertheless, the aim of the drinking diaries was to illustrate patterns: abstinence (P3), drinking within the daily recommendations (2-3 units/day) (P4), drinking more than twice the recommendations (>6 units/day) 'binge drinking' (P5), and drinking over the daily recommendations (>3 units/day) 'risky drinking' (P6).

Weekly Diary

Monday	**Saturday**
Tuesday	**Sunday**
Wednesday	**Notes**
Thursday	**Total units = 0** **Recommendations = 2-3 units/day**
Friday	

Figure 37 Prompt 3 (P3)

Weekly Diary
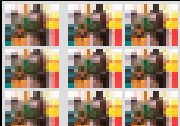
Monday 1 unit	**Saturday** 2 units
Tuesday 1 unit	**Sunday** 2 units
Wednesday 2 units	**Notes**
Thursday 1 unit	**Total units = 11** **Recommendations = 2-3 units/day**
Friday 2 units	

Figure 38 Prompt 4 (P4)

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Figure 39 Prompt 5 (P5)

Figure 40 Prompt 6 (P6)

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What became apparent was the willingness of mothers to disclose personal information with regards to their own alcohol use during the focus group discussions, despite it being made explicitly clear that the intention was to discuss maternal alcohol use in general. This was an unexpected advantage of having taken an indirect approach to exploring mothers' perceptions of maternal alcohol use. Disadvantaged mothers more often referred to their own drinking behaviours than advantaged mothers who were less likely to disclose information about themselves and preferred to generalise. This is perhaps due to the fact that, as a young female researcher with two children, my presence may have unwittingly made mothers feel that they were being judged in relation to what they said. However from a researcher perspective, one of the greatest difficulties of having to facilitate the focus group discussions as a mother of pre-school aged children myself was to not become involved or influence the discussion in any way, and using imagery effectively prevented my becoming involved in the dialogue.

The study participants

Table 35 and Figure 41 provide a demographic summary of all 18 mothers who took part in one of the four focus group discussions ($n = 2$ advantaged, $n = 2$ disadvantaged). The majority of advantaged mothers had left education at an older age, had higher household incomes, and were older when they first gave birth in comparison to disadvantaged mothers. Advantaged mothers were also more likely to be married than disadvantaged mothers who were more likely to be single or cohabiting. All of the advantaged mothers in this sample were economically active, whereas, amongst disadvantaged mothers economic activity was more evenly distributed between those who were economically active and those who were economically inactive. Therefore throughout the analysis of the focus group data (chapters 8 and 9) reference is made to these related dimensions of advantage/ disadvantage, and the ways in which they figured in mothers' accounts of perceptions and patterns of alcohol use.

Table 35 Demographic details of mothers who took part in the focus group discussions

Focus Group	Age left Education	Employment status	Household income	Relationship status	Age at first birth	Children
Advantaged Group 1						
Helen	22+	Active	£41,600+	Married	30+	2
Nichola	22+	Active	£41,600+	Married	25-29	3+
Vivienne	20-21	Active	£41,600+	Married	30+	2
Elisa	17-19	Active	£20,800-31,200	Married	25-29	2
Anna	22+	Active	£20,800-31,200	Cohabiting	30+	2
Advantaged Group 2						
Marsha	20-21	Active	£41,600+	Married	30+	2
Debbie	22+	Active	£20,800-31,200	Cohabiting	20-24	2
Jo	22+	Active	£41,600+	Married	30+	2
Emily	22+	Active	£31,200-41,600	Married	25-29	2
Disadvantaged Group 1						
Emma	17-19	Inactive	£0-10,400	Single	14-19	1
Kirsty	17-19	Active	£10,400-20,800	Cohabiting	20-24	1
Fiona	17-19	Inactive	£10,400-20,800	Cohabiting	14-19	1
Elaine	22+	Active	Unknown	Cohabiting	20-24	1
Disadvantaged Group 2						
Karen	$\leq$16	Inactive	Unknown	Married	14-19	3+
Ann-Marie	17-19	Inactive	£0-10,400	Single	25-29	3+
Cathryn	$\leq$16	Active	£0-10,400	Cohabiting	14-19	2
Hannah	$\leq$16	Inactive	£20,800-31,200	Cohabiting	20-24	1*
Sylvia	$\leq$16	Active	£10,400-20,800	Cohabiting	20-24	3+

*Pregnant at time of focus group discussions
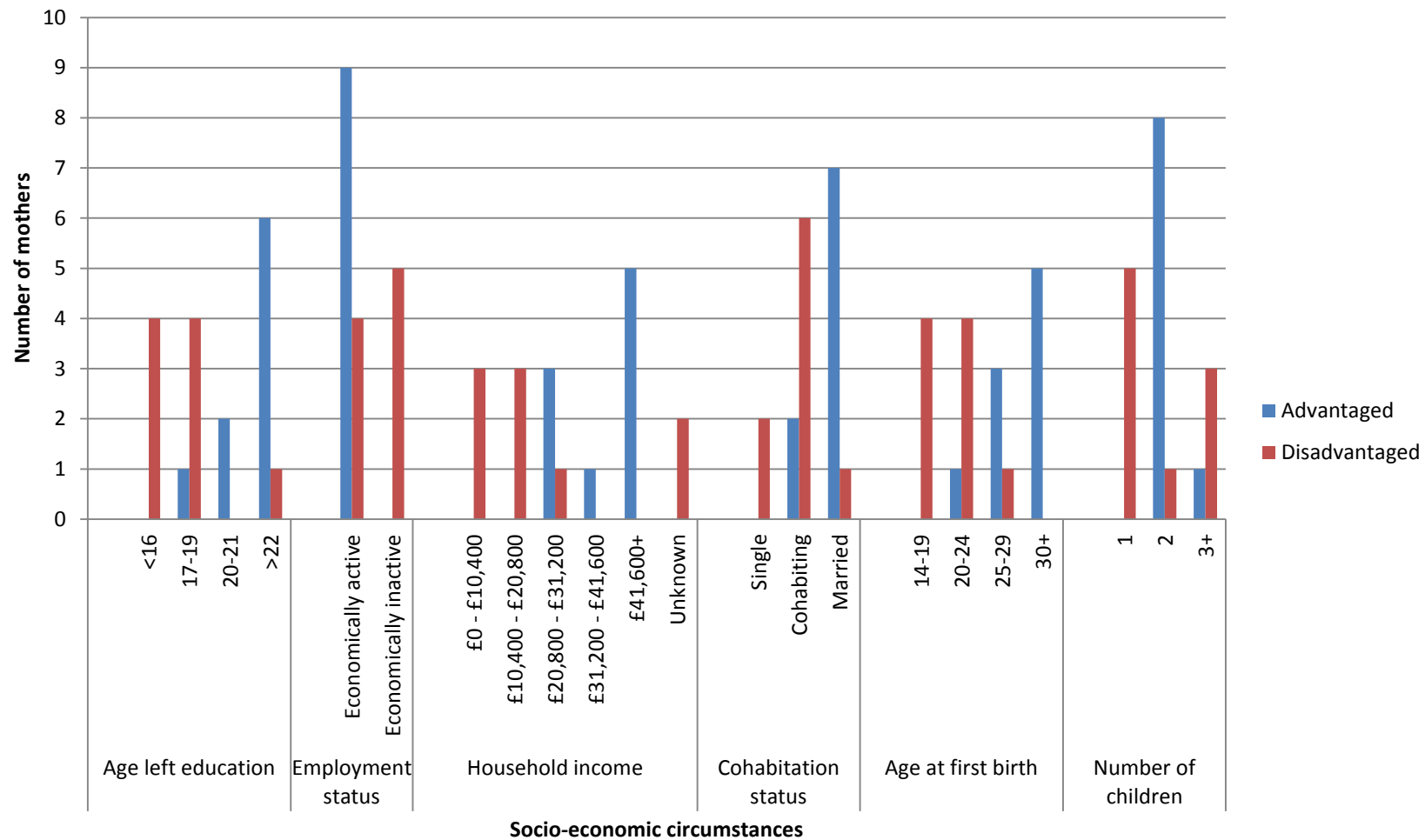
Figure 41 Demographic details of mothers who took part in the focus group discussions

Analysis

Focus group discussions were audio recorded and transcribed verbatim. All data were anonomised on transcription to prevent identification of participants. Written data were stored in a locked drawer at the University of York only accessible to the researcher. All of the information that was stored on the computer was password protected, as was data on a portable hard drive and was only accessible to the researcher.

The aim of the qualitative analysis was to generate theory (inductive) in relation to how social circumstances may influence the context in which motherhood is experienced and subsequent maternal patterns of alcohol use, thereby contextualising and explaining the results of the quantitative analysis (chapter 6) (Andrew and Halcomb, 2009). Therefore, the intention of the focus group analysis was to find explanations relating to the ways in which advantaged and disadvantaged socio-economic and domestic circumstances may influence patterns of alcohol use. Nevertheless, factors other than socio-economic and domestic circumstances for example, age and gender, did emerge from the literature and are highlighted in chapters 8 and 9.

The qualitative analysis was framed within a research paradigm known as interpretivism. Interpretivism is characterised by the ontological belief that reality only exists as a result of an individual's subjective experience of that reality (Green and Thorogood, 2009). Interpretivists take the epistemological viewpoint that individuals construct meaning with regards to a phenomenon as a result of their real world interactions, and the theoretical perspective that different experiences result in different perspectives on the same phenomenon (Green and Thorogood, 2009). Using focus groups allowed mothers to voice their subjective experiences of motherhood in the context of advantaged and disadvantaged circumstances. In addition, it provided advantaged and disadvantaged mothers with the opportunity to describe how they perceived maternal alcohol use and the ways in which alcohol was integrated into the everyday lives of mothers by drawing on their own lived experiences. Likewise, my interpretation of the qualitative data is influenced by my individual experience of motherhood and my wider experiences as a researcher

having read the literature on mothers and alcohol use and having carried out the quantitative MCS analysis.

Thematic analysis was used to identify recurrent themes within the qualitative data and establish similarities and differences between advantaged and disadvantaged mothers. Thematic analysis is an iterative process and the themes both emerge from, and help make sense of, the data. Transcripts were closely scrutinised line by line and were coded with regards to the general points being made (Gibbs, 2007). For instance, discussion that related to particular aspects of mothers' social circumstances such as their cohabitation status or employment status were each coded separately (Figure 42). In addition, quotes and extracts that appeared to have particular meaning in relation to patterns and perceptions of maternal alcohol use were also highlighted. For example, negative childhood experiences amongst disadvantaged mothers appeared to be related to their subsequent patterns of alcohol use (see chapter 9).

Transcripts were then revisited and re-ordered using the initial codes identified in the coding framework made up of recurrent issues and meanings in the focus group transcripts. The initial codes then went through a process of refinement with several iterations of themes and sub-themes: firstly descriptors - a general free-flowing description of the text, followed by sub-themes - that involved grouping similar topics of discussion together, and finally overall themes - that effectively summarised the overall topic being discussed. This was an iterative process that started immediately after the first focus group discussion had taken place. Therefore, my initial theories continually developed and evolved whilst simultaneously gathering additional information from subsequent focus group data. Figure 42 is a worked example of this staged approach.

Using constant comparative techniques, extracts from the transcripts labelled as 'advantaged mothers' or 'disadvantaged mothers' were re-arranged under each of the themes (Gibbs, 2007). The re-arranged transcripts were then colour coded to highlight similarities and differences within and between the content and flow of advantaged and disadvantaged mothers' dialogue. Analytical questions were posed of the data relating to each theme, for example, "how are these points related?", and

"how do these points differ from one another?" (Thorne, 2000). This process continued until it appeared that no new data (codes/themes) was emerging. However, had time allowed it, would have been beneficial to carry out additional focus groups to be confident that data saturation had been achieved. Following further refinement of the themes, transcripts were re-examined in order to identify how each of the themes related to one another and how they related to the overarching themes of social-circumstantial influences on motherhood and patterns of maternal alcohol use (Green and Thorogood, 2009).

Transcribed data	Initial code	Refining themes		
Focus group 3: (R: Researcher, 1-4: Participants)	Descriptors	Sub-theme	Theme	Overarching theme
R: Anything else that might influences somebody or you might associate with this [small quantities everyday] drinking pattern? *1: I can't get out of my head erm……middle aged sort of thing* *2: Yeah, my dad coming home and they go to a pub that's opposite the yard that's sort of for a drink after work and then, cause they bike to work so they can just ……. You get older don't you and you get more responsible don't you and think I can just have one drink to relax, I don't need any more.*	Alcohol as an expression of identity (including age). Typical drinking venues. Alcohol as a tool for relaxation.	'Identity and individuality' 'Drinking outside the home'	'Drinking locations'	'Perceptions of alcohol use'
1: I think weekends are completely different compared to during the week, at a weekend you sort of think if you haven't got a kid erm….. you can sort of like drink most of the day it's not really frowned upon as much during the weekend *4: It's the mind-set isn't it? It's seen as like free time without the children…..binge drinking* *2: That's us (laughs)* *1: Yeah, that's us on a Saturday night (laughs)* *1: That would definitely be me* *R: So this is the weekend drinker having all of the units in one night. So what are your immediate thoughts about this pattern of drinking then and who drinks like this?*	Drinking opportunities at weekends. Normative drinking patterns. Drinking opportunities whilst free from childcare constraints. Patterns of alcohol use whilst free from children.	'Responsibilities of motherhood' 'Frequency and quantity of alcohol consumption'	'Drinking opportunities' 'Patterns of consumption'	'Patterns of alcohol use'
3: Me (laughs), young people but yeah I suppose my mum's started now that she's single *R: So why, what influences that [binge drinking] pattern?* *4: Social* *2: Your friends go out on a Saturday night and you go out on a Saturday night* *1: Night off from the kids* *4: To de-stress, cause once you're intoxicated you don't have no worries you don't have to think of things it's just gone (laughs) (general agreement)* *R: So we're saying it's linked to your social network, it's a way of socialising, it's normal*	Alcohol use as an expression of one's cohabitation status. The social aspect of drinking. Opportunities to drink. Alcohol as a tool to de-stress. Alcohol as a social act.	'Socialising' 'Socialising' 'Responsibilities of motherhood' 'Emotions' 'Socialising'	'Reasons for drinking' 'Reasons for drinking' 'Drinking opportunities' 'Reasons for drinking'	'Perceptions of alcohol use'

1: Yeah, everybody's doing it	Group 'norms' and what is considered acceptable behaviour within social groups.	'Frequency and quantity of alcohol consumption'	'Patterns of consumption'	'Patterns of alcohol use'
2: Yeah, it's not dirty it's not frowned upon to go out on a Saturday night to go out and get drunk				
3: Yeah nobody looks at you and think oh you're getting drunk on a Saturday night, if this was mid-week like a Wednesday night you were that drunk and you'd drank that much people would think what are you doing on a Wednesday night outside of a pub that drunk do you know what I mean…… I think it's different I don't know. I think it's maybe the way you get with school that, it stems from being at school that's your week at school and then you get your playtime on a weekend. That's how you grow up thinking that a week's not for playtime	Fitting alcohol consumption around the working week.	'Drinking outside the home' 'Employment'	'Drinking locations' 'Reasons for drinking'	'Perceptions of alcohol use'
R: So it's always been that way (general agreement.) Anything else that anyone would like to chip in with? Is there any other reason that people drink all of their allowance, if you like, on one day?				
1: I think maybe they've got a night off from the kids	Opportunities and reasons for drinking alcohol in relation to time free from childcare responsibilities and work. Using alcohol as a tool to de-stress and to assert one's individuality.	'Responsibilities of motherhood' 'Employment' 'Emotions' 'Responsibilities of motherhood' 'Identity and individuality'	'Drinking opportunities' 'Reasons for drinking'	
4: Been at work all week (general agreement)				
2: De-stress				
4: Or in 1's case her daughter goes to her other half's, so she wants to go out with her friends, to enjoy herself free from being a mum again				
1: Yeah, that's definitely how I look at it yeah and how I feel				

Figure 42: Stages of thematic analysis: A worked example

Figure 43 is a conceptual framework which outlines the different research methods I employed in order to answer the research question. It illustrates how insights from the wider research literature helped to contextualise the data that emerged from my qualitative study, which in turn shed light on how the patterns and perceptions of maternal alcohol use were related to mothers' social circumstances. Furthermore, the conceptual framework provides an overview of how the quantitative and qualitative components of the thesis complement one another in contributing to a deeper understanding of patterns and perceptions.
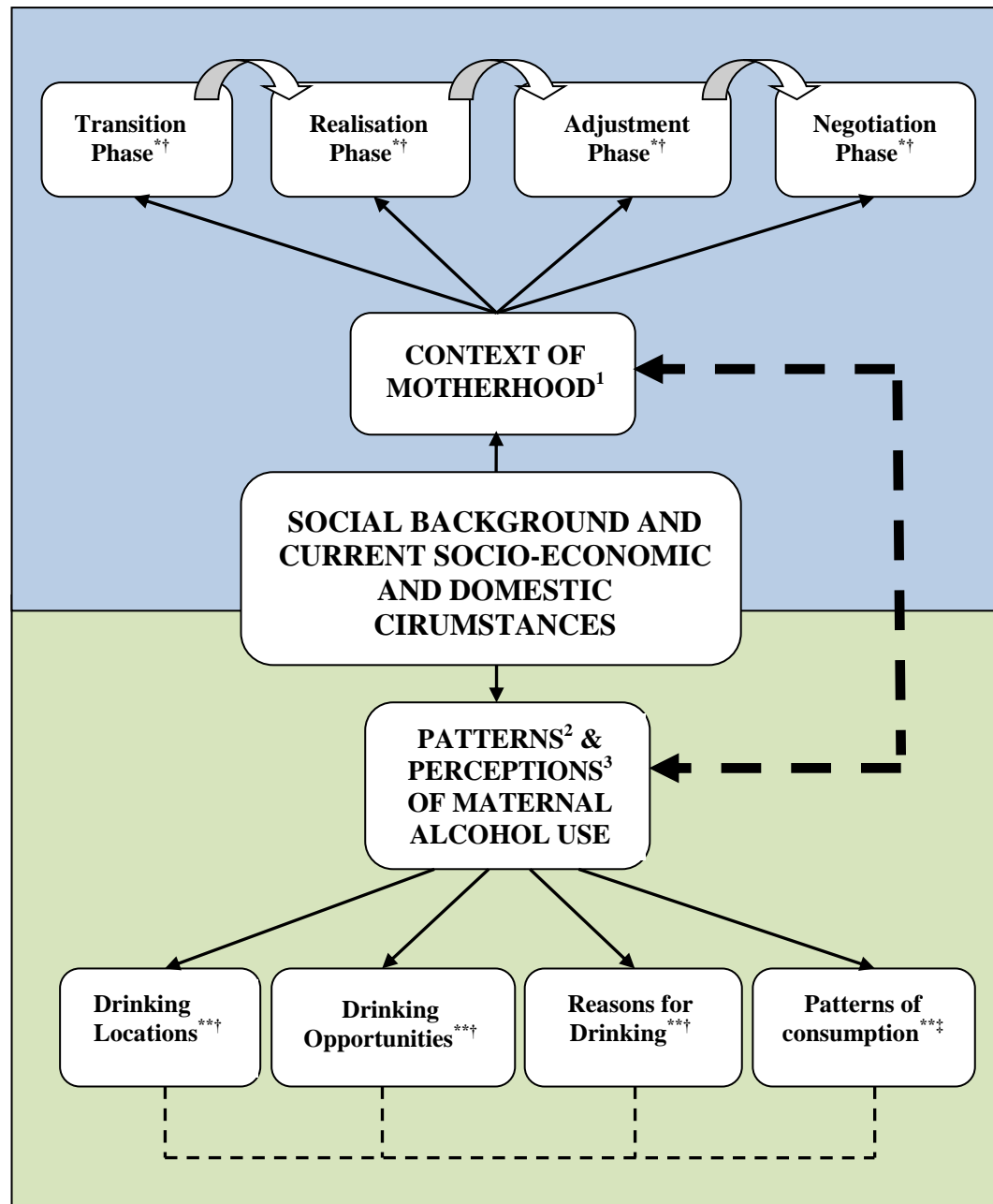
Figure 43 A conceptual framework illustrating the influence of social circumstances on maternal alcohol use

1: Chapters 3 and 8. **2**: Chapters 6 and 9. **3**: Chapter 9. ***** Theoretical framework identified from the research literature (chapter 3). ****** Theoretical framework emerged from the data (chapter 9). **†** Qualitative data. **‡** Quantitative and qualitative data

Ensuring rigor in qualitative research

All evidence designed to advance theory and inform practice, whether derived from quantitative or qualitative studies, is expected to meet quality standards. The standards appropriate for qualitative research have been and remain a focus of considerable debate (Denzin, 2009). What follows is a descriptive account of how I

ensured rigor in my qualitative work based on the guidelines published by Mays and Pope (2000).

The aim of the qualitative study was to deepen our understanding of mothers' patterns and perceptions of maternal alcohol use. The composition of the focus groups was informed by the results of the MCS analysis; the mothers who took part were purposively sampled by their postcode (IMD score) to ensure the groups contained participants who were either socially advantaged or disadvantaged. Due to time and budgetary constraints, the number of focus groups I was able to carry out was limited. As a result, the generalisability of my findings is limited to advantaged and disadvantaged mothers with pre-school aged children living in Yorkshire. Notwithstanding this limitation, by comparing the quantitative and qualitative results, I was able to increase the comprehensiveness of the research findings (Mays and Pope, 2000).

A clear and detailed account of how I went about collecting and analysing the data was provided earlier in the chapter. This level of transparency allows the reader to come to their own conclusions about the level of credibility they attach to my interpretation of the results (Mays and Pope, 2000). For instance, I used "member checking" throughout the focus group discussions, whereby mothers were asked to confirm that I had understood what they were saying correctly (Mays and Pope, 2000). Furthermore, on presenting the results, care was taken to ensure there was sufficient qualitative data (quotations/ passages) to support my interpretation (Mays and Pope, 2000). In addition, it was made clear that the views of the group were not taken as a whole and the extent of agreement/divergence was noted (Mays and Pope, 2000). Moreover, "deviant" cases were sought from within the data that provided alternative explanations for the patterns and perceptions of maternal alcohol use (Mays and Pope, 2000). For example, disadvantaged mothers who were abstinent were identified as individuals whose patterns of alcohol use were markedly different to the majority of mothers within the same group (see chapter 9).

Reflexivity is an important component of qualitative research and being transparent about the reflexive process is recognised to contribute to rigor and trustworthiness (Mays and Pope, 2000). What follows is a short section reflecting on the different

stages of my qualitative research: the formulation of the research questions, the materials used during the focus group discussions, the data collection, and the analysis of the data. A more detailed reflexive statement is included in appendix 4.

Reflexivity in qualitative research

The research questions asked during the focus group discussions were not directly related to the mothers' own patterns and perceptions of alcohol use, but to maternal alcohol use overall. This indirect line of questioning was borne out of concern that mothers would feel reluctant to discuss such a sensitive and emotive subject. In addition, the questions were theoretically informed by the results of the quantitative MCS analysis and effectively allowed participants to lead the discussions, thus lessening my influence as a researcher. Likewise, the materials used during the focus group discussions (for example, the images of women drinking and drinking diaries) were theoretically informed by the results of the quantitative MCS analysis. While my choice of focus group materials (images and diaries) was inevitably influenced by my perspectives on how certain patterns of maternal alcohol use are portrayed in public discourse, the images were a useful tool with which to distance myself from the group and allowed mothers the opportunity to interpret what they saw and engage in lively discussion.

Whilst facilitating the focus group discussions, I tried to maintain my role as facilitator and not allow my own beliefs to influence the discussion. Furthermore, as noted above, I used "member checking" to regularly check that I had interpreted correctly what mothers were trying to say (Mays and Pope, 2000). Unfortunately, I was unable to ask mothers to confirm (or amend) my interpretations by providing them with access to the transcripts due to time constraints. Maintaining my role as facilitator was particularly challenging in some instances since the topic of discussion was relevant to my own personal circumstances as a mother of two young children. I made the decision to disclose that fact that I was a mother to the research participants in an attempt to convey that, like them, I was caring for children. However, other non-modifiable factors such as my social class and age may have worked against my being seen as having experiences in common with them.

As previously described, following close scrutiny of the transcripts, the first stage of my analysis involved developing a coding framework constructed from recurring issues. On reflection, I acknowledge that, despite all efforts to the contrary, I may have been more inclined to notice recurrent issues within the text that related to my own experiences as a mother, or those which I found particularly interesting having read the research literature (e.g. as in accord with or different from the findings of previous studies). As a result, there may have been subtleties within the data that were lost. Having adopted a position of interpretivism, my analysis of the focus group data reflects my own interpretation of that data. Nevertheless, I made every attempt to provide a true account of what mothers said during the focus group discussions without being judgemental. In addition, I made sure that I had sufficient quotes from participants to support my interpretation of the data when reporting the results (see chapters 8 and 9).

Summary

Chapter 7 has provided a detailed description of the qualitative analysis undertaken in order to ascertain how the context in which motherhood is experienced may shape maternal patterns of alcohol use, thus providing a greater breadth of understanding with regards to the social gradients in frequent drinking ($\geq$1/week), infrequent moderate drinking (>1 unit/day, <1/week), frequent moderate drinking ($\geq$4 units/week), and 'risky' alcohol use (>3 units/day or >21 units/week) evident in the results of the quantitative analysis (chapter 6). The results of the qualitative analyses form two separate chapters; Chapter 8 describes the context of advantaged and disadvantaged motherhood that effectively 'sets the scene' for chapter 9 which describes mothers' perceptions of maternal alcohol use.

Chapter 8: Qualitative results - Context of motherhood

Introduction

Following the detailed account of the qualitative methodology provided in chapter 7, chapter 8 and 9 present the findings of the focus group discussions. Drawing on the data from the focus groups, chapter 8 sets motherhood in its everyday context and chapter 9 describes perceptions of alcohol use amongst women with children. Both chapters make reference to the similarities and differences observed between advantaged and disadvantaged mothers in terms of their socio-economic and domestic circumstances, thus addressing the gap in the research literature identified in chapters 1 and 2. Incorporating a qualitative component within this thesis also helps to make sense of the quantitative results in chapter 6 that pointed to marked social gradients in: frequent drinking ($\geq$1/week), infrequent moderate drinking (>1 unit/day, <1/week), frequent moderate drinking ($\geq$4 units/week), and 'risky' alcohol use (>3 units/day or >21 units/week).

Chapter 3 emphasised the importance of contextualising women's experience of motherhood when considering health behaviours. It is noted that the circumstances in which women become mothers and the material and structural resources available to them are likely to affect their experiences of motherhood in general and their perceptions of alcohol use in particular. Therefore, Chapter 8 focuses on the similar and divergent ways in which motherhood and alcohol use were described by advantaged and disadvantaged mothers who took part in the focus group discussions.

This chapter is structured around the temporal framework that I first developed in relation to the literature on mothers' experiences of motherhood in chapter 3. In the focus groups, mothers tended to refer to a timeline or sequence of events starting with when they first became a mother, regardless of whether they had gone on to have more children. This is not to say that all mothers in every focus group described their experiences in this way. However, locating mother's accounts in this biographical framework proved to be a helpful and insightful way of interpreting the data and, in particular, of illuminating similarities and differences between more and

less advantaged mothers. The framework consisted of four biographical phases as described in chapter 3;

1. The 'Transition phase': Routes to motherhood
2. The 'Realisation phase'
3. The 'Adjustment phase': Reconstructing identities
4. The 'Negotiation phase': Relationships and work-life balance

Firstly, the 'Transition phase' describes women's route to parenthood, followed by the 'Realisation phase' in which women recall their feelings towards motherhood, next the 'Adjustment phase' whereby women describe reconstructing their identity, and finally the 'Negotiation phase' in which women make adjustments to their relationships and working lives in an attempt to create the right work-life balance. The overlapping phases are represented schematically in Figure 44
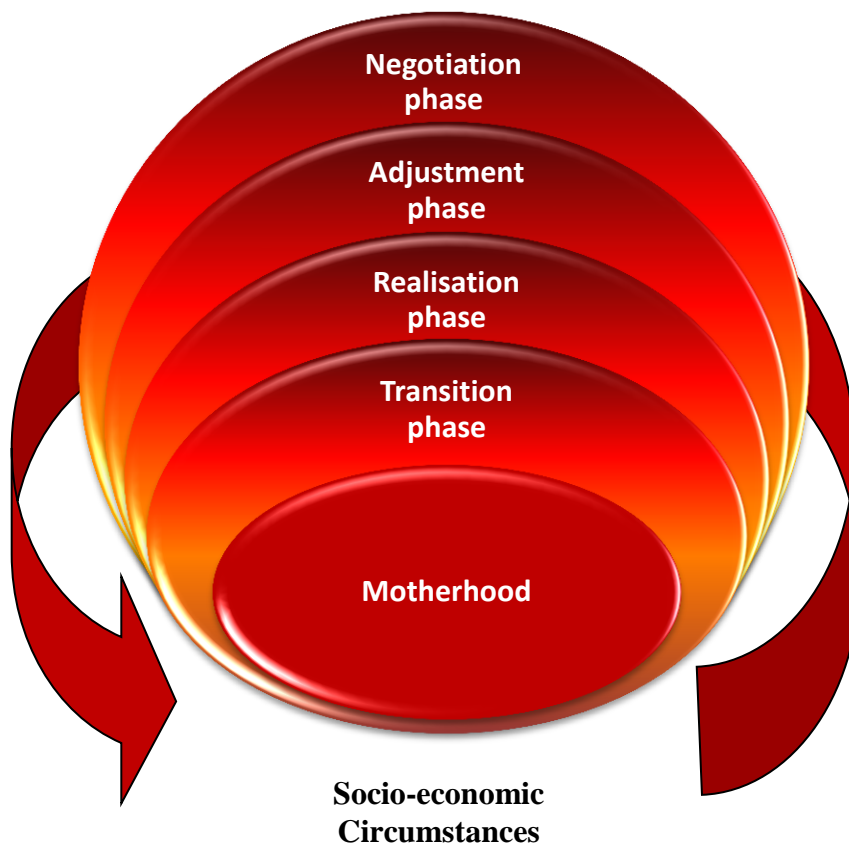
Figure 44 The 'aftershock' of motherhood

Using this framework as an overarching structure in which to anchor mother's accounts, the sections below look in turn at each of the phases. Attention is paid to the similarities and differences between mothers in disadvantaged and advantaged socio-economic and domestic circumstances. Headings and sub-headings are used within the sections to help highlight what is being discussed.

The 'Transition phase': Routes to motherhood

As noted chapter 7, the majority of disadvantaged women in this study become mothers at a younger age than advantaged mothers. In addition, mothers in disadvantaged circumstances were more likely to be single or cohabiting, in comparison to advantaged mothers who were more likely to be married. While detailed biographical information was not collected from participants, accounts suggest that the majority of disadvantaged mothers had been disadvantaged for most of their lives.

It was evident from the focus group discussions that age was seen as an important dimension of the participants' experiences of motherhood. Amongst most of the disadvantaged mothers who had had their children at a young age, there was a sense that motherhood had brought order to otherwise hectic lives and that their lifestyles improved as a result, as illustrated in the exchange between focus group participants below;

Cathryn: I think having a baby in general you've gotta work everything out in a strategic fashion before you can even think about leaving the house. You'll know (Hannah) with a 2 year old that everything's gotta be...

*Hannah: I know what you mean but I think it's made my life totally better, before it was just like chaos now it's, I'm more organised and....

Karen: Definitely more organised.

(Disadvantaged mothers; Cathryn, an employed cohabiting mother of 2 who had her first child between the ages of 14 and 19, Hannah, an unemployed cohabiting mother of 1(and pregnant) who had her first child between the ages of 20 and 24, and Karen, an unemployed married mother of 3 who had her first child between the ages of 14 and 19)

Many of the mothers described being 'organised' as necessary when you have a child and that, out of this necessity they had improved their organisation skills and appeared to take pride in that.

Motherhood for the majority of women who took part in the focus group discussions involved having to develop new skills and face unexpected challenges. Several of the advantaged mothers like Marsha described being unprepared;

Marsha: It's just such a huge responsibility and I know that sounds ridiculous 'cause it's a responsibility but I don't think you can ever prepare yourself or no-one can prepare you for how major that role is.

(Advantaged mother Marsha, an employed married mother of 2 who had her first child aged 30+)

Marsha's comment reflected the general consensus of the advantaged group of mothers, perhaps as a result of unrealistic expectations and ideological views of motherhood. However, there was no evidence of this amongst the group of disadvantaged mothers who all appeared to have reconciled themselves to the fact that motherhood would be challenging. This may have been as a result of the difficulties that disadvantaged mothers had often experienced up until this point in their lives.

This section entitled the 'Transition phase' has shown how both advantaged and disadvantaged mothers regard motherhood as a defining point in their lives, one that entails a number of challenges. A number of disadvantaged mothers discuss having to be more organised, a thread that continues throughout this chapter as several disadvantaged mothers, who were predominantly younger, go on to describe feelings of forced maturity. As mothers settle into new motherhood, they go on to experience what is entitled the 'Realisation phase', whereby they discover that their initial expectations of motherhood may be at odds with their lived reality.

The 'Realisation phase'

On becoming mothers, women had to deal with the realisation that idealised representations of motherhood and their lived reality were often very different. How

mothers dealt with this realisation most likely affected their feelings towards motherhood.

Across the focus groups with advantaged and disadvantaged mothers, the majority of women reported a sense of enjoyment, contentment and self-worth obtained through motherhood. Amongst all of the disadvantaged mothers, parenthood was described as their number one priority;

Elaine: Erm, I don't know there are a lot of things in't there? I'm just thinking when you've got roles there is like work, parent and carer. You know being a parent that's your priority.

Kirsty: Yeah it comes before anything you do doesn't it? You've got to think about that before [everything else].

(Disadvantaged mothers; Elaine and Kirsty, both employed cohabiting mothers of 1 who had their first child between the ages of 20 and 24)

In the above extract Elaine confidently states that motherhood is a priority, whereas Kirsty implies that the prioritisation of children is necessary, an unwritten rule amongst mothers. Indeed, all mothers reported feeling overwhelmed by the responsibility that motherhood entailed, and Emma, a disadvantaged mother, described how it dominated other aspects of their lives.

Emma: Your whole life's different isn't it really your whole life is around your children, it's hard to explain really in't it, your social life your alcohol life anything it's just completely different.

(Disadvantaged mother Emma, an unemployed single mother of 1 who had her first child between the ages of 14 and 19)

The sub-sections that follow describe how the focus group data pointed to two related issues – employment and financial circumstances – as integral to the realisation phase. These are considered in turn in the sub-sections below.

Employment and fulfilment in motherhood

Employment status was a central theme in mothers' accounts of their experiences of motherhood. Many of the advantaged mothers also described how motherhood affected their lives but more often referred to their working lives, emphasising the importance they attached to work outside the home.

Helen: I think it's just linked to business really isn't it, just stuff to do all the time really, whether it's work or childcare or the whole thing, there's just always something to do and it wasn't the case before I had children.....and I'm sure I had lots of down time. (Laughs)

(Advantaged mother Helen, an employed married mother of 2 who had her first child aged 30+)

Advantaged mother Helen's referral to childcare as a *"business"* implies that childcare constitutes an additional responsibility that has to be dealt with in a strategic fashion. This was not the case amongst most of the disadvantaged mothers whose accounts often revealed possessiveness over the time they spent with their children, perhaps as a result of not having a working role outside the home.

Elaine: I'm the main carer for [my daughter] and her grandma is there all the time, but she has her on a Wednesday afternoon, that's the only time. I don't like parting with my daughter. (Laughs)

Fiona: No, I'm the same I look after [my son], just…it wouldn't be even like a choice that [his dad] would have him more than me it's like I'll look after him, I'll take him out I'll (animated, laughs), so you know I just look after him all the time.

(Disadvantaged mothers; Elaine, an unemployed cohabiting mother of 1 who had her first child between the ages of 20 and 24, and Fiona, an unemployed cohabiting mother of 1 who had her first child between the ages of 14 and 19)

Both advantaged and disadvantaged mothers felt that motherhood was natural and the majority associated the role with fulfilment, as summarised by advantaged mother Nichola;

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Nichola: .... there's a reason why we all had kids in the first place, and the positive is that yeah you might have less couple time but you've got this family that's just great and you've got your own thing going on within it. I just thought, impact on life........ and thought, that's all really negative....I did want kids! (laughter) I mean fair enough we do want time away and stuff but the positive is you know I've got my own unit of people and they're all, we're all together and we're all one.

(Advantaged mother Nichola, an employed married mother of 3 who had her first child between the ages of 25 and 29)

Nichola alludes to the fact that many of the mothers in the advantaged group were quite negative about their overall experiences of motherhood. This was a noticeable feature of the focus group discussions, when the positive aspects of motherhood were often not discussed at all. This is not to say that women did not have positive experiences of parenting; what is more likely is that they were using the focus groups as a supportive environment in which they felt able to verbalise their negative feelings and express their frustration. However, a number of advantaged mothers did explicitly state that they felt dissatisfied with motherhood.

Anna: I think it's for me the humdrum, you know when you get through the laundry and the cooking. I think if I could employ a cleaner and a cook I feel that 'cause I get to the end of the day and I feel like oh I've got to do the washing up now, it's just relentless and I just don't see a light at the end of the tunnel. It sounds selfish but then, I'm not a natural mother I'm a born martyr (laughs).................

Nichola: Yeah, that humdrumness that comes with it that makes you more tired and it's hard to get motivated because it's just a bit boring sometimes.

Helen: Yeah, sometimes I just think I'm bored today……….bored with all this now.

(Advantaged mothers; Anna and Helen, both employed cohabiting mothers of 2 who had their first child aged 30+, and Nichola, an employed married mother of 3 who had her first child between the ages of 25 and 29)

It is evident that the roles associated with motherhood are the cause of dissatisfaction rather than simply being a mother. Terms such as *"humdrum"* and *"bored"* emphasise the feeling of relentlessness regarding the chores related to motherhood. Furthermore, advantaged mother Anna considered herself *"selfish",* not a *"natural mother"* because she did not enjoy these routine aspects of mothering.

Financial influences

Financial circumstances were highlighted throughout the discussions as having a pivotal role in mothers' experiences of motherhood. This was most evident among disadvantaged mothers of whom several spoke about difficulties and dissatisfaction with motherhood, but unlike the advantaged mothers, these were linked to their lack of resources. In the extract below, disadvantaged mother Fiona describes how her lack of transport impacts on her everyday activities;

Fiona: ....like before [motherhood] you could just like say "oh I'm gonna go to the shops and buy something nice", you know just going shopping into town or….....now you've got to think "I've got to have the buggy on the bus - am I gonna get enough space to keep the buggy up?".............

(Disadvantaged mother Fiona, an unemployed cohabiting mother of 1 who had her first child between the ages of 14 and 19)

Furthermore, Cathryn and Ann-Marie both disadvantaged mothers describe sacrificing their own needs for those of their children's;

Cathryn: You get the spare money in your purse don't you and you can guarantee one of the kid's trainers will have gone or they need a new coat, we're always the last ones to get out, or is that just me I'm pretty sure…..

Ann-Marie: Yeah the mothers always the last to, what's the right word to treat themselves. Even the basics..................

(Disadvantaged mothers; Cathryn, an employed cohabiting mother of 1 who had her first child between the ages of 14 and 19, and Ann-Marie, an unemployed single mother of 3 who had her first child between the ages of 25 and 29)

As described earlier in the chapter, there is a tone of inevitability with regards to mothers' prioritising others. Disadvantaged mother Cathryn goes on to refer to it as a "*mother thing*", a point reiterated by Karen, also a disadvantaged mother, who clarifies that *"It's not 'cause we want to do it, it's because that's just the way we [mothers] are"*.

The preceding section labelled the 'Realisation phase' highlights how mothers' made children their number one priority in line with their idealised representations of motherhood. Nevertheless, many of the advantaged mothers described dissatisfaction with their mother role as a result of boredom, and several disadvantaged mothers described dissatisfaction as a result of inadequate material and financial resources. As well as adjusting to the realities of motherhood and reconciling discrepancies between their experiences and idealised representations of motherhood, the accounts given in the focus groups suggest that the mothers go through a process of psychological transition whereby they reconstruct their identity.

The 'Adjustment phase': Reconstructing identities

For all of the advantaged and disadvantaged mothers, it was clear that motherhood constituted a defining point in their lives; becoming a mother therefore involved the rebuilding of their identity, as well as their lives, around motherhood. Social identity theory points to the ways in which an individual's perception of themselves is shaped by the social groups with which they associate (Turner et al., 1994). Once an individual has aligned themselves with a particular group, for example, 'mothers' or 'working class', then that individual acts according to the normative behaviours governing that group. On becoming mothers, women have to reconstruct their identity in accordance with their group affiliation. The sub-sections below discuss how mothers who took part in the focus groups recalled having to reconstruct their identities and look in turn at changing identities, the influence of age, maintaining identities and individuality.

Changing identities

We heard from Elaine, Kirsty, and Emma earlier in the chapter describing how parenthood was their number one priority and how their lives revolved around their

children. Perhaps as a result of this, many of the disadvantaged mothers like Cathryn described how they felt they had lost their identity.

Cathryn: .... when you have a kid like you, you're no longer Cathryn you're somebody's mother.

(Disadvantaged mother Cathryn, an employed cohabiting mother of 1 who had her first child between the ages of 14 and 19)

Age and changing identities

A few of the disadvantaged mothers went on to describe feeling that their whole self-image was framed by motherhood which dominated other aspects of their identity. In particular, they referred to lost youth identity, an identity they associated with freedom. They recalled feelings of what one participant evocatively described as *"forced maturity"* and felt that their lives had been put on hold, again pointing to the age at which women became mothers as an important dimension of mothers' experiences.

Karen: Well yeah 'cause having a kid or a baby that's it your life has gone out of the window until they've grown up and can look after themselves.

(Disadvantaged mother Karen, an unemployed married mother of 3 who had her first child between the ages of 14 and 19)

A number of disadvantaged mothers were adamant that they would re-claim their lost youth in adulthood. Disadvantaged mother Karen's point above suggests that motherhood denotes a period of time after which they would be free from the ties they associated with being a mother. In the extract below, Ann-Marie, also disadvantaged, states that her *"rebellious years"* have come to fruition at an older age since motherhood prevented her from being rebellious at a younger age;

Ann-Marie: Basically it's forced maturity, if you're young like that, when I had my first..........I didn't go out, I didn't socialise, I always kept myself to myself in the house whereas my younger sisters went out to dance and whatever. My rebellious years are now, they are, they are. (general laughter)

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(Disadvantaged mother Ann-Marie, an unemployed single mother of 3 who had her first child between the ages of 25 and 29

Similarly, Cathryn amongst the group of disadvantaged mothers refers to the 'pub scene' amongst young adults and reflects upon the fact the she was unable to participate because of becoming a mother in her teenage years. She felt that she had missed out and wanted to start *"clawing"* that time back now her children were older.

Cathryn: Yeah you spend more times doing things like you just said like toddler groups and things that are children orientated I mean I had my first at seventeen so I'd never really experienced the pub scene I'd never really looked old enough to go in a pub before I turned eighteen so that never happened for me so now mine are older I can start clawing that back now.

(Disadvantaged mother Cathryn, an employed cohabiting mother of 1 who had her first child between the ages of 14 and 19)

Maintaining identities

Most of the advantaged and disadvantaged mothers expressed a desire to be free from their children at least occasionally. Mothers' desire to be seen as, and have time to be, separate from their children perhaps reflected their sense that their identity and their everyday lives had become encompassed by their children. Several of the advantaged mothers, in particular, spoke of wanting *"freedom"* time to *"get away"* and purposefully trying to *"steer the conversation away from children"*. Most of the advantaged mothers appeared more able to compartmentalise their lives utilising their personal and working relationships in comparison to disadvantaged mothers. However amongst several disadvantaged mothers like Ann-Marie, there were advantages to being constantly with her child. For example, she describes greater health awareness since becoming a mother and an increased responsibility for her own health referring to herself and her child as one entity;

Ann-Marie: Yeah I think the medical side, when you've got kids medically I think you're more aware about what goes on like infections and stuff. The medical world is opened up to you a lot more 'cause of health wise you've health check-ups and

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stuff they teach you, and you've got dentists, whereas when you're younger you don't bother with that sort of thing do you.

(Disadvantaged mother Ann-Marie, an unemployed single mother of 3 who had her first child between the ages of 25 and 29)

The majority of mothers like Ann-Marie from the disadvantaged groups did not appear to value their own health as highly as the majority of mothers in the advantaged groups, amongst whom several repeatedly spoke of activities in relation to their health. Therefore, for many disadvantaged women, becoming a mother may constitute a healthier lifestyle a point also alluded to earlier in the chapter. However despite their increased awareness of health, a number of mothers in the disadvantaged group reported using alcohol as part of an attempt to assert their own autonomy and individuality, as illustrated by Cathryn;

Cathryn: Alcohol turns you back into a person again, like if you go back into a pub you're suddenly, I'm back to being Cathryn again I'm no longer [my child's] mummy. (laughs)

(Disadvantaged mother Cathryn, an employed cohabiting mother of 1 who had her first child between the ages of 14 and 19)

As this suggests the 'pub' appeared to be somewhere that the majority of disadvantaged mothers were able to retreat in order to be separate from their children. It provided a break from a daily life that was otherwise *"child orientated"*, a recognised desire to *"walk out and take that time out for [themselves]"*. In contrast, most of the advantaged mothers described being able to *"switch-off"* from motherhood and *"compartmentalise"* different aspects of their lives. A major factor was access to paid work that they enjoyed. Once again, this points to employment as an important influence on mothers' identity and overall experience of motherhood.

Anna: But I am amazed by how compartmentalized your life becomes, because I go to work and people say "how are the children", and you go "children? Oh yes", and it's completely out of my mind. I just switch off completely, which in some ways is quite nice and you come home to these little bodies that just want a hug.

Interviewer: That's interesting because in one sense we're saying having children is all consuming meaning that it spills over into your relationship, it spills over into your free time. But then often you say, "ok I'm at work this is my role today".......

Vivienne: I compartmentalise, I actually look forward to it, my work takes me out of town for four days a month and by god do I look forward to those four days, and I actually completely switch off. You know it's as if I've given myself permission to do this and to just go away and to, oh, and living by my clock, I actually have an alarm clock to ring my children, to remind myself I have children (laughs).....mummy does care. (laughs)

(Advantaged mothers; Anna, an employed cohabiting mother of 2, and Vivienne, an employed married mother of 2 who both had their first child aged 30+)

Earlier in the chapter Anna, Nichola, and Helen all advantaged mothers described how they found the responsibilities associated with motherhood boring. In the above extract, a number of advantaged mothers describe being able to retain and to access identities beyond motherhood and engineer what they perceived as a legitimate escape through work. In contrast, while several disadvantaged mothers had paid work, none described work in these terms.

Individuality

Aside from work, the majority of mothers in both groups stated that they felt *"guilty"* when they took time out for themselves. However, as the discussion below indicates, many advantaged mothers justified 'time-out' from childcare as necessary and beneficial for the family.

Nichola: I am a bit torn because I'm somebody that gets really high pressured and quite stressed so I know I need to do things for myself, because if I don't I'll just go mental. So we have to, to make our family time good, I have to be happy as well and I think it's the same for [my partner] but he doesn't seem to have as high a demand for it so we do factor in time during the week when I'm doing my own thing so I like to go to the gym, I like to go out running with my dog. If I do that, the time I get to spend with my family is better quality time 'cause I'm happier. That's something

we've had to learn to do in our family because sometimes you don't realise why everything is bubbling up and then you fathom out which bits need tweaking. I know for other people it's different but in our family that's what we have to do.

Helen: Yeah, if I don't get a bit of 'me time' now and then I get a bit cranky, some time to go to the shops by myself, that sorts it and my head's back to normal again.

Nichola: Even if it's right 'I'm going for a bath, I'm closing the door and don't let the kids anywhere near the bathroom', that's fine, that will do, just some separation so you can clear your head a little bit.

(Advantaged mothers; Nichola, an employed married mother of 3 who had her first child between the ages of 25 and 29, and Helen, an employed married mother of 2 who had her first child aged 30+)

In the discussion above, the two advantaged mothers refer to the simple pleasures in life, such as walking, time at the shops, and having a bath. However, for most mothers in disadvantaged circumstances, simple pleasures such as these may be unattainable. For example, they may not feel safe to walk around their neighbourhood, they may not have the financial resources or transport required to go to the gym and the shops, and those who are single parents may not have the necessary childcare to have time apart from the children. A few of the advantaged group of mothers go on to illustrate how their financial resources and partner's support enable them to spend quality time with friends away from their children.

Vivienne: Money doesn't solve all your problems but it can make things a lot nicer. When you have the money, I've been able to go away on holiday by myself with girlfriends and single friends. I've kept them for that reason (laughs). I would go off for three or four days and we'd go off to whatever city and you spend the whole year looking forward to it. Something that was all about me, it was wonderful so so nice.

Anna: I'm the same. I've been lucky enough to be able to go on holiday with friends who haven't got kids and leave him at home for the week and it's been great. We've done it reciprocal, he's done it as well and he does allow me quite a lot of me time. He doesn't do mornings, I don't mind getting up at six in the morning at weekends

but then he comes down at nine at the weekends and I have an hour for a coffee and reading the papers upstairs, it's great.

(Advantaged mothers; Vivienne, an employed married mother of 2, and Anna, an employed cohabiting mother of 2 who both had their first child aged 30+)

It is evident that most of the advantaged and disadvantaged mothers valued the time they had to themselves and that this enhanced their well-being. Many of the mothers in advantaged circumstances were able to retain more of their own identity separate from that of their identity as a mother. Perhaps as a result of this continued self-awareness, only mothers in the advantaged groups reflected on their body image as a result of having children as illustrated in the extract below;

Jo:...... you know your bodies gonna change having a baby but, I don't know it's just, it's not that I didn't realise how it was gonna change but it's more about I didn't know how I was going to feel about it changing. Urm, just the..... I don't know things like breastfeeding, I breastfed both my boys and I'm incredibly proud of the fact but then you kind of look down and then.......ok (laughs). Or just things like I was in the shower the other day and [my son] said to me, asked what the scratches were on my body, and it's stretch marks and I'm like "well that's what mummy's tummy looks like now" (general laughter). I mean I never was a 'bikini girl' but you know, so it's just physically and I don't want to, I would never regret the boys or regret the changes but it's coming to terms with it and accepting it, ok that's how I look and how I feel.

(Advantaged mother Jo, an employed married mother of 2 who had her first child aged 30+)

Advantaged mother Jo describes having had to come to terms with her new appearance as a result of motherhood and hints that, whilst she does not regret having children, she was not fully prepared for the physical changes that ensued. The fact that none of the mothers in the disadvantaged group mentioned any changes in their appearance may be a result of their youthful bodies being more resistant to change, diminished self-awareness, or that they had worries that took precedence over their body image, for example, financial worries often described by the majority of disadvantaged mothers.

The previous section entitled the 'Adjustment phase', describes the ways in which several mothers maintained and re-constructed their identity. Most disadvantaged mothers utilised alcohol as a means to define their self-image when they had no working identity outside the home, whereas, the majority of advantaged mothers were able to maintain their identity through work outside the home. Several disadvantaged mothers described feelings of forced maturity whilst acknowledging that motherhood had provided a safer route to adulthood than they might have otherwise taken. Following what is identified from the focus group data as the 'Adjustment phase', many mothers recalled having to negotiate changes in their relationships, their working lives, and their social lives, all of which were linked to their social circumstances.

The 'Negotiation phase': Relationships and work-life balance

All of the advantaged and disadvantaged mothers described how motherhood had completely changed every aspect of their lives. For example, mothers who took part in the focus groups described changes in their relationships, friendships, work-life balance/ conflict, domestic control and gender expectations. The sub-sections below briefly consider each of these in turn.

Relationships

Mothers stated that they prioritised their children over other relationships and their careers. It was evident amongst the majority of disadvantaged mothers in particular, that childcare responsibilities and financial necessity took precedence over their relationships with their partners.

Elaine: Me and my partner both work. He works, well we work full-time and erm he works Monday to Friday so he goes like really early in the morning and comes back late at night so I do get time to spend with my daughter during the day 'cause I do work in a pub, so it's more night shifts. It's still hard but you've got to pay the bills.

Emma: It's hard to keep your relationships going like that as well in't it? You know when you're working nights and he's away during the day.

Elaine: He leaves at half seven and gets home at half six and I go to work at half six so…… (laughs)

(Disadvantaged mothers; Elaine, an unemployed cohabiting mother of 1 who had her first child between the ages of 20 and 24, and Emma, an unemployed single mother of 1 who had her first child between the ages of 14 and 19)

Employment status and patterns of paid work also figured strongly in focus group discussions of mothers' relationships and resulting experiences of motherhood. For example, in the above extract, disadvantaged mother Elaine's working pattern meant that she was able to spend time with her child during the day. However, this shift pattern conflicted with her partner's, with whom, in consequence, she was rarely able to spend time. In comparison, most advantaged mothers appeared to be protective of their relationships with their partners and, in the conversation between advantaged mothers Elisa and Nichola, it was clear that their relationship time was important;

Elisa: We spoke about [our daughter] staying up later because she's six and maybe she should have an extra hour up, [my partner] was like "no no, that's eating into our time. She can read, play on the DS whatever this is our time." (laughter)

Nichola: That's the thing as they get older they're gonna encroach even more, on that very short evening that we've got anyway.

(Advantaged mothers; Elisa, an employed married mother of 2, and Nichola, an employed married mother of 3 who both had their first child between the ages of 25 and 29)

The language used by the focus group participants, with terms such as *"eating into"* and *"encroaching"*, suggest dissatisfaction amongst many advantaged mothers of the impact of motherhood on the time they spend with their partners. Several mothers in the advantaged group described regularly arranging *"date nights"* to ensure they had quality time together.

Vivienne: I schedule on my husband's calendar family events, family time, I sometimes think we've more time together now than we did before. I think we plan it,

whereas before I might have just turned up at something or what not. And it was always group things when we were single, I don't know that there was a lot of couple things.

Elisa: I know we have to make a point of having a 'date night' I try to have those once a week, you're right it's not..... what do you call it?....... 'quality over quantity.'

(Advantaged mothers; Vivienne, an employed married mother of 2 who had her first child aged 30+, and Elisa, an employed married mother of 2 who had her first child between the ages of 25 and 29)

It is clear from the extract above that the majority of mothers in the advantaged group were able to plan time together with their partners. *"Date nights"* presumably involved paying for childcare or utilising the support of others to look after their children and did not appear to be problematic amongst this group of mothers. However, most advantaged mothers acknowledged that they had less time with their partners and that their relationships had changed on becoming parents. Some of the mothers in this group reflected on their lives prior to having children.

Elisa: Looking at couples going round supermarkets, I'm in awe of them with their basket and they're holding hands down the aisle and they're picking their fancy bread out (general laughter) ....(sighs) is that what life used to be like (laughter) did we used to do that, no we didn't.....but if I could go back, that's what I'd like to do. (general laughter)

(Advantaged mother Elisa, an employed married mother of 2 who had her first child between the ages of 25 and 29)

Despite the obvious humour, advantaged mother Elisa's comment evokes an image of their relationships - admittedly romanticised - prior to having children. Notwithstanding the restrictions that that they felt motherhood imposed, a number of advantaged mothers also spoke positively about the quality of the relationship they currently had with their partner, in particular, they spoke positively about the support they had from their partners, both from a financial and an emotional perspective. In contrast, most disadvantaged mother's accounts painted a more negative picture and they recalled difficult times with their partners. They described instances of

separation, lack of understanding and support, and strain mainly in response to financial difficulties as illustrated by the conversation between disadvantaged mothers Fiona and Elaine;

Fiona: Yeah, I've been with my partner 9 years and this will be my 3rd pregnancy, I've had, no 4 sorry. I've had 2 abortions and 1 miscarriage and that was due to not being ready and er it just changes. Your social life is just gone (laughs) you know wow, erm they don't help as much as you wish so just relationships just gone……basically. (laughs)

Elaine: It's just strain…….money. (general agreement)

(Disadvantaged mothers; Fiona, an unemployed cohabiting mother of 1 who had her first child between the ages of 14 and 19, and Elaine, an unemployed cohabiting mother of 1 who had her first child between the ages of 20 and 24)

In the above extract, disadvantaged mother Fiona is clear that her relationships have disintegrated and there is no suggestion that these are redeemable. Furthermore, as with Elaine's comment, there is a sense of inevitability with regards to the strain on, and possible breakdown of, relationships as a result of financial difficulties amongst many of the mothers in this group. Ironically, on becoming single parents, a number of mothers in the disadvantaged group found themselves with more freedom to enjoy their leisure time whilst their ex-partners looked after the children.

Emma: I do [have] more [free time] now that I'm single 'cause [my ex-partner] has [our child] once during the week and once on the weekend so I've always got a night at the weekend that I could maybe go out and I was gonna say I don't always go out but I do actually. (laughs)

(Disadvantaged mother Emma, an unemployed single mother of 1 who had her first child between the ages of 14 and 19)

Friendships

Many of the differences amongst advantaged and disadvantaged mothers were not confined to mother's relationships with their partners. Friendships were also

identified as important in relation to how mothers viewed their experiences of motherhood. For example, there were several instances in both groups of mothers where they recalled changes in their friendships. Amongst all of the advantaged mothers, the emphasis was on gaining new friends,

Vivienne: Support, that's been a huge plus for me, the support element, it was unexpected going into motherhood. I was all on my own, everyone else was single and then realising that this whole group just emerged of new friends that was wonderful. I don't think I'd noticed a pregnant woman in my life then suddenly I'm pregnant and wow everyone's pregnant. (laughter)

(Advantaged mother Vivienne, an employed married mother of 2 who had her first child aged 30+)

Increasing networks meant increased support for several of the advantaged mothers. In comparison, the majority of disadvantaged mothers spoke predominantly about loss of friendships.

Cathryn: Yeah, your single mates have now gone off the balance haven't they?

(Disadvantaged mother Cathryn, an employed cohabiting mother of 1 who had her first child between the ages of 14 and 19)

Disadvantaged mother Cathryn re-counts how friends without children cease to be friends and, in the following extract, Emma also in the disadvantaged group, describes being marginalised and her decision to disengage herself from friends without children who *"don't understand"* her situation.

Emma: Well like if you don't, your friends that don't have children, you don't get invited to many things in case you can't get a babysitter or, obviously they don't understand as much.

Kirsty: Your whole inner circle of friends' changes.

(Disadvantaged mothers; Emma, an unemployed single mother of 1 who had her first child between the ages of 14 and 19, and Kirsty, an employed cohabiting mother of 1 who had her first child between the ages of 20 and 24)

A diminishing network of friends takes on an additional significance for mothers in the focus groups: all the mothers highlighted the importance of support during motherhood, succinctly illustrated by disadvantaged mother Karen.

Karen: Yeah 'cause you ain't got your friends, your shoulders to cry on, you've got nobody.

(Disadvantaged mother Karen, an unemployed married mother of 3 who had her first child between the ages of 14 and 19)

Work-life balance

In addition to relationships, a number of advantaged and disadvantaged mothers spoke at great length about their work-life balance. All the mothers agreed that having children had meant changes to their work and leisure time. Most advantaged mothers felt that the impact of having children was much greater for women since they usually have the main childcare responsibilities. They felt that childcare responsibilities were often burdensome and threatened their career aspirations along with the self-efficacy they ascribed to having a successful career. Yet again, this highlights the importance of mothers' employment status in terms of their well-being and as a result, their experiences of motherhood.

Vivienne: You mentioned career there, you mentioned your part-time hours, I've found that's something you really have to think about. I went the other way, I actually stayed full-time and it has hugely impacted me from the point of view that there still seems to be that assumption that the dentist, the doctors all those, it seems to be the woman who will do it. Now I don't know if that's true in all families (nodding agreement) but it's a, you know, I'm managing a full career and yet I seem to ... everything else is falling in there too. (laughs)

(Advantaged mother Vivienne, an employed married mother of 2 who had her first child aged 30+)

Advantaged mother Vivienne points out that, despite working full-time, there is the assumption that she will deal with all the family matters and this was confirmed by other group members. Therefore, mothers who work full-time are likely to struggle to combine paid employment and motherhood. However, mothers like Debbie in the

advantaged group did appear to have an element of choice over their decision to work and their working hours.

Debbie: ..... I had a career before and then I've had 2 boys and whilst I've had them I've been made redundant in the job that I really liked and got side-lined into another team, which is like an administration role .... But at the moment I am just happily ticking along doing a job that's just 9 to 4.30. I don't have to take work home, I don't have to stress too much about it. I work as part of a team, so if I'm not there as long as I've left everything clear, as long as someone could pick up from me it's fine, and I've kind of done the management stuff and done the other stuff and I'm quite happy to just ……. And I imagine that, a year or two down the line, it will go back up again and maybe when [my son] starts school, both of them are at school, it might go back up again but right now I'm happy to put the career on the back burner (general agreement and laughter).

(Advantaged mother Debbie, an employed cohabiting mother of 2 who had her first child between the ages 20 and 24)

Most disadvantaged mothers appeared to have less autonomy with regards to their decision to work or not and, perhaps in an attempt to reconcile themselves to that fact, they appeared more content with their childcare responsibilities. Indeed, their self-efficacy was linked to their ability to mother and motherhood was seen as a valid job role. This was particularly evident in one disadvantaged young mother whose child had a disability and who was able to gain confidence from her ability to provide expert care for her child. Furthermore, the support she had received as a result of her child having a disability meant that she no longer had to continually worry about job security and finances, since her role as a carer would always be supported.

Fiona: I mean in a way it was sort of well I don't have to go back to work now, you know have that worry about "oh I'll have to go back to work on Monday" 'cause he needs me now that's it, it's my job, that's my full-time job and it's always gonna be my job so in a way the thought of never having to worry about money, you know like before I was always panicking like what if I don't get a shift. Whereas now I'm

always gonna be supported as a carer so…. I get the best of both, I get to stay at home with my little boy.

(Disadvantaged mother Fiona, an unemployed cohabiting mother of 1 who had her first child between the ages of 14 and 19)

Work-life conflict

Other than Fiona, the majority of disadvantaged mothers described difficulties juggling employment and childcare. The conflict between paid work and childcare responsibilities was particularly prevalent amongst those mothers who were single parents, highlighting the influence of their cohabitation status on their overall experience of motherhood. However, only two of the mothers in this study were single parents, both of whom were in the disadvantaged group of mothers.

Sylvia: I had to give up work 'cause when obviously me and my ex split up I had to give up one of my jobs to be there to……..

Ann-Marie: Hence why I'm here, I took that breakdown and left for here…… yeah work is a big issue and childcare when you're in work and then the kids are sick as well it's difficult and not a lot of employers are…..

(Disadvantaged mothers; Sylvia, an employed cohabiting mother of 3 who had her first child between the ages of 20 and 24, and Ann-Marie, an unemployed single mother of 3 who had her first child between the ages of 25 and 29)

Disadvantaged mother's accounts of their employment revealed that most had very little flexibility in terms of their working hours, which made it difficult to maintain a career. In addition, a number of the disadvantaged mothers who reportedly wanted to work for financial and social reasons were unable to do so as a result of the high costs associated with childcare;

Emma: [my daughter's] not in nursery no, I'd love her to be in nursery but it's... I need to find a job so then obviously financially, financial situation again.

Conversely, in a number of instances, despite wanting to stay at home with their child, several disadvantaged mothers had had to enter the work force since their partners were unable to find employment. This is likely to become more common in the current economic climate where manual labour and unskilled jobs are scarce. For all this group of disadvantaged mothers, financial constraints resulted in strain and difficulty accessing the basic essentials. Mothers in the disadvantaged group often described concern with regard to their financial situation. For instance, making sure they had *"enough money to feed [the children] and buy their nappies"* and *"providing a roof over your head"*. Moreover, amongst all of the disadvantaged mothers, there was an acceptance that they would go without for the sake of their family and that self-deprivation amidst mothers was inevitable;

Emma: ...... I was just saying that as a single parent I get a lot of help but I don't seem to have any at the end of it for me myself but obviously that's becoming a parent.

(Disadvantaged mother Emma, an unemployed single mother of 1 who had her first child between the ages of 14 and 19)

Furthermore, as a result of financial difficulties, many disadvantaged mothers struggled to obtain support and enjoy any variety during their leisure time which directly impacted on their experiences of motherhood. Leisure and relaxation time amongst the majority of disadvantaged mothers was usually associated with the *"local pub"* as a social environment and alcohol consumption as a social facilitator.

A small number of advantaged mothers also referred to the financial constraints that resulted from working part-time rather than full-time and meeting the costs of childcare, noting that it meant having to be less indulgent with regards to their leisure pursuits. However, they were still able to afford domestic help *"a cleaner"*, *"someone to do the ironing"*, access childcare support, enjoy *"me time"* and a variety of leisure activities such as *"tennis"*, the *"gym"* and going out with friends.

Domestic control and gender expectations

One aspect of their lives in which most advantaged and disadvantaged mothers felt in control was the domestic domain. Mothers felt that they had ownership of who did what, where and when, with regards to activities in the home, apart from single mothers in the disadvantaged group who felt they had no choice.

Jo: It is with us but having said that at the weekend if we're going out somewhere he will say "have you packed a bag for the boys? Have you made the picnic? Have you?"... or, if he's got to do it, he'll say "what food do I need to make for the picnic? What clothes do I need to take? What do I need to do?" So it still comes back to me .(laughs)

Emily: You sort of just fall into that role, because I sort of .... I can't just go out and leave my husband with the kids. I'll leave like nappies, wipes, spare clothes, pyjamas, tea, lunch everything's lined up ready just ..... and I'm sure he's perfectly capable of doing it himself and he knows where all the stuff is in the house but ...I...just ....do it, it's like automatic almost.

(Advantaged mothers; Jo, an employed married mother of 2 who had her first child aged 30+, and Emily, an employed married mother of 2 who had her first child between the ages of 25 and 29)

In the passage above, advantaged mothers Jo and Emily both imply that having control was not necessarily advantageous and entailed additional expectations and responsibilities. However, several mothers also acknowledged that they were at times *"controlling"* with regards to the domestic arena;

Vivienne: I don't know..... is your partner a helper or is he a parent? And often I feel I give him instructions, he's doing it my way rather than just doing the task, I'm controlling, even when I'm not there, I'm kind of controlling how it will be done rather than just letting him think it through which is what I have to do.

Anna: So maybe the way....I'm sorry.... You might have created it off your own back, you know do it like this......

(Advantaged mothers; Vivienne, an employed married mother of 2, and Anna, an employed cohabiting mother of 2 who both had their first child aged 30+)

The focus group discussions suggested that most advantaged and disadvantaged mothers desired gender equality in terms of household chores and childcare responsibilities; however, they acknowledged that this was rarely achieved. However, the majority of mothers appeared to accept the imbalance in the division of labour between themselves and their partners. For instance, a number of advantaged mothers justified their partner's lack of help, explaining that it was their role as mothers to do *"all those little things"* because their partners had the *"breadwinner"* role. Gender role expectations clearly influenced how women from both the advantaged and disadvantaged groups behaved as a result of becoming a mother.

Helen: That's a tricky one really isn't it, because I'm working part-time, so we kind of sort of agreed that, you know husband has a job that pays more, so he's the main kind of breadwinner. So therefore I do all those little things, you know like the dentist, the doctors and all that… domestic stuff, and we've kind of come to that agreement but I guess if you're full-time, then that's a discussion to be had isn't it…

(Advantaged mother Helen, an employed married mother of 2 who had her first child aged 30+)

Most disadvantaged mothers also felt that they should do the majority of work around the house - and to be able to cope without any help in a way that would not be expected of men, highlighting their possessiveness of the domestic arena as indicated by Elaine and Fiona previously in the chapter. Indeed, the majority of disadvantaged mothers described having to experience the burden of childcare responsibilities even when their partners didn't work.

Cathryn: [domestic help is] not the done thing.

Ann-Marie: There's a lot of people don't like other people in their house too and it kind of comes down to your time and how you do things where you want things putting 'cause you've doctored yourself into that sort of thing, isn't it, and then somebody else.........

Sylvia: Yeah 'cause I hate it when my partner puts the shopping away 'cause, no seriously 'cause I have a way that the tins go in the cupboard and the labels have to be… I haven't got OCD, but facing a certain way and they've got to be in certain rows and I hate it when I go in and I can't find anything.

(Disadvantaged mothers; Cathryn, an employed cohabiting mother of 1 who had her first child between the ages of 14 and 19, Ann-Marie, an unemployed single mother of 3 who had her first child between the ages of 25 and 29, and Sylvia, an employed cohabiting mother of 3 who had her first child between the ages of 20 and 24)

As this suggests, like most of the advantaged mothers, the majority of disadvantaged mothers took pride in controlling the household despite the additional tasks involved.

The final section on the 'Negotiation phase' shed light on advantaged and disadvantaged mothers' preponderance to take charge of the domestic arena which resulted in feelings of self-worth. Additional positive aspects of motherhood were described by several mothers in the advantaged group with regards to their relationships and friendship networks. Amongst most disadvantaged mothers, there was more emphasis on the negative aspects of motherhood in relation to strained relationships and loss of friendships. The majority of advantaged mothers went on to discuss the ways in which work had allowed them to compartmentalise their lives and maintain their independence. Many disadvantaged mothers described having far less autonomy with regards to work and how the 'pub' allowed them to preserve their own identity separate from that of being a mother.

Summary

Chapter 8 draws on the focus group participants' accounts to describe their experiences of early motherhood. It points to both similarities and differences between advantaged and disadvantaged mothers.

For instance, both advantaged and disadvantaged mothers described motherhood as a defining point in their lives. They took charge of the domestic arena and their children were their number one priority. However, all of the mothers also expressed a strong desire for time free from their children. The majority of advantaged

mothers, who were more often married, described the positive effects that motherhood had had on their relationships with regards to support and new friendship networks. Amongst most disadvantaged mothers, who were more likely to be single or cohabiting, the emphasis was more negative and several mothers recalled strained relationships and the loss of friendship groups.

The types of paid employment available to many of the advantaged mothers enabled them to compartmentalise their lives and maintain their independence. Most of the disadvantaged mothers had far less autonomy with regards to work and the 'pub' provided a rare space in which to relax and enjoy themselves without their children. In addition, several advantaged mothers reported dissatisfaction with motherhood with respect to its tedium and appeared to reflect on aspects of their lives prior to having children. Similarly, a number of disadvantaged mothers described dissatisfaction with their current lives but explained this in terms of inadequate material resources and overall financial strain. They also described feelings of forced maturity whilst acknowledging that motherhood had provided a safer route to adulthood than they might have otherwise taken.

Taken as a whole, the qualitative accounts described in this chapter enhance our understanding of women's experiences of motherhood and provide a backdrop against which to set and to make sense of their perceptions of alcohol use in chapter 9.

Chapter 9: Qualitative Results – Patterns and perceptions of maternal alcohol use

Chapter 8 drew on the focus group data to describe the context in which mothers from advantaged and disadvantaged circumstances experienced motherhood. It confirmed that motherhood is a significant event in women's lives and one that could be expected to affect women's alcohol use. However, as the narrative literature review (chapter 1) and scoping review (chapter 2) revealed, little is known about the patterning of alcohol use amongst mothers. Chapter 9 helps to address this gap by exploring perceptions of their own and other mothers' alcohol use, thus answering the following research question:

- What are mothers' perceptions of alcohol use, and do they differ according to their social background and current socio-economic and domestic circumstances?

As noted in chapter 7, the focus groups used a series of prompts (P1-P6) that depict various patterns of alcohol use and drinking contexts. As well as eliciting mothers' perceptions, the prompts also gave rise to discussions of their patterns of alcohol use. In doing so, the qualitative focus group data provide further evidence of what mothers' patterns of alcohol use are according to their social circumstances. In addition, perceptions of their own and other mothers' alcohol use provides further insight into the factors underlying social gradients in: frequent drinking ($\geq$1/week), infrequent moderate drinking (>1 unit/day, <1/week), frequent moderate drinking ($\geq$4 units/week), and 'risky' alcohol use (>3 units/day or >21 units/week) identified in the MCS analysis (chapter 6).

Patterns and perceptions of maternal alcohol use

During the focus group discussions, mothers described patterns and perceptions of their own alcohol use as well as how they perceived other mothers should, and do, use alcohol. Two overarching themes emerged;

1. The influence of social circumstances on patterns of maternal alcohol use.

2. The influence of social circumstances on perceptions of maternal alcohol use.

Mothers recalled how becoming a mother had altered their own alcohol use and how past and current socio-economic and domestic circumstances affected the ways in which they integrated alcohol consumption into their mother role. It was evident that social position was a major influence on how mothers incorporated routine alcohol use into their daily lives; specifically where they drank, when they drank, why they drank, and how much they drank. Furthermore, social position influenced the ways in which they perceived both their own alcohol use and that of other mothers. Using thematic analysis and constant comparative techniques (see chapter 7), four major themes emerged, each with a number of sub-themes;

1. Drinking locations

     i. Drinking at home

     ii. Drinking outside the home

2. Drinking opportunities

     i. Celebratory events

     ii. Responsibilities of motherhood

     iii. Employment

3. Reasons for drinking

     i. Identity and individuality

     ii. Socialising

     iii. Emotions

4. Patterns of consumption

     i. Type of drink

     ii. Abstinence

     iii. Frequency and quantity of alcohol consumption

     iv. Binge drinking

The chapter is structured as follows. Each section focuses on a theme (e.g. drinking locations) with sub-sections discussing areas within it (e.g. drinking at home, drinking outside the home). Each theme relating to mothers' alcohol use is taken in turn, starting with where mothers drink, followed by what opportunities they have to drink, and their reasons for drinking, which in turn influence their pattern of alcohol consumption. For each theme, a descriptive summary of the overall similarities and differences between advantaged and disadvantaged mothers' alcohol use in relation to their socio-economic and domestic circumstances is provided, an overview of these similarities and differences is shown in Table 36. Following on from this is a more detailed description of mothers' alcohol use, as well as the ways in which they perceive their own and other mothers' alcohol use highlighting potential explanations for any such differences.

Table 36 descriptive summary of the overall similarities and differences between advantaged and disadvantaged mothers emerging from the focus groups (broken down by theme)

	Drinking location	
Prompt	**Advantaged**	**Disadvantaged**
P1 & P2	Drank more often at home	Drank more often in the pub
	Drinking opportunities	
Prompt	**Advantaged**	**Disadvantaged**
P1 & P2	Drank more during celebratory events	Drank more during celebratory events
P1 & P5	Drank more when free from childcare responsibilities	Drank more when free from childcare responsibilities
P1	Work provided drinking opportunities	
	Reasons for drinking	
Prompt	**Advantaged**	**Disadvantaged**
P1 & P4	Drank as a symbolic marker of their time free from the children	
P1 & P5		Drank to maintain their identity
P1 & P2 & P4 & P5	Drank as a reward for coping	Drank to cope
P1 & P2 & P4 & P5 & P6	Drank for pleasure/ relaxation	Drank due to stress/ to escape
	Patterns of consumption	
Prompt	**Advantaged**	**Disadvantaged**
P3		Abstained
P4 & P5	Drank Frequently	Drank infrequently
P4 & P5	Drank Small quantities	Drank large quantities
P1 & P5	Found it unacceptable to binge	Found it acceptable to binge at weekends

Drinking location

As indicated by the narrative review (chapter 1) and scoping review (chapter 2), how alcohol is integrated into family life remains largely unknown despite its potential to explain subsequent patterns of alcohol consumption. The focus groups explored mothers' views on drinking practices inside and outside the family home and according to their socio-economic circumstances.

Under the two broad headings of 'at home' and 'outside the home', the sections below substantiate and discuss how advantaged and disadvantaged mothers describe their drinking locations, how they perceive them, and their views on the drinking locations of other mothers.

Drinking at home

In chapter 8, several advantaged mothers described how they were protective of their relationship time. With regards to their own drinking locations, many advantaged mothers reported increased alcohol consumption at home whilst spending time with their partners.

Vivienne: a lot in our single days was meals and pubs………but now we would open a bottle of wine at home whereas we never would have done before

Elisa: We're more likely to open a bottle at home rather than if we went out to a pub or restaurant cause one of us would be driving normally.

Anna: .... couple time means more drink

(Advantaged mothers; Vivienne, an employed married mother of 2 who had her first child aged 30+, Elisa, an employed married mother of 2 who had her first child between the ages of 25 and 29, and Anna, an employed cohabiting mother of 2 who had her first child aged 30+, in response to P4 describing their own alcohol use)

It was clear that, amongst advantaged mothers, the majority did not associate motherhood with decreased alcohol use, rather a change in their drinking venue.

Vivienne: I think it's interesting, it's not that we're saying that we drink any less, I'm not gonna make that claim it's: I find that I'm drinking in my friend's houses and my house, I'm having a lot more dinner parties so the very setting, the fact that it's in a pub, inexpensive drinks is why I stereotype them as younger. That's one of the very biggest changes for me is where I'm drinking as a parent I think.

(Advantaged mother Vivienne, an employed married mother of 2 who had her first child aged 30+, in response to P1 describing her own alcohol use)

On a number of occasions mothers discussed what it meant to be a *"responsible mother"* and *"role model"* for their children. There were a number of differences between advantaged and disadvantaged mothers with regards to what they thought constituted responsible mothering. For example, the overwhelming majority of disadvantaged mothers did not think it appropriate for them to drink in front of their children at home. In contrast, the majority of advantaged mothers felt that it was their duty to introduce alcohol to their children within the home environment and act as a good role model regarding alcohol use, making reference to their own experiences and behaviours as an acceptable means of doing so. Nichola, an advantaged mother, referred to *"other cultures"* that drank around children perhaps in an attempt to validate her own drinking behaviours and to present herself as 'cultured'.

Interviewer: What do you think about the images where the children are present?

Nichola: Depends on how you've been brought up. It was always in our family quite acceptable that mum and dad would have a glass of wine at Sunday dinner sometimes and things when we were sat around the table together. It was never, it was just and, you know, in a lot of other cultures it is more than normal in the Mediterranean, so that doesn't bother me looking at those images. It's a family situation they are sat round having a meal, the adults are having a glass of wine.

Vivienne: You get a sense in the last one there's one bottle on the table, there are three people. It's a controlled, it's a nice social friendly scene.

(Advantaged mothers; Nichola, an employed married mother of 3 who had her first child between the ages of 25 and 29, and Vivienne, an employed married mother of 2 who had her first child aged 30+, in response to P2 describing their own alcohol use and their perception of other people's alcohol use)

Marsha went on to assert that children should be involved in the celebratory rituals at home associated with alcohol as participants rather than observers.

Marsha: Yeah, family meal. On Sunday we have [my children's] grandparents round and yes I do think it's appropriate for children to do cheers and [my child] actually quite likes to do cheers with his lemonade or whatever he's got to drink and ....it's participation.

(Advantaged mother Marsha, an employed married mother of 2 who had her first child aged 30+, in response to P2 describing her own alcohol use)

Most of the advantaged group were keen to represent alcohol as something they enjoyed, not forbidden. One of the advantaged mothers, Helen, felt that to exclude children would make them more inquisitive in later life and perhaps result in them drinking more.

Helen: You're showing the children that yeah, it can be enjoyable to have a drink, there's nothing wrong with having a drink but it's being sensible how you do it so you're not making it a forbidden thing, hopefully the plan being they maybe won't drink to excess themselves when they get to an older age, they just see nice happy times with it you know?

(Advantaged mother Helen, an employed married mother of 2 who had her first child aged 30+, in response to P2 describing her perception of other people's alcohol use)

The emphasis in the above extract was on portraying alcohol in favourable terms, as *"enjoyable"* when consumed in a *"sensible"* manner. This was not the case amongst the majority of disadvantaged mothers who appeared stricter in terms of where and when their children were introduced to alcohol. For instance, as Fiona makes clear in her statement below, all of the disadvantaged mothers were adamant that children should not be exposed to alcohol consumption in the home unless celebratory events dictated otherwise, as discussed later in this chapter.

Fiona: No, I don't agree with [drinking at home either] cause if the children are in the house.............. I don't like that.

(Disadvantaged mother, Fiona, an unemployed cohabiting mother of 1 who had her first child between the ages of 14 and 19, in response to P2 describing her perception of other people's alcohol use)

It could be argued that this was because disadvantaged mothers rarely spoke of alcohol as intrinsically pleasurable and more often referred to their own alcohol use as a method of coping. Chapter 8 highlighted the financial constraints and lack of material resources experienced by many disadvantaged mothers who sacrificed their own needs for those of their children (see chapter 8 sections on the 'realisation phase' and the 'negotiation phase'). In addition, a number of disadvantaged mothers were keen to break negative family patterns of alcohol use and it was evident that negative childhood experiences had shaped their decision to avoid drinking alcohol in the home environment.

Cathryn: I don't know really. My childhood consisted of an alcoholic father and domestic violence. He used to go around beating up my step mum, to cut a long story short, so from a very, very young age my visions were my father laid out on the sofa after vomiting on the floor and then snoring his head off with sick on the floor and I remember this vividly from being about five or six year old erm, growing up in a pub later on…. He still managed to work in a pub even though he was alcoholic so, but anyhow later on growing up in the pub and smelling the beer on all the people that used to come in the pub, a lot of that put me off. I mean yeah I can sup like a goldfish do you know what I mean? I really can but, but actually having a drink on a night I certainly won't go home and crack open a can. It wouldn't enter my head, I wouldn't sit in front of the tele on a night and have a beer. It just doesn't happen.

(Disadvantaged mother Cathryn, an employed cohabiting mother of 1 who had her first child between the ages of 14 and 19, in response to P2 describing her own alcohol use)

Cathryn's rich description of past childhood events in which she draws on sights and smells that remain vivid in her memory, provide a powerful illustration of the ways in which childhood experiences can influence subsequent alcohol use.

Drinking outside the home

Despite their rejection of drinking in front of children in the home as appropriate behaviour, most disadvantaged mothers felt that it was tolerable for them to drink in front of children in a *"pub"* since it signified a social environment. This decision may have been influenced by the fact that their lives were dominated by motherhood, as discussed in chapter 8, and that they had few options with regards to childcare, particularly single mothers.

Cathryn: In the summer we'll often take the kids and bike up to [the village], there's a little village pub [near where we live] what we do is we take the kids and we bike up to [the village] and have a Shandy in the pub and then we bike back and that's a brilliant way of spending a school afternoon you know after school.

.... Yeah, I mean I don't drink around them, I mean I will take them to the pub now and again but their now very, very aware of what I'm drinking. I don't let myself go for want of a better word.

(Disadvantaged mother Cathryn, an employed cohabiting mother of 1 who had her first child between the ages of 14 and 19, in response to P2 describing her own alcohol use)

As Cathryn's comments suggest, alcohol consumption in the presence of children in most disadvantaged families was much more likely to occur outside the home and children were more likely to experience pub-type drinking cultures, as opposed to cultures whereby drinking at home is considered the 'norm'. Furthermore, chapter 8 revealed that, for many disadvantaged mothers, the pub is regarded as an environment in which to retreat from childcare responsibilities and where otherwise strict attitudes in relation to alcohol consumption are relaxed.

In contrast to their *"controlled"* drinking inside the home, a few advantaged mothers felt that different venues outside the home necessitated different levels of restraint in terms of people's alcohol consumption as described by Marsha.

Marsha: I think it depends on the environment as well. If you saw a cocktail bar in the centre of York or Leeds or somewhere then, no, it wouldn't be appropriate [to

act drunk] then, but the fact that there are bleary lights in the background suggests that they are in a, it's fairly relaxed environment and it may be a bit more appropriate, a bit more easy going in terms of atmosphere and they're just letting their hair down.

(Advantaged mother Marsha, an employed married mother of 2 who had her first child aged 30+, in response to P1 describing her perception of other people's alcohol use)

Marsha's comments suggest that drinking outside the home was likely to result in a more *"relaxed"* attitude to alcohol use that may lead to increased quantities of alcohol consumption, mirroring the discussion in chapter 8 that described how freedom from childcare responsibilities was associated with heavier alcohol use.

The evidence from the focus groups suggests the location in which mothers consumed alcohol was different with respect to their social circumstances. Most advantaged mothers described drinking at home more often than outside the home. In contrast, disadvantaged mothers all spoke of rarely drinking at home and most often drank in the pub. Furthermore, it was evident that the majority of advantaged and disadvantaged mothers had different drinking companions, perhaps as a result of their favoured drinking locations. Several advantaged mothers spoke of drinking with their partners. In comparison, most disadvantaged mothers described drinking more often with their female friends, perhaps reflecting their increased likelihood of being single as demonstrated in chapters 7 and 8.

Mothers' social circumstances not only affected the location in which they drank alcohol but also their opportunity to do so. The next section provides insight into the drinking opportunities experienced by advantaged and disadvantaged mothers, how they perceive them, and their perceptions of other mothers.

Drinking opportunities

Drinking opportunities during motherhood have not been adequately explored in relation to socio-economic circumstances, despite the potentially useful information that could be elicited in terms of explaining subsequent patterns of alcohol use. The focus groups explored mothers' opportunities to drink according to their socio-

economic circumstances in relation to celebratory events, the responsibilities of motherhood and employment each in turn.

Celebratory events

As with different venues requiring different levels of restraint in terms of alcohol use, a number of advantaged and disadvantaged mothers recalled how celebratory events dictated the level of restraint necessary in terms of alcohol use including; *"Stag and hen parties"*, *"Christmas"* and *"New Year"*. Several mothers from both advantaged and disadvantaged groups described how this allowed them to behave differently without criticism. Elisa, an advantaged mother, recalled her experience of a Christmas party with colleagues.

Elisa: Christmas say like, I don't know well like recently at a Christmas party, the first time I'd been out in ages and I drank a whole bottle of wine to myself. I've not drunk a bottle of wine in nearly six years so ….

Anna: Bet you were a picture weren't you (laughs)

Elisa: Someone had to put me in the back of a taxi, fortunately taxi drivers can't just drop you off, they have to take you home and I don't even know if I had enough money to pay my taxi fare, like you said though how often does that happen? If I was doing that every weekend I would hope that somebody would say…

(Advantaged mothers; Elisa, an employed married mother of 2 who had her first child between the ages of 25 and 29, and Anna, an employed cohabiting mother of 2 who had her first child aged 30+, in response to P5 describing their own alcohol use)

In a similar vein, Jo refers to her experience one New Year's Eve and justifies one particular adult's drinking behaviour in terms of the celebratory context associated with New Year. She explains how the individual was not condemned as they might otherwise have been had it not been an *"event"*.

Jo: New Year we all went to a friend's and so we had, there were three families and we got all the kids to bed and so then there was six of us and we all got different stages of, well I was tipsy. I was probably the most sober…. cause I knew [my child]

would be awake (laughs)..... but two of the fathers got really properly drunk, one of them was absolutely.... And I was quite surprised at that, I mean he was fine, he didn't get abusive or anything but he was not at all compass mentis in the morning, he slept in, well couldn't wake up really. But we wouldn't have been able to drive anywhere in the night, but had there been an emergency, we'd have just called an ambulance. But I suppose that was New Year's Eve as well.

Emily: Well you see New Year's Eve is different, isn't it really, you wouldn't be doing that on a regular..................

Jo: No but, I think it's so rare that we all get together like that, it could have been someone's birthday.

Emily: Yes, an event.

Jo: Yeah, had the meal had the drink and it sort of just happened to be that New Year's Eve was the excuse to do. Yeah, but it wasn't frowned on that everyone, they were all responsible adults sort of thing, it wasn't frowned on. We all just laughed at the two dads in the morning. (laughter)

(Advantaged mothers; Jo, an employed married mother of 2 who had her first child aged 30+, and Emily, an employed married mother of 2 who had her first child between the ages of 25 and 29, in response to P5 describing their own alcohol use)

All of the advantaged mothers clearly felt that drinking to excess was not normal behaviour and required an *"excuse"* in the form of an event in order to not have to judge others or be judged themselves.

Similarly, many disadvantaged mothers felt more able to drink in front of their children during celebratory events such as Christmas, even to the point where children became active participants with regards to celebratory alcohol consumption.

Karen: That is our Christmas you know [everyone drinking together around the table], I mean especially when I was back at home, so you can imagine Christmases that me mum had really, erm, and that one [children surrounded by adults drinking].

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Even the kids even from being 4 year old, [my child] has had alcohol, she's had so much in a glass topped up with lemonade...................

Sylvia: Cause I know that [my children at] the ages that they are now, they've always had that as well at Christmas time, a glass of wine watered down with lemonade.

(Disadvantaged mothers; Karen, an unemployed married mother of 3 who had her first child between the ages of 14 and 19, and Sylvia, an employed cohabiting mother of 3 who had her first child between the ages of 20 and 24, in response to P2 describing their own alcohol use)

Responsibilities of motherhood and the influence of employment status and financial circumstances

For all of the mothers who took part in the focus group discussions, it was clear that the responsibilities of parenthood were prioritised above all else, including alcohol use which was *"not a priority"*. As discussed in chapter 8, most advantaged and disadvantaged women recalled how responsibilities associated with motherhood had curtailed their opportunity to drink alcohol.

Chapter 8 revealed that, for many disadvantaged mothers in particular, their lives were dominated by motherhood. For most advantaged mothers, chapter 8 noted how they took a business-like approach to parenthood and were more able to compartmentalise different aspects of their lives. However, the relationship between their decreased alcohol consumption and increased childcare responsibilities was not viewed negatively. A number of mothers in the advantaged group noted that they would usually prioritise childcare responsibilities over and above consuming alcohol and that this was a clear preference, something that they chose to do.

Jo: Yeah, I've got a work 'do' this Saturday and I'm driving cause, well partly cause the bus doesn't come down to [where we live]. But because if we go out, not that [my husband] has to drink, but, it's just better if it's me that doesn't drink...............If mum calls and we suddenly have to be away with the kids, I would rather be the one that's compos mentis.

Furthermore, Jo subtly implies that, as a mother, she is *"better"* able to care for her children than her husband and, that she considers parental responsibility to be an innate role for women (linking to mothers' desire to be in control the domestic arena described in chapter 8).

The majority of both advantaged and disadvantaged mothers associated their alcohol use with time spent away from their children. However, all of the mothers from both the advantaged and disadvantaged groups expressed a desire to spend quality time with their children and this also affected the extent to which they drank. Many of the advantaged mothers like Jo and Debbie suggested that excessive alcohol consumption would impair the time spent with your children.

Jo: [I] don't go out with the intention of getting utterly, utterly off my face.

Debbie: Yeah, it's because I think you're thinking the next day, or I think you're with your children so (laughter) if you've been drinking that badly, you'll be really hung over and poorly the next day. It affects the time that you would have with the kids and, if you're working every day or doing something every day, then that's my time with them at the weekend to spend whole days with them. Especially with my daughter going to school, I want to be there with her doing something, and you know if I do drink and I'm hung over, then that would affect what I would do.

Similarly, most of the disadvantaged group were aware of the negative effects that excess alcohol consumption could have on their children, as illustrated by Elaine and Emma.

Elaine: The fact that the morning after you're gonna be feeling absolutely (laughs), tired, not very well and that affects your child loads.

Emma: That your child's gonna be in your care in the morning or dinner time when you've been like that and like you say you're not gonna be up for playing with the kids are you and that affects the way…………

(Disadvantaged mothers; Elaine, an unemployed cohabiting mother of 1 who had her first child between the ages of 20 and 24, and Emma, an unemployed single mother of 1 who had her first child between the ages of 14 and 19, in response to P1 describing their perception of other people's alcohol use)

Both groups of mothers were protective over the time they spent with their children. Moreover, all of the mothers spoke of not wanting to be judged by their children despite their relatively young age and, this to some extent controlled the amount of alcohol they consumed.

Emma: ....if I know I've got [my child] to look after in the morning, I wouldn't drink half as much as what I probably would if she wasn't coming back till the next day or something or till teatime.................

Fiona: Yeah, they should have thought I've got my kid, or I don't want my kid to see me rolling in like this at whatever time you know. What happens if they're up or something like that?

(Disadvantaged mothers; Emma, an unemployed single mother of 1, and Fiona, an unemployed cohabiting mother of 1 who both had their first child between the ages of 14 and 19, in response to P1 describing their own alcohol use)

Despite all of the mothers who took part in the focus group discussions claiming to prioritise their children over their alcohol consumption, amongst disadvantaged mothers, a small number revealed to have prioritised their alcohol on occasion, purposefully excluding their children in order to drink.

Cathryn: Drinking alcohol in front of children I've never done, erm yes I have people round normally on a Tuesday night and both my children even my 15 year old get sent to bed. We have a girly time and that's it, I have friends round and we have girly time. We don't have the kids. I don't drink in front of my kids particularly, certainly not in the house.

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(Disadvantaged mother Cathryn, an employed cohabiting mother of 1 who had her first child between the ages of 14 and 19, in response to P2 describing her own alcohol use)

Earlier in the chapter, Cathryn stated that she was opposed to drinking at home in front of the children and in the above extract Cathryn refers to the fact that her drinking did not take place in front of her children and was therefore acceptable. Similarly, Ann-Marie acknowledged that she had prioritised her alcohol consumption over and above the time she spent with her children and that this had occurred when the children were present, but her alcohol use was used to denote time *"alone"*. Perhaps emphasising the difficulties faced by single mothers in relation to having time away from their children.

Ann-Marie: I've been like that and I've said right give me a minute to finish this and then I'll do it. I've done it like that I mean it could be me, I know in that picture it says "bugger off leave me alone."

(Disadvantaged mother Ann-Marie, an unemployed single mother of 3 who had her first child between the ages of 25 and 29, in response to P2 describing her own alcohol use)

Both of the above extracts point to the importance that most disadvantaged mothers placed on having time separate from their children and how alcohol was used to facilitate this.

Employment

Employment is likely to affect alcohol consumption by means of facilitating or hindering one's access to alcohol through work opportunities and financial resources. In chapter 8, many of the advantaged mothers described having greater autonomy over their work and, for advantaged mothers, work offered them the opportunity to drink and socialise. However, as in the case of Jo, focus group members noted that they were less likely to involve themselves in work drinking cultures now that they were mothers.

Jo: Pre-kids we used to go out for a drink after work. (general agreement)

Marsha: Yeah, socialise and go out for a drink.

Jo: That never happens now.

(Advantaged mothers; Jo, an employed married mother of 2 who had her first child aged 30+, and Marsha, an employed married mother of 2 who had her first child aged 30+, in response to P4 describing their own alcohol use)

Several of the disadvantaged mothers, on the other hand, described *"work commitments"* and lack of financial resources as a hindrance to their drinking opportunities, linking back to discussions about self-sacrifice that most disadvantaged mothers associated with motherhood (described in chapter 8). However, the majority of disadvantaged mothers with limited financial resources like Cathryn felt able to justify their own drinking patterns through work.

Karen: How can they get in that state knowing that they've got kids, what's happening to kids while the parents are spending all the money on…

Cathryn: No, no can I just say that like you pointing out this, I do go out to the pub, I work but at the end of the day I don't see the point in spending my entire working life, I go out to work and come home you eat tea and watch the tele rather than. I don't see why now I can't go out to the pub, I mean my other half is playing darts tonight and at some point my friend will come to me and then we will both go and join the lads for the last hour in the pub and have a few beers.

(Disadvantaged mothers; Karen, an unemployed married mother of 3, and Cathryn, an employed cohabiting mother of 1 who both had their first child between the ages of 14 and 19, in response to P1 describing their own alcohol use and their perception of other people's alcohol use)

Interestingly, Cathryn's partner was not currently in employment, yet it appeared that his expenditure on alcohol did not require such justification.

The focus group data suggests that drinking opportunities were similar amongst the majority of advantaged and disadvantaged mothers, both of whom drank more during celebratory events such as Christmas and New Year when they felt less restraint was necessary. Similarly, most of the mothers from both groups drank greater amounts of alcohol whilst free from childcare responsibilities. One major

difference between the two groups was that work appeared to provide several advantaged mothers with more opportunities to drink; there was less evidence that this was the case amongst any of the disadvantaged mothers.

Mothers' choice of location and opportunity to drink are likely, in part, to reflect their reasons for consuming alcohol. The section below moves on to consider similarities and differences in the reasons that advantaged and disadvantaged mothers gave for drinking alcohol, in relation to how they perceive both their own drinking rationale and that of other mothers.

Reasons for drinking

Insufficient research has been carried out to determine why mothers drink alcohol and whether any such reasons differ according to their socio-economic circumstances. The focus group discussions explored mothers' reasons for drinking in an attempt to shed light on why patterns of alcohol use may differ between more or less advantaged socio-economic groups. The following categories emerged: identity and individuality, socialising, and emotions, each are considered in turn.

Identity and individuality

Alcohol use amongst many advantaged mothers like Vivienne was used to distinguish between the time spent with their children, *"mummy time"* and time spent without their children, *"grown up time."*

Vivienne: Kids have just gone off to bed and this is her little transition from mummy time to grown up time just to have that little glass of wine and enjoy. (laughter)

(Advantaged mother Vivienne, an employed married mother of 2 who had her first child aged 30+, in response to P4 describing her own alcohol use)

Likewise, most disadvantaged mothers also associated alcohol use with individuality and separateness from their children as described by Cathryn.

Cathryn: Alcohol turns you back into a person again, like if you go back into a pub you're suddenly, I'm back to being [Cathryn] again I'm no longer [X's] mummy. (laughs)

(Disadvantaged mother Cathryn, an employed cohabiting mother of 1 who had her first child between the ages of 14 and 19, in response to P5 describing her own alcohol use)

Elaine, also a disadvantaged mother, described how alcohol was an important symbolic marker that denoted time free from her parental responsibilities.

Elaine: It's the mind-set isn't it? It's seen as like free time without the children.........binge drinking.

(Disadvantaged mother Elaine, an unemployed cohabiting mother of 1 who had her first child between the ages of 20 and 24, in response to P5 describing her perception of other people's alcohol use)

Elaine's account suggests that there is a mind switch from mother to individual which results in binge drinking behaviour. As noted in chapter 8, the majority of disadvantaged mothers, who had become mothers at a younger age, described how they felt they had lost their (youth) identity on becoming a mother and how they were making up for lost time which resulted in binge drinking, an issue considered in greater depth later in the chapter.

Socialising

The sociable act of consuming alcohol was one that several advantaged and disadvantaged mothers referred to throughout the focus group discussions. For instance, a number of advantaged mothers described using alcohol as a *"social lubricant"* to aid conversation.

Elisa: If somebody appeared with two glasses and a bottle of wine and said "we need to talk", I'd be like "right ok then (laughs) let's talk."

(Advantaged mother Elisa, an employed married mother of 2 who had her first child between the ages of 25 and 29, in response to P5 describing her own alcohol use)

Lone drinking was not considered to be sociable or normal behaviour amongst the majority of advantaged and disadvantaged mothers. Moreover, lone drinking was associated with problem drinking and drinking as a result of something negative, as intimated by Jo, an advantaged mother.

Jo: The one where she looks like she's drinking by herself, that's a bit of a worry, yeah…I just think if I saw [someone] like that, I'd think "has she got anyone she could talk to?"

(Advantaged mother Jo, an employed married mother of 2 who had her first child aged 30+, in response to P1 describing her perception of other people's alcohol use)

With regards to their own drinking, a number of women in the advantaged group had admitted to imposing limits on their alcohol use in relation to lone drinking.

Nichola: I wouldn't open a bottle of wine by myself.

Elisa: I wouldn't drink on my own. (general agreement)

Helen: I would. (laughs)

Vivienne: I just know I would finish it so that was why I put that rule in, I wouldn't stop at one glass.

(Advantaged mothers; Nichola, an employed married mother of 3, Elisa, an employed married mother of 2 both who had their first child between the ages of 25 and 29, and Helen and Vivienne, both employed married mothers of 2 who had their first child aged 30+, in response to P2 describing their own alcohol use)

Several mothers in the disadvantaged group went on to reiterate that it was the unsociable aspect of lone drinking that they found unacceptable. One disadvantaged mother, Hannah, found it particularly difficult to comprehend why someone would drink alone outside a social venue.

Hannah: I don't understand why? Why sit at home by yourself and have a drink?

(Disadvantaged mother Hannah, an unemployed cohabiting mother of 1(and pregnant) who had her first child between the ages of 20 and 24, in response to P2 describing her perception of other people's alcohol use)

Hannah's comment suggests that alcohol use amongst the majority of disadvantaged mothers was viewed as part of social networking, rather than simply a beverage to be enjoyed. This is perhaps as a result of the need to maintain friendships at a time when several disadvantaged mothers described friendship loss (see chapter 8). However, the disadvantaged mothers' group condemnation of lone drinking did not include drinking that took place in a social environment, even when it was in excess of the recommendations.

Cathryn: I mean somebody we know who goes in our local pub and he goes in every night without fail he goes and has his 2 ½ pints and then he goes home.

Ann-Marie: See that's reasonable.

Sylvia: But it's just to socialise. (general agreement)

(Disadvantaged mothers; Cathryn, an employed cohabiting mother of 1 who had her first child between the ages of 14 and 19, Ann-Marie, an unemployed single mother of 3 who had her first child between the ages of 25 and 29, and Sylvia, an employed cohabiting mother of 3 who had her first child between the ages of 20 and 24, in response to P6 describing their perception of other people's alcohol use)

In the above example, mothers refer to lone drinking amongst men. When considering lone drinking amongst women, most disadvantaged mothers immediately associated that type of drinking behaviour with sexual promiscuity.

Karen: If you saw her [drinking alone in a bar] like that you'd think she were a call girl just waiting for a customer, wouldn't you, sat like that by herself.

(Disadvantaged mother Karen, an unemployed married mother of 3 who had her first child between the ages of 14 and 19, in response to P1 describing her perception of other people's alcohol use)

Karen's comment emphasises gender disparities in terms of specific drinking behaviours and this is discussed in more detail later in the chapter.

Emotions

Amongst all the advantaged group of mothers, it was clear that their alcohol consumption was associated with *"nice happy times"* and enjoyment. In comparison, most disadvantaged mothers referred to their increased alcohol use as a result of negativity such as strain in relationships, which they described in chapter 8 as increasingly likely with children, possibly as a result of their prioritisation of children over and above their relationships.

Fiona: I suppose if you were under a lot of strain in your relationship you could, I mean a lot of people will turn to drink, you know?....... think I'm stressed out, I'll have a drink.

(Disadvantaged mother Fiona, an unemployed cohabiting mother of 1 who had her first child between the ages of 14 and 19, in response to P6 describing her perception of other people's alcohol use)

The majority of disadvantaged mothers also associated increased work stress with greater alcohol use. In chapter 8, many disadvantaged mothers described their lack of autonomy with regards to work outside the home and the necessity of paid work to make ends meet, which may have contributed to feelings of stress.

Interviewer: [How does] work [affect alcohol consumption]?

Kirsty: I think work commitments make you drink less, but then again if you're stressed in your work, it could go up.

(Disadvantaged mother Kirsty, an employed cohabiting mother of 1 who had her first child between the ages of 20 and 24, in response to P6 describing her perception of other people's alcohol use)

A number of disadvantaged mothers also described using alcohol to *"de-stress"* after *"a hard day's work"*

A few mothers in both socio-economic groups described how other individuals used alcohol as a means of coping with negative events and emotions. When questioned about frequent heavy drinkers, Anna, an advantaged mother, quickly associated this pattern of drinking with someone who used alcohol as a *"comfort blanket"*, a *"coping mechanism"* to deal with the stresses of motherhood, whilst making clear that she did not identify with this behaviour. In addition, several advantaged and disadvantaged mothers discussed excessive alcohol consumption as a means of *"escapism"*. However, it was only a small number of disadvantaged mothers who explicitly referred to how they themselves had utilised alcohol as a means of dealing with the stresses of motherhood in unfavourable circumstances.

Ann-Marie: Again if she's a working mum, she's under stress at work, as well she's trying to cope with the stress and her loneliness if her partners not there obviously, it's a wind down 'cause that's exactly what it is with me.

(Disadvantaged mother Ann-Marie, an unemployed single mother of 3 who had her first child between the ages of 25 and 29, in response to P6 describing her own alcohol use)

Drinking to excess, in particular, was a way that a few disadvantaged mothers talked about being able to momentarily forget about the problems they were experiencing.

Elaine: [You drink in excess] To de-stress, cause once you're intoxicated, you don't have no worries, you don't have to think of things, it's just gone. (laughs) (general agreement)

(Disadvantaged mother Elaine, an unemployed cohabiting mother of 1 who had her first child between the ages of 20 and 24, in response to P6 describing their own alcohol use)

A number of disadvantaged mothers explicitly referred to poor mental health as a trigger for excess alcohol consumption. They described how they had used alcohol as a form of medication to block out their problems.

Karen: [Poor mental health results in] drinking more, so they get sober, they've got their problems, then they start again............... For me, alcohol and drugs have the same effect................... You know you've got your problems, you take the [alcohol].

(Disadvantaged mother Karen, an unemployed married mother of 3 who had her first child between the ages of 14 and 19, in response to P6 describing her own alcohol use)

In contrast, most of the advantaged mothers were more likely to refer to their alcohol consumption as a *"treat"* for having coped with the demands of motherhood. Chapter 8 described how many advantaged mothers associated the responsibilities of motherhood with boredom, and alcohol appears to have been used as a motivator to carry on.

Anna: Gives herself a midweek treat (points to Wednesday night on P4) she's halfway there. (laughs)

(Advantaged mother Anna, an employed cohabiting mother of 2 who had her first child aged 30+, in response to P4 describing her perception of other people's alcohol use)

The majority of mothers in the advantaged group went on to reveal how they viewed alcohol as a *"deserved"* reward, a "*congratulations"* for having *"got through"* the day or the week.

Anna: Drinking eleven units, that's over a bottle (general agreement). I think the problem is the glasses are quite big aren't they .... But really I just think she's letting her hair down, she's deserved this, she's waited all week, she might have been looking forward to this.

(Advantaged mother Anna, an employed cohabiting mother of 2 who had her first child aged 30+, in response to P5 describing her perception of other people's alcohol use)

However, a few of the mothers in the advantaged group were keen to point out that excess alcohol consumption should not be a weekly occurrence.

Vivienne: In context, a let your hair down at the end of the week, exactly like that every few weeks, something to look forward to.

(Advantaged mother Vivienne, an employed married mother of 2 who had her first child aged 30+, in response to P5 describing her perception of other people's alcohol use)

Several advantaged and disadvantaged mother's accounts suggest that they saw their own alcohol use as an aid, a tool which enabled them to cope with the responsibilities of motherhood rather than hinder their ability to mother.

The reasons why mothers consumed alcohol were different depending on their social circumstances. Most advantaged mothers drank as a reward for coping with the responsibilities of motherhood, perhaps since the majority of advantaged mothers in chapter 8 described these responsibilities as mundane. In comparison, many disadvantaged mothers drank in order to cope with the responsibilities of motherhood, perhaps since financial and material resources were lacking, also described in chapter 8. Drinking for pleasure and relaxation was more commonly mentioned by advantaged mothers in contrast to the majority of disadvantaged mothers who spoke about drinking in response to stress and as a means of escapism.

Mothers' drinking locations, opportunities to drink, and reasons for drinking, are all likely to shape their subsequent patterns of alcohol use. Furthermore, how mothers who took part in the focus group discussions perceive their own frequency and quantity of alcohol use and those of other mothers is reflected in their alcohol consumption, the section below moves on to this dimension of alcohol use.

Patterns of consumption

There is meagre research on maternal patterns of alcohol use and even less seeking to examine why maternal patterns of alcohol use may be associated with mother's socio-economic circumstances. The focus group discussions explored mothers' perceptions of maternal alcohol use according to their socio-economic circumstances to address this gap in the research literature. A number of categories were identified: types of drink, abstinence, frequency and quantity of drinking, and binge drinking. In addition, a number of sub-categories were included in relation to binge drinking – the influence of age and the influence of gender – each are briefly considered in turn.

Types of drink

Only advantaged mothers specifically referred to the types of drinks mothers consumed on the images (P1 and P2) presented during the focus group discussions.

Many of the advantaged mothers paid particular attention to the type of alcohol that was being consumed in order to make a judgement about a person. How they perceived their own choice of alcoholic beverage and those of other mothers reflected their own drinking preferences. For instance, Elisa associated red wine with advantaged socio-economic groups and Anna associated beer with disadvantaged socio-economic groups.

Elisa: They're all having a nice bottle of red aren't they?

Anna: Yeah, there would be more beer, tenants and special brew (general laughter)……………

(Advantaged mothers; Elisa, an employed married mother of 2 who had her first child between the ages of 25 and 29, and Anna, an employed cohabiting mother of 2 who had her first child aged 30+, in response to P2 describing their perception of other people's alcohol use)

Similarly, Vivienne linked wine to affluence and even considered it more appropriate to drink wine rather than spirits around children.

Vivienne: But it's still a bottle of wine. I mean wine itself is one of the most expensive, you know you can actually go out and get one of those things that just says 'gin' with nothing else on it and you get a lot more (laughter). So if you saw that and no tonic and the kids were around, I think spirits. I think the fact that it's wine and not spirits the children are beginning to drink. Definitely if that were a bottle of spirits I'd have a lot more issue.

(Advantaged mother Vivienne, an employed married mother of 2 who had her first child aged 30+, in response to P2 describing her perception of other people's alcohol use)

In addition, a significant number of mothers in the advantaged group referred to fashion trends in relation to alcohol consumption patterns.

Vivienne: There's a new thing coming out from the media and London that people for the first time, not religiously not for any other reason, they're just choosing not

to drink, it's a social evolution for want of a better term……………people are actually making a lifestyle choice not to drink.

(Advantaged mother Vivienne, an employed married mother of 2 who had her first child aged 30+, in response to P3 describing her perception of other people's alcohol use)

All of the advantaged mothers appeared acutely aware of the effect of alcohol use in terms of the image one portrayed - awareness that may influence their own drinking habits. None of the disadvantaged mothers stereotyped individuals in relation to the type of alcoholic beverage they consumed, nor did they discuss alcohol in relation to fashion trends. This suggests that disadvantaged mothers do not use alcohol as a 'social marker' that portrays a desirable/non-desirable image in the way that perhaps advantaged mothers do.

As well as using alcohol to project an image, a few advantaged mothers described alcohol's medicinal properties. They discussed what they perceived to be the health benefits of *"red wine"* and *"Guinness"*, and the sleep enhancing properties of *"whisky"* and *"brandy"*.

Vivienne: It's so controlled, I don't know whether there's any medicinal perspective to it, it's very, very controlled and precise.

Elisa: Like red wine for her iron.

Vivienne: Well, yes I'm thinking in my culture there are people who drink a little bit of Guinness, you know, it was always given to pregnant women, I don't know it looks very, very controlled.

Nichola: Unless she's having a shot of whisky before bed.

Elisa: Brandy to help her sleep.

(Advantaged mothers; Vivienne, an employed married mother of 2 who had her first child aged 30+, and Elisa, an employed married mother of 2, and Nichola, an employed married mother of 3 who both had their first child between the ages of 25 and 29, in response to P4 describing their perception of other people's alcohol use)

In the above extract, the majority of advantaged mothers' considered frequent consumption of small quantities of alcohol as *"controlled"* and thus acceptable, even beneficial to health. In contrast, most disadvantaged mothers associated controlled drinking with abstinence throughout the week only to *"let themselves go at [the] weekend"*. They also did not refer to any perceivable health benefits of alcohol, nor did they discuss limiting their alcohol consumption for weight control purposes. As discussed in chapter 8, this may be as a result of disadvantaged mothers having worries that took precedence over their image

Abstinence

The majority of mothers who took part in the focus groups drank alcohol. However, there was one example of 'a negative case' in the disadvantaged group, where one mother described how she was abstinent, citing negative childhood experiences as the reason.

Elaine: The way you've been grown up as well I think it affects my way of being growing up. Because my, my mum and dad used to be big drinkers and for me it used to come out in fights, so for me I've seen that it affected the way of being a child seeing my parents drink and how it's affected my..... I choose not to [drink alcohol].

(Disadvantaged mother Elaine, an unemployed cohabiting mother of 1 who had her first child between the ages of 20 and 24, in response to P3 describing her own alcohol use)

The majority of mothers in the advantaged group only abstained from alcohol whilst *"dieting"* or on a *"detox"*, highlighting their concern over their appearance as discussed in chapter 8.

Debbie: ....If I'm at the point where I'm, which I'm getting at, where I want to start and lose weight, then I'll completely stop [drinking alcohol].

Marsha: I cut out alcohol.

Debbie: I see it as not a good thing and it's like a detox isn't it, like get rid of all the bad and [alcohol] wouldn't help if you were dieting.

(Advantaged mothers; Debbie, an employed cohabiting mother of 2 who had her first child between the ages 20 and 24, and Marsha, an employed married mother of 2 who had her first child aged 30+, in response to P3 describing their own alcohol use)

The two extracts above emphasise stark differences between advantaged and disadvantaged mothers' reasoning with regards to their alcohol use patterns.

Frequency and quantity of alcohol use

In the focus groups with advantaged mothers, there was a general consensus that the quantity of alcohol they consumed had remained unchanged since becoming a mother. However, many of the mothers described how their drinking pattern had altered and how on becoming mothers they drank smaller quantities more frequently. During the focus group discussions mothers were invited to discuss their perceptions of different patterns of alcohol use shown in the form of a weekly diary (see chapter 7). Most of the mothers in the advantaged group associated the frequent consumption of small amounts of alcohol with higher social classes to which they aligned themselves.

Marsha: [I would associate frequent drinking of small quantities with] someone older, and…….are you looking for class? I would probably say they were more like your, towards middle class type drinking pattern..............................Partly to do with, I guess, it's got an air of kind of being sophisticated, and to relax drinking a glass of wine and having a bit of leisure time, and I guess there's a bit of a cost element in it as well erm.............. and it's not for the purpose of getting drunk, it's for relaxation, measured as opposed to getting drunk.

(Advantaged mother Marsha, an employed married mother of 2 who had her first child aged 30+, in response to P4 describing her perception of other people's alcohol use)

In contrast, the majority of disadvantaged mothers like Emma did not associate frequent alcohol consumption with higher social classes but did associate this pattern of drinking with older age groups.

Emma: To me this [Diary showing the consumption of alcohol as little and often] is a single or typical middle aged couple, getting home on a night time and having a glass of wine.

(Disadvantaged mother Emma, an unemployed single mother of 1 who had her first child between the ages of 14 and 19, in response to P4 describing her perception of other people's alcohol use)

Financial resources were also cited as influential in terms of the frequency and quantity of alcohol use. With regards to mothers' financial resources, a number of advantaged mothers like Marsha were unperturbed with regards to spending money on alcohol

Marsha: In [the] overall budget I don't think that drink plays that big a part.

(Advantaged mother Marsha, an employed married mother of 2 who had her first child aged 30+, in response to P3 describing her own alcohol use)

In comparison, most of the disadvantaged mothers described how limited financial resources hindered their alcohol use.

Elaine: It affects you in that if you haven't got any money you can't [drink alcohol] anyway. (general agreement)

Fiona: Yeah, to me it always comes at the bottom of my priorities, having a drink. (general agreement)

(Disadvantaged mothers; Elaine, who had her first child between the ages of 20 and 24, and Fiona, who had her first child between the ages of 14 and 19 both unemployed cohabiting mothers of 1, in response to P3 describing their own alcohol use)

Binge drinking

All of the mothers in both advantaged and disadvantaged groups referred to problematic drinking as subjectively defined limits that related to how they felt or behaved and whether their drinking was *"controlled"*, as opposed to objectively defined guidelines or recommendations.

Many of the disadvantaged mothers implied that excess alcohol use was often as a result of low household income and *"financial stress"*. Several mothers from both advantaged and disadvantaged groups acknowledged that friendship groups affected their own drinking patterns. The consensus within the advantaged group of women was that individuals drank in order to maintain friendship groups and as a result of *"peer pressure"* but stopped short of saying that this was something they succumbed to at this point in their lives. Marsha an advantaged mother, specifically related binge drinking to younger mothers, alluding to the fact that they might feel they are missing out on their youth having become a parent.

Marsha: Ok, [I associate binge drinking with] young mums, a younger mum who potentially, and maybe not totally, missing some of her, maybe she's got friends that haven't got kids and they still do the big Saturday nights and everything and she's keeping in with that kind of, her friends and her gang......

(Advantaged mother Marsha, an employed married mother of 2 who had her first child aged 30+, in response to P5 describing her perception of other people's alcohol use)

In a similar way, a number of disadvantaged mothers recalled participating in binge drinking themselves in an attempt to maintain their relationships and appear *"social"*. This finding reflects a number of the discussions between disadvantaged mothers in chapter 8.

Kirsty: Your friends go out on a Saturday night and you go out on a Saturday night.

(Disadvantaged mother Kirsty, an employed cohabiting mother of 1 who had her first child between the ages of 20 and 24, in response to P5 describing her own alcohol use)

Kirsty's matter of fact statement suggests she has little choice other than to participate in the drinking practices of friends in order to maintain these relationships.

Binge drinking and the influence of age

As noted in chapter 7, most of the disadvantaged mothers taking part in the present study were considerably younger than those mothers grouped as advantaged, with

just under half having had their first child under the age of twenty. The focus groups discussions provided some insights into binge drinking, youth and motherhood.

The majority of both advantaged and disadvantaged mothers associated binge drinking with younger age groups and referred to it as an *"age thing"*. Many of the advantaged mothers considered it normal behaviour for young adults and students to drink to excess and that they were unlikely to face stigmatisation for engaging in what would usually be regarded as problematic alcohol use, describing it as a *"coming of age experience"* and *"liberating"*.

Marsha: I think age has something to do with it, I don't know, as people get older and get out of that, I don't know, teenage understanding, the levels of what's ok and what's not ok, you start to think ok you're just being plain stupid now. My expectation is that maybe you wouldn't expect to see someone in their thirties [drunk] like that to be honest.

(Advantaged mother Marsha, an employed married mother of 2 who had her first child aged 30+, in response to P1 describing her perception of other people's alcohol use)

A small number of disadvantaged mothers specifically referred to young women's lack of awareness with regards to their vulnerability, an awareness that they believed increased with age thus reducing the incidence of bingeing.

Fiona: ....I think as you get older you get more aware of [your vulnerability] and you get more, your friends protect you more. Whereas as when you're younger, your friends are like "oh leave her she'll catch up with us" whereas when you're older your friends are sort of "come on have we got everybody?"

(Disadvantaged mother Fiona, an unemployed cohabiting mother of 1 who had her first child between the ages of 14 and 19, in response to P1 describing her own alcohol use)

In addition, a few disadvantaged mothers linked the age-related decrease in binge drinking to decreasing capacity to consume large volumes of alcohol rather than a conscious decision to control one's drinking.

Fiona: I don't think you can drink so much, I don't know about anybody else but I can't drink, I can't drink as much as I used to be able to.

(Disadvantaged mother Fiona, an unemployed cohabiting mother of 1 who had her first child between the ages of 14 and 19, in response to P1 describing her own alcohol use)

All of the advantaged mothers reported being much less likely to binge drink than was the case prior to motherhood. Nevertheless, they did recall times when they had engaged in binge drinking, but asserted that this was a *"one-off"* event and not a regular occurrence. In contrast, the overwhelming majority of disadvantaged mothers described weekend binge drinking as normal behaviour for *"everybody"* including mothers and themselves, and that it was not confined to young adults but represented *"the general public"* and a *"wide range"* of individuals.

Fiona: Yeah nobody looks at you and thinks "oh you're getting drunk on a Saturday night". If this was midweek like a Wednesday night [and] you were that drunk and you'd drank that much, people would think "what are you doing on a Wednesday night outside of a pub that drunk?" do you know what I mean?......

(Disadvantaged mother Fiona, an unemployed cohabiting mother of 1 who had her first child between the ages of 14 and 19, in response to P5 describing her own alcohol use)

In the above extract it becomes clear that binge drinking amongst the majority of disadvantaged mothers was heavily influenced by normative behaviours such as the choice of drinking venue, in this instance the *"pub"* and when it is considered normal to enter such premises, in this example a *"Saturday night"* as opposed to *"mid-week"*. Considering binge drinking behaviour at the weekend as normative behaviour allowed the majority of mothers in the disadvantaged group to engage in patterns of heavy drinking free from moral reproach.

Emma: Yeah, everybody's [binge drinking].

Kirsty: Yeah, it's not dirty, it's not frowned upon to go out on a Saturday night to go out and get drunk.

(Disadvantaged mothers; Emma, an unemployed single mother of 1 who had her first child between the ages of 14 and 19, and Kirsty, an employed cohabiting mother of 1 who had her first child between the ages of 20 and 24, in response to P5 describing their own alcohol use)

The ability to binge drink amongst a small number of disadvantaged mothers such as Ann-Marie and Cathryn was in fact highly regarded and female bravado was evident during their conversation.

Ann-Marie: ....11 units, oh [that's nothing].

Karen: It is cause its binge drinking.

Sylvia: It's this kind of drinking that ends up with the park bench situation.

Cathryn: There's only 5 pints there.

Ann-Marie: That's not gonna touch me.

(Disadvantaged mothers; Ann-Marie, a single mother who had her first child between the ages of 25 and 29, Karen, a married mother who had her first child between the ages of 14 and 19 both unemployed with 3 children, Sylvia, a mother of 3 who had her first child between the ages of 20 and 24, and Cathryn, a mother of 1 who had her first child between the ages of 14 and 19 both employed and cohabiting, in response to P5 describing their own alcohol use)

Amongst the disadvantaged group of mothers, many described having to negotiate conflicting normative behaviours. Fiona, a young mother from the disadvantaged group, described the pressure she felt in relation to other people's expectations since becoming a mother and her need to conform to society's view of how a mother should look and behave. Her comments link back to discussions noted in chapter 8, about women needing to adjust to their new identity as a mother.

Fiona: A lot of the time I do think, like even down to things like what I wear, I think should I be wearing that now I'm a mum, do you know what I mean? I feel like I need to dress older and be more respectable and I can't wear a low cut top, because people think "well she's a parent she shouldn't be wearing that", you know. But I am one of those people that worry about what people think, my partner says "don't

worry about what other people think. As long as you know you're all right don't worry", but yeah I do. I think people have expectations of parents, like we said that's unacceptable for parents to be like that ... you know it does change when you're a parent don't it?

(Disadvantaged mother Fiona, an unemployed cohabiting mother of 1 who had her first child between the ages of 14 and 19, in response to P1)

Young mothers like Fiona are at the age when society considers it normal to engage in heavy and binge drinking behaviour but this is at odds with what society considers acceptable drinking behaviour amongst mothers.

Binge drinking and the influence of gender

The focus group participants went on to consider how gender influenced their perception of problematic alcohol use amongst mothers and how this in turn affected their own consumption patterns. The majority of both advantaged and disadvantaged women felt that mothers and women in general should behave in a *"controlled"* manner with regards to their alcohol use, despite some differences as to what they felt constituted *"controlled"* drinking practices, as previously discussed. Most of the advantaged and disadvantaged mothers accepted that men were less likely to be subject to social disapproval for being drunk in public than women.

Nichola: But sometimes don't you think it's not more acceptable for the chap to be seen like that but that, it's like "oh look at him he's had too much to drink", whereas a woman it would be like "oh my god, look at the state of her. What has she done to get herself into that position?"

Vivienne: Different expectations.

Nichola: I don't know sometimes it's, it's not alright for anyone to get into that state but I think a lot more people would speak about it in a lot more condemning way seeing a woman in that state than they would if it was a chap in that state.

(Advantaged mothers; Nichola, an employed married mother of 3 who had her first child between the ages of 25 and 29, and Vivienne, an employed married mother of 2 who had her first child aged 30+, in response to P1 describing their perception of other people's alcohol use)

In the disadvantaged group, there was also a group-wide awareness that gender mattered.

Cathryn: I'm not saying she should be any different, I'm saying she is different because she's a woman. I'm not saying it should make a difference but it does.

(Disadvantaged mother Cathryn, an employed cohabiting mother of 1 who had her first child between the ages of 14 and 19, in response to P1 describing her perception of other people's alcohol use)

The majority of women in the advantaged group attempted to understand the differences in the social acceptability of drunkenness for men and women by emphasising women's increased vulnerability to male *"prey"* when drunk.

Vivienne: The danger element unfortunately comes down to urm the woman is a lot more urm vulnerable to prey when she's drunk. That woman there is absolutely comatose, the extreme you're talking about rape or something like that, that's something that comes to mind there.

(Advantaged mother Vivienne, an employed married mother of 2 who had her first child aged 30+, in response to P1 describing her perception of other people's alcohol use)

Similarly, Fiona from the disadvantaged group described women as vulnerable to sexual assault, echoing the sexual connotations that Karen, also a disadvantaged mother, associated with alcohol earlier in the chapter.

Fiona: I think she's in more danger than a man would be definitely, because that woman like she could get raped. She's like in a lot of danger.

(Disadvantaged mother Fiona, an unemployed cohabiting mother of 1 who had her first child between the ages of 14 and 19, in response to P1 describing her perception of other people's alcohol use)

A small number of advantaged mothers such as Helen and Vivienne described how they would not judge problematic alcohol use amongst women more harshly than they would judge problematic alcohol use amongst men.

Interviewer: What does everybody think about that? Do you think that [its right that society is more condemning of drunken women than of men]?

Helen: I wouldn't think like that.

Vivienne: I think that maybe ten years ago, but thankfully now it's got to a point where it's unacceptable for any gender now to do it.

Helen: Yeah, I think it's bad news, no matter what gender you are it's not good news really.

(Advantaged mothers; Helen, and Vivienne, both employed married mothers of 2 who had their first child aged 30+, in response to P1 describing their perceptions of other people's alcohol use)

Anna from the advantaged group went on to surmise that gender equality in terms of alcohol use may not be beneficial and may even be detrimental leading to excessive drinking behaviour in women.

Anna: Yet I think that because it's become more prevalent it's become more acceptable but it's not sort of deemed worse for the girl to be in that state.

(Advantaged mother Anna, an employed cohabiting mother of 2 who had her first child aged 30+, in response to P1 describing her perception of other people's alcohol use)

The focus group data provides insight into mothers' perceptions of maternal patterns of alcohol use that are likely to reflect their own alcohol consumption patterns. Several advantaged mothers described how they made an association between the type of alcoholic drink and socio-economic position (e.g. red wine and advantaged socio-economic position). Many advantaged mothers also perceived a link between specific alcoholic drinks and medicinal properties (e.g. Guinness and iron). Such linkages were not evident amongst any disadvantaged mothers.

In terms of maternal patterns of alcohol use, abstinence was associated with negative childhood experiences by a number of disadvantaged mothers. In contrast, abstinence was linked to 'health kicks' (dieting/detoxing) amongst several advantaged mothers. Consuming small quantities of alcohol frequently was linked to social advantage by the majority of advantaged mothers, and middle age by the majority of disadvantaged mothers. Almost all of the mothers who took part in the focus group discussions associated binge drinking with youth. Nevertheless, advantaged mothers felt that regular binge drinking was not acceptable. In comparison, the majority of disadvantaged mothers' perception of binge drinking was that it was perfectly acceptable provided it took place over the weekend.

Summary

Chapter 9 provides a rich account of mothers' perceptions of their own alcohol use and that of other mothers', as well as insight into their patterns of alcohol use. By carrying out focus group discussions with advantaged and disadvantaged mothers separately, we have been able to identify similarities and differences between groups with regards to four major themes; drinking location, drinking opportunities, reasons for drinking and drinking patterns. In so doing, the qualitative accounts also enhance our understanding of the quantitative results in chapter 6 that revealed social gradients in everyday patterns and 'risky' patterns of alcohol use.

Chapter 10 draws together the quantitative and qualitative information on mothers' alcohol use to provide a greater breadth of understanding with regards to the patterns and perceptions of alcohol use amongst mothers with pre-school aged children in England.

Chapter 10: Discussion

Introduction

The aim of this thesis was to enhance our understanding of alcohol use among mothers with pre-school aged children. Using a multi-methods approach, the quantitative and qualitative components investigated patterns and perceptions of alcohol use, paying particular attention to differences and similarities by mothers' social background and current socio-economic and domestic circumstances.

I addressed these aims in three ways. I undertook a literature review, including a systematic search and review of studies of mothers' alcohol use. Building on this, I conducted a secondary analysis of a major national dataset (MCS) on mothers with pre-school aged children, followed by a primary qualitative study.

My literature review (chapter 1) suggested that gender, age, socio-economic circumstances, and psychological factors were all associated with alcohol use. However, very few UK studies were identified and the research was predominantly quantitative, favoured binge drinking behaviour, and specific population groups for example, adolescents, young adults, and students. Similarly, my scoping review (chapter 2) pointed to social circumstances as an important factor in determining mothers' alcohol use. Moreover, it revealed a dearth of research on mothers' drinking patterns.

My quantitative results (chapter 6) illustrated social gradients in everyday and 'risky' alcohol use (>3 units/day, or >21 units/week) amongst mothers with pre-school aged children. Social disadvantage (other than economic inactivity) was negatively associated with frequent drinking ($\geq$1/week), and positively associated with infrequent moderate drinking (> 1 unit/day, <1/week), frequent moderate drinking ($\geq$4 units/week), and 'risky' patterns of alcohol use (>3 units/day, or >21 units/week). My qualitative results (chapters 8 and 9) provided further explanation as to why the circumstances in which motherhood is experienced may shape mothers' alcohol use patterns through drinking locations, drinking opportunities, and reasons for drinking.

Together, the results of this thesis provide an overview of women's alcohol use during the early years of motherhood and evidence that patterns and perceptions of alcohol use amongst mothers vary according to their social circumstances. In so doing, the thesis addresses a significant gap in the research literature pertaining to the majority patterns of alcohol use amongst women with pre-school aged children in England.

Chapter 10 draws together the quantitative results (chapter 6) and qualitative research findings (chapters 8 and 9) described in the thesis as well as evidence from the broader research literature (chapters 1 and 2) on alcohol use amongst mothers and women in general. The methodological contribution of my postgraduate work is discussed, whilst acknowledging both the strengths and weaknesses of my multi-methods research design. Finally, recommendations are made with regards to the direction of future research on alcohol use during motherhood. An overview of the thesis' substantive contribution will be provided in chapter 11.

Methodological contribution to the literature

Multi-methods approach

Chapters 1 and 2 identified a dearth of qualitative research on alcohol use amongst mothers and no multi-methods studies. My research utilised both quantitative and qualitative methodological approaches to answer the central research questions regarding the typical everyday patterns and perceptions of alcohol use amongst advantaged and disadvantaged mothers with pre-school aged children in England. This multi-method approach proved particularly well suited to an area that was both under-studied and hard to study. Furthermore, a multi-methods approach complements my ontological viewpoint as a critical realist. I assert that the 'real' world can exist independently of our beliefs, whilst maintaining an interpretivist epistemology that our understanding of the world is dependent on our own unique perspectives and subjective experiences.

My quantitative analysis was built on the slim evidence base pertaining to the influence of social circumstances on patterns of alcohol use amongst mothers and women in general. For example, frequent drinking ($\geq$1/week), infrequent moderate drinking (>1 unit/day, <1/week), frequent moderate drinking ($\geq$4 units/week), and

'risky' alcohol use patterns (>3 units/day or >21 units/week) amongst mothers of pre-school aged children were identified from my quantitative analysis of the MCS according to their social background and current socio-economic and domestic circumstances.

My qualitative analysis was inductive and aimed to develop understanding of why patterns of alcohol use may exist amongst mothers with pre-school aged children in the context of advantaged and disadvantaged circumstances. Focus group data from discussions with advantaged and disadvantaged mothers pointed to a number of potential explanations for divergent patterns of alcohol use. In doing so, the qualitative data effectively brought to life the variables encompassed in the quantitative analysis and contextualised the overall findings, thus addressing the gap identified in the research literature (Chapters 1 and 2). Moreover, as intended, my methodological approach was successful in shifting the research focus from the problematic end of the alcohol spectrum, to include more typical patterns of alcohol use, patterns which provide an important backdrop to our understanding of how problematic alcohol behaviour may develop.

Taking a multi-methods approach, my analysis has enabled me to show quantitative patterns of alcohol use amongst advantaged and disadvantaged mothers with pre-school aged children and, provide qualitative analyses which shed light on why these patterns exist. Quantitative and qualitative approaches alone would not have elicited the breadth of understanding with regards to mothers' alcohol use necessary to address the gap identified in the research literature. Using both quantitative and qualitative methodologies in this way has been termed "complementarity" whereby the methodological origin and strength of each method is maintained (Greene et al., 1989).

Imagery in focus groups

It is increasingly recognised that the use of imagery to improve our understanding of social phenomenon is underutilised in the social sciences despite its potential to generate rich data (Van Auken et al., 2010). Images and pictorial representations of alcohol use patterns were used during my focus group discussions with advantaged and disadvantaged mothers to elicit perceptions of alcohol use during motherhood.

This method provided a means through which to portray the relationship between motherhood and alcohol use that may have proved difficult with descriptive accounts. Moreover, by using images, mothers were empowered to make their own interpretations and develop the discussion on that basis, thus limiting the extent to which the participants' responses were influenced by me as the researcher (Van Auken et al., 2010). Furthermore, the images provided a reference point with which mothers were able to articulate their arguments and reduce misunderstanding. Research on visual elicitation suggests that images evoke a different kind of response from participants, one that delves deeper into memories and feelings in comparison to more conventional interviewing techniques (Harper, 2002; Crilly et al., 2006; Van Auken et al., 2010). An Italian study successfully used photo elicitation to complement and enrich their interview data exploring teenagers, young adults, elderly adults (over 65), and pregnant women's subject perception of alcohol use in society (Faccioli and Zuccheri, 1998). In my focus groups, images were integral to the group discussions and formed the basis upon which data were collected and subsequently analysed.

Study limitations

There are a number of limitations relating to my literature review, quantitative analysis of the MCS and qualitative analysis of the focus group data. My literature reviews (chapters 1, 2, and 3) were subject to both time and resource constraints. As a result, the majority of searches were conducted within a specific time frame to limit the number of papers retrieved from each search. Nevertheless, this method will have captured contemporary papers that are relevant to both my secondary analysis of the MCS and my primary focus group study. With regards to my scoping review (chapter 2), I was the only reviewer which inevitably meant that the searching and selection process were subject to bias. However, by following strict criteria with which to extract and assess papers I was able to reduce the extent to which bias may have occurred.

Utilising a secondary data set (MCS) for my quantitative analyses meant that I was constrained by the questions asked in the survey. For example, I was unable to analyse quantity of alcohol use amongst mothers in wave 2 of the MCS when the child was 3 years old since questions relating to the quantity of mothers' alcohol use

were not included. It was not possible to exploit the longitudinal design of the MCS by examining individual patterns of alcohol use over time, rather mothers with similar social characteristics (childhood circumstances, age left education, employment status, household income, age at first birth, cohabitation status, and number of children) were grouped together. Therefore, the cross-sectional nature of my data provides a 'snap-shot' of mothers' alcohol use at two single points in time. Nevertheless, by using repeat cross-sectional data at wave 1 (cohort child aged 9 months) and wave 2 (cohort child aged 3 years), and by including only those mothers who took part in both waves 1 and 2 of the MCS, I was able to broadly outline how mothers' social circumstances may influence patterns of alcohol use throughout early motherhood. In addition, the survey was reliant on self-reported alcohol use amongst mothers, a group who may be inclined to report conservative estimates of alcohol consumption due to the contentiousness of alcohol use during motherhood. Moreover, it is likely that mothers who are problematic drinkers, and/or whom have disassociated themselves from societal institutions and associated organisations, will be under-represented.

Focus group data have been used in my thesis to provide deeper insight into the patterns of alcohol use that emerged from my quantitative analysis of the MCS. However, due to time constraints, it was not possible to undertake longitudinal focus groups. In addition, I acknowledge that the focus group data and that obtained in the MCS are a decade apart and mothers' alcohol use patterns and the factors influencing such patterns may have changed during that time. Notwithstanding this limitation, the MCS provided the most contemporary national source of information on mothers' alcohol use. In addition, the national trends reviewed in chapter 1 indicate relatively modest changes in women's drinking from 1998 to 2009.

Furthermore, despite taking every step to prevent myself, the researcher, from influencing the focus group discussions, my presence will have inevitably affected the participants' responses to some extent. However, my presence was necessary to facilitate the discussions and to encourage further elaboration from participants when necessary.

Principal findings

By combining quantitative and qualitative analyses, I have begun to indicate and broadly outline the ways in which mother's social circumstances may influence both patterns and perceptions of alcohol use. The ways in which social (dis)advantage may influence the following patterns and perceptions of alcohol use amongst mothers are each considered in turn, drawing upon both the quantitative and qualitative results and evidence from the wider research literature;

1. Drinking frequency

2. Drinking quantity

3. 'Risky' alcohol use

4. Drinking locations

5. Opportunities to drink

6. Reasons for drinking

Social circumstances and the frequency of alcohol use

Quantitative analysis of the MCS found that mothers who were disadvantaged (as measured by childhood circumstances, household income, age at first birth, lone parenthood, and multiple disadvantage) during early motherhood (children aged 9 months and 3 years) were significantly less likely to be frequent drinkers (>1/week) in comparison to advantaged mothers. Mothers who were economically inactive were more likely to be frequent drinkers (>1/week) than economically active mothers.

In my literature reviews (chapters 1 and 2), I was only able to identify two US papers, one that related to social circumstances and the frequency of alcohol use among parents, and another that specifically related to mothers. Contrary to my findings, one of these papers showed that social disadvantage (as measured by adolescent parenthood) was associated with increased frequency of alcohol use

(Little et al., 2009). Similarly, the second study found disadvantage (as measured by single motherhood) to be linked to a greater mean number of drinking days during the previous 28 days in comparison to mothers residing in dual headed households (Stroup-Benham et al., 1990). However, a number of papers ($n = 9$) referred to women in general and the results were in line with my research findings. For example, previous research conducted in Australia amongst women in the general population (Giskes et al., 2011) and longitudinal research of young adults aged 18-26 in New Zealand (Casswell, 2003) both found that drinking frequency increased with advantaged social circumstances (as measured by income).

My reviews did not unearth any qualitative or mixed/multi-methods research on social circumstances and alcohol frequency among mothers or women in general. However, the qualitative component of my thesis was able to shed light on the relationship between the frequency of alcohol use and the social circumstances of mothers with pre-school aged children not evident in research to date. Advantaged mothers recalled drinking more frequently than disadvantaged mothers. Advantaged mothers who took part in my focus groups viewed frequent alcohol use as a pattern of drinking associated with social advantage. In comparison, disadvantaged mothers described the frequent consumption of small quantities of alcohol as more consistent with middle aged patterns of drinking from which they distanced themselves. In addition, disadvantaged mothers described how they were more likely to abstain due to negative childhood experiences in an attempt to prevent the intergenerational transmission of negative alcohol use patterns.

Social circumstances and the quantity of alcohol use

Quantitative analysis of the MCS found that mothers who were disadvantaged (as measured by educational attainment, age at first birth, and lone parenthood) during early motherhood (children aged 9 months and 3 years) were significantly more likely to be infrequent moderate drinkers (>1 unit/day, <1/week), and frequent moderate drinkers ($\geq$4 units/week) in comparison to advantaged mothers. Economic inactivity was negatively associated with infrequent moderate drinking (>1 unit/day, <1/week), and frequent moderate drinking ($\geq$4 units/week). Similarly, my qualitative analyses indicated that advantaged mothers drank smaller quantities of alcohol on a typical drinking session than disadvantaged mothers.

My review (chapter 1) found a small number of quantitative papers ($n = 8$) - but no qualitative or mixed/multi-methods studies - that researched social circumstances and the quantity of alcohol consumption among women, a number of which supported my results. For example, two studies - one conducted in Australia and one in New Zealand - found disadvantage (as measured by educational attainment and income) to be linked to increased quantities of alcohol consumption on a typical drinking occasion amongst women in the general population (Giskes et al., 2011; Casswell, 2003). In addition, I found one study of Mexican American mothers elicited during my scoping review (chapter 2) that found disadvantage (as measured by single parenthood) was associated with a greater overall mean number of drinks, and number of drinks on each drinking occasion in the past 28 days when compared to mothers who were not considered disadvantaged (had partners living in the household) (Stroup-Benham et al., 1990). Likewise, in a national study of 14-22 year olds in the USA, married women had decreased quantities of alcohol use in comparison to non-married women (Christie-Mizell and Peralta, 2009). In contrast, I only found one US study that was not consistent with my results; this US study showed disadvantaged women (as measured by occupational status) drank smaller quantities of alcohol on each drinking occasion (Christie-Mizell and Peralta, 2009).

Social circumstances and 'risky' alcohol use

My analysis of the MCS found that 'risky' alcohol use (>3 units/day, or >21 units/week) was increasingly likely with increasing disadvantage (as measured by educational attainment, household income, age at first birth, lone parenthood and multiple disadvantage).

My literature reviews (chapters 1 and 2) identified a substantial number of quantitative papers that related to women's social circumstances and problematic alcohol use ($n = 21$), and a smaller number of papers relating to mothers' social circumstances and problematic alcohol use ($n = 3$). The majority of results (summarised in chapters 1 and 2) are in line with my findings, with deprivation (as measured by occupation, income, and unemployment) linked to problematic alcohol use (Baumann et al., 2007; Mulia, 2008). One Finnish study found a clear quantitative association between disadvantage (as measured by early parenthood) and problematic alcohol use (Kokko et al., 2009). Women who became mothers

early (19-24 years) were significantly more likely to have problematic patterns of alcohol use in comparison to older mothers (30+ years) (Kokko et al., 2009). Furthermore, there have been many more quantitative studies linking young age with problematic alcohol use amongst women in the general population (Makela, 2006; Wilsnack et al., 2009; Kuntsche et al., 2006a; Jukkala et al., 2008; Tsai, 2007; Caetano, 2006; Emslie et al., 2009; Keyes et al., 2008; National, 2010; Holdcraft, 2002).

Advantaged social circumstances (as measured by marital status) have been found to decrease the incidence of problematic alcohol use in an international cross-sectional survey, a nationally representative survey in Australia, a health survey in Moscow, and a Canadian national survey (Kuntsche et al., 2006a; Maloney et al., 2010; Jukkala et al., 2008; Avison and Davies, 2005). Binge drinking behaviour (>5 drinks on one occasion in last month) has also been associated with neighbourhood poverty amongst 18-30 year olds in the USA (Cerda et al., 2010). However, Giskes' study of Australian women in the general population did not find neighbourhood poverty to be associated with problematic drinking ($\geq$5 drinks per day or $\geq$15 drinks/week). Instead, disadvantage (as measured by education and income) reduced the odds of problematic alcohol use ($\geq$5 drinks per day or $\geq$15 drinks/week) (Giskes et al., 2011). Likewise, a number of other studies have found advantage (as measured by educational attainment) rather than disadvantage to be positively associated with problematic alcohol use amongst women (Giskes et al., 2011; Jones, 2002; Bloomfield, 2006).

My scoping review (chapter 2) identified one qualitative paper that described the relationship between social circumstances (occupational disadvantage) and problematic alcohol use among mothers (Waterson, 1992). My qualitative focus group data pointed to potential explanations of the links between 'risky' alcohol use and mothers' levels of disadvantage that have not been explored in the literature to date. It suggested that attitudes to 'risky' alcohol use differed between advantaged and disadvantaged mothers who took part in the focus group discussions. When presented with a prompt image representing 'risky' alcohol use (>6 units/day), advantaged mothers described how they felt it was unacceptable to drink in this manner and associated this type of drinking behaviour with disadvantaged groups

from which they sought to differentiate themselves. In contrast, disadvantaged mothers felt it was acceptable to adopt this type of drinking pattern if it took place at the weekend. This perhaps reflects the disadvantaged mothers' tendency to drink less frequently and drink outside the home in an environment such as the pub where heavier drinking is seen as permitted and the norm.

Both advantaged and disadvantaged mothers who took part in my focus group discussions alluded to the fact that their fear of disapproval from others limited the extent to which they drank alcohol. Similarly, in a recent qualitative study of working class parents, parenthood was viewed as a time to take care of oneself and cease unhealthy behaviours including problematic alcohol use (Silva and Pugh, 2010). Nevertheless in my focus groups, alcohol was seen by disadvantaged mothers as a means of escapism, a way to cope with life stress and general negativity, a finding in line with previous research (Kim et al., 2010; Rolfe, 2008; Waterson, 1992). In addition, a number of studies have linked psychological stress with living in deprived circumstances (Mulvaney and Kendrick, 2005; Arditti et al., 2010), which has in turn been linked with problematic alcohol use (Rospenda et al., 2008; Tsai et al., 2009).

My qualitative analysis indicated that, among disadvantaged mothers, work stress had contributed to their increased alcohol use, as has been found to be the case in quantitative research carried out in the USA (Dawson et al., 2005). Furthermore, mothers who took part in the focus group discussions cited unemployment as a contributory factor that could result in either decreased alcohol use due to limited financial resources, or increased alcohol use in an attempt to counteract the stress associated with unemployment. A number of disadvantaged single mothers recalled how they found it particularly difficult to find and maintain employment as a result of childcare responsibilities and the insurmountable costs of childcare, a finding echoed by previous research examining work-family conflict amongst single mothers (Ciabattari, 2007).

The majority of disadvantaged mothers who took part in my focus groups linked their experiences of financial strain and associated financial stress with patterns of 'risky' alcohol use (>3 units/day, or >21 units/week). The mechanism of this relationship remains unclear; however, one study suggests that financial strain

amongst mothers decreases self-esteem, thus increasing distress (Ali and Avison, 1997) which may be a possible contributor to problematic alcohol use.

Both advantaged and disadvantaged mothers who took part in my focus group discussions described drinking greater quantities of alcohol when they were freed from childcare responsibilities. Interestingly, disadvantaged single mothers felt that they had more free time at the weekends to socialise and, invariably drink alcohol, than their cohabiting or married counterparts as a result of the child's father taking on the childcare responsibilities at these times. In addition, it was apparent from the focus groups that, amongst young mothers in the disadvantaged group, there was an element of peer pressure to remain involved in social events that almost always revolved around the local pub and alcohol. In addition, by continuing to take part in what was viewed as youthful 'risky' drinking behaviour, young mothers spoke about how they were able to maintain their 'youth' identity and maintain friendship groups. It has been identified in recent studies that women drink according to the drinking patterns of others within their social group in an attempt to affirm their membership (MacNeela and Bredin, 2011; Neighbors et al., 2007; Smith and Berger, 2010). Disadvantaged mothers who took part in my focus group discussions described how they faced the contradictory discourses in relation to youth and motherhood described in previous qualitative research (Rolfe, 2008). A number of disadvantaged mothers recalled losing friends as a result of being unable to take part in cultural 'norms' such as Saturday night heavy drinking.

Drinking locations

My qualitative analyses (chapters 8 and 9) suggested that drinking locations differed between advantaged and disadvantaged mothers. Information elicited from the focus group discussions depicts advantaged mothers as drinking more often at home with their partners. Furthermore, advantaged mothers described changes with regards to their drinking location rather than a change in their actual alcohol consumption. Previous qualitative research conducted in Australia and South West England has shown that the location in which drinking takes place dictates drinking patterns (Lindsay, 2006; Leyshon, 2008). My focus group analyses indicated that advantaged mothers more often drank at home and felt that it was appropriate to do so even whilst children were present. This is consistent with findings of previous qualitative

studies, which similarly indicated that professional and managerial women in England were more likely to drink at home than non-professional and non-managerial women (Waterson, 1992). In contrast, disadvantaged mothers who took part in my focus group discussions did not feel it was appropriate to drink at home and described how they more often drank in the pub, using it as a retreat free from childcare responsibilities. Moreover, disadvantaged mothers cited negative childhood experiences in relation to alcohol as their reason for abstinence and strict regulations on drinking in the home, reflecting their desire to break free from negative family patterns and childhood memories as described in a recent qualitative study (Silva and Pugh, 2010).

Drinking opportunities

My analysis of the MCS showed that fewer children living in the household during very early motherhood (child aged 9 months) resulted in an increased likelihood of mothers being infrequent moderate drinkers (>1 unit/day, <1/week) and 'risky' drinkers (>3 units/day, or >21 units/week). Therefore, we may consider that having fewer children allows mothers more free-time and, coupled with fewer financial restraints, greater opportunity to drink alcohol.

Evidence from my qualitative focus group data (chapters 8 and 9) suggested that, among advantaged mothers, paid employment provided drinking opportunities, whereas amongst disadvantaged mothers work was described as limiting drinking opportunities. This is in line with previous research findings, where professional and managerial women in paid work were found to have easiest access to alcohol (Waterson, 1992). In addition, it was evident from the qualitative analysis conducted for my thesis that advantaged mothers had greater financial means with which to purchase alcohol in comparison to disadvantaged mothers who described experiences of financial strain. This may help to explain decreased alcohol use in terms of frequency and quantity amongst income-disadvantaged mothers.

Reasons for drinking

Analyses of my qualitative data (chapters 8 and 9) described how advantaged mothers spoke of using alcohol as a symbolic marker of their time free from childcare responsibilities, for pleasure and relaxation, and as a reward for coping

with the demands of motherhood, a finding that mirrors previous qualitative and multi-methods research conducted in England and Sweden (Rolfe, 2008; Birath et al., 2010). Disadvantaged mothers who took part in my focus groups described experiences of financial strain in relation to their work and unemployment. Single parenthood was only evident amongst disadvantaged mothers in my study and these mothers cited having more free time at the weekends to go out and consume alcohol whilst the child's father took on childcare responsibilities. In these instances, the pub effectively became a retreat from childcare responsibilities. Furthermore, alcohol use was described by disadvantaged mothers as a means of maintaining an identity separate from motherhood when they had no working identity. All of these factors may influence mothers' alcohol use and, in the case of disadvantage, could result in either increased or decreased alcohol use amongst mothers with pre-school aged children.

Summary

By drawing together the quantitative and qualitative components of the thesis and, by comparing my findings to the wider research literature, I have been able to show that the social circumstances of mothers with pre-school aged children affects the likelihood of them adopting specific patterns of alcohol use. Other than economic inactivity, social disadvantage is negatively associated with frequent drinking (>1/week). Social disadvantage is also positively associated with infrequent moderate drinking (>1 unit/day, <1/week), frequent moderate drinking ($\geq$4 unit/week), and 'risky' alcohol use (>3 units/day or >21 units/week). Figure 45 is a simplified graphical illustration of the key differences in mothers' alcohol use according to their social circumstances (advantaged/ disadvantaged). My analyses reveal differences in advantaged and disadvantaged mothers' preferred drinking locations, opportunities to drink, and reasons for consuming alcohol. Figure 46 provides a summary of the quantitative results from my investigation of the MCS and the supporting qualitative data from my focus group analysis that provides potential explanations for specific patterns of alcohol use.

Figure 45 Simplified, graphical representation of alcohol use patterns amongst advantaged and disadvantaged mothers with pre-school aged children

* Majority patterns: Infrequent light drinking (1 unit/day, <1/week), Frequent light drinking (<4 units/week).

Socio-economic Circumstances

Childhood

Advantaged	Disadvantaged

→ Negative childhood experiences → Frequent drinking (w2)

Education

Advantaged	Disadvantaged

→ Infrequent moderate drinking & 'Risky'

Employment status

Advantaged	Disadvantaged

Greater autonomy over working arrangements ←

→ Difficulty finding/maintaining work, Work stress → Frequent drinking (w2) / Infrequent moderate drinking

Income

Advantaged	Disadvantaged

No financial strain ←

→ Financial strain → Frequent drinking / 'Risky'

Domestic Circumstances

Age at first birth

Advantaged	Disadvantaged

Frequent drinking associated with older age, bingeing associated with youth ←

→ Frequent modest drinking associated with older age, bingeing associated with youth → Frequent drinking / Infrequent moderate drinking & 'Risky'

Cohabitation status

Advantaged	Disadvantaged

Drank with partners ←

→ Free time when dad caring for child → Frequent drinking / Infrequent moderate drinking, frequent moderate drinking & 'Risky'

Number of children

Fewer	Greater

Frequent drinking / Infrequent moderate drinking & 'Risky' ←

Social Circumstances

Drinking locations

Advantaged	Disadvantaged

More often drank at home ← → More often drank in the pub

Drinking opportunities

Advantaged	Disadvantaged

Work opportunities, Free from childcare ← → Work hindered opportunities, Free from childcare

Reasons for drinking

Advantaged	Disadvantaged

Drinking frequent small quantities associated with advantage, risky drinking associated with disadvantage, reward for coping, pleasure/relaxation, and as a symbolic marker of time free from children ←

→ To maintain youth identity, peer pressure, to cope with psychological stress, financial stress, escapism, negativity, and to retreat (pub) from childcare responsibilities

Key:

Quantitative results (-ive associations) [green]

Quantitative results (+ive associations) [orange]

Qualitative results [purple]

Figure 46 Quantitative patterns of frequent alcohol use (>1/week), infrequent moderate drinking (>1 unit/day, <1/week), frequent moderate drinking (≥4 units/week), and 'risky' alcohol use (>3 units/day or >21 units/week), with explanatory qualitative data

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Implications of the results

My multi-methods study has shown that the social circumstances in which motherhood is experienced are associated with mothers' alcohol use. Compared to advantaged mothers, disadvantaged mothers are significantly less likely to be frequent drinkers (>1/week) and significantly more likely to be infrequent moderate drinkers (>1 unit/day, <1/week), frequent moderate drinkers (>4 units/week), and 'risky' drinkers (>3 units/day or >21 units/week).

My analysis of the MCS sheds light on how social disadvantage and alcohol use patterns are linked. Previous research has predominantly focussed on problematic use and, as a result, our views on how disadvantaged social groups consume alcohol have been distorted. My study suggests that problematic use represents one end of a continuum and disadvantaged mothers are over-represented at both ends of the alcohol use continuum: abstinence and minimal consumption at one end, and consumption in excess of the recommendations (>3 units/day) at the other (Figure 45).

Delving deeper into the links between social (dis)advantage and patterns of alcohol use, my multi-methods research indicated how childhood circumstances can be linked to adult patterns of alcohol use and that an important factor may be negative childhood experiences. It also noted how disadvantaged mothers reported drinking more often outside the home, thus making themselves more vulnerable to the negative social consequences associated with alcohol use. Disadvantaged mothers also felt it more appropriate to drink in front of their children whilst outside the home environment, thus exposing them to public drinking cultures of infrequent excess. In contrast, advantaged mothers' propensity to drink more often at home meant they were protected from any negative social consequences resulting from their alcohol use. In addition, advantaged mothers were more likely to drink in front of their children at home and expose them to private drinking cultures of frequent controlled quantities of alcohol use. Nevertheless, the implication of regularly consuming alcohol at home with children present is a contentious issue and one that remains little studied. Furthermore, it could be argued that reported alcohol consumption in the home is likely to be less accurate than drinking that takes place

in a pub where standard measures are used. Therefore, advantaged mothers' drinking patterns may be more of a cause for concern than previously thought. In addition, current UK recommendations do not advocate any alcohol free days during the week. If this were the case then perhaps the results from my quantitative analysis of the MCS that found advantaged mothers drank alcohol most frequently would be deemed more problematic. The difficulty that remains in alcohol use research is facilitating an accurate measurement of individual alcohol use within time, budget, and resource constraints whilst being acceptable enough to ensure sufficient numbers of participants agree to take part.

My qualitative analyses indicate that social circumstances influence mothers' drinking locations, opportunities to drink, and reasons for consuming alcohol. Despite this, health messages aimed at reducing individual and societal consequences of alcohol misuse are largely individualistic and fail to acknowledge the wider social influences behind individual patterns of alcohol use. My research suggests that social background, and current socio-economic and domestic circumstances may shape mothers' alcohol use patterns - and thus reinforce socially created stereotypical behaviour for example, heavy Saturday night drinking among disadvantaged women. Addressing some of the wider social issues faced by mothers in disadvantaged circumstances may prove successful in encouraging a healthier relationship with alcohol. Likewise, advantaged mothers need to be made aware that, although their patterns of alcohol use may be deemed more socially acceptable, they too may be vulnerable to the negative effects of excessive alcohol consumption, particularly if they underestimate their alcohol use.

Recommendations

Future research

Having identified clear differences in the drinking patterns of advantaged and disadvantaged mothers associated with their contrasting social circumstances, there remain a number of questions with regards to mothers' drinking patterns. My analysis of the MCS and focus group data examines 'typical' and 'risky' patterns of alcohol use amongst mothers with pre-school aged children. Research is needed that investigates if and how mothers' drinking patterns change over time as their children

age and, whether these differences are consistent across advantaged and disadvantaged groups. In addition, my investigation of patterns of alcohol use amongst mothers with pre-school aged children did not include non-mothers as a comparable group. Research that compares alcohol use patterns of mothers and non-mothers who have been matched according to their social background, and current socio-economic and domestic circumstances, would be informative.

Implications for policy and practice

My analysis of the MCS and focus group data shows that the majority of advantaged mothers drink frequently, but within the recommendations (2-3 units/day). In contrast, the majority of disadvantaged mothers drink infrequently and are more likely to drink in excess of the recommendations (>3 units/day). This is in line with society's perception that problematic alcohol use exists primarily amongst disadvantaged groups. However, public perceptions may exaggerate the extent of problematic drinking among disadvantaged groups. One reason could be that disadvantaged groups predominantly drink in public, unlike advantaged groups who drink largely in private. My investigation of mothers' drinking patterns revealed that advantaged mothers were more likely to consume alcohol at home, whereas disadvantaged mothers' preference was to drink in public. More research is needed that investigates the private drinking sphere where the majority of advantaged mothers' alcohol intake is consumed. Furthermore, policy makers need to consider the consequences of drinking behaviour within the home environment, particularly where children are present.

Chapter 11: Conclusion

Introduction

Chapter 10 brought together my literature reviews (chapters 1 and 2), quantitative results (chapter 6) and qualitative findings (chapters 8 & 9) to enhance our understanding of everyday patterns of alcohol use amongst mothers with pre-school aged children in England.

Multi-methods research on both mothers' and women's alcohol use was found to be lacking in my review of the literature (Chapters 1 and 2). Using quantitative analysis, I was able to show how patterns of alcohol use among advantaged and disadvantaged mothers differed according to a number of social circumstances previously identified as influential in the research literature. Analysis of the qualitative focus group data provided a means through which to bring original insights regarding the social patterning of alcohol use among mothers with pre-school aged children. The qualitative data brought to life the variables used in the quantitative analysis and gave mothers a voice with which to explain how they negotiated alcohol into their lives. In addition to the results of my own analyses, findings from previous studies identified in my review of the literature (Chapters 1 and 2) were incorporated into the discussion. However, very little of the research I unearthed related to mothers. Therefore, whilst such comparisons were included they should be interpreted with caution.

Chapter 11 concludes by providing an overview of the thesis' substantive contribution with regards to the patterns and perceptions of alcohol use amongst mothers with pre-school aged children in England.

Patterns of alcohol use

The most common patterns of alcohol use amongst mothers, according to the categories used in my analyses, were found to be as follows;

- Infrequent drinking (Never/<1/week)
  - Wave 1: 51.6%, Wave 2: 49.1%
- Infrequent light drinking (1 unit/day, <1/week)
  - Wave 1: 42.5%
- Infrequent moderate drinking (<4 units/week)
  - Wave 1: 35.5%

Everyday patterns of alcohol use were different according to mothers' social background, and their socio-economic and domestic circumstances. The odds of frequent drinking (>1/week) decreased in a stepwise fashion with each additional dimension of disadvantage experienced by mothers. In particular, frequent drinking (>1/week) was significantly less likely amongst mothers who experienced childhood disadvantage (father's occupation), mothers who were disadvantaged in terms of the age at which they had their first child (younger), mothers disadvantaged with regards to their household income (lower), and mothers who were lone parents. In addition, mothers with fewer children in the household were significantly less likely to be frequent drinkers (>1/week). In contrast, mothers who were economically inactive were increasingly likely to be frequent drinkers (>1/week). Qualitative explanations included negative childhood experiences linked to alcohol misuse, difficulty finding and maintaining work, work stress, financial strain, and the association of frequent drinking with middle age.

Infrequent moderate drinking (>1 unit/day, <1/week) was significantly more likely amongst mothers who were disadvantaged in terms of their educational attainment, the age at which they had their first child (younger), and lone parenthood. Similarly, the fewer children there were in the household, the more likely it was that mothers were infrequent moderate drinkers (>1 unit/day, <1/week). Economic inactivity was the only socio-economic variable that was associated with a decreased likelihood of infrequent moderate drinking (>1 unit/day, <1/week). Qualitative explanations

included financial strain and the perceived association of frequent drinking with middle age.

Frequent moderate drinking (≥ 4 units/week) was significantly more likely amongst cohabiting and lone mothers in comparison to mothers who were married. Frequent moderate drinking (≥ 4 units/week) was less likely among mothers who were economically inactive. Qualitative explanations included difficulty finding and maintaining work amongst single mothers, work stress, financial strain, and the provision of childcare at weekends by fathers.

Very few of the mothers who took part in wave 1 of the MCS engaged in 'risky' patterns of alcohol use (>3 units/day or >21 units/week), $n = 1124$ (14.4%). Nevertheless, 'risky' patterns of alcohol use were different according to mothers' social background, and socio-economic and domestic circumstances. 'Risky' alcohol use (>3 units/day or >21 units/week) rose significantly with each additional dimension of disadvantage experienced by mothers. In particular, 'risky' drinking was significantly more likely amongst mothers who were disadvantaged in terms of their education (left education at a younger age), the age at which they first gave birth (younger), and their cohabitation status (single). 'Risky' alcohol use (>3 units/day or >21 units/week) was also significantly more likely with fewer children in the household. 'Risky' alcohol use (>3 units/day or >21 units/week) was less likely with economic inactivity. Qualitative explanations included difficulty finding and maintaining work, work stress, financial strain, time free from childcare responsibilities amongst single mothers, and the association of binge drinking behaviour (>6 units/day) with youth.

Perceptions of alcohol use

My analysis of qualitative focus group data provide us with an increased understanding of mothers' perceptions of maternal alcohol use. There were 4 key themes that emerged;

- Drinking locations
- Drinking opportunities
- Reasons for drinking
- Patterns of consumption

Perceptions of alcohol use were found to be different amongst advantaged and disadvantaged mothers with pre-school aged children. Disadvantaged mothers more often drank in public (pub) in comparison to advantaged mothers who preferred to drink at home with their partners. This was in part to protect their children from the negative consequences associated with alcohol consumption in the home that they had witnessed growing up.

Both advantaged and disadvantaged mothers equated their time free from childcare responsibilities with the opportunity to consume alcohol. Advantaged mothers described how work provided them with opportunities to drink. Disadvantaged single mothers reported having more free time, whilst their children were being looked after by their fathers, in which to drink alcohol.

Disadvantaged mothers' reasons for drinking included such things as maintaining their 'youth' identity, as a result of peer pressure, to cope with psychological and financial stress, as a means of escapism, and as a result of negativity. In contrast, advantaged mothers drank as a reward for coping, for pleasure and relaxation, and to affirm their socio-economic status.

Reflections

Research to date has led to a skewed knowledge of alcohol use as a result of researchers' tendency to focus on the minority of individuals who lie at the problematic end of the alcohol use spectrum. In future there needs to be greater consideration given to the examination of majority patterns of habitual alcohol use. Problematic alcohol use does not suddenly happen, it is a gradual process that we need to understand from its earlier stages in order to identify who is at risk and, more importantly, why.

My research suggests that patterns of alcohol use may be influenced by wider social factors. Research therefore needs to consider social background, and current socio-economic and domestic circumstances, and not make the assumption that, upon becoming a mother, women drink less. My results suggest that it is more likely that their pattern of alcohol consumption has changed since becoming a mother, especially amongst advantaged mothers.

Interventions and future research may want to consider some of the common misconceptions evident in my research. For example, socially accepted patterns of alcohol consumption and types of alcoholic beverage are not necessarily exempt from adverse health implications. For instance, frequent consumption without alcohol free days may progress into problematic alcohol use and, despite claims that wine is beneficial to health it contains a high concentration of alcohol. The focus of health interventions need to shift public attitudes away from the choice of alcoholic beverage and onto alcohol content. In addition, we need to address the social norm among young adults that it is acceptable to binge at weekends and point out the dangers of problematic alcohol use, highlighting specific cultural events during which this is more likely to occur.

Early motherhood is a difficult time, particularly for those women who find themselves in disadvantaged circumstances. In terms of problematic alcohol use, disadvantaged mothers may be particularly vulnerable since they use alcohol to cope. However, advantaged mothers may also be vulnerable to alcohol misuse and, since they largely consume alcohol in private, we may be underestimating the problem.

Appendices

MEDLINE(R): 1946 to current – searched January 2010 and repeated on 13/10/2011 via Ovid interface. **EMBASE:** 1980 to current - searched January 2010 and repeated on 13/10/11 via Ovid interface. **PSYCINFO:** 1987 to current – searched January 2010 and repeated on 13/10/11 via Ovid interface.		
1	drink$.ab,ti.	162639
2	exp alcohol consumption/	96146
3	exp drinking behaviour/ep, pc [Epidemiology, Prevention]	14240
4	prevalence.ab,ti.	654184
5	findings.af.	2336477
6	quantitative.af.	802214
7	socio-economic.ti,ab.	32959
8	impover$.ti,ab.	5820
9	disadvantage$.ti,ab.	86279
10	(social$ adj (advant$ or disadvant$ or exclusion or excluded or depriv$)).ti,ab.	7453
11	mother$.m_titl.	56264
12	exp parents/	174351
13	exp mothers/	81112
14	housewi?e$.m_titl.	370
15	wom?n.m_titl.	309740
16	female$.m_titl.	119498
17	qualitative.af.	335383

18	"gender*".m_titl.	64020
19	"sex*".m_titl.	212371
20	(m?n and wom?n).m_titl.	19474
21	(male$ and female$).m_titl.	20830
22	"famil*".m_titl.	291339
23	family unit.m_titl.	96
24	"domestic*".m_titl.	31647
25	domestic life.m_titl.	20
26	"relation*".m_titl.	439290
27	"relative*".m_titl.	51165
28	alcohol.mp.	437475
29	1 or 2 or 3 or 28	534947
30	4 or 5 or 6 or 17	3753121
31	7 or 8 or 9 or 10	127755
32	11 or 12 or 13 or 14 or 15 or 16 or 18 or 19 or 20 or 21	866551
33	22 or 23 or 24 or 25 or 26 or 27	802809
34	29 and 30 and 32	10767
35	29 and 30 and 31	1679
36	34 and 33	968
37	35 and 33	122
38	34 or 35 or 36 or 37	12180
39	limit 38 to (English language and humans and yr="2002 -Current")	8701

Appendix 2 Studies included in literature review on women's alcohol use

Study	Country	Method			Drinking pattern					
		Quantitative	Qualitative	Mixed/ multi-methods	Non-drinking	Drinking frequency	Drinking quantity	Binge/heavy drinking	Population group	Social measure
Batty et al (2006) sample size *n* = 5780 (eligible sample) response rate 64%	Scotland Data collection: 1962 & 2000-2003	X						Self-reported hangover due to alcohol (≥2 occasions/month in previous year)	Men (*n* =not specified) and women (*n* = not specified) aged 44-52 yrs	Gender (systematic comparison) & Socio-economic circumstances
Baumann et al (2007) sample size *n* = 6216 response rate 44.3%	France Data collection: Not specified	X						Alcohol abuse (score ≥2 DETA questionnaire)	Men (2959) and women (3257) aged ≥15yrs	Gender (systematic comparison) & Socio-economic circumstances*
Bernards et al (2009) sample size *n* = 6443 response rate 52.8-85.4%	8 Countries Data collection: 2002-2005	X			Lifetime abstainers & never drank in last 12 months				Male (*n* = not specified) and female (*n* = not specified) abstainers aged 17+ yrs	Gender (systematic comparison) & Age

Study	Country / Data collection				Abstention	Frequency	Quantity	Binge / Heavy drinking	Sample	Socio-demographic
Bloomfield et al (2006) sample size $n = 55271$ response rate 51.4-87.5%	15 countries Data collection: 1997-2002	X			Never drank in last 12 months			Binge drinking (≥ 3, ≥ 5, ≥ 6 drinks on one occasion >1/month) Heavy drinking (average drinking ≥ 20g alcohol women, ≥ 30g in men) Alcohol problems (AUDIT in previous year)	Men ($n = 24560$) and women ($n = 30711$) aged 25-59 yrs	Gender (systematic comparison) & Socio-economic circumstances*
Bond et al (2010) Average sample size $n = 2324$ response rate 38-96%	22 countries Data collection: 1997-2002	X				Frequency of drinking in public/ private settings in past year (every day - never)			Men (Av. $n =1270$) and women (Av. $n = 1054$) aged ≥ 18 yrs	Gender & Socio-economic circumstances*
Caetano et al (2006) sample size $n = 12093$ response rate 81%	USA Data collection: 2001-2003	X						Binge drinking (≥ 4 drinks on one occasion in past year)	Women ($n = 12093$) aged 18-44 yrs	Gender (systematic comparison) & Socio-economic circumstances & Age
Casswell et al (2003) sample size $n = 969$ response rate N/A	New Zealand Data collection: 1990/91 & 1993/94 & 1998/99	X			Lifetime abstainers & never drank in last 12 months	Frequency of drinking in different locations in previous year	Quantity of alcohol per occasion at each location		Young men ($n =$ not specified) and women ($n =$ not specified) aged 18-26 yrs	Gender (systematic comparison) & Age & Socio-economic circumstances

Cerda et al (2010) sample size n = 5115 response rate 69%	USA Data collection: 1985-2006	X					Number of glasses per week in previous year		Binge drinking (≥ 5 drinks on one occasion in previous month)	Men (46%) and women (54%) aged 18-30 yrs	Socio-economic circumstances*
Christie-Mizell and Peralta (2009) sample size n = 1488 response rate N/A	USA Data collection: 1979-1994	X					Number of drinks in previous month/ year	Number of drinks per occasion in last 30 days)		14-22 year old males (n = 773) and females (n = 715)	Gender & Socio-economic circumstances*
Diehl et al (2007) sample size n = 212 response rate N/A	Germany Data collection: Not specified	X							Alcohol dependence (DSM IV & ICD-10)	Alcohol dependent men (n = 106) and women (n = 106) (mean age 42)	Gender (systematic comparison) & Age
Emslie et al (2002) sample size n = response rate Av. 72%	Scotland Data collection: 1994	X							Heavy drinkers (≥ 21 units in men and ≥ 14 units in women in previous week)	Employed men (n = 2121) and women (n = 1629) aged ≥ 18 yrs	Gender*#

Emslie et al (2009) sample size $n = 3811$ response rate Av. 73%	Scotland Data collection: 1990 & 2000	X							Binge drinking (≥ 7 units in women and ≥ 10 in men in last week) Heavy drinking (≥ 21 units per week in men and ≥ 14 units in women) Problem drinking (≥ 2 CAGE in previous year)	Men ($n = 1753$) and women ($n = 2058$) aged 18-60 yrs	Gender (systematic comparison) & Age
Flensbourg-Madsen et al (2007) sample size $n = 14223$ response rate 73.6%	Denmark Data collection: 1976-2002	X					Frequency of drinking (hardly ever/never, monthly, weekly, daily)	Average daily /weekly alcohol intake		Men ($n = $ not specified) and women ($n = $ not specified) aged ≥ 20yrs	Gender (systematic comparison)*#

Giskes et al (2011) sample size *n* = 2349 response rate 58.7%	Australia Data collection: 2003	X					Frequency of drinking in previous year (<1 day/month, 1 day/month, 2-3 days/ month, 1-2 days/week, 3-4 days/week, 5-6 days/week, everyday)	Drinks on a typical occasion (1-2, 3-4, 5-6, 7-10, 11-12, 13+)	Risk of short-term harm (typically ≥11 units per week in men and ≥7 in women in previous year) Risk of long-term harm (typically ≥43 units per week in men and ≥29 in women in previous year)	Men (*n* = 1023) and women (*n* = 1326) aged 18-76 yrs	Gender (systematic comparison) & Socio-economic circumstances*
Hassan and Shiu (2007) sample size *n* = 217 response rate N/A	Scotland Data collection: 2004	X							Exceeding low risk single occasion drinking (> 1 pint, 2 small wines, 2 units of spirits in women and > 1.5 pints, 3 small wines and 3 units of spirits in men)	Male (*n* = 107) and female (*n* = 110) students	Gender (systematic comparison)
Holdcraft and Lacono (2002) sample size *n* = 600 response rate N/A	USA Data collection: Not specified	X							Substance use disorder (DSM-III-R)	Alcohol dependent men (*n* = 468) and women (*n* = 132) (Av. age 40yrs)	Gender (systematic comparison)& Age & Socio-economic circumstances

Humensky (2010) sample size n = 9872 response rate not specified	USA Data collection: 1994-1995 & 2001-2002	X							Binge drinking (≥5 drinks on one occasion at least once per month in previous year)	Adolescent boys (n = 50.8) and girls (n = 49.2)	Socio-economic circumstances*
Jones (2002) sample size n = 1800 response rate 90%	USA Data collection: 1989	X							Heavy drinking (≥ 6 drinks) Alcohol dependant (DSM-III-R)	Women (n = 1800) aged 24-31 yrs	Socio-economic circumstances*
Jukkala et al (2008) sample size n = 1190 response rate 47%	Moscow Data collection: 2004	X							Heavy drinking (≥80g alcohol on one occasion in men and ≥60g in women)	Men (n = 510) and women (n = 680) aged ≥18 yrs	Gender (systematic comparison) & Age & Socio-economic circumstances
Keyes et al (2008) sample size n = 42693 response rate 81%	USA Data collection: 2001-2002	X							Binge drinking (≥5 drinks on one occasion at least 1/week in previous year) Alcohol abuse/ dependence (DSM-IV, AUDADIS-IV questionnaire in previous year)	Men (n = 18413) and women (n = 24280) aged 18-90 yrs	Gender (systematic comparison) & Age#

Keyes and Hasin (2008) sample size n = 42693 response rate 81%	USA Data collection: 2001-2002	X							Binge drinking ($\geq$5 drinks on one occasion at least 1/week in previous year) Alcohol abuse/ dependence (DSM-IV, AUDADIS-IV questionnaire in previous year) Hazardous drinking in previous year (driving, swimming, using machinery, walking in dangerous area/ near traffic after drinking)	Men (n = 18413) and women (n = 24280) aged $\geq$18 yrs	Gender (systematic comparison) & Socio-economic circumstances*
Kubicka and Csemy (2008) sample size n = 497 response rate Av. 77%	Czech Republic Data collection: 1992 & 1997	X				Drinking frequency in previous year	Usual quantity of alcohol per drinking occasion & weekly quantity	Hazardous alcohol use (occasional $\geq$96g alcohol, usually $\geq$48g, daily $\geq$40g)	Women (n = 497) aged 30-59 yrs	Gender*#

Kuntsche et al (2006) sample size *n* = 27528 response rate not specified	8 Countries Data collection: 1993-2002	X							Heavy drinking (>20g alcohol in women & >30g in men per day in previous year)	Men (*n* = 12885) and women (*n* = 14643) aged 25-49 yrs	Gender (systematic comparison) & Age & Socio-economic circumstances
Lima et al (2007) sample size *n* = 1473 response rate 60%	Brazil Data collection: 2005	X					Light infrequent drinking (1/2 drinks per occasion <1/week or 1-3/month) Light frequent drinking (1/2 drinks per occasion weekly) Moderate infrequent drinking (3 drinks per occasion <1/week or 1-3/ month) Moderate frequent drinking (3 drinks per occasion weekly) in previous year		Heavy drinking (>5 drinks on each occasion) in previous year	Men (*n* = 595) and women (*n* = 878) aged >18 yrs	Gender (systematic comparison) & Socio-economic circumstances*
Little et al (2009) sample size *n* = 664 response rate 80%	USA Data collection: Not specified	X					Frequency of alcohol use in previous year (never - everyday)	Quantity of alcohol use per occasion (1-9+)		Adolescent and emerging adult males (*n* = 344) and females (*n* = 320) aged 13-30 yrs	Gender (systematic comparison) & Socio-economic circumstances*
Lyons and Willot (2008) sample size *n* = 32 response rate N/A	New Zealand Data collection: 2001		X						Perceptions of binge/ heavy drinking	Young men (*n* = 16) and women (*n* = 16) aged 20-29 yrs	Gender

Study	Country / Data collection										
Magovcevic and Addis (2005) sample size n = 120 response rate N/A	USA Data collection: not specified	X							Perceptions of alcohol abuse/ alcohol problems	Male (n =) and female (n =) students aged 17-31 yrs	Gender
Makela (2008) sample size n = 6406 response rate Av. 94%	Finland Data collection: 1969 & 1976 & 1984	X				Lifetime abstainers & never drank in last 12 months	Annual frequency	Drinking quantity (1-4, 5-7, 8-12, 13+ drinks)	Subjective intoxication Heavy episodic drinking (BAC >1%)	Men (n = not specified) and women (n = not specified) aged 25-69 yrs	Socio-economic circumstances*
Makela et al (2006) sample size n = 57817 response rate 51-79%	14 countries Data collection: 1997-2003	X				Abstinence in previous 12 months	Frequency of alcohol in previous week/ month/ year	Quantity of alcohol last drinking occasion, specific day, previous year	Binge drinking ($\geq$5, $\geq$6, $\geq$8 drinks on one occasion each month)	Men (n = 27168) and women (n = 30649) aged 20-64 yrs	Gender (systematic comparison) & Age
McMahon et al (2007) sample size n = 586 response rate N/A	Scotland Data collection: Not specified	X							Binge drinking ($\geq$6 units on one occasion in women and $\geq$8 units in men in previous week)	Men (44%) and women (56%) aged $\geq$18 yrs	Gender (systematic comparison) & Age & Socio-economic circumstances

McPherson (2004) sample size *n* = 9345 response rate Av. 75%	New Zealand Data collection: 1995 & 2000	X				Frequency of alcohol use in previous year	Typical quantity per drinking occasion in previous year Volume per year	Heavy drinking (20L+ per year) Drunkenness (subjective drunkenness per week) Alcohol related problems (3+ in previous year)	Males (*n* = 4312) and females (*n* = 5020) aged 14-65 yrs	Gender (systematic comparison) & Age
Moller-Leimkuhler et al (2002) sample size *n* = 112 response rate N/A	Germany Data collection: 1997	X						Alcohol dependence (DSM-III)	Alcohol dependent men (*n* = 76) and women (*n* = 36) (mean age 42)	Gender
Mortensen et al (2006) sample size *n* = 694 response rate Not specified	Denmark Data collection: Not specified	X			Non-drinkers including very occasional drinkers in previous week		Daily amount of alcohol in previous week or last typical week	Risk drinking (>21 units in men and >14 in women)	Men (*n* = 363) and women (*n* = 331) aged 29-34 yrs	Gender (systematic comparison) & Socio-economic circumstances

Mulia et al (2008) sample size n = 392 response rate 85%	USA Data collection: 2001	X							Problem drinking (≥ 2 of the following: ≥ 5 drinks per occasion ≥ 1/month, ≥ 1 alcohol dependence symptom, >1 tangible consequence in previous year)	Mothers (n = 392) (Mean age 29 yrs)	Socio-economic circumstances
Nayak (2004) sample size n = 1504 response rate 58%	USA Data collection: 2000	X					Number of usual drinking days/ week in previous year	Number of usual drinks per day/ week in previous year	Risky drinking (≥ 5 drinks per occasion or ≥ 7 drinks per week) in previous year	Women (n = 1504) aged 18-39 yrs	Age
Rahav et al (2006) sample size n = Not specified response rate not specified	29 Countries Data collection: Not specified	X					Drank alcohol last week	Typical daily alcohol use	Heavy drinking (>8468g alcohol in previous year)	Men (n = not specified) and women (n = not specified) aged 18-34 yrs	Gender (systematic comparison) & Socio-economic circumstances
Rosta (2008) sample size n = 1120 response rate 86%	Germany Data collection: 2000	X							Hazardous drinking (AUDIT)	Male (n = 773) and female (n = 347) doctors and surgeons (Mean age ~ 44yrs)	Gender (systematic comparison)*

Rudolfsdottir and Morgan (2009) sample size *n* = 13 response rate N/A	UK Data collection: 2005-2006		X						Heavy drinking (subjective perception)	Young female middle class moderate drinkers (*n* = 13) aged 18-22 yrs	Gender
Simons-Morton et al (2009) sample size *n* = Av. 1683 response rate 65-91%	24 European Countries Data collection: 1998 & 2002 & 2006	X					Frequency of alcohol use (monthly or less than monthly)		Drunkenness (subjective drunkenness)	Male (Av. *n* = 809) and female (Av. *n* = 874) adolescents aged 15	Gender (systematic comparison)
Stewart and Power (2003) sample size *n* = 1874 response rate 50%	USA Data collection: Not specified	X					Frequency of alcohol use in previous month/ year	Typical drinking quantity	Frequency of intoxication (subjective intoxication)	Male (*n* = 740) and female (*n* = 1134) adolescents	Gender (systematic comparison) & Socio-economic circumstances
Timko et al (2005) sample size *n* = 466 response rate N/A	USA Data collection: Not specified	X							Freedom from drinking-related problems	Men (*n* = 236) and women (*n* = 230) with alcohol use disorders (Mean age 34 yrs)	Gender (systematic comparison) & Socio-economic circumstances*

Tsai et al (2007) sample size n = 188290 response rate Av. 56%	USA Data collection: 2001-2003	X				Drinking in previous 30 days	Typical number of drinks on each occasion, average number of drinks in an average month	Binge drinking ($\geq$5 drinks on one occasion in previous 30 days)	Women (n = 188290) aged 18-44 yrs	Age & Socio-economic circumstances
Wells et al (2011) sample size n = Not specified response rate not specified	14 Countries	X				Alcohol use in previous year			Men (n = not specified) and women (n = not specified) aged 18-29 yrs	Gender (systematic comparison)
White et al (2002) sample size n = 549519 response rate N/A	England and Wales Data collection: 1997	X						Risky alcohol use (5% increase in risk of mortality)	Men (n = not specified) and women (n = not specified) aged $\geq$16 yrs	Gender (systematic comparison) & Age
Wilsnack et al (2006) sample size n = Not specified response rate not specified	USA Data collection: 1981 & 1991 & 2001	X			30 day abstinence			Heavy episodic drinking ($\geq$6 drinks on one occasion in previous 30 days and previous year)	Women (n = not specified) aged 21-80	Age#

Wilsnack et al (2009) sample size *n* = 113901 response rate 38-96%	35 Countries Data collection: 1997-2007	X				Abstinence in previous 12 months	Drinking frequency in previous year	Typical number of drinks on each drinking occasion	Heavy episodic drinking ($\geq$60g alcohol a day in previous year)	Men (*n* = 51396) and women (*n* = 62505) aged $\geq$18 yrs	Gender (systematic comparison) & Age
Zins et al (2003) sample size *n* = 4782 response rate 44.7%	France Data collection: 1992-1996	X					Drinking days per week	Glasses per day		Women (*n* = 4782) aged 35-50	Socio-economic circumstances & Age

* Adjusted for age
\# Adjusted for socio-economic circumstances

	EMBASE: 1980 to current - searched March 2010 and repeated on 29/06/11 via Ovid interface.	
1	exp alcohol consumption/ or alcohol/	171029
2	exp drinking behaviour/ or exp alcohol consumption/	73229
3	exp prevalence/	270200
4	findings.af.	1139707
5	exp quantitative analysis/	107271
6	exp qualitative analysis/ or exp qualitative research/	36781
7	exp trend study/	4640
8	exp socioeconomics/	133431
9	exp social aspect/ or exp socioeconomics/ or exp demography/	282161
10	impover$.ti,ab.	2459
11	(social$ adj (advant$ or disadvant$ or exclusion or excluded or depriv$)).ti,ab.	2354
12	poor.ti,ab.	306597
13	exp poverty/	23213
14	exp mother/	57839
15	mother$.ti,ab.	138149
16	exp single parent/ or parent/ or exp adolescent parent/	42865
17	housewi?e$.ti,ab.	2058
18	1 or 2	188444
19	3 or 4 or 5 or 6 or 7	1506177
20	8 or 9 or 10 or 11 or 12 or 13	576266

21	14 or 15 or 16 or 17	202019
22	18 and 19 and 20 and 21	196
23	limit 22 to English language	186

	MEDLINE (R): 1948 to current - searched March 2010 and repeated on 29/06/11 via Ovid interface.	
1	alcohol.mp.	173649
2	exp Alcohol Drinking/ep, sn, td [Epidemiology, Statistics & Numerical Data, Trends]	8742
3	exp Prevalence/	147529
4	finding$.af.	1167705
5	quantitative.af.	306078
6	qualitative.af.	88931
7	exp Socioeconomic Factors/ or exp Social Class/	287235
8	exp Demography/ or exp Socioeconomic Factors/	979855
9	impover$.ti,ab.	2215
10	(social$ adj (advant$ or disadvant$ or exclusion or excluded or depriv$)).ti,ab.	2453
11	exp Poverty/cl, ec, sn, td [Classification, Economics, Statistics & Numerical Data, Trends]	2531
12	mother$.ti,ab.	123233
13	exp Parents/	59176
14	exp Mothers/	21013
15	housewi?e$.ti,ab.	1725
16	1 or 2	173649
17	3 or 4 or 5 or 6	1615573
18	7 or 8 or 9 or 10 or 11	982120
19	12 or 13 or 14 or 15	165750
20	16 and 17 and 18 and 19	423

21	limit 20 to English language	392

	PSYCINFO: 1987 to current - searched March 2010 and repeated on 29/06/11 via Ovid interface.	
1	exp Alcohols/	9571
2	exp Alcohol Drinking Patterns/ or exp Drinking Behaviour/	37621
3	exp Demographic Characteristics/ or exp Trends/ or exp Alcohol Drinking Patterns/ or exp Epidemiology/ or exp Socio-cultural Factors/	143530
4	exp Epidemiology/	27134
5	finding$.af.	458467
6	exp Quantitative Methods/	1021
7	exp Qualitative Research/	2764
8	exp Trends/	5915
9	exp Socioeconomic Status/	21488
10	exp Epidemiology/ or exp Demographic Characteristics/ or exp Psychosocial Factors/ or exp Socioeconomic Status/ or exp Socio-cultural Factors/	141916
11	impover$.ti,ab.	1964
12	(social$ adj (advant$ or disadvant$ or exclusion or excluded or depriv$)).ti,ab.	1890
13	exp Poverty/ or exp Economics/	14977
14	exp Parental Role/ or exp Adolescent Mothers/ or exp Mothers/ or exp Parenthood Status/	25832
15	mother&.ti,ab.	28092
16	exp Parents/ or exp Single Parents/	47883
17	parent$.ti,ab.	124566
18	exp Homemakers/ or housewif?e$.mp. or exp Demographic Characteristics/	20298
19	1 or 2	44630

20	3 or 4 or 5 or 6 or 7 or 8	565144
21	9 or 10 or 11 or 12 or 13	156873
22	14 or 15 or 16 or 17 or 18	173716
23	19 and 20 and 21 and 22	1232
24	limit 23 to English language	1089

	IBSS: 1990 to current - searched March 2010 and repeated on 29/06/11 via Proquest interface	
1.	ti(alcohol) or ti((drink* or "alcohol consumption")) or ti(("drinking pattern" or "alcohol use")) or ti(("alcohol intake" or "drinking behaviour")) and ti((alcohol prevalence or pattern*)) or ti((finding* or quantitative)) or ti(trend*) and ti((mother* or motherhood)) or ti((parenthood or parent*)) or ti((housewi?e* or parental)) and ti((socio?economic? or socio?demographic? or improver* or disadvantage* or advantage* or social disadvant* or exclusion or excluded or deprive*))	14828
2.	AND Peer reviewed	11656
3.	AND English	11068
4.	AND Subject discipline: (Sociology) NOT (Anthropology AND Economics AND Political Science	2493

ASSIA: 1990 to current - searched March 2010 and repeated on 29/06/11 via Proquest interface		
1.	ti(alcohol) or ti((drink* or "alcohol consumption")) or ti(("drinking pattern" or "alcohol use")) or ti(("alcohol intake" or "drinking behaviour")) and ti((alcohol prevalence or pattern*)) or ti((finding* or quantitative)) or ti(trend*) and ti((mother* or motherhood)) or ti((parenthood or parent*)) or ti((housewi?e* or parental)) and ti((socio?economic? or socio?demographic? or improver* or disadvantage* or advantage* or social disadvant* or exclusion or excluded or deprive*))	20807
2.	AND peer reviewed	3745

Full copies retrieved and assessed for eligibility *n* = 47

Total papers <u>not</u> meeting inclusion criteria *n* = 42

Non-pregnant/ non-breast-feeding mothers not main sample group n = 29

1. ADAMS, E. H., GFROERER, J. C. & ROUSE, B. A. 1989. Epidemiology of substance abuse including alcohol and cigarette smoking. *Annals of the New York Academy of Sciences,* 562**,** 14-20.
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5. BARNET, B., DUGGAN, A. K., WILSON, M. D. & JOFFE, A. 1995. Association between postpartum substance use and depressive symptoms, stress, and social support in adolescent mothers. *Pediatrics,* 96**,** 659-66.
6. BERNARDS, S., GRAHAM, K., KUENDIG, H., HETTIGE, S. & OBOT, I. 2009. 'I have no interest in drinking': a cross-national comparison of reasons why men and women abstain from alcohol use. *Addiction,* 104**,** 1658-1658-1668.
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10. DUNCAN, T. E., DUNCAN, S. C. & HOPS, H. 1998. Latent variable modeling of longitudinal and multilevel alcohol use data. *Journal of Studies on Alcohol,* 59**,** 399-408.
11. DZUROVA, D., SPILKOVA, J. & PIKHART, H. 2010. Social inequalities in alcohol consumption in the Czech Republic: a multilevel analysis. *Health and place,* 16**,** 590-590-597.
12. FEAR, N. T., IVERSON, A., MELTZER, H., WORKMAN, L., HULL, L., GREENBERG, N., BARKER, C., BROWNE, T., EARNSHAW, M., HORN, O., JONES, M., MURPHY, D., RONA, R. J., HOTOPF, M. & WESSELY,

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13. FERNANDEZ, K. R. 1996. Predicting alcoholism in selected college-age women. *Dissertation Abstracts International Section A: Humanities and Social Sciences,* 56**,** 3462.

14. FILLMORE, K. M., GOLDING, J. M., GRAVES, K. L., KNIEP, S., LEINO, E. V., ROMELSJÖ, A., SHOEMAKER, C., AGER, C. R., ALLEBECK, P. & FERRER, H. P. 1998. Alcohol consumption and mortality. III. Studies of female populations. *Addiction,* 93**,** 219-219-230.

15. FOSTER, J., READ, D., KARUNANITHI, S. & WOODWARD, V. 2010. Why do people drink at home? *Journal of Public Health,* 32**,** 512-512-518.

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breastfeeding Australian women. *Australian & New Zealand Journal of Public Health,* 31**,** 51-6.

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No appropriate measure of SEC n = 3

1. DELVA, J. & KAMEOKA, V. A. 1999. Risk for alcohol and drug abuse among ethnically diverse female recipients of public assistance. *Ethnicity & Disease,* 9**,** 237-45.
2. MUHURI, P. K. & GFROERER, J. C. 2009. Substance use among women: Associations with pregnancy, parenting, and race/ethnicity. *Maternal and Child Health Journal,* 13**,** 376-385.
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No comparison group of mothers n = 2

1. GILLMORE, M. R., GILCHRIST, L., LEE, J. & OXFORD, M. L. 2006. Women who gave birth as unmarried adolescents: trends in substance use from adolescence to adulthood. *Journal of Adolescent Health,* 39**,** 237-43.
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Alcohol consumption not main outcome n = 8

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Total papers meeting inclusion criteria n = 5

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2. KOKKO, K., PULKKINEN, L. & MESIAINEN, P. 2009. Timing of parenthood in relation to other life transitions and adult social functioning. *International Journal of Behavioral Development***,** 356-356-365.
3. MALONEY, E., HUTCHINSON, D., BURNS, L. & MATTICK, R. 2010. Prevalence and patterns of problematic alcohol use among Australian parents. *Australian & New Zealand Journal of Public Health,* 34**,** 495-501.
4. STROUP-BENHAM, C. A., TREVINO, F. M. & TREVINO, D. B. 1990. Alcohol consumption patterns among Mexican American mothers and among children from single- and dual-headed households: findings from HHANES 1982-84. *American Journal of Public Health,* 80 Suppl**,** 36-41.
5. WATERSON, J., STERLING, S. & WEISNER, C. 2002. Women and alcohol in social context: mother's ruin revisited. *Addiction,* 97**,** 763-763-764.

Assessment tool:

Please circle Yes or No to the following questions. If answered Yes = 1, No = 0.

Study…………….....……………………………......Total score……………….

1. Did the study have a clear research focus?   Yes (1)   No (0)
   - Population/ exposure variables/ outcomes

2. Was an appropriate method used to answer the research question?
                                                        Yes (1)   No (0)
   - Did the method address the research question?

3. Was the population group recruited in an appropriate way?
                                                        Yes (1)   No (0)
   - Was the group representative of a particular population?
   - Was everyone included that should have been?
   - Was there anything unique about the population group?
   - Were participants allocated to groups in a particular way?

4. Was exposure bias minimised?   Yes (1)   No (0)
   - Were subjective or objective exposure measures used?
   - Have the measures used been validated?
   - Were all the subjects classified into the exposure groups using the same procedure?
   - Does the exposure of interest precede the outcome?

5. Was outcome bias minimised?   Yes (1)   No (0)
   - Were subjective or objective outcome measures used?
   - Have the measures used been validated?
   - Has there been a reliable system put in place to quantify the outcome?
   - Were the measures used to quantify the outcome the same in the different groups?
   - Were the subjects/ assessors blinded to the exposure variable and does this matter?

6. Have important confounding factors been identified in the design and/or analysis?   Yes (1)   No (0)
   List the ones you think might be important that were missed
   - Restriction in design and techniques e.g. modelling, stratified, regression, sensitivity analysis to correct, control or adjust for confounding factors

7. Was the follow up of subjects complete enough and long enough?

Yes (1)   No (0)

- Have the outcome effects had enough time to reveal themselves?

8. Is the analysis appropriate to the design?   Yes (1)   No (0)
   - What are the results of the study?
   - Have they reported the rate or the proportion between the exposed/unexposed, the ratio/ the rate difference?
   - How strong is the association between the exposure and outcome (OR, RR)?
   - What is the absolute risk reduction? (ARR)?

9. How precise are the results, have all the important variables been considered?
   - Size of the p-value   Yes (1) No (0)
   - Confidence intervals

10. Is the design and methodology of the study adequate and not flawed to such an extent that they make the results unreliable? Are the design and methods of the study flawed to such an extent that they make the results unreliable?

Yes (1)   No (0)

11. Is there a big effect?   Yes (1)   No (0)
    - Can it be due to bias, chance or confounding?

12. Can the results be applied to the local population?   Yes (1)   No (0)

13. Are the subjects the same as in your study population?

Yes (1)   No (0)

- Are the subjects covered in the study the same as sufficiently different from your population to cause concern?

14. Is the local setting the same as your study?   Yes (1)   No (0)
    - Does your local setting differ much from that of the study?

15. Can you quantify the local benefits and harms?   Yes (1)   No (0)

16. Do the results of this study fit with other available evidence?

Yes (1)   No (0)

EMBASE: 1980 to current – last searched 18/01/12 via Ovid interface. **HMIC** (Health Management Information Consortium): 1979 to November 2011 – last searched 18/01/12 via Ovid interface. **JOURNALS@OVID** (Full Text) – last searched 18/01/12 via Ovid interface. **MATERNITY AND INFANT CARE:** 1971 to current – last searched 18/01/12 via Ovid interface. **MEDLINE(R):** 1946 to current – last searched 18/01/2012 via Ovid interface. **PSYCINFO:** 1987 to current – last searched via Ovid interface. **SOCIAL POLICY AND PRACTICE** – last searched via Ovid interface.

1	(narrative$ or account$ or insight$ or context$ or transition$ or attitude$ ti,ab).m_titl	276740
2	social.m_titl	305111
3	analysis.m_titl	1138852
4	experience$.m_titl	441292
5	role$.m_titl	914717
6	assess$.m_titl	568927
7	implication$.m_titl	266539
8	expectation$.m_titl	20488
9	explorat$.m_titl	51578
10	construct$.m_titl	87383
11	evidence.m_titl	370837
12	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11	4250999
13	mother$.m_titl	99219
14	parent$.m_titl	178415
15	maternal.m_titl	129723

16	$mum.m_titl	1562
17	13 or 14 or 15 or 16	399850
18	poverty.m_titl	12940
19	domestic.m_titl	37565
20	li$e$.m_titl	8519
21	societal factor$.m_titl	47
22	stress.m_titl	322715
23	(advantage$ or disadvantage$).m_titl	34555
24	socio$economic.m_titl	21728
25	low income.m_titl	12651
26	marginalized.m_titl	621
27	constraint.m_titl	349
28	class.m_titl	104683
29	ideolog$.m_titl	5322
30	lone.m_titl	2338
31	single.m_titl	279058
32	alone.m_titl	34866
33	unequal.m_titl	2775
34	change.m_titl	167983
35	(identit$ or self).m_titl	320393
36	Feminin$	3296
37	18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35	1355606

38	12 and 17 and 36	4399
39	limit 37 to English language	4212
40	limit 38 to yr="1990 –Current"	3741
41	limit 39 to humans [Limit not valid in PsycINFO; records were retained]	3602
42	remove duplicates from 40	2323

Appendix 7 Ethnic group analyses

Main respondent's ethnic group - 6 category census classification (UK)	Freq.	Weighted %
White	7,048	89.2
Mixed	108	0.9
Indian	346	2.1
Pakistani and Bangladeshi	850	4
Black or black British	413	2.5
Other ethnic group (inc. Chinese)	197	1.3
Total	8,962	100

	Frequency					
	Never	**<1/wk**	**1-2/wk**	**3-4/wk**	**5-6/everyday/wk**	**Total**
All ethnic groups	2347 (17.6)	3228 (38.2)	2105 (26.7)	791 (10.8)	491 (6.8)	8962 (100)
White British	886 (11.5)	2917 (40.1)	1996 (28.9)	771 (11.9)	478 (7.5)	7048 (100)
Mixed	39 (28.7)	41 (40.3)	18 (16.7)	7 (11.6)	3 (2.6)	108 (100)
Indian	235 (61.7)	79 (26.4)	26 (10.2)	5 (1.6)	1 (0.1)	346 (100)
Pakistani & Bangladeshi	843 (98.5)	2 (0.5)	1 (0.4)	2 (0.5)	2 (0.2)	850 (100)
Black or Black British	213 (43.0)	140 (40.6)	49 (13.7)	5 (1.3)	6 (1.4)	413 (100)
Other incl. Chinese	131 (53.3)	49 (34.6)	15 (10.2)	1 (1.3)	1 (0.7)	197 (100)

Weighted % in brackets

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Appendix 8 Drinking frequency according to social background and current socio-economic and domestic circumstances
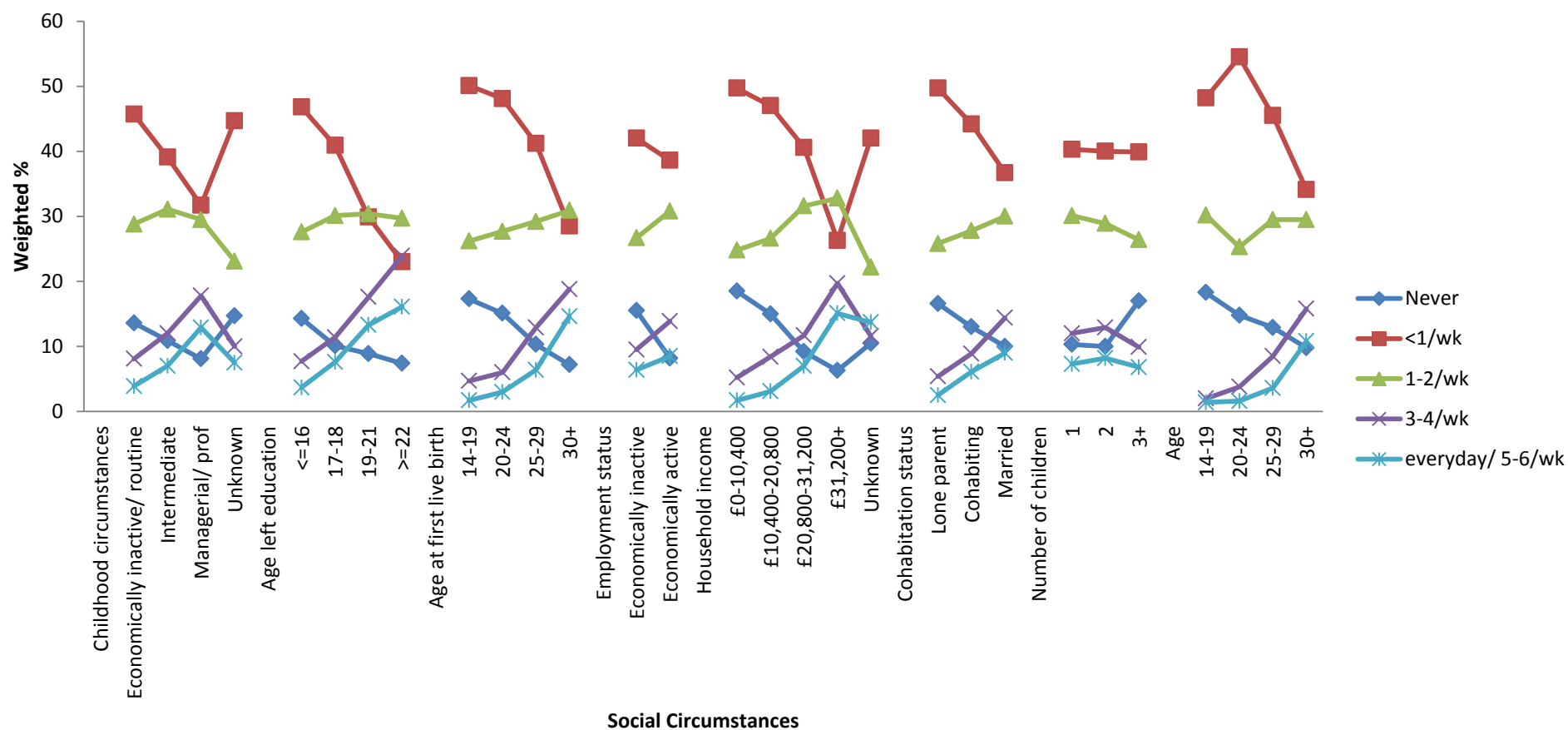
Appendix 9 Separate analysis for the daily quantity of alcohol use
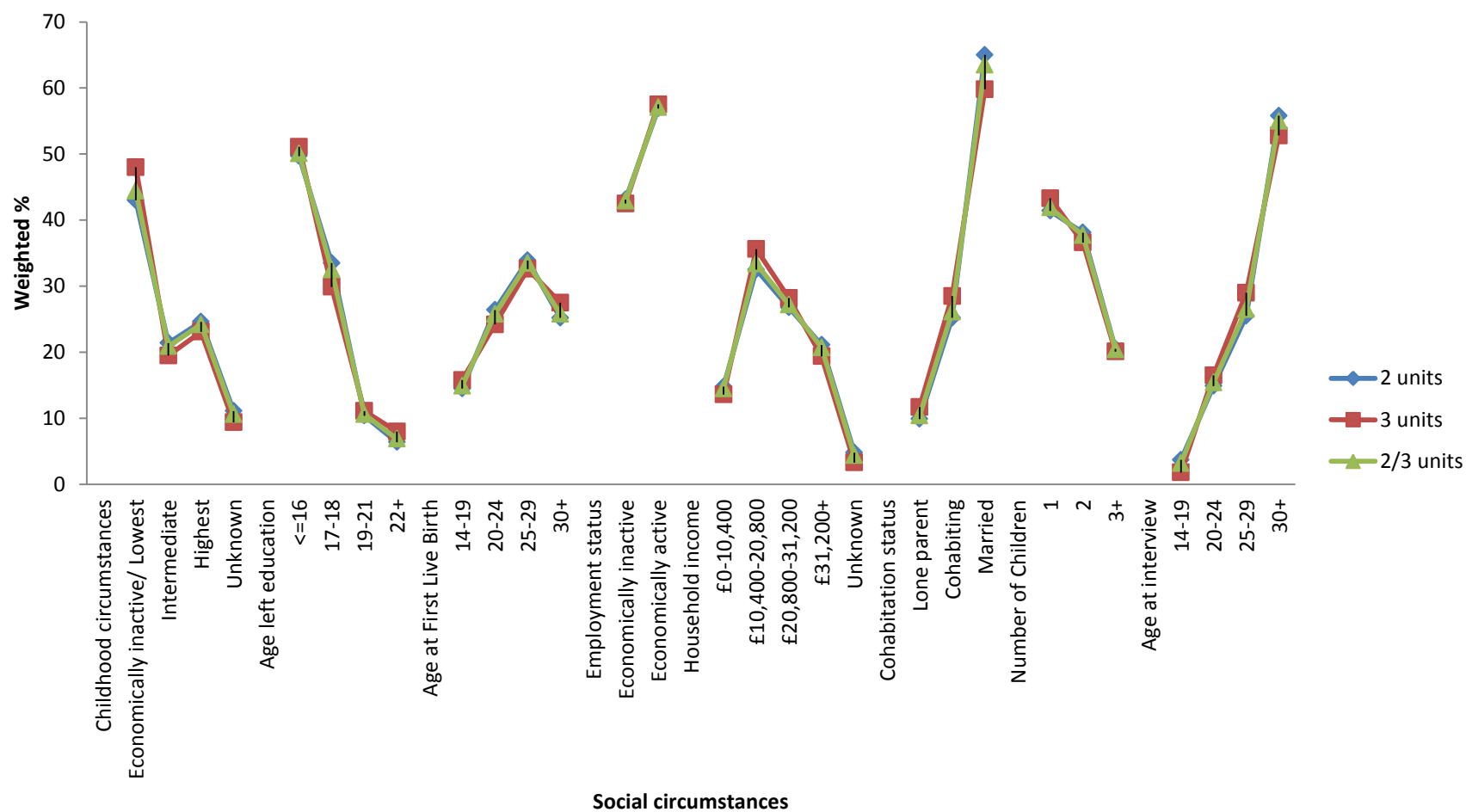
Appendix 10 Correlation matrix for waves 1 and 2

```
. pwcorr childsepfem ageleftedfem occfem houseincfem agebirth femrelation totsfem age, sig
```

	childs~m	agelef~m	occfem	housei~m	agebirth	femrel~n	totsfem
childsepfem	1.0000						
ageleftedfem	0.2983	1.0000					
	0.0000						
occfem	0.1283	0.1959	1.0000				
	0.0000	0.0000					
houseincfem	0.2303	0.3620	0.3332	1.0000			
	0.0000	0.0000	0.0000				
agebirth	0.2328	0.4078	0.2951	0.4576	1.0000		
	0.0000	0.0000	0.0000	0.0000			
femrelation	0.1807	0.2721	0.2518	0.4677	0.4366	1.0000	
	0.0000	0.0000	0.0000	0.0000	0.0000		
totsfem	-0.0643	-0.1451	-0.1743	-0.0441	-0.2372	0.0687	1.0000
	0.0000	0.0000	0.0000	0.0002	0.0000	0.0000	
age	0.1583	0.2617	0.2219	0.4004	0.6818	0.4430	0.2651
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	age
age	1.0000

```
. pwcorr w2childsepfem w2ageleftedfem w2occfem w2houseincfem w2agebirth w2femrelation w2tots
> fem w2age, sig
```

	w2chil~m	w2agel~m	w2occfem	w2hous~m	w2ageb~h	w2femr~n	w2tots~m
w2childsep~m	1.0000						
w2agelefte~m	0.2983	1.0000					
	0.0000						
w2occfem	0.1080	0.1757	1.0000				
	0.0000	0.0000					
w2houseinc~m	0.2303	0.3620	0.2696	1.0000			
	0.0000	0.0000	0.0000				
w2agebirth	0.2328	0.4078	0.2384	0.4576	1.0000		
	0.0000	0.0000	0.0000	0.0000			
w2femrelat~n	0.1698	0.2573	0.2164	0.4214	0.4061	1.0000	
	0.0000	0.0000	0.0000	0.0000	0.0000		
w2totsfem	-0.0300	-0.0713	-0.1918	-0.0065	-0.1938	0.1275	1.0000
	0.0118	0.0000	0.0000	0.5888	0.0000	0.0000	
w2age	0.1505	0.2515	0.2043	0.3907	0.6351	0.4256	0.2000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	w2age
w2age	1.0000

Appendix 11 Significant two-way interactions in wave 1 and 2

Frequent drinking (wave 1)

Main effect of childhood circumstances and employment status, and the interaction effect of childhood circumstances and employment status on frequent drinking (≥1/week) in wave 1*

	Employment status		
Childhood circumstances	**Economically active**	**Economically inactive**	
Highest	61.5	58.1	60.2
Intermediate	54.4	44.1	50.0
Lowest/economically inactive	46.3	35.2	40.8
unknown	47.7	35.2	40.6
	53.2	42.5	

Red = Main effect

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

Main effect of age at first birth and cohabitation status, and the interaction effect of age at first birth and cohabitation status, on frequent drinking (≥1/week) in wave 1*

	Cohabitation status			
Age at first birth	**married**	**cohabiting**	**lone parent**	
30+	65.4	65.1	33.1	35.7
25-29	50.4	46.3	27.0	48.5
20-24	40.7	32.5	35.3	36.7
14-19	28.6	34.0	34.2	32.6
	53.4	42.7	33.7	

Red = Main effect

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

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Main effect of age at first birth and number of children in household, and the interaction effect of age at first birth and number of children in household, on frequent drinking (>1/week) in wave 1*

	Number of children in household			
Age at first birth	3+	2	1	
30+	29.3	66.3	62.0	35.7
25-29	49.1	50.6	45.9	48.5
20-24	37.7	37.0	35.6	36.7
14-19	28.9	33.6	35.0	32.6
	43.1	50.0	49.4	

Red = Main effect

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

Frequent drinking (wave 2)

Main effect of cohabitation status and employment status, and the interaction effect of cohabitation status and employment status, on frequent drinking (>1/week) in wave 2*

	Cohabitation status			
Employment status	married	cohabiting	lone parent	
Economically active	57.3	50.3	56.2	55.2
Economically inactive	52.9	37.3	34.7	45.5
	55.7	44.2	42.4	

Red = Main effect

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

Age at first birth and number of children

See wave 1

Infrequent moderate drinking (wave 1)

Main effect of age left education and age at first birth, and the interaction effect of age left education and age at first birth, on infrequent moderate drinking (>1 unit/day, <1/week) in wave 1*

	Age left education				
Age at first birth	**>=22**	**19-21**	**17-18**	**<=16**	
30+	40.5	45.3	52.4	59.1	52.1
25-29	48.3	56.5	54.1	60.8	56.8
20-24	66.2	57.2	59.8	59.0	59.1
14-19	94.5	54.8	62.7	62.3	62.4
	46.1	53.2	56.0	60.5	

Red = Main effect

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

'Risky' alcohol use (wave 1)

Main effect of age left education and age at first birth, and the interaction effect of age left education and age at first birth, on 'risky' alcohol use

	Age at first birth				
Age left education	**30+**	**25-29**	**20-24**	**14-19**	
>=22	2.8	7.6	11.8	2.9	5.0
19-21	2.4	11.0	15.4	24.7	8.1
17-18	5.7	10.0	17.6	25.4	11.6
<=16	10.9	17.9	21.2	28.1	20.4
	5.8	12.9	19.3	27.4	

Red = Main effect

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

Main effect of age left education and number of children in household, and the interaction effect of age left education and number of children in household, on 'risky' alcohol use

	Number of children in household			
Age left education	3+	2	1	
>=22	0.2	4.1	6.7	5.0
19-21	6.4	7.2	9.2	8.1
17-18	10.4	9.7	13.8	11.6
<=16	17.4	21.3	21.5	20.4
	13.4	14.0	15.2	

Red = Main effect

* Mutually adjusted for childhood circumstances, education, employment status, household income, age at first birth, cohabitation status, number of children living in the household, and age.

What happens next?
If you would like to discuss the study before deciding to take part, then please contact me or send an email (see below).

If you want to take part, please sign the consent form and include a current email address or phone number that you are happy for me to contact you with.

Thank you

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THE UNIVERSITY *of York*

— DEPARTMENT OF —
HEALTH SCIENCES

Mother's lives and drinking habits

Information for participants

Version: 1

October 2010

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We are inviting you to take part in a group discussion that forms part of a PhD research project. Your decision to take part is entirely voluntary. If you do not wish to take part, this will not affect you in any way. If you agree to take part you can withdraw from the study at any time and do not have to give a reason.

Why are you asking me to take part in this study?
We are interested in women's experiences of parenthood and how it impacts on women's lives. We want to investigate whether becoming a parent changes the working, home and social lives of women, and if so how this affects their alcohol use. In particular, their beliefs about alcohol and their resulting drinking patterns. Little is known about how parenthood affects women's lives and their subsequent alcohol use. Therefore, increasing our understanding may help policy makers who are working towards improving women's health.

What will be involved if I agree to take part in the study?
If you agree to take part you will be sent details of the focus group venue, time and date you should attend. During the group discussion you will be asked to talk about key topics relating to parenthood and alcohol in a group of between 4 and 6 women with pre-school aged children who attend the same childcare provider. The discussion will be tape recorded and two researchers will be present to take notes and facilitate the discussion. This should take approximately 1-1 ½ hours, and refreshments will be available throughout the session.

Who will have access to the information I provide?
Recorded discussions will be stored in a locked drawer on secure premises at the University of York. Any transcribed material will password protected, accessible only to the researcher. Any information you provide is confidential. Any quotations used in future publications will be anonymised so that you cannot be identified. If you wish to withdraw after the group discussion has taken place your comments will still be used as data.

Where is the study taking place, and for how long?

The study will take place at a familiar venue. The group discussion will last approximately 1-1 ½ hours.

What will happen with the information you gather?
We will not share anything you have told us with anyone else, without your permission. However, during the group discussion you may mention something which suggests your child has been, or is, at risk of harm. If so, we are able to suggest sources of support, but may also have to inform the appropriate authorities after discussing this with you. We aim to publish the study in journals so that the results are disseminated to a wider audience. No names or childcare providers will be mentioned in any publications and care will be taken so that individuals cannot be identified in reports of the results of the study.

What are the benefits of taking part?
It may benefit policy makers wanting to develop targeted health intervention programs. A £10 voucher will be provided to each participant that attends the focus discussion.

THE UNIVERSITY *of York*

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HEALTH SCIENCES

CONSENT FORM FOR PARTICIPANTS

Title of Project: Mother's lives and drinking habits

Name of Researcher: Sarah Baker

Please Initial Box

1. I confirm that I have read and understood the information sheet dated October 2010 (Version: 1) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

3. I agree to take part in the above study

4. I agree to you contacting me to confirm the venue/time/date of the group discussion by telephone or email

Preferred telephone/ email address…………………………………….

Preferred day/ time for group discussion (please tick all that apply)

	Monday	Tuesday	Wednesday	Thursday	Friday
9-11am					
1-3pm					
7-9pm					

Name   Date   Signature

……………………………………………………………………………….

Name of Person   Date   Signature
Taking consent

……………………………………………………………………………·

Appendix 14 Topic guide for focus group discussion

Group discussion 1-1 ½ hours

Welcome/ introductions (5 minutes)

- Provide name badge and point out refreshments (available prior to focus group discussion)
- Welcome (check consent/ understanding/ confirm timings)
    o Reiterate participant information
    o Any Q's relating to session
- Ground rules

    o Participation is voluntary. You can leave the group at any time.

    o Only first names will be used and you may use an alias if you prefer.

    o I will ensure that all participants have a chance to talk.

    o I will be sensitive to any signs of distress and arrange follow up support if necessary or appropriate.

    o You should respect each other's privacy and not repeat what you hear during the group, outside the group.

    o You should respect each other's contributions and not interrupt or talk over other participants.

- Shall we start by saying who we are?

Group task 1 (15 minutes)

Context of motherhood:

Becoming a mother is a significant event in any woman's life. Please help me write down the things that have changed in your lives, positive and negative as a result of becoming a mother.

Now work together and list these changes in order of those that have had the biggest impact on your life. List the biggest impact first.

Prompts for general discussion (40 minutes)

Context of motherhood:

In terms of your home life………..

1. Who does the domestic chores within your household?
    a. Why?
2. Do you have any help with domestic chores?
    a. If no, why?
    b. If yes, who?
3. Who has the childcare responsibilities within your household?
    a. Why?
4. Do you have any help with childcare?
    a. If no, why?
    b. If yes, who?
5. Do you have regular leisure time?
    a. If no, why?
6. How do you spend your leisure time?
    a. Who
    b. What
    c. Where
7. How would you like to spend your leisure time?
    a. Who
    b. What
    c. Where

Perceptions of alcohol use:

Now I want you to take a look at some pictures of women drinking alcohol. I'm not interested in your own alcohol intake, rather your views on the images you see.

Pictures of mothers drinking (P1)

1. What do you think about these images?
2. Is it a concern?
3. Are there any implications?
4. Who do you think drinks like this?

Picture of mothers drinking in a family situation with young children present (P2)

1. What do you think about this?
2. Is it a concern?
3. Are there any implications?
4. Who do you think drinks like this?

Comparison between pictures of mothers out drinking and mothers drinking in a family situation with young children present (P1 & P2)

1. How do the images on the two slides compare?

Perceptions of alcohol use and influences on alcohol use in the context of motherhood:

I'm now going to show you a number of drinking diaries that reflect the different drinking patterns of mothers with pre-school aged children. Using your own experiences as mothers of pre-school aged children I want you to consider what might have influenced their drinking patterns.

Diary of a mother who never drinks alcohol (P3)

1. What are your immediate thoughts?
2. What do you think influences a mother to drink in this pattern?

Diary of a mother who drinks small quantities of alcohol every day (P4)

1. What are your immediate thoughts?
2. What do you think influences a mother to drink in this pattern?

Diary of a mother who drinks greater quantities of alcohol less frequently (binge drinking) (P5)

1. What are your immediate thoughts?
2. What do you think influences a mother to drink in this pattern?

Diary of a mother who is a 'risky' drinker i.e. drinks greater quantities of alcohol frequently (above daily recommendations) (P6)

1. What are your immediate thoughts?
2. What do you think influences a mother to drink in this pattern?

- My approach to the focus group discussions:

The focus group discussions were planned for 2 groups of mothers, those who were advantaged and those who were disadvantaged according to their postcodes (IMD score). A gatekeeper was employed to recruit eligible mothers and to effectively provide a link between myself and the research participants. This method appeared to work well. However, it meant having to relinquish some of the control I had in relation to the recruitment process and this resulted in the inclusion of two research participants that were not strictly eligible for the study. On reflection, I could have perhaps made it clearer to the gatekeeper what the eligibility criteria were and, had time allowed, I could have checked the participants were all suitable prior to the commencement of the focus groups.

Within the epistemological position of interpretivism, impartiality is not possible or, indeed, valued. I had a several prior expectations having read the research literature and having been exposed to media portrayals of who was, and who was not, likely to engage in problematic alcohol use. In this regard, it was my assumption that disadvantaged mothers would drink more alcohol and drink in ways that would be considered problematic. However, the reasons behind any such patterns I could not fully articulate and this was the main aim of the focus group discussions – to illuminate the ways in which advantaged and disadvantaged mothers' social and domestic circumstances influenced their patterns of alcohol consumption.

My approach to the focus group discussions was to ask mothers about their perception of maternal alcohol use as opposed to asking them about their own patterns of alcohol use. This was due to the fact that I was concerned that mothers would be reluctant to discuss such a contentious issue with someone whom they might associate with an official authority. Similarly, ethical discussions I had had in relation to my research had suggested that this might be the preferred approach. In retrospect, what became apparent was that the mothers themselves were happy to discuss their own patterns of alcohol use and did so the majority of the time in order to articulate their arguments. This may or may

not have been as a result of the mothers knowing that I was also a mother and perhaps feeling that I would understand some of their experiences. Indeed, it was a conscious decision that I made on commencing the focus groups to tell the participants that I was a mother of two young boys. I did so in an attempt to align myself with the research participants, to become 'integral' to the group. I felt that mothers had taken this on board during the focus groups with subtle glances in my direction as if they were attempting to include me in the discussion some way.

Alternatively, the fact that mothers knew I was a parent myself may have made them less likely to disclose information that they perceived portrayed them in a negative way, for fear of being judged. Similarly, the disadvantaged group of mothers may have viewed me as someone who was not socially disadvantaged and therefore, someone that could not appreciate their experiences of motherhood and whom might be dismissive of them. This was not something that I could escape, therefore, I made every attempt to encourage mothers to express themselves and feel that their points were valid.

- What I learnt from the focus group discussions:

The focus groups proved to be a valuable means of collecting data on mothers' patterns and perceptions of alcohol use. However, it proved important to encourage mothers to take part in a short exercise in order to orientate them with the format of the focus group discussions. I realised early on that one cannot assume that research participants know how to behave during focus groups and may at first be reticent about leading the discussion. Once they felt comfortable to do so, I learnt that mothers were willing to discuss very personal issues. Some of which I found affected me emotionally in ways that I had not fully anticipated. I think that this is one of the benefits of having individuals taking part in a focus group who are either known to one another or whose circumstances are very similar to one another. Nevertheless, it cannot be assumed that participants will be willing to disclose personal information about themselves. My approach involved asking them about their perceptions of maternal alcohol use in general

and provided a useful avenue with which to invite mothers to talk about their own alcohol use without feeling pressured into doing so.

Whilst carrying out the focus groups I learned how powerful images can be as a means of facilitating discussion. The images appeared to evoke insightful responses from the mothers who took part and enabled them to interpret what they saw according to their own lived experiences. Furthermore, they encouraged lively discussion and generated a lot of interest from the participants.

- What problems I encountered during the focus group discussions:

A number of issues occurred in relation to the recruitment of participants. As with any primary research it is difficult to know how long the recruitment process is likely to take and whether sufficient participants will be recruited. As described earlier, I employed a gatekeeper to aid the recruitment process and this worked well. However, relinquishing control meant that a number of the research participants were not strictly eligible and this did not become apparent until the actual focus group session. However, this did not prove to be too problematic since most of the mothers referred to their experiences of early motherhood regardless of how old their children were.

Another challenging aspect of the focus group discussions was effectively managing the different personalities within each group. It was important that the data I obtained during the focus group discussions reflected all of the mothers' patterns and perceptions of maternal alcohol use. In a number of instances, I had to divert the groups' attention from the more dominant voices in the room and help facilitate the quieter members of the group being heard. I did so in what I would consider a sensitive way, drawing upon skills I had learnt working in large discussion groups as a clinical practitioner.

A perhaps unexpected challenge was that mothers in the disadvantaged group had to bring along their children in order to take part in the focus groups. Had I had the financial means it would have been beneficial to have some form of child care for the children since there were a number of interruptions during the discussion and the children were inevitably a distraction for the mothers taking

part. In addition, my colleague who was taking notes on the group interactions and more subtle indications from mothers with regards to how they perceived maternal alcohol use effectively became a child minder, and some information is likely to have been lost as a result.

- How I perceive the focus group discussions may or may not be useful to me in the future:

I think that the experience of having conducted focus groups will prove useful in the future. I am confident that provided focus groups are planned well in advance they are a useful means with which to collect data on subjects that may be considered sensitive and emotive. Focus groups are extremely valuable for examining a phenomenon in context by exploring how participant's lived experiences may influence that phenomenon. With this in mind, I believe it was the right decision to conduct separate focus groups on the grounds of social circumstances and feel that had mothers not been amongst individuals similar to themselves the discussion may not have been as successful. Furthermore, I would advocate the use of images during focus group discussions since they proved useful in generating lively discussion and provided mothers with a point of reference upon which to articulate their points of view.

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