

National Child Development Study
User Support Group

Working Paper
No 4

*
* A LONGITUDINAL STUDY OF ALCOHOL CONSUMPTION *
*
* AMONGST YOUNG ADULTS IN BRITAIN *
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* I Alcohol Consumption and Associated Factors in Young *
* Adults in Britain *
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by

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National Child Development Study User Support Group Working Paper Series

This Working Paper is one of a number, available from the National Child Development Study User Support Group, which report on the background to the Study and the research that has been based on the information collected over the years. Other Working Papers in the series are listed below.

No.	Title	Author(s)	Date
1.	The National Child Development Study: an introduction to the origins of the Study and the methods of data collection	P. Shepherd	October 1985
2.	Publications arising from the National Child Development Study	NCDS User Support Group and Librarian, National Children's Bureau	October 1985
3.	After School: the education and training experiences of the 1958 cohort	K. Fogelman	October 1985
4.	A Longitudinal Study of Alcohol Consumption Amongst Young Adults In Britain: I Alcohol consumption and associated factors in young adults in Britain	C. Power	December 1985
5.	A Longitudinal Study of Alcohol Consumption Amongst Young Adults In Britain: II A national longitudinal study of Alcohol consumption between the ages of 16 and 23	M. Ghodsian and C. Power	December 1985
6.	A Longitudinal Study of Alcohol Consumption Amongst Young Adults In Britain: III Childhood and adolescent characteristics associated with drinking behaviour in early adulthood	M. Ghodsian	December 1985

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Working Papers 4,5 and 6 report on drinking behaviour, in particular heavy drinking, among young adults in Britain. Data from the National Child Development Study are used to explore: the personal, social and economic characteristics of young adults in relation to alcohol consumption (Working Paper No. 4); the relationship between alcohol consumption during adolescence (age 16) and early adulthood (age 23) (Working Paper No. 5); and alcohol consumption in early adulthood and its associations with a wide range of characteristics during childhood and adolescence (Working Paper No. 6).

The first paper covers a stage in the life cycle during which important social transitions, such as marriage and starting work occur. Alcohol consumption during this period has attracted considerable interest and several influences on drinking behaviour have been suggested. Many of these suggestions are represented in the first and second papers, whereas, there are no known previous studies of childhood factors and the approach adopted in the third paper was to cover as wide an area of individual and social experience as possible.

It is evident from these analyses that heavy drinking during early adulthood is associated with a wide range of social, economic and personal characteristics. There are, however, several main themes which have emerged. Of those characteristics examined in the first paper, marital status and equivalent net weekly income in particular, were associated with heavy drinking for both sexes. Whereas, other associations for women included partnership history and depression, and, for men, economic status and number of job changes. In the second paper, longitudinal analysis of the data showed that those who drank most and more frequently at 16 were the most likely to drink heavily at 23. This was consistent with one of the main findings in the third paper which showed that young men and women who took part more frequently in extrovert activities, such as party-going and sports, were most likely to be heavy drinkers at 23. Interestingly, neither deviant behaviour, nor measures of social disadvantage during childhood and adolescence were uniquely associated with heavier drinking later on.

It is important to point out, however, that it has not been possible to combine these analyses given the short length of this project and this could be done in a future analysis thereby producing a more comprehensive picture. Other areas which are not covered in this report, which are of topical interest and which would be possible using these data include:-

- a) A comparison of those who drank relatively more than their peers at 16 and who subsequently became heavy drinkers at 23 with those who did not. Also, a comparison of those who drank little at 16 and who consequently became heavy drinkers at 23 with those who did not.
- b) A comparison of those reporting similar consumption levels but who reported different numbers of alcohol-related problems (for example, health, accidents, marital breakdown), according to their drinking patterns and personal and social characteristics.

We are grateful to the Alcohol Education Research Council for their financial support, to Mr. Dougal Hutchison for statistical advice and Mr. Ken. Fogelman for his valuable help.

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Introduction.

Alcohol consumption peaks during the late teens and early adulthood (Wilson, 1980) and heavy drinking during this period is regarded with concern because of the size of the problem and the social and economic costs incurred (Blane, 1979; DHSS, 1981; Bruun et al, 1975). Explanations of problem drinking among young people have focussed on the psychosocial aspects of the development process (Donovan and Jessor, 1980). Similarly, drinking problems later in life, particularly alcoholism, have also been related to psychological predisposition (Barnes, 1979). However, epidemiological studies have related heavy drinking and the prevalence of alcoholism to per capita consumption (Ledermann, 1964; Kendell, 1979; Paton, 1985) and despite criticisms of this approach (Miller and Agnew, 1974; Duffy, 1977) empirical studies have lent support to the basic hypothesis (Cartwright et al, 1977; Kendell et al, 1983).

There have been few attempts to integrate the different types of explanations of heavy drinking in any single study, although the need to do so has been recognised (Edwards, 1984; Cartwright and Shaw, 1978). In relation to the problem of heavy drinking amongst young adults the aim of the present study was, therefore, to examine a combination of personal, social and economic characteristics and alcohol consumption in a large nationally representative sample.

Method

The study sample

The data used are from the National Child Development Study (NCDS). This study has its origins in the Perinatal Mortality Survey which was designed to examine the social and obstetric factors associated with stillbirth and death in early infancy (Butler and Alberman, 1969). The subjects were all the children born in the week 3-9 March 1958, and resident in England, Scotland and Wales. Information was obtained on an estimated 98 percent of the total births - about 17,000 children. The sample has been followed up at the ages of 7, 11, 16 (Davie et al, 1972; Fogelman, 1983) and 23. Immigrants to Britain born during the same week were incorporated at each sweep of the survey except at age 23.

The present analysis is based on information obtained from a highly structured interview with the individual respondents at age 23, although previous analyses of childhood and adolescent factors were based on information from parents, teachers and medical officers, in addition to the individuals themselves (Ghodsian, 1985).

Non-response

The response rate in the sample as a whole has been documented previously (Fogelman, 1983), although this does not cover response bias at age 23. Up to age 16, the response had been high although such attrition as there had been tended to be from those with somewhat more disadvantaged

backgrounds. Unpublished non-response analyses at 23 show that this trend has continued (Iyer, 1984). The representativeness of the sample between 16 and 23 has been examined specifically in relation to alcohol drinking (Ghodsian and Power, 1985). Comparing respondents and non-respondents at 23 in terms of their self-reported drinking at age 16 there was an under-representation of those who had never drunk (the percentage bias* was 9%) and those who had not had a drink in the preceding 12 weeks (4%). Conversely, there was an over-representation of those who had had a drink two to four weeks ago (2.8%), those who drank five to eight weeks ago (1.6%) and those who drank during the last week (0.7%). Thus, those who drank more recently at 16 were generally over-represented in the sample at 23 and those who drank less recently under-represented.

Data on alcohol consumption

At age 23, respondents reported their usual frequency of drinking and how much they had consumed in the preceding week (the questions are given in Appendix A). Since drinking habits were likely to be atypical at Christmas time, respondents were excluded from these analyses if they were interviewed during this period, taken here as covering three weeks. For those who were included in the study and who had drunk alcohol in the preceding week, the total number of alcohol units were calculated. (A unit of alcohol is half a pint of beer or one measure of spirits or a glass of wine).

* Percentage bias was calculated as the ratio of observed over expected values minus 1, expressed as a percentage.

Other information obtained at 23

The information collected at age 23 was by personal interview. Interviews lasted an average of 90 minutes and covered many aspects of the respondents' lives, such as education, employment and their family relationships. The information collected referred both to current circumstances and to the period between the ages of 16 and 23 for example, current employment status and past employment history. It is not possible here to give details of all of the information collected and only the variables used in the present analysis are defined in Appendix B. The variables included were: marital status, family composition, history of a relationship breakdown, social class, net equivalent weekly income, housing tenure, economic status, number of jobs since leaving full-time education, level of qualifications and the Malaise Inventory score.

Analysis of the data

Alcohol consumption (in units) has not been used as a continuous variable in the present analysis, since this may disguise underlying non-linear relationships and interest here lies in a particular group of drinkers, that is, those who drank heavily. Furthermore, non-drinkers were treated as a separate group (there is no basis for assuming that non-drinkers are part of a drinking continuum) and division of the drinkers into separate categories made it possible to include drinkers and non-drinkers in the same analysis. Three categories of drinking used previously (Ghodsian and Power, 1985) and which are comparable with other studies (Wilson, 1980; Kendell et al, 1983) have been used in this analysis. Women were categorised as light drinkers if they consumed 0 to 5 units of alcohol in

the previous week; medium drinkers had 6-35 units and heavy over 35 units. Men were defined as light drinkers if they had consumed 0-10 units; medium 11-50 and heavy more than 50 units.

Data analysis was in two stages and this is reflected in the presentation of the results. The first stage consisted of simple cross-tabulations and statistical comparisons using the Chi-squared test, in order to identify variables which had a univariate relationship with drinking. The second stage involved multivariate analysis for which it was necessary to select a method which would allow for the multi-category nature of the dependent variable and for the many non-linear relationships identified in the first stage of analysis. The program 4F in BMDP (Dixon et al, 1983) was selected as appropriate for these requirements.

Results

Table 1 shows the distribution of alcohol consumed in the preceding week for men and women separately, at age 23. These data have been described in more detail (Ghodsian and Power 1985) but are included here since they provide the distribution on which subsequent figures and tables are based.

Simple associations with drinking at 23

It is apparent from Figures 1 to 10 that respondents in the four drinking groups differed from each other according to many personal, social and economic characteristics. The direction of these differences was generally consistent for both sexes, although there were few variables which differentiated the male abstainers compared with several amongst the women. Comparisons of the proportion of respondents in each of the drinking categories were made for each variable separately and the

Figure 1 Drinking and marital status
a) Women

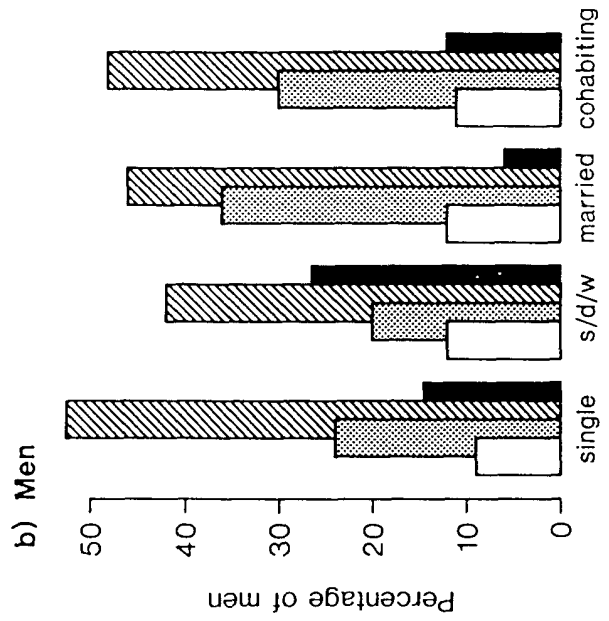
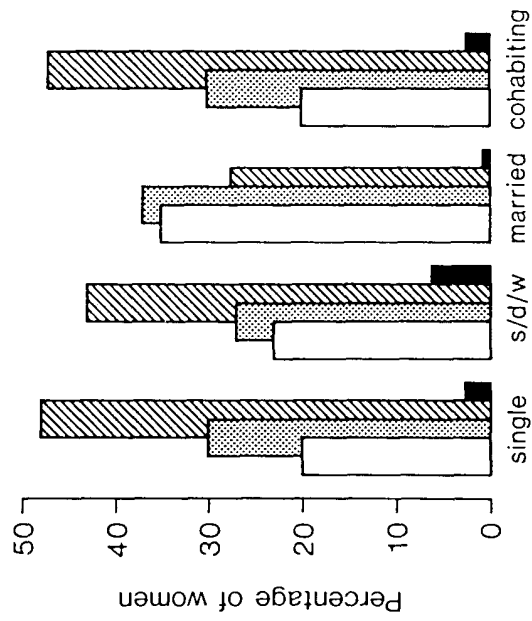


Figure 2 Drinking and parenting
a) Women

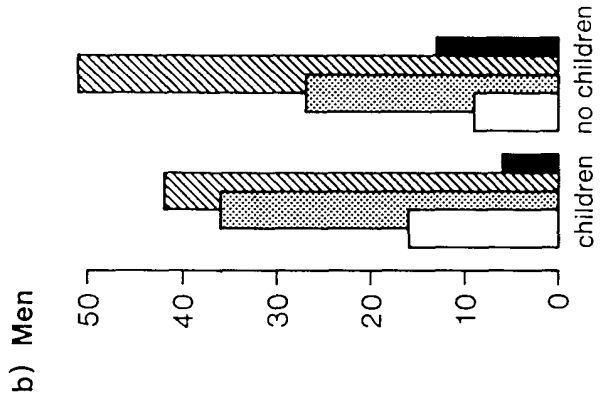
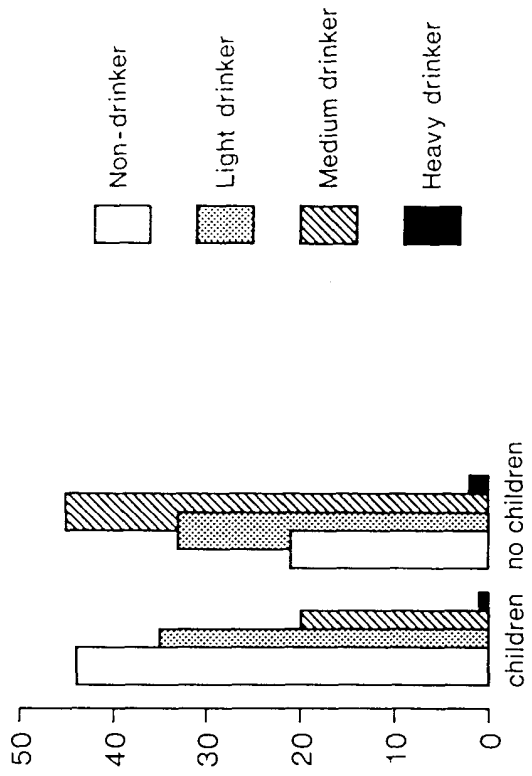


Figure 3 Drinking and relationship history

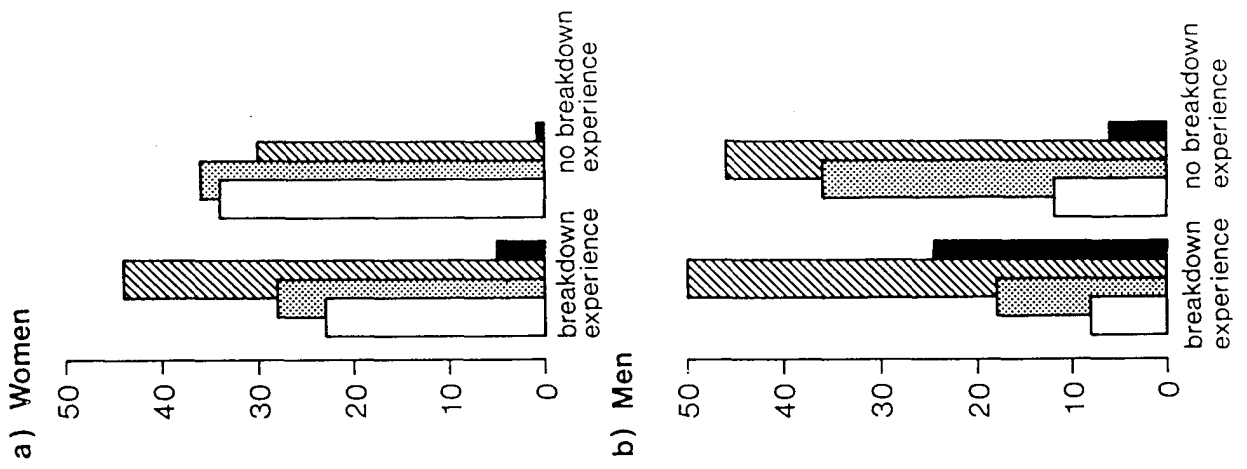
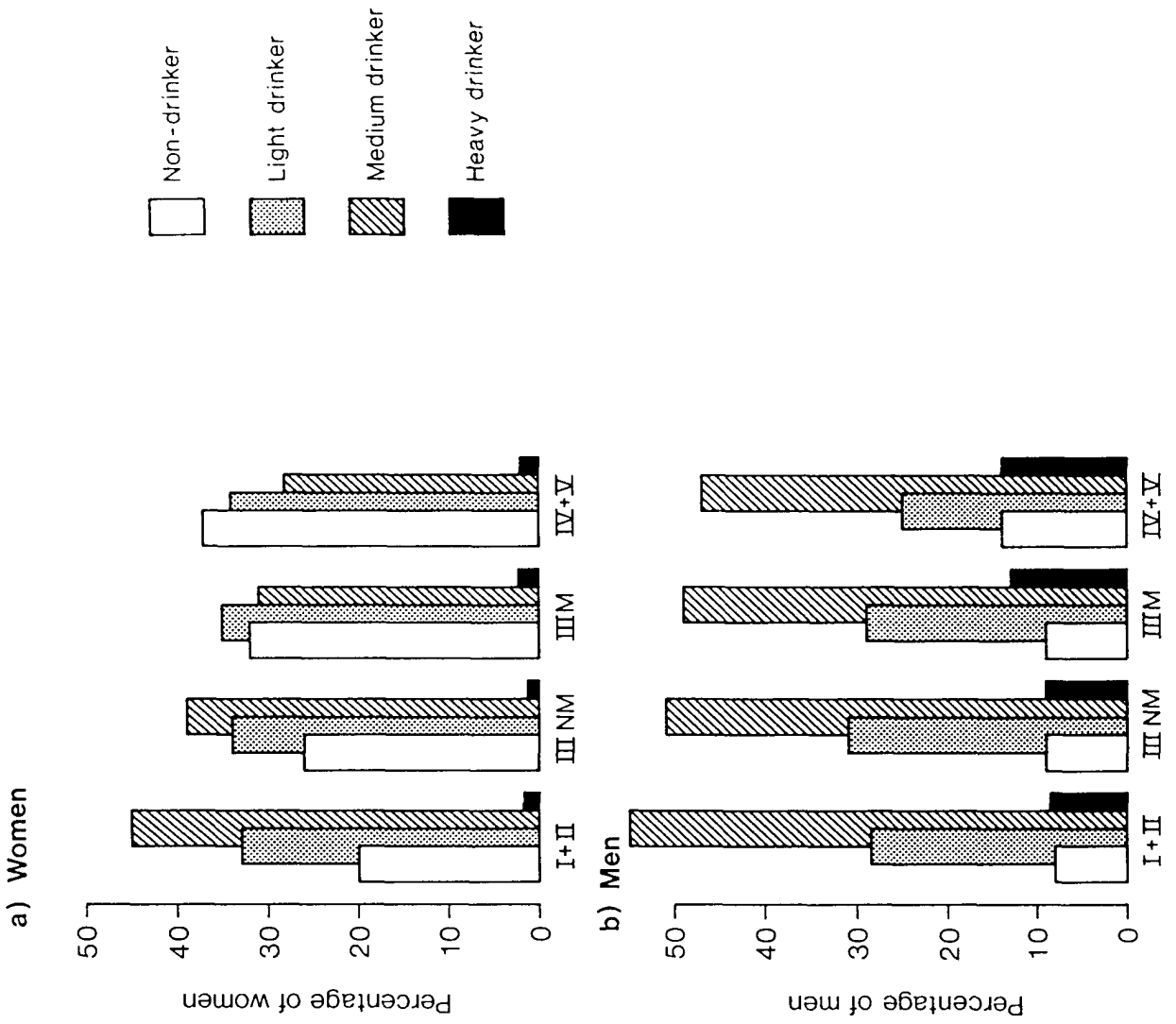


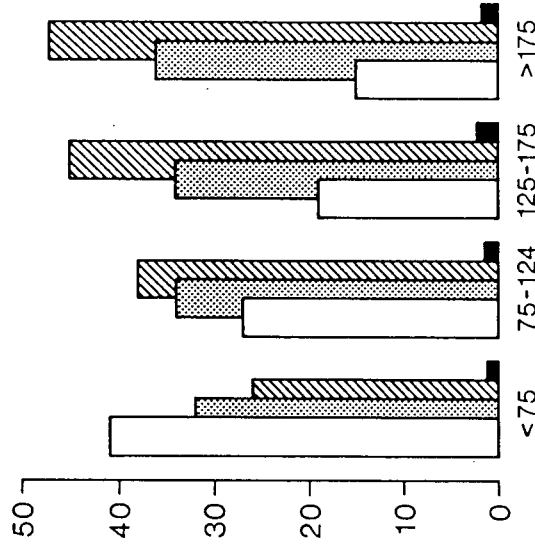
Figure 4 Drinking and Social Class



Non-drinker
 Light drinker
 Medium drinker
 Heavy drinker

Figure 5 Drinking and income (£/week)

a) Women



b) Men

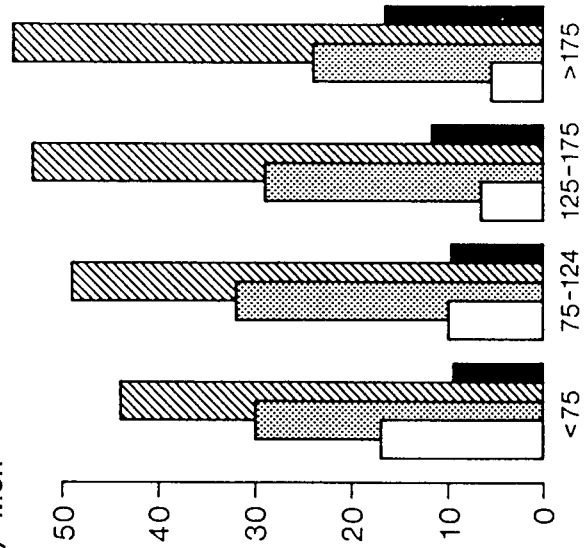
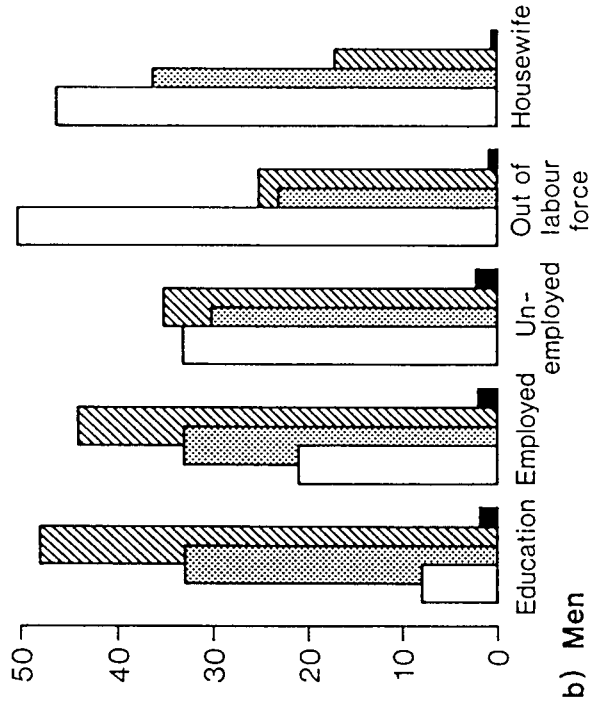


Figure 6 Drinking and economic status

a) Women



b) Men

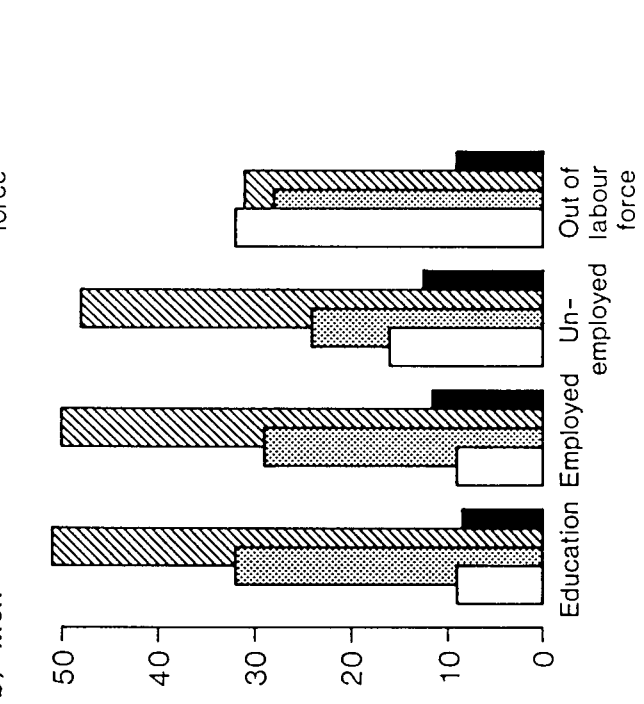


Figure 7 Drinking and job changes since leaving full-time education

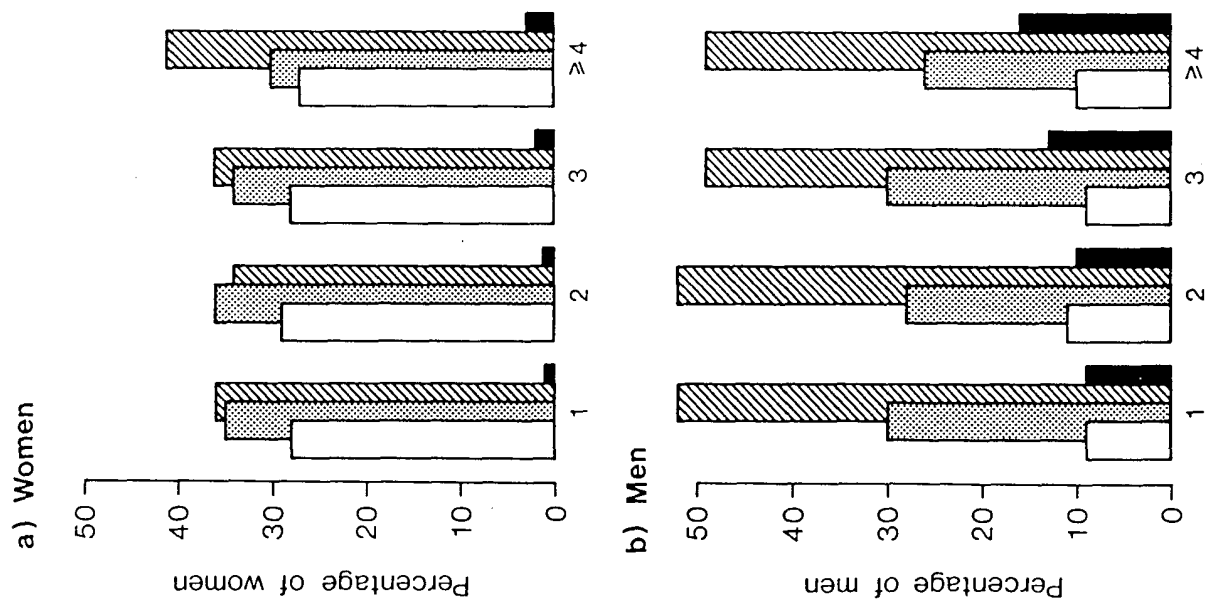


Figure 8 Drinking and housing tenure

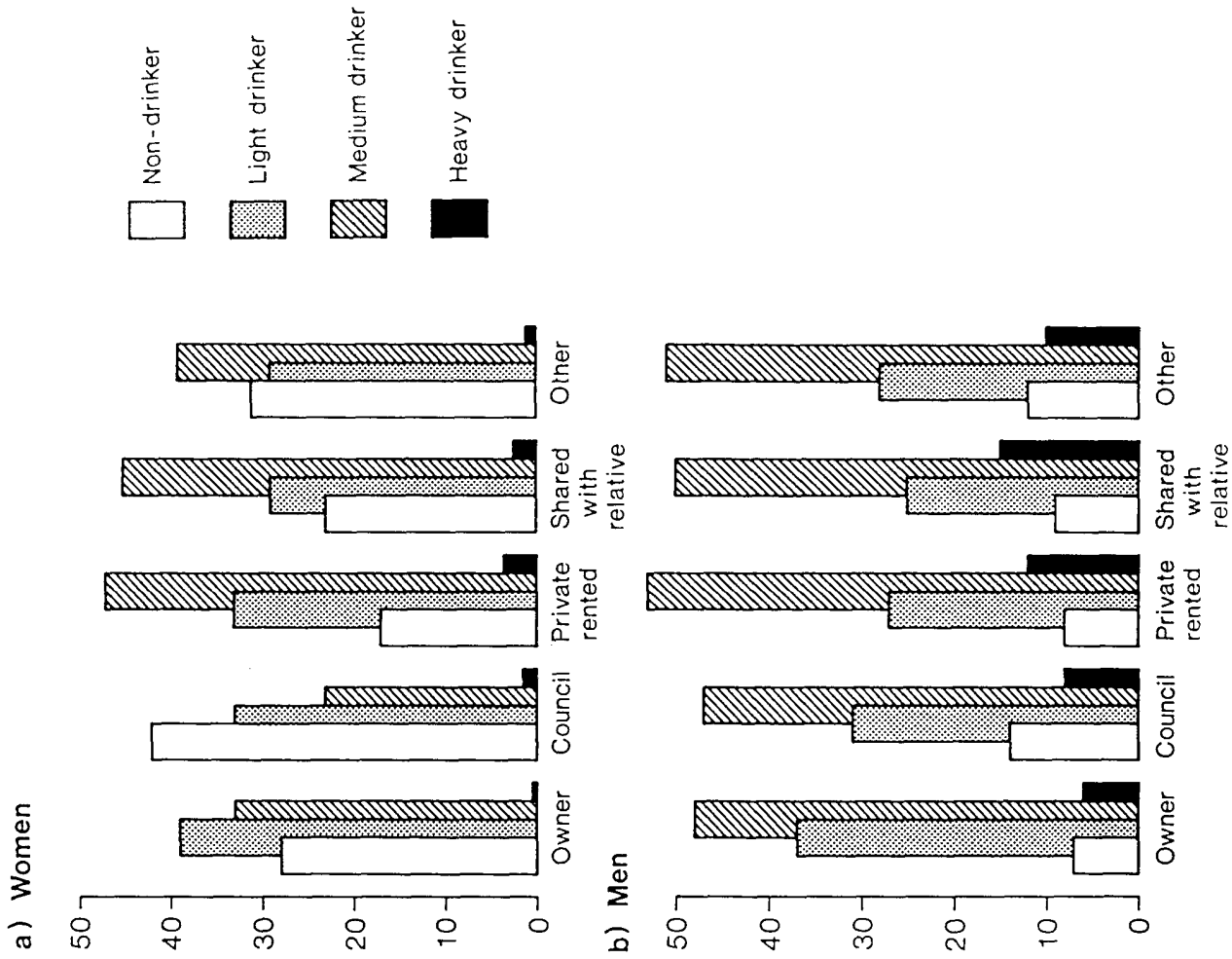


Figure 9 Drinking and level of qualifications

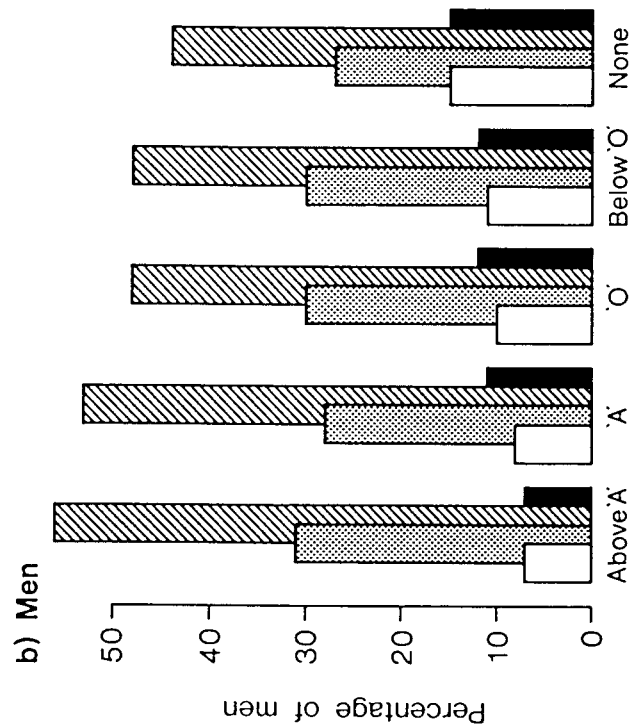
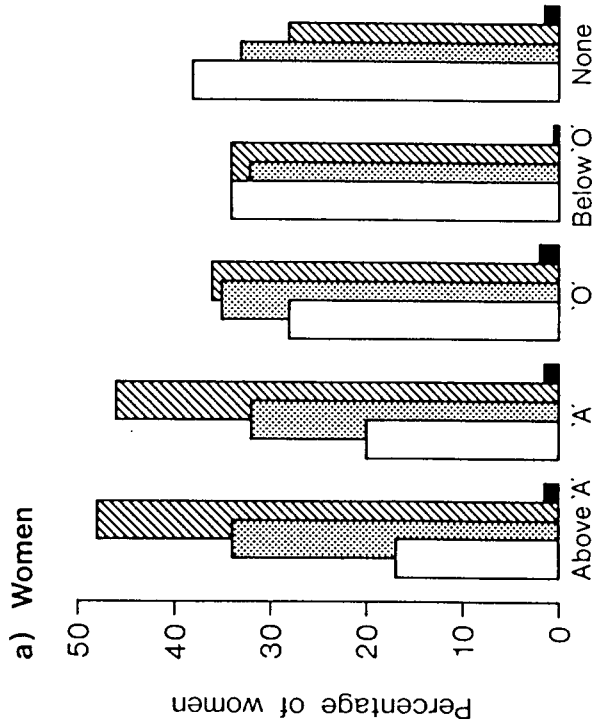
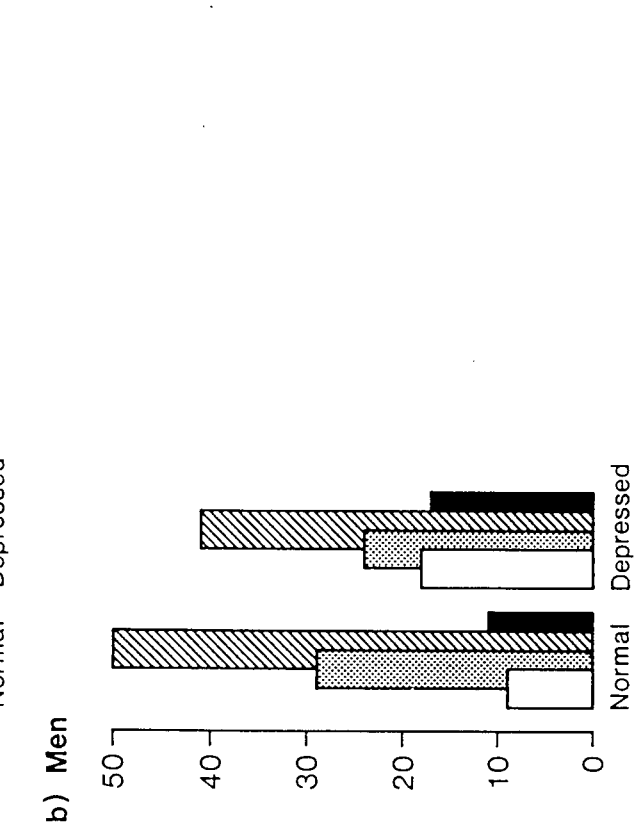
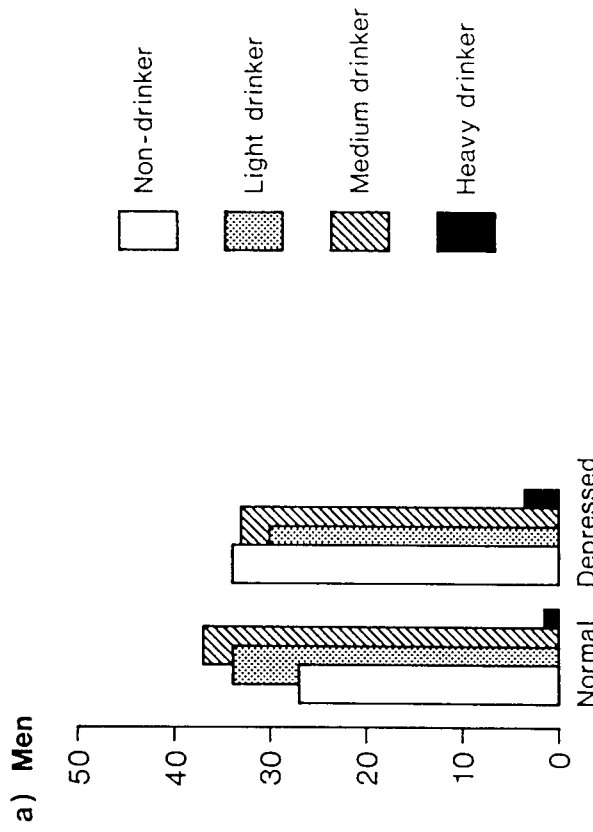


Figure 10 Drinking and emotional state



Non-drinker
 Light drinker
 Medium drinker
 Heavy drinker

50
40
30
20
10
0

50
40
30
20
10
0

50
40
30
20
10
0

50
40
30
20
10
0

Percentage of women

Percentage of men

differences were statistically significant at the $p < 0.01$ level for all of the ten variables.

Partnerships and family structure (Figs 1 to 3).

Those men and women who had experienced the breakdown of a relationship⁽¹⁾ and who were currently separated, divorced, widowed, single or cohabiting and who did not have children, were the most likely to be heavy drinkers. Women were more likely to be non-drinkers, on the other hand, if they had not experienced the breakdown of a previous relationship or if they were married and had children. Whereas, amongst men, the proportions of non-drinkers were similar irrespective of these characteristics.

Social and economic position (Figs 4 to 8).

Young men and women in social classes IV and V were simultaneously the most likely to be heavy drinkers and non-drinkers. Whilst those in the highest income group⁽²⁾ (men only), living in private rented accommodation or sharing with relatives, currently employed or seeking employment and who had experienced more job changes since leaving full-time education were the most likely to drink heavily at 23. Conversely, those most likely to be non-drinkers were in the lowest income group, or living in council housing, or currently out of the labour force, or with a more stable employment history.

Personal characteristics (Figs 9 and 10).

Women who drank heavily were most likely to have achieved an 'O' level

-
1. A relationship is either a cohabitation lasting more than 6 months or a marriage - for definitions of variables see Appendix B.
 2. Equivalent net family income is a measure of income adjusted for family size, composition and age structure. Refer to Appendix B for further details.

standard of education, whereas non-drinkers were most likely to be below '0' level standard. Amongst men, there were small differences only in the percentages of heavy and non-drinkers according to level of qualifications. Heavy drinkers and non-drinkers were both characterised by a Malaise Score⁽¹⁾ suggestive of depression compared with other types of drinkers.

It was not evident from these simple comparisons whether each variable described above would still be associated with alcohol consumption after controlling for the other variables included in the present study. This description has, therefore, been restricted to allow for multivariate analyses of these data.

Multivariate explanations of drinking at 23

The number of independent variables which could be included in each analysis was limited and so three analyses were necessary for men and women separately. Marital status was included in all of the analyses on the basis of the simple associations described above. Indeed, in all but one of the six analyses it was shown to be the most important variable in terms of explaining the variation in the amount of alcohol consumed. There was only one variable, housing tenure, which did not show a statistically significant ($p < 0.01$) independent association with alcohol consumption at 23, and that was the case for men only.

1. The malaise score is an index of emotional well-being and is described in more detail in Appendix B.

All of the other variables were independently associated with drinking and their parameter estimates (fitted constants⁽¹⁾) are shown in Tables 2 to 7. Comparisons between sub-groups, expressed here as odds ratios⁽²⁾, were derived from the fitted constants. Thus, for both men and women, the highest odds of being a heavy drinker were associated with marital status: in all analyses, the odds for those who were single, cohabiting and separated, widowed or divorced were twice (or more) those of married men and women. There were other similarities between the sexes, but although odds of heavy drinking were associated with similar variables, the differences between the categories were not always the same for men and women. In addition the size of the odds were relatively greater, generally, amongst women.

Five variables in addition to marital status had odds of heavy drinking which were greater than two. Thus, for women, the odds of being a heavy drinker were 2.9 times greater for those in full-time education compared with those currently employed; 2.6 times for those who had a history of a relationship breakdown compared with those who had had no such experience; 2.4 times in the highest income group compared with the lowest; 2.4 times for those who had not had a job since leaving school compared with those who had stayed in the same job and 2.2 times for those with a malaise score suggestive of depression compared with other women.

-
1. Fitted constants greater than 1.00 indicate that membership of a sub-group increases the odds of being a particular type of drinker, whilst fitted constants less than one show membership of a sub-group decreases the odds.
 2. Odds ratios were derived from fitted constants e.g. comparing single and married women, the odds of heavy drinking for single women were $\frac{0.934}{0.377} = 2.5$ times the odds for married women (based on fitted constants in table 2)

Level of education, housing tenure, social class and children in the family were associated with relatively lower contrasts in the odds of being a heavy drinker amongst women (1.7,1.7,1.6 and 1.1 respectively).

Amongst men, the odds of being a heavy drinker were 1.9 times for the highest income group compared with the lowest; 1.9 times for those who had had four or more jobs since leaving school compared with those who had not had a job and 1.7 times for those with a history of relationship breakdown compared with those who had not. Lower odds ratios, ranging from 1.5 to 1.3, were associated with social class groups, level of education, current economic status, depression and the presence of children.

Conversely, the odds of being a non-drinker were greatest for those women who were married (twice or more compared with those in other groups); in the lowest income group (2.1 times the highest group); living in council housing (1.9 times those in private rented accommodation); and who, as housewives, were economically inactive (1.9 times those in full-time education). For men the highest odds of non-drinking were associated with being out of the labour force (2.7 times those currently employed), having had no job since leaving school (2.7 times those who had four or more jobs) and lower income (1.9 times those in the highest income group). The other variables, with the exception of history of relationship breakdown amongst the men, also showed differences in the odds of non-drinking at 23, but these were smaller in comparison with those given above.

Discussion

Alcohol consumption has been compared with personal, social and economic

factors among young adults in Britain. The findings of this study suggest that heavy drinking in this age group is indeed the result of a complex interplay between these factors, since there were independent associations with all of the variables examined amongst the women, and all but one amongst the men. However, the odds of particular attributes being associated with heavy drinking did vary considerably, especially amongst the women.

The relationship between alcohol consumption and marital status is well-known (Wilson, 1980, Royal College of Psychiatrists, 1979), although it has not been explained satisfactorily. Findings in the present study confirm the association between marriage and moderate drinking behaviour and suggest that this may reflect more than the presence or absence of children, for example, or differences in disposable income and economic status. The odds of heavy drinking among young married men and women were lower having taken these other factors into account. Psychological and socio-cultural aspects of marital status and their relationship with drinking behaviour are more difficult to disentangle and data were not available in the present study to address these issues. However, the higher odds of heavy drinking for those who had experienced the loss or breakdown of a marriage or cohabitation early in adulthood suggest that stability in the emotional environment during this period, may affect drinking behaviour. This is consistent with previous studies in older age groups, which have shown an association between heavy drinking and a number of life changes, including separation, widowhood and divorce (Neff and Husaini, 1982; Mules et al, 1977), although no causal arguments can be made here. The present study is representative of marriage and loss of relationships in early adulthood only and heavy drinking in itself, along

with other factors, may affect the likelihood of marriage by the age of 23.

Alcohol consumption was also examined in relation to weekly income. The odds ratios for heavy drinking were greatest for those in the highest income group compared with the population overall (1.5 for women and 1.4 for men) or with a particular income category such as the lowest group (2.4 for women and 1.9 for men). These odds were high compared with those associated with other characteristics included in the analysis (for example, social class and level of qualifications achieved). Therefore, income may be a relatively important factor influencing alcohol consumption amongst young adults. A previous study reported that income was not a major determinant of consumption, although an increase in the real cost of alcohol resulted in a fall in alcohol consumption. (Kendell et al, 1983). It may appear that there are discrepancies between the findings of the two studies but their conclusions are not inconsistent. However, there were differences in the methods of analyses used and the measures of income. It is also possible that the importance of income and the real cost of alcohol in determining consumption patterns varies for different age groups.

Whilst the associations between consumption levels and marital status and income were similar for both men and women, the comparison of consumption patterns and economic status revealed some differences between the sexes. The odds of heavy drinking among the women were highest for those in full-time education and those out of the labour force (other than housewives) but because the numbers in these groups were rather small, the findings must be viewed as tentative. Amongst men, the highest odds of heavy drinking were associated with unemployment. Conversely, lower odds of heavy drinking amongst women were associated with full-time and

part-time employment and being a housewife, and, amongst men, with full-time education. These findings contrast with those from a study of young adults in Scotland which compared mean alcohol consumption in different employment groups (Plant and Peck, 1984). Data from the Scottish study showed a similar mean consumption of alcohol for men who were employed and unemployed, whereas, unemployed men and women in the present study had higher odds of heavy drinking than those for the employed (1.3 and 2.1 times respectively). Therefore, there appear to be differences between the Scottish study and the present one, despite the similarity in the age groups. These differences may be related to differences in methods, sample size and geographical distribution. In addition to simple comparisons, the present analysis has used multivariate techniques and the number of respondents with information on drinking and economic status was 11,568 compared with 929. However, there are many other studies which have examined the relationship between alcohol and unemployment and the evidence from these is also conflicting (for example, Brenner, 1975; Brenner 1979; Plant, 1979; Kilich and Plant 1981; Fagin and Little, 1984). Kendell et al (1983) have suggested that heavy drinkers were selectively at risk of losing their jobs. This is consistent with the higher odds of heavy drinking for those men who were unemployed in the present study and those young men and women who had more job changes. However, it is not possible to identify whether the associations with heavy drinking shown here occurred as a result of current unemployment and frequent job changes.

The associations described above were more important in explaining the different levels of alcohol consumption than were other social and personal characteristics included in the analysis. Also, these other variables were not always associated with greatly increased odds of heavy

drinking. It was of interest, for example, that the odds of heavy drinking for those with children were not dissimilar from those without children, having taken account of marital status, income level and economic status. However, the associations with alcohol consumption shown here represent differences in the proportions of non-drinkers, light and medium drinkers as well as heavy drinkers. A brief description of characteristics associated with non-drinking has been presented and many of these contrast with those associated with heavy drinking. Other associations, for example, in the social class groups and categories of depression (amongst men) are similar for heavy drinkers and abstainers. A full description of all associations is, however, not possible here because of lack of space. These details are provided in the tables and figures.

Before concluding this paper there are certain limitations which need to be mentioned. Firstly, this study relates to a specific age group and it may not be possible to generalise to the rest of the population. Secondly, the sample is not completely representative of the original cohort, although the relatively small biases in response are unlikely to affect the associations reported here. Thirdly, this analysis has been cross-sectional and aetiological inferences are thereby precluded. The findings from previous analyses (Ghodsian and Power, 1985; Ghodsian, 1985), need to be integrated with those shown here, especially those which examine factors related to personality. (The present study includes one measure only, the Malaise Inventory, which is an index of emotional well-being). Fourthly, there is no consensus of a safe level of consumption (Anderson, et al, 1984) and the cut-offs used in the present study, although used by others, are arbitrary and may not be the most appropriate. The categories used do not necessarily identify 'problem'

drinking, although alcohol-related health problems are concentrated among heavier drinkers (Brunn et al, 1975). Finally, there were restrictions associated with the statistical model used, in that a small number of variables only could be included in any one analysis.

Notwithstanding these limitations this study covers a stage of the life cycle during which important social transitions, such as marriage and starting work, occur. It is important to understand how these factors are associated with drinking behaviour, not only because vulnerability to heavy drinking may lead to problem drinking later on, but also because heavy drinking at this age in itself constitutes a large and unresolved problem. This study has shown how consumption patterns vary according to a range of social, personal and economic circumstances and that particular characteristics or areas of vulnerability associated with heavy drinking can be identified during early adulthood.

Table 1: Drinking groups at age 23

Type of Drinker	Men (n = 6109)	Women (n = 6151)
	%	%
Non-Drinkers*	9	28
Light ¹	29	34
Medium ²	50	36
Heavy ³	12	2

1,2,3 are classified according to the number of units of alcohol consumed in the last week:

- (1) 0-10 for men, 0-5 for women;
- (2) 11-50 men, 6-35 women;
- (3) over 50 for men, over 35 for women.

* Includes also those who said that they drank on special occasions only.

Table 2: Logistic regression of drinking and economic status, marital status, children and income amongst women. (1)

Fitted constants (Multiplicative) for odds of:

	Non- Drinker	Light Vs Cohort	Medium Population	Heavy	Step- wise X ²	d.f.
Overall Constant	1.172	1.431	1.647	0.362		
ECONOMIC STATUS						
Full-time Education	0.683	0.868	1.046	1.614	559.36	12**
Employed ⁽²⁾	0.969	1.229	1.505	0.558		
Unemployed	0.932	0.917	1.009	1.160		
Out of Labour Force	1.268	0.774	0.677	1.506		
Housewife	1.278	1.321	0.931	0.636		
MARITAL STATUS						
Single	1.003	0.998	1.070	0.934	234.63	9***
S/d/w	0.684	0.682	0.936	2.290		
Married	1.774	1.556	0.962	0.377		
Cohabiting	0.822	0.944	1.038	1.242		
WHETHER CHILDREN IN FAMILY						
Yes	1.139	0.977	0.842	1.067	54.27	3***
No	0.878	1.024	1.187	0.937		
EQUIVALENT NET FAMILY INCOME⁽³⁾						
< 75	1.479	1.051	1.025	0.628	66.90	9.***
75-124	1.150	1.073	0.998	0.813		
125-175	0.842	0.949	0.967	1.295		
>175	0.698	0.935	1.012	1.513		

*** p<0.001

1. Complete data were available for 5901 women
2. Includes full-time and part-time employment
3. Refer to Appendix B for definition (£/week)

Table 3: Logistic regression of drinking and economic status, marital status, children and income amongst men. (1)

Fitted constants (Multiplicative) for odds of:

	Non- Drinker	Light	Medium	Heavy	Step- wise χ^2	d.f.
	Vs Cohort Population					
Overall Constant	0.693	1.277	1.810	0.624		
MARITAL STATUS						
Single	0.894	0.800	1.039	1.346	188.51	6***2
Married	1.105	1.351	1.089	0.615		
Cohabiting	1.013	0.926	0.883	1.207		
EQUIVALENT NET FAMILY INCOME(2)						
<75	1.427	1.042	0.919	0.732	112.50	9***
75-124	1.078	1.069	0.967	0.898		
125-175	0.859	1.009	1.056	1.093		
>175	0.757	0.890	1.066	1.392		
ECONOMIC STATUS						
Education	0.849	1.176	1.151	0.870	57.40	9***
Employed	0.726	1.133	1.280	0.951		
Unemployed	0.819	0.862	1.157	1.224		
OLF(4)	1.982	0.871	0.587	0.988		
WHETHER CHILDREN						
Yes	1.110	0.907	0.878	1.132	23.30	3***
No	0.901	1.103	1.139	0.884		

*** $p < 0.001$

1. Complete data were available for 5740 men
2. £ per week - refer to appendix B for definition
3. Includes full-time and part-time employment
4. Out of Labour force

Table 4: Logistic regression of drinking and marital status, housing tenure, social class and malaise score amongst women

Fitted constants (Multiplicative) for odds of:

	Non- Drinker	Light	Medium	Heavy	Step- wise χ^2	d.f.
	Vs Cohort Population					
Overall Constant	1.197	1.506	1.821	0.305		
MARITAL STATUS						
Single	0.825	1.021	1.198	0.990	405.31	9***
S/d/w	0.726	0.765	0.891	2.021		
Married	1.977	1.427	0.864	0.410		
Cohabiting	0.844	0.897	1.084	1.219		
HOUSING TENURE						
Owner	0.846	1.151	1.139	0.901	140.07	12***
Council	1.361	1.069	0.812	0.846		
Private-rented	0.699	0.950	1.028	1.464		
Shared/relative	1.143	0.981	1.044	0.854		
Other	1.087	0.872	1.007	1.048		
SOCIAL CLASS						
I & II	0.864	1.040	1.179	0.945	57.96	9***
III NM	1.007	1.043	1.195	0.797		
III M	1.011	0.923	0.823	1.303		
IV & V	1.138	0.999	0.863	1.019		
MALAISE SCORE⁽²⁾						
'Normal'	1.081	1.166	1.172	0.677	36.82	3***
'Depressed'	0.925	0.858	0.853	1.477		

*** $p < 0.001$

1. Complete data were available for 5828 women
2. Refer to Appendix B for definition

Table 5: Logistic regression of drinking and marital status, housing tenure, social class and malaise score amongst men⁽¹⁾

Fitted constants (Multiplicative) for odds of:

	Non- Drinker	Light	Medium	Heavy	Step- wise X ²	d.f.
	Vs Cohort Population					
Overall Constant	0.701	1.146	1.776	0.700		
MARITAL STATUS						
Single	0.764	0.921	1.294	1.098	234.55	9***
S/d/w/ Married	1.115	0.749	0.768	1.560		
Married	1.139	1.440	1.089	0.560		
Cohabiting	1.030	1.008	0.924	1.042		
SOCIAL CLASS						
I & II	0.934	1.113	1.148	0.837	75.08	9***
III NM	1.003	1.141	1.017	0.859		
III M	0.860	0.960	0.987	1.227		
IV & V	1.241	0.820	0.868	1.133		
MALAISE SCORE ⁽²⁾						
'Normal'	0.823	1.139	1.251	0.853	44.90	3***
'Depressed'	1.215	0.878	0.799	1.173		
HOUSING TENURE						
					22.13	12(NS)

*** p<0.001

NS Not statistically significant at level of p<0.01

1. Complete data were available for 5645 men

2. Refer Appendix B for definitions

Table 6: Logistic regression of drinking and marital status, qualifications, number of job changes and breakdown of relationships amongst women⁽¹⁾

Fitted constants (Multiplicative) for odds of:

	Non- Drinker	Light Vs Cohort	Medium Population	Heavy	Step- wise X ²	d.f.
Overall Constant	1.293	1.560	1.876	0.264		
MARITAL STATUS (2)						
Single	0.877	0.897	1.161	1.161	368.60	6***
Married	1.557	1.292	0.849	0.586		
Cohabiting	0.776	0.863	1.015	1.471		
QUALIFICATION LEVEL						
Above 'A'	0.739	1.118	1.291	0.937	163.44	12***
'A'	0.801	0.967	1.182	1.092		
'O'	1.028	1.038	0.991	0.946		
below 'O'	1.099	0.856	0.812	1.310		
None	1.494	1.041	0.814	0.786		
BREAKDOWN OF RELATIONSHIP ⁽³⁾						
Yes	0.840	0.825	0.897	1.609	59.40	3***
No	1.190	1.213	1.115	0.622		
NUMBER OF JOBS ⁽⁴⁾						
0	1.310	0.802	0.565	1.686	67.76	12***
1	1.036	1.170	1.185	0.696		
2	0.997	1.170	1.104	0.776		
3	0.886	1.009	1.099	1.018		
4+	0.834	0.903	1.232	1.078		

*** $p < 0.001$

1. Complete data were available for 6148 women
2. The separated/widowed/divorced have been re-allocated to either the single or cohabiting category according to which was appropriate, in order to avoid overlap with the variable defining relationship breakdown.
3. Relationship is defined as a marriage of cohabitation of 6 months or more
4. Number of jobs between leaving full-time education and interview

Table 7: Logistic regression of drinking and marital status, qualifications, number of job changes and breakdown of relationships amongst men⁽¹⁾

Fitted constants (Multiplicative) for odds of:

	Non- Drinker	Light	Medium	Heavy	Step- wise X ²	d.f.
	Vs Cohort Population					
Overall Constant	0.659	1.294	1.914	0.612		
MARITAL STATUS ⁽²⁾						
Single	0.812	0.814	1.098	1.378	190.13	6***
Married	1.143	1.319	1.047	0.633		
Cohabiting	1.077	0.931	0.870	1.145		
QUALIFICATION LEVEL						
above 'A'	0.769	1.277	1.337	0.761	127.01	12***
'A'	0.833	1.025	1.119	1.046		
'O'	1.023	0.987	0.946	1.047		
below 'O'	1.117	0.927	0.873	1.107		
none	1.365	0.835	0.810	1.083		
BREAKDOWN OF RELATIONSHIP ⁽³⁾						
Yes	1.048	0.818	0.903	1.291	50.69	3***
No	0.954	1.222	1.107	0.774		
NUMBER OF JOBS ⁽⁴⁾						
0	2.014	1.189	0.613	0.681	84.97	12***
1	0.904	1.033	1.164	0.920		
2	0.964	0.926	1.151	0.973		
3	0.756	0.985	1.078	1.245		
4+	0.753	0.892	1.129	1.317		

*** p < 0.001

1. Complete data were available for 6106 men
2. The separated/widowed/divorced have been re-allocated to either the single or cohabiting category according to which was appropriate, in order to avoid overlap with the variable defining relationship breakdown.
3. Relationship is defined as a marriage or cohabitation of 6 months or more
4. Number of jobs between leaving full-time education and interview

Appendix A: Questions on alcohol consumption at age 23

1. How often do you usually have an alcoholic drink of any kind
most days?
around once or twice a week?
less often?
or only on special occasions?
or never?

2. In the last seven days, that is not counting today but starting
from last (Name of present day of week), how much
beer, stout, lager or cider have you had?
(Recorded in pints)

3. In the last seven days how many measures of spirits have you had?
(Measures of spirits)

4. In the last seven day how many glasses of wine have you had?
(1 bottle = 6 glasses; recorded in glasses)

5. In the last seven days haw many glasses of martini vermouth or
similar drinks have you had?
(Recorded in glasses)

Appendix B: Definitions of independent variables compared with alcohol consumption.

1. Marital status
Respondents were classified into four categories which described their current marital status:-
 - (a) Single
 - (b) Separated, widowed or divorced
 - (c) Married
 - (d) Cohabiting

2. Whether children in family
This variable describes whether cohort members are parents or not.

3. Breakdown of relationships
Respondents experienced the breakdown of a relationship if:-
 - (a) their marriage did not survive to the time of the interview
 - (b) they had lived with someone for at least 6 months but were no longer doing so.

4. Social class
The social class of current or last job was classified according to the OPCS classification of occupations (1980)

5. Income
Equivalent family income is net income adjusted to allow for the size and composition of the respondent's family (i.e. respondent, spouse or partner and any children living in their care) and may be taken to be a proxy measure of standard of living. Therefore, the low income of single adult families and those without children are adjusted upward because of their relatively lower requirements. Conversely, the higher incomes of married and cohabiting couples and those with children are lowered because of their relatively higher requirements. The adjustments were derived from an income equivalence scale based on Supplementary Benefit scale rates. This measure was developed by P. Shepherd, but for a discussion of similar measures see Van Slooten and Coverdale (1977) and Fiegehen, et al (1977).

6. Current economic status
There are 4 categories of economic status for men and 5 for women.
 1. Full-time education and TOPS
 2. Full-time and part-time employment
 3. Unemployed awaiting a job and unemployed wanting work
 4. Out of the labour force through sickness or disability; on extended holidays; prison or borstal; 'houseperson' (men only); other reason. Unemployed not wanting work are also included in this group.
 5. (Women only) Housewife

Appendix B: (cont'd)

7. Number of jobs

Full-time and part-time jobs between leaving full-time education and interview.

8 Housing tenure

Current tenure of housing, originally 12 categories comparable with the census, aggregated here into 5 categories:-

1. Owner
2. Council house
3. Private (furnished and unfurnished) rented.
4. Shared accommodation with parents, parents-in-law or other relatives
5. Other - includes housing tied to employment, housing association, rent-free, sharing with other (not relatives), lodgings.

9 Qualifications

1981 GHS qualification classification aggregated into 5 groups

10 Malaise Inventory

The Malaise Inventory consists of 24 questions on physical and mental manifestations, or symptoms of psychiatric disturbance. This measure was developed by the Institute of Psychiatry from the Cornell Medical Index, and whilst the instrument alone could not be used to diagnose clinical depression it has been used as a screening method to indicate the likelihood of a psychiatric disorder (Rutter et al 1970). Hirst and Bradshaw (1983) reported only moderate correlations with other measures of stress.

The 24 items of the Malaise Inventory were scored so that each positive item was given a value of one. Theoretically, the higher the score (up to a maximum of 24) the greater the likelihood of depression. The distribution of malaise scores in the general population is highly skewed, therefore mean scores can be misleading and a cut-off value has been used to indicate depression (Rutter et al 1976; Richman, 1978). In the present analysis a malaise score of 7 or more has been taken as an indication of depression.

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NATIONAL CHILD DEVELOPMENT STUDY

The National Child Development Study (NCDS) is a continuing longitudinal study which is seeking to follow the lives of all those living in Great Britain who were born between 3 and 9 March, 1958.

It has its origins in the Perinatal Mortality Survey (PMS). This was sponsored by the National Birthday Trust Fund and designed to examine the social and obstetric factors associated with the early death or abnormality among the 17,000 children born in England, Scotland and Wales in that one week.

To date there have been four attempts to trace all members of the birth cohort in order to monitor their physical, educational and social development. These were carried out by the National Children's Bureau in 1965 (when they were aged 7), in 1969 (when they were aged 11), in 1974 (when they were aged 16) and in 1981 (when they were aged 23). In addition, in 1978, details of public examination entry and performance were obtained from the schools, sixth-form colleges and FE colleges.

For the birth survey information was obtained from the mother and from medical records by the midwife. For the purposes of the first three NCDS surveys, information was obtained from parents (who were interviewed by health visitors), head teachers and class teachers (who completed questionnaires), the schools health service (who carried out medical examinations) and the subjects themselves (who completed tests of ability and, latterly, questionnaires). In addition the birth cohort was augmented by including immigrants born in the relevant week in the target sample for NCDS1-3.

The 1981 survey differs in that information was obtained from the subject (who was interviewed by a professional survey research interviewer) and from the 1971 and 1981 Censuses (from which variables describing area of residence were taken). Similarly, during the collection of exam data in 1978 information was obtained (by post) only from the schools attended at the time of the third follow-up in 1974 (and from sixth-form and FE colleges, when these were identified by schools). On these last two occasions case no attempt was made to include new immigrants in the survey.

All NCDS data from the surveys identified above are held by the ESRC Data Archive at the University of Essex and are available for secondary analysis by researchers in universities and elsewhere. The Archive also holds a number of NCDS-related files (for example, of data collected in the course of a special study of handicapped school-leavers, at age 18; and the data from the 5% feasibility study, conducted at age 20, which preceded the 1981 follow-up), which are similarly available for secondary analysis.

Further details about the National Child Development Study can be obtained from the NCDS User Support Group.







