

NATIONAL CHILD DEVELOPMENT STUDY  
FOURTH FOLLOW-UP.

WORKING PAPER NO. 4.

DRINKING PATTERNS.

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Final version, revised in the light  
of Departmental comments.

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## Background to Working Papers from the National Child Development Study

1. This Working Paper reports on the analysis of data relating to 12,538 23 year olds living in Great Britain who have been the subjects of a longitudinal study since their birth in 1958. The data were obtained by means of interview survey during late 1981 and early 1982. This survey and this Working Paper form part of the fourth follow-up of the National Child Development Study which is being sponsored by five Government departments - DHSS, DES, DE, MSC and DOE. Preparation for the survey began in May 1980 and the project is due for completion by December 1984
2. The National Child Development Study (NCDS) is a longitudinal study which takes as its subjects all those living in Great Britain who were born between 3 and 9 March 1958. Since the original birth survey in 1958 the National Children's Bureau has sought to monitor the social, economic, educational and health circumstances of the surviving subjects. To this end major surveys were carried out in 1965 (NCDS1), 1969 (NCDS2), 1974 (NCDS3) and 1981 (NCDS4). For the purposes of the first 3 surveys the birth cohort was augmented by including those new immigrants born in the relevant week and information was obtained with the active co-operation of parents, teachers and the schools' health service as well as members of the NCDS cohort. The 1981 survey differs in that no attempt was made to include new immigrants since 1974 and information was obtained from the subject only.
3. The target sample for the 1981 survey was a total of 16450 individuals - all those who had participated in NCDS1, NCDS2 or NCDS3, excluding those known to have emigrated or to have died. Following initial tracing by the Bureau details of names and addresses were passed to NOP Market Research Limited and Social and Community Planning Research who carried out further tracing and subsequent interviews. The 12538 interviews obtained represent 76 percent of the original target sample and 93 percent of those traced and contacted by interviewers.
4. The interview survey was carried out by NOP and SCPR between August 1981 and March 1982. Each interview took approximately 90 minutes and information was obtained on employment, unemployment and periods out of the labour force; apprenticeship and training; post-school education; marriage, cohabitation and children; housing and household; family income, savings, investment and inheritance; respondent reported health and health related behaviour; and voluntary activity and leisure.
5. Completed questionnaires were visually checked by NOP and SCPR and the data then transferred by them to computer. Following preliminary computer editing by NOP and SCPR more detailed checks have been carried out by NCB. The majority of open-ended questions were coded by SCPR using coding frames developed by NCB. All open-ended questions related to health states were coded by NCB.

## Introduction

1. Alcohol is a drug of dependence: it is potentially addictive. Over 90% of British adults drink alcohol, even if only occasionally (Plant M. 1981). Annually over a quarter of a million cases of drunkenness are recorded in Britain and there are 18,000 admissions to mental illness hospitals for alcoholism. Many other problem drinkers are admitted to general hospital wards and treated by private and voluntary agencies. The relationship between alcohol and road accidents is well documented: a third of drivers killed in accidents have exceeded the legal level of blood alcohol and on Saturday nights this proportion rises to 71%. Excessive drinking is also associated with numerous diseases (R.C.P. 1979).

2. Drinking among younger people is of particular concern as there is evidence that progress from abnormal drinking to alcoholism is a much quicker process than in older people, and the prognosis is correspondingly worse (see Kinder, 1977). The OPCS (1980) survey on drinking in England and Wales found that men and women in the youngest age group studied (18-24) drank more than the other age groups. Using a measure to identify problem drinkers, OPCS found that 5% of the men in their total sample and almost 2% of the women had a drinking problem (although as they indicate, heavy drinkers were under-represented in the survey). The proportion of problem drinkers was found to be particularly high in the 18-24 year age group. The number of young people at risk might be reduced by identification of the factors leading to heavy drinking and directly influencing these - or attempting to intervene by a programme of health education.

## The survey

3. NCDS 4 respondents were asked a series of questions relating to alcohol consumption: how often they drank, how much they had drunk in the last seven days, and whether their drinking patterns in this period were typical or not.

## Frequency of drinking

4. Table 1 shows that 28% of women said they drank on 'special occasions only' or 'never' in comparison with just 11% of men. Again, while just 10% of the women said they usually had an alcoholic drink

'most days', 31% of the men said this. Most respondents had an alcoholic drink 'once or twice a week' or 'less often'.

Table 1 - Frequency of drinking alcohol by sex

<u>Frequency:</u>		<u>Female</u>	<u>Male</u>
Most days	%	10	31
Once or twice a week	%	45	50
Less often	%	17	9
Special occasions only	%	22	7
Never	%	6	4
Total (100%)		6267	6264

5. While males generally drank alcohol more often than women, within both groups the single drank more frequently and the married least frequently (Table 2).

Table 2 - Frequency of drinking alcohol by sex and marital status

<u>Frequency:</u>		<u>Female</u>			<u>Male</u>		
		Single	Married	Separated Divorced Widowed	Single	Married	Divorced Separated
Most days	%	16	5	10	39	18	31
Once or twice a week	%	52	40	50	46	58	46
Less often	%	13	20	15	6	13	11
Special occasions only	%	14	28	19	5	9	7
Never	%	6	7	6	4	3	5
Total (100%)		2542	3411	314	3940	2177	147

Living alone or with others

6. Respondents who lived alone were more likely to drink on most days in comparison with those who lived with others (29% : 20%). Presumably, these people are more likely to seek social company outside the home and this involved drinking in pubs, bars and so on. They are also, of course, least likely to be married and perhaps would have more money to spend on non-essentials.
7. Survey members who were single were less likely to drink on most days if they were cohabiting - 24% in comparison with 31% of those not cohabiting.
8. Further analyses are desirable, using a more detailed measure of household composition and family size.

Quantity drunk

9. Respondents were asked how much beer, stout, lager or cider, spirits, wine, Martini, vermouth or similar drinks they had consumed in the seven days preceding the interview. The amounts reported were converted into units of alcohol, according to the classifications used by the OPCS, and drinkers divided into the appropriate categories accordingly. (One unit equalled half a pint of beer, lager or cider; one measure of spirits; one glass of wine, Martini, vermouth etc. Women were classified as light drinkers if they drank weekly between one and five units; as medium drinkers if they drank between 6 and 35 units; and as heavy drinkers if they drank 36 or more units. Men were classified as light drinkers if they drank weekly between one and 10 units; as medium drinkers if they drank between 11 and 50 units; and as heavy drinkers if they drank 51 or more units.)
10. These levels have come to be conventionally used in drinking research, and are derived from the recommendations of the Royal College of Physicians. The levels are lower for women because of their smaller body size and because it has been shown that liver damage occurs in women drinking less than men.
11. Table 3 compares NCDS 4 data with those from the OPCS (1980) survey of drinking in England and Wales (taking here ages 18-24 only)\*. It appears that more NCDS members drank nothing in the week preceding the interview. Fewer females in the NCDS sample were light drinkers than females in the

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\* This was based on a random sample of 2000 adults.

OPCS sample although there were few differences between the proportion of women in each sample who were medium drinkers or heavy drinkers. Among the men, however, although the differences were smaller than among women, fewer NCDS than OPCS sample members were medium drinkers. It is difficult to explain this discrepancy. It may have something to do with the smaller numbers of 18-24 year olds (and hence 23 year olds) in the OPCS sample making their figures less reliable, or it may reflect significant changes in drinking patterns between the late teens and early twenties.

Table 3 - Amount drunk in seven days preceding interview by sex in comparison with OPCS figures for men and women in 18-24 age group (OPCS 1980)

Type of drinker		NCDS	OPCS	NCDS	OPCS	TOTAL	OPCS
		Females	Females 18-24	Males	Males 18-24	NCDS	18-24
Nothing drunk	%	37	22	15	7	26	15
Light drinker	%	25	38	24	27	24	32
Medium drinker	%	36	36	49	53	43	44
Heavy drinker	%	2	4	12	13	7	9
Total (100%)		6267	125	6264	123	12531	248

12. Further analyses with household composition are needed but Table 4 shows that separated and divorced males were the heaviest drinkers.

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Table 4 - Amount drunk in seven days preceding interview by sex and marital status

Type of drinker	Female				Male			Overall total	
	Single	Married	Separated Divorced Widowed	Total	Single	Married	Separated Divorced Widowed		Total
Nothing drunk	26	45	33	37	13	18	20	15	26
Light drinker	23	27	20	25	21	30	15	24	24
Medium drinker	48	27	40	36	52	46	40	49	43
Heavy drinker	3	1	6	2	15	6	24	12	7
Total (100%)	2542	3411	314	6267	3440	2177	147	6264	12531

13. In the OPCS survey men who were single and women who were single, divorced or separated had the highest average consumption and contained the highest proportion of drinkers who had consumed more than the safe levels. Although more of the single people were in the youngest age group these differences persisted when attention was confined to the younger (18-34) and middle (35-54) age groups. This suggests that marriage is associated with more moderate drinking. It is possible that marriage has a stabilising effect, or that people with more moderate habits are likely to be attracted to marriage, or it may be a function of disposable income. In the NCDS sample single men and single women were the heavier drinkers (Table 4). Contrary to the OPCS findings there were more non-drinkers among the separated, divorced and widowed females than among the single (but also slightly more 'heavy' drinkers). This contrast may simply be a function of the small numbers in this category and age group in the OPCS sample.

14. When asked, most of the NCDS respondents (60%) said the amount drunk in the seven days prior to the interview was fairly typical, 11% said they normally drank more and 29% said they normally drank less. There were no differences associated with sex. Interviews were carried out over a period of several months which included the summer holiday and Christmas period. Although the majority were interviewed in the Autumn, higher levels of drinking in the holiday periods might be a partial explanation of the relatively large proportion claiming that they normally drank less (and may also underlie some of the contrasts with OPCS figures).

15. Analyses of drinking and leisure activities have yet to be carried out although the OPCS (1980) survey found that drinkers, particularly younger people, took part in more social activities away from home than the non-drinkers. They were particularly likely to spend fewer evenings watching television than non-drinkers. The heavier drinkers were more involved in social activities linked to drinking (such as making new friends at parties or going to dances).

#### Drinking and Health

16. Table 5 shows that females who were heavy drinkers were far less likely to describe their health as excellent than other respondents.

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Table 5 - Drinking by self-reported health status

Health status	<u>Drinking patterns in the seven days before interview</u>							
	Nothing drunk		Light Drinker		Moderate Drinker		Heavy Drinker	
	Female	Male	Female	Male	Female	Male	Female	Male
Excellent %	40	46	43	49	43	49	28	45
Good %	48	42	48	44	48	44	54	43
Fair %	11	9	8	6	9	7	14	11
Poor %	1	3	1	1	1	1	4	1
Total (100%)	2310	981	1558	1488	2285	3098	114	747

17. The OPCS survey (1980) found that a much higher proportion of heavy drinkers (30%) than of other groups (10-16%) reported being off work for more than three days because of an accident in the previous ten years. This difference persisted in each age and social class sub-group except among 18-34 year olds, but, of course, the youngest group would include many who had not yet been in work for very long.

18. More of the heavy drinkers, both men and women, than of other groups in the OPCS survey also reported being absent from work through illness during the last three months. This supports similar findings from the General Household Survey (1978).

19. NCDS respondents who drank alcohol most days and at least 1-2 times a week were also more likely to have had an accident involving hospital attendance since age 16 than other respondents. Fifty-nine per cent of those who drank on most days had experienced an accident, in comparison with 44% of those who drank 1-2 times a week, 38% who drank less often and 31% who drank on special occasions only or who never drank. Further analyses with quantity drunk and accidents are needed.

20. In the OPCS survey (1980) of drinking in England and Wales, of those in full-time employment about one in ten of the men and one in twenty of the women reported feeling the effects of a hangover while at work or doing their housework in the previous three months. A similar proportion was found to have had a heavy evening of alcohol consumption before a working day during the last week. Thus it is unsurprising that there is a relationship between alcohol intake and accidents.

21. Those NCDS respondents who said they had a longstanding illness, disability or infirmity which was limiting their activities, drank alcohol less frequently than those who said they had no such condition. They were also more likely to have not drunk at all in the past four weeks (Table 6).

Table 6 - Disability and drinking

Frequency of drinking	Respondents reporting	
	A disability	No disability
Most days %	19	21
1-2 times a week %	37	48
Less often %	12	13
Special occasions only %	19	14
Never %	14	4
Total (100%)	575	11953

Table 7 - Disability and drinking by sex

Drinking patterns in 7 days before interview	Respondents reporting a disability		Respondents not reporting a disability	
	Female	Male	Female	Male
Non drinker %	57	29	36	14
Light drinker %	17	22	25	24
Medium drinker %	24	40	37	50
Heavy drinker %	2	11	2	12
Total (100%)	256	319	6010	5943

22. Tables 6 and 7 show that 'the disabled' of both sexes were more likely to be abstainers. This may be due to their particular medical condition in some cases.

#### Drinking and mental health

23. While no real differences were found among men, women who were heavy drinkers were far more likely than others (male or female) to have seen a specialist for a psychological problem since age 16 (Table 8).

Table 8 - Drinking and whether seen a specialist for psychological problems

	Nothing drunk		Light drinker		Moderate drinker		Heavy drinker	
	Female	Male	Female	Male	Female	Male	Female	Male
Seen a specialist % since age 16 (n)	5 (114)	3 (28)	4 (63)	3 (39)	5 (117)	2 (58)	14 (16)	3 (24)
Total (100%)	2310	31	1558	1488	2285	3098	114	747

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24. Individual malaise items are shown in association with drinking habits in Table 9. Women who were heavy drinkers were more likely to say they often felt miserable or depressed, had great difficulty sleeping, woke unnecessarily early, often got into a violent rage, suffered from an upset stomach and felt their heart often raced like mad. The main problem reported by men who were heavy drinkers was an upset stomach.

Table 9 - Drinking and selected malaise inventory items - Drinking patterns in 7 days before interview

	Nothing drunk		Light drinker		Moderate drinker		Heavy drinker	
	Female %	Male %	Female %	Male %	Female %	Male %	Female %	Male %
Often have backache	26	16	22	14	21	14	25	18
Often miserable or depressed	21	15	16	9	17	9	28	13
Often have bad headaches	22	10	19	6	18	5	15	6
Usually great difficulty sleeping	12	11	9	8	12	9	24	12
Usually wake unnecessarily early	19	15	15	14	15	14	24	21
Worry about health	5	2	2	2	2	2	8	3
Often get into violent rage	9	7	6	3	6	4	18	7
Scared to go out alone	15	7	12	4	10	3	7	1
Suffer from upset stomach	11	9	9	7	12	9	18	14
Poor appetite	7	4	4	4	4	3	9	5
Heart often races like mad	9	8	7	4	8	5	15	11
Ever had nervous breakdown	2	2	1	2	2	1	10	2
Base* (100%)	2261	909	1553	1485	2280	3095	114	745

\* Total varied slightly between items.

Drinking, occupation and employment

25. Table A below shows occupational liver cirrhosis mortality data (OPCS, 1978) for 1970-2 (this disease is associated with heavy drinking). There have been some changes since the 1950s but these have mainly been increases in the standardised mortality ratios for some occupations.

Table A - High-risk groups: liver cirrhosis mortality (England and Wales 1970-2)

Occupational Group	Standardised mortality ratio
Publicans, innkeepers	1,576
Deck, engineering officers and pilots, ship	781
Barmen, barmaids	633
Deck and engine room ratings, barge and boatmen	628
Fishermen	595
Proprietors and managers, boarding houses and hotels	506
Finance insurance brokers, financial agents	392
Restauranteurs	385
Lorry drivers' mates, van guards	377
Cooks	354
Shunters, pointsmen	323
Winders, reelers	319
Electrical engineers (so described)	319
Authors, journalists, and related workers	314
Medical practitioners (qualified)	311
Garage proprietors	294
Signalmen and crossing keepers, railways	290
Maids, valets, and related service workers	269
Metallurgists	266

26. The two industries in the OPCS survey containing a high proportion of heavy drinkers (almost 20%) were the construction and drinks industries. Such findings suggest the importance of analysing the NCDS drinking information in relation to occupational data, as part of the investigation of the process by which people become heavy drinkers.

27. Information is available for NCDS members at age 16 on length of time since they last drank alcohol, what they had drunk in the past week and where they had drunk these. Although this information is limited there may be a

relationship between drinking patterns at age 16 and subsequent patterns. These patterns can, together, be analysed in terms of occupation.

28. Other variables with which cross-analyses may be made include unemployment and, for those in work, hours of work.

29. Table 10 shows that respondents who worked longer hours were more likely to drink alcohol on most days. Although the direction of the relationship is not always consistent, shorter working hours seemed generally associated with less frequent alcohol intake. This could be explained in terms of either stress (longer hours leading to greater psychological stress with people attempting to alleviate this with alcohol) or in terms of the fewer opportunities for part-time workers to engage in social drinking with work colleagues.

Table 10 - Current hours of work and drinking

Frequency of drinking:	Less than 35 hours a week	35-40 hours a week	41-60 hours a week	61+ hours a week
Most days %	16	21	29	31
1-2 times a week %	46	53	52	43
Less often %	15	12	8	12
Special occasions only %	19	11	8	10
Never %	4	3	3	5
Total (100%)	811	5545	2148	720

30. Although the RCP (1979) pointed out that excessive drinking can result in sacking, repeated sacking, virtual unemployability or a drift into less skilled and responsible work, there was no evidence of this process among NCDS 4 members. The lack of association may simply reflect the youth of the cohort.

31. Few differences were found between those who were currently unemployed and the total sample in terms of frequency of drinking, except that the unemployed were slightly less likely to drink on most days and more likely, instead, to never drink (Table 11).

Table 11 - Unemployment and drinking

Frequency of drinking:	Currently Unemployed	Total Cohort
Most days %	19	21
1-2 times a week%	47	48
Less often %	12	13
Special occasions only %	14	14
Never %	8	5
Total (100%)	1156	12476

32. No clear trend was found between number of periods of unemployment and frequency of drinking.

#### Social class

33. The OPCS survey found that social classes II, III and V contained slightly higher than average proportions of men who reported drinking more than the safe level of 50 units. Donnan and Haskey (1977) found that groups II and V had a higher than average risk of death from liver cirrhosis, the exception being the skilled manual workers (III manual) - who, of course, may become unable to perform skilled work if they develop a drinking problem and so are no longer classified in that grouping. Social class, however, was not related to the average alcohol consumption of women in the OPCS sample. The two factors found by OPCS to be associated with women drinking more heavily were being at work or in full-time education and not having any dependent children. This relationship held across age groups. Possibly working women without children have more opportunities to go out drinking and have more money to spend on drink. Analyses of drinking by economic status, sex and social class, and childbearing have yet to be carried out for NCDS 4 members.

34. The data on social class and drinking have not yet been analysed but some indication of background influences may be obtained from measures of education. Respondents with 'O' and 'A' levels were more likely to drink alcohol most days or at least once or twice a week in comparison with other respondents (Table 12). It is not clear at present how to interpret this relationship.

Table 12 - Education and frequency of drinking

Frequency of drinking:	Exams passed		
	No 'O' levels	'O' levels only	'A' levels
Most days %	18	20	26
1-2 times a week %	46	48	52
Less often %	13	14	11
Special occasions only %	17	15	8
Never	6	4	3
Total (100%)	4876	4938	2697

35. Other relevant background factors worthy of analysis here are home ownership, type of residence and household amenities, and respondent's income.

#### Conclusion

36. A number of potentially fruitful areas of research have been indicated. On the basis of findings so far it appears particularly worthwhile to analyse drinking patterns with demographic and life events (eg, occupational history, stresses such as marital breakups and so on) data. The longitudinal data in relation to drinking patterns are limited but those which are possible (such as the relation to drinking now to drinking at age 16 in terms of when 16-year-olds last had a drink and type of drink) should be carried out to examine whether problem drinkers at age 23 can be identified at age 16.

37. Analyses of the relationship with accidents and other health problems could also be carried out. Health education on alcohol problems needs to be particularly directed it seems at young age groups (according to OPCS data). Information from NCDS 4 may add weight to the argument for this need - particularly in relation to accidents. The open coded data on type of accident



would reveal the types of injuries suffered from and where the accident occurred. On the other hand although we can analyse drinking patterns and quantity drunk in relation to the accident data, and we know the ages at which accidents were experienced, we do not have comparable longitudinal data for drinking.

38. A further area worthy of analysis is drinking habits in relation to type of occupation, controlling for other demographic variables. This may shed some light on the characteristics of individuals who succumb to pressures to drink heavily within certain 'at risk' occupational groups.

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