

Cigarette Smoking and Drinking Behaviour in Northern Ireland 1986-2002: A Cohort Analysis

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Executive Summary

This report examines trends in the prevalence of cigarette smoking and drinking behaviour by age, gender and socio-economic status across different birth cohorts in Northern Ireland. Cohort specific death rates are presented for major smoking and alcohol related diseases. The analysis uses data from the Continuous Household Survey over the period 1986-2002 as well as mortality data.

Smoking

Over the last fifteen years the prevalence of cigarette smoking in Northern Ireland has declined substantially. In 1986, 35 percent of men and 32 percent of women over age 16 were current cigarette smokers; by 2002 these proportions had fallen to 27 percent and 26 percent respectively. The decline in smoking has been significantly less marked amongst women, compared to men, and by 2002 a similar proportion of both women and men were current smokers. Smoking cessation rises with age as a higher proportion of older age groups report being ex-smokers than younger age groups. Cross-sectionally, a greater proportion of women have never smoked than men of the same age; and this is particularly the case amongst older women.

The general decline in the propensity to smoke over the last two decades is reflected in the lower proportion of men who state that they have ever smoked amongst successive birth cohorts at all ages. This is not, however, the case amongst women, where *higher* proportions of successive birth cohorts of women report ever having smoked. Although smoking is generally more common amongst men than women, men (especially amongst the younger cohorts) are also more likely to give up than women and their *relative* improvement in mortality from smoking related diseases is higher. Gender differences in smoking behaviour need to be addressed if the targets for reducing deaths from lung cancer are to be achieved.

There is a clear gradient in the prevalence of cigarette smoking by socio-economic group amongst both men and women. In 2002, men working in semi-skilled manual occupations were twice as likely to report that they currently smoked than men employed in professional jobs (33% versus 17%). Similarly women in semi-skilled or unskilled manual occupations were *three times* as likely to smoke as professional women (i.e. 35% & 33% versus 11%). There appears to have been little progress in narrowing the gap between socio-economic groups in terms of smoking behaviour over the last two decades. Within manual groups, the rate of smoking cessation has been faster amongst men than women. By 2002, more women from manual backgrounds smoked than any other group. Inequalities in smoking behaviour between socio-economic groups appear to be generally widening both *within* birth cohorts with rising age, and *between* cohorts at any given chronological age. If public health campaigns are to be successful in reducing inequalities in death rates from smoking related diseases they will need to be more effective in targeting women, especially young women and women from manual backgrounds.

Drinking

The proportion of men and women who are current drinkers has *increased* significantly during the last two decades, from 73% of men and 59% of women in 1986 to 81% and 73% respectively in 2002. Men were more likely than women to drink alcohol in each year over this period (1986-2002), although the gap has narrowed across time. In 2002, a significantly higher proportion of women reported being lifetime abstainers than men. Older women were significantly more likely to have never drunk alcohol than younger women. For example, over two-fifths (42%) of women over 60 reported being lifetime abstainers compared with just 10% of women aged 25-34.

Looking at changes across birth cohorts, drinking is more common amongst successive birth cohorts at the same age. The trend towards an increased prevalence of current drinking between birth cohorts is significantly more marked amongst women than men. These changes in the patterns of drinking by gender and birth cohort may have implications for the future health of women.

Drinking varies with socio-economic group, with the highest prevalence of current drinkers in 2002 being amongst professional men and women and the lowest amongst skilled manual women. Women from a manual socio-economic background are significantly more likely to be lifetime abstainers than women from a non-manual background. Current drinking has increased amongst men and women from all socio-economic groups. Most striking is the rise in the prevalence of current drinking amongst women from non-manual backgrounds, whose rates of drinking now match those of manual men.

There has been an upward trend in current drinking amongst successive birth cohorts within each socio-economic group. This is most marked amongst women. For example, at age 45, 76% of women of non-manual backgrounds born in 1941-50 were current drinkers. However amongst non-manual women born ten years later, in 1951-60, 82% were current drinkers at the same age. The gap between non-manual and manual groups appears to be narrowing somewhat between successive cohorts and there is little difference in the prevalence of current drinking by socio-economic group amongst men born in 1971-81 and 1961-71. However, socio-economic differentials remain amongst younger cohorts of women.

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Cigarette smoking and drinking behaviour in Northern Ireland 1986-2002: A Cohort Analysis

1. Introduction

Differentials in mortality by social class have been a continuing concern of public health analysts in the UK since the inception of death registration in 1837 (Drever and Whitehead, 1997). At the end of the twentieth century there remained clear inequalities in life expectancy by social class, with a 7.4 year difference in the expectation of life at birth between men in social class I (78.5 years) and social class V (71.1 years); and a 5.7 year differential for women (82.8 years compared with 77.1 years) (ONS, 2002). Health damaging or health promoting behaviours, such as smoking and alcohol consumption are now widely recognised as making a major contribution to current levels of morbidity and mortality (DoH, 1995). To the extent that these behaviours vary by socio-economic status means that they also contribute to the persistence of health inequalities. This report examines trends in cigarette smoking and drinking behaviour in Northern Ireland using data from the Continuous Household Survey over the period 1986 to 2002. A unique aspect of the analysis is that trends in behaviour are examined for seven different birth cohorts allowing insight into the dynamics of cigarette smoking and drinking behaviour over the life-cycle and across time.

2. Data and Method

To date there has been no analysis of the prevalence of smoking by different birth cohorts in Northern Ireland. In part this has been due to a lack of longitudinal data. The majority of international birth cohort studies on smoking have used retrospective data, with recall questions regarding the dates of smoking initiation and cessation. There are a number of problems inherent within such an approach. In particular, the effects of selective mortality, as well as possible biases in recall errors between older and younger cohorts, may confound comparisons between cohorts. A recent study in Finland adopted an alternative approach, utilising data from six cross-sectional surveys containing self-reported data on smoking status (Laaksonen et al, 1999). These data were then used to construct synthetic birth cohorts to analyse trends in smoking in eastern Finland during the period 1972-97. This paper adopts a similar approach to examine the smoking behaviour of representatives of seven Northern Irish birth cohorts born in the years 1991-20, 1921-30, 1931-40, 1941-50, 1961-70 and 1971-80. It builds upon earlier research examining smoking behaviour amongst different birth cohorts within Britain (Evandrou and Falkingham, 2002).

The Continuous Household Survey (CHS), an annual cross-sectional survey of individuals living in private households in Northern Ireland, has included questions on smoking behaviour in alternate years since 1984. In this report, data from the CHS for the

period 1986-2000 are used to generate seven pseudo-cohorts (see Table 1). The experience of representatives of each birth cohort is tracked in successive years of the CHS. For example, those aged 56-65 years in the 1986 CHS are taken as being representative of the birth cohort born in 1921-30. The same birth cohort is then represented by those aged 58-67 in 1988, 60-69 in 1990, and finally those aged 70-79 in 2000. This constitutes a pseudo-cohort or quasi-cohort approach since the individuals are not the same from year to year. Rather than tracking individuals per se, it is the group means or proportions that are taken. Thus the unit of analysis is the cohort and what is measured is the *average* experience for the cohort. Since a fresh sample is drawn from the surviving population each year, the cohort mean remains representative of that population and there is no problem of sample attrition for reasons other than mortality, as with panel data. As information is collected on current smoking and drinking behaviour, recall biases are minimised.

Table 1 Age ranges of ten year birth cohorts in selected years of the Continuous Household Survey (CHS), Northern Ireland

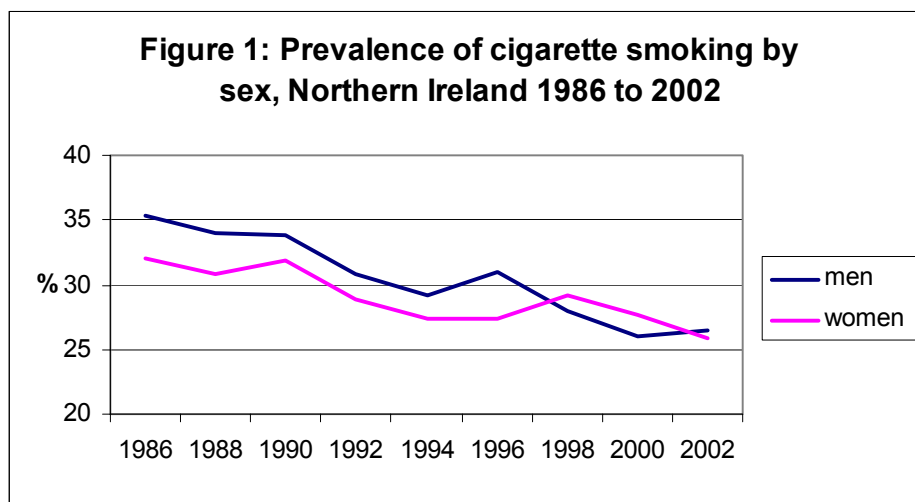
Year	Birth Cohort						
	1911-20	1921-30	1931-40	1941-50	1951-60	1961-70	1971-80
1986	66-75	56-65	46-55	36-45	26-35	16-25	
1988	68-77	58-67	48-57	38-47	28-37	18-27	
1990	70-79	60-69	50-59	40-49	30-39	20-29	
1992		62-71	52-61	42-51	32-41	22-31	
1994		64-73	54-63	44-53	34-43	24-33	
1996		66-75	56-65	46-55	36-45	26-35	16-25
1998		68-77	58-67	48-57	38-47	28-37	18-27
2000		70-79	60-69	50-59	40-49	30-39	20-29
2002		72-81	62-71	52-61	42-51	32-41	22-31

One limitation in employing such a method is that there may be problems with consistency of data, particularly where there have been changes in question wording or definitions between surveys. This problem is encountered in any analysis of cross-sectional data over time. Fortunately, there has been a remarkable degree of consistency in the questions regarding smoking behaviour within the CHS. However, there have been some changes over time in the way in which information regarding the volume of alcohol consumed has been collected and the recommended daily limits calculated. Therefore the analysis on drinking behaviour is confined to the prevalence of 'current drinking'. The

sample size of each ten year birth cohort varies over time as both the overall sample size of the CHS has changed and the share of the cohort in the sample population alters with age (see Appendix Table A1). Finally, the results are affected by both age and period effects, which are often difficult to disentangle. Nevertheless, despite these limitations, pseudo-cohort analysis can provide useful insights into inter-cohort differences and help to inform policy making.

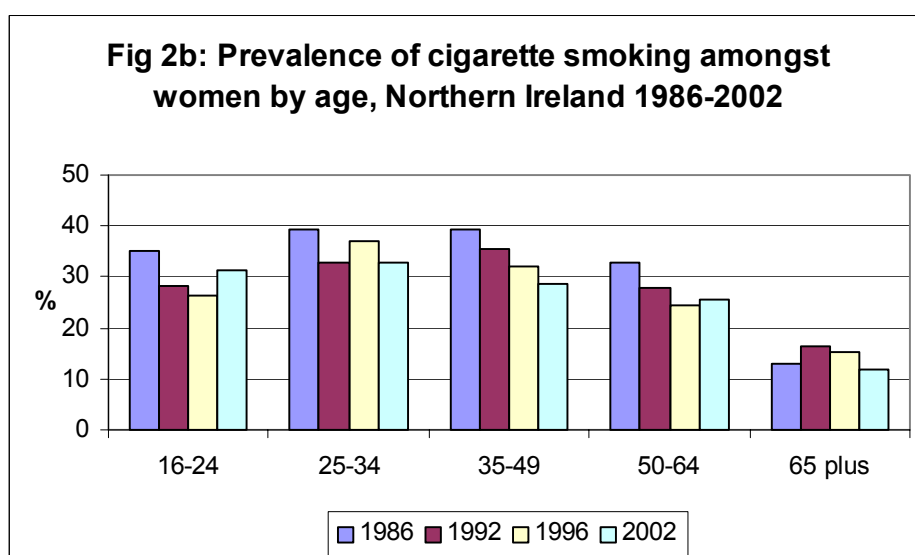
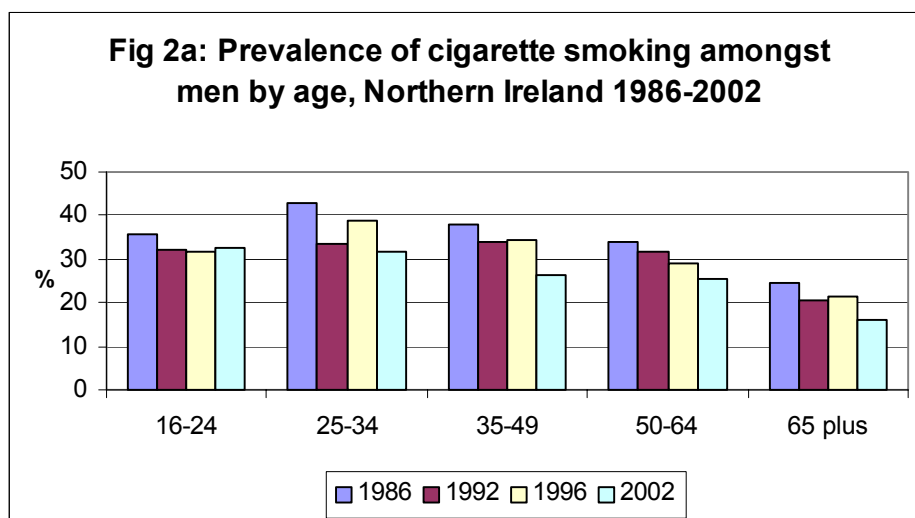
3. Trends in Cigarette Smoking by Age and Birth Cohort

Over the last fifteen years the prevalence of cigarette smoking in Northern Ireland has declined significantly. In 1986, 35 percent of men and 32 percent of women over age 16 were current cigarette smokers; by 2002 these proportions had fallen to 27 percent and 26 percent respectively (see Figure 1 and Appendix Table A2). The decline in smoking has been less marked amongst women, compared to men, and by 2002 a similar proportion of both women and men were current smokers.



Source: Authors' own analysis CHS 1986-2002.

The prevalence of cigarette smoking amongst men and women varies by age, rising through the twenties and thirties and then falling back again at later ages (Figures 2a and 2b and Appendix Table A3). Within each age group, the proportion smoking has fallen significantly over time - with the notable exceptions of people under age 25 and women over age 65. Amongst men aged 16-24, the proportion reporting that they currently smoked has fallen slightly between 1986 and 2002 (from 36% to 32%), but the fall is not statistically significant. Amongst women of the same age, the prevalence of smoking fell between 1986 and 1996 (from 35% to 26%) but during the last 6 years has risen to 31% by 2002. Again, the changes are not significant at the 95% level (but only just).



Source: Authors' own analysis CHS 1986, 1990, 1996, 2002.

The questions in the CHS regarding smoking behaviour are as follows: 'Have you ever smoked a cigarette, a cigar or a pipe?' and 'Do you smoke cigarettes at all nowadays?'. Thus it is possible to look at both current smokers and ex-smokers. Figures 3a and 3b show patterns of smoking behaviour amongst men and women by age in 2002. Two key observations may be made. First, smoking cessation rises with age as a higher proportion of older age groups report being ex-smokers than younger age groups. Secondly, a greater proportion of women have never smoked than men, and this is particularly the case amongst women aged 65 and over (see also Appendix Table A4).

Fig 3a: Patterns of cigarette smoking amongst men by age, NI 2002

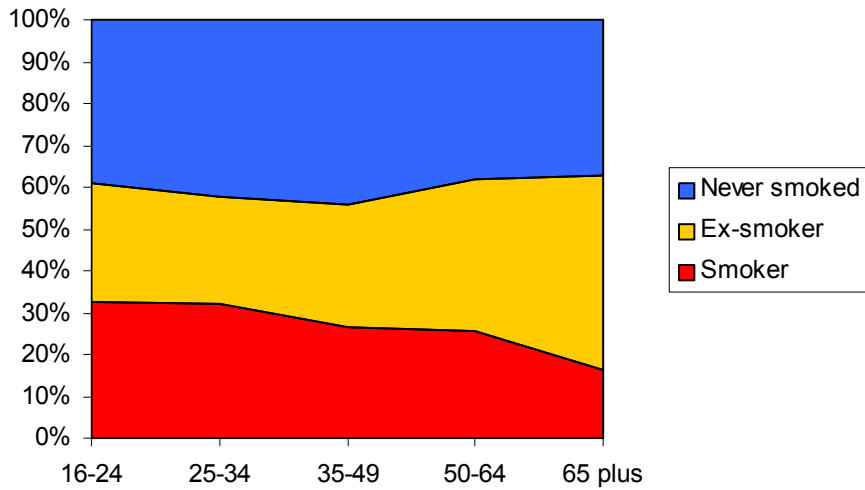
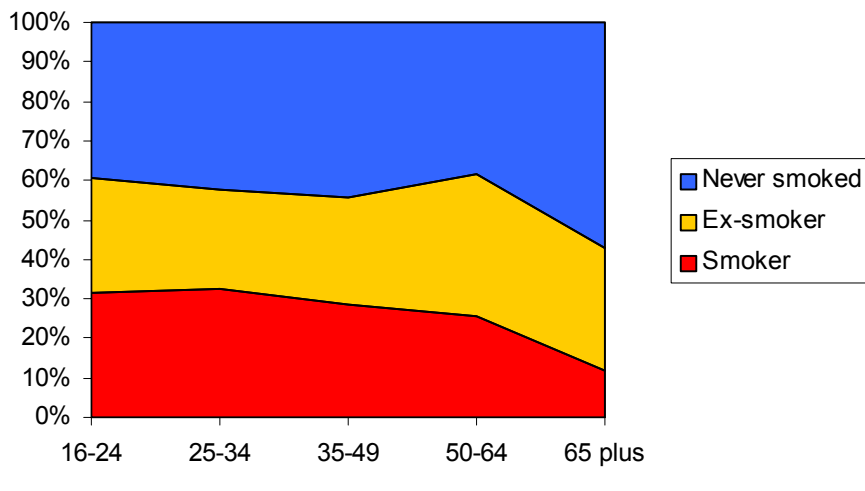


Fig 3b: Patterns of cigarette smoking amongst women by age, NI 2002



Source: Authors' own analysis CHS 2002.

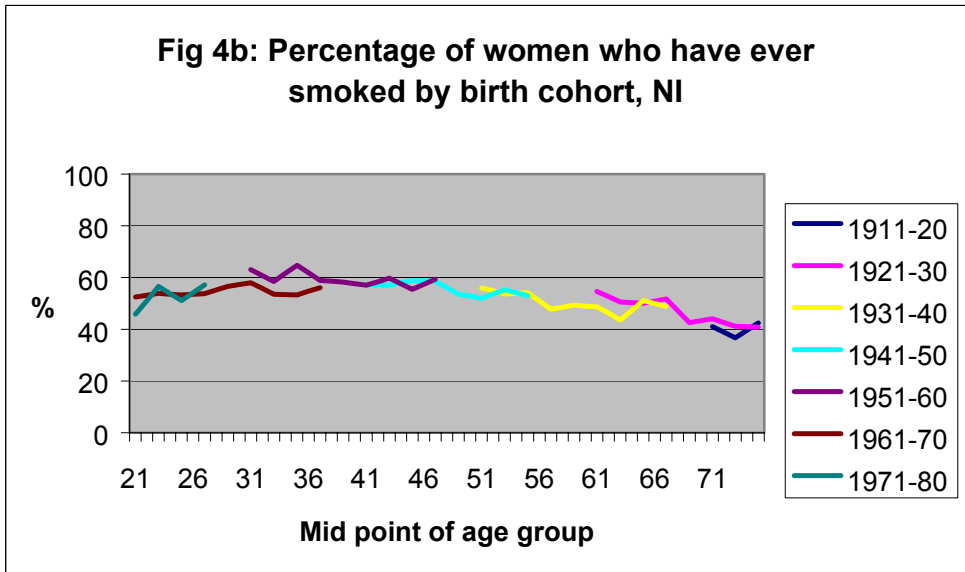
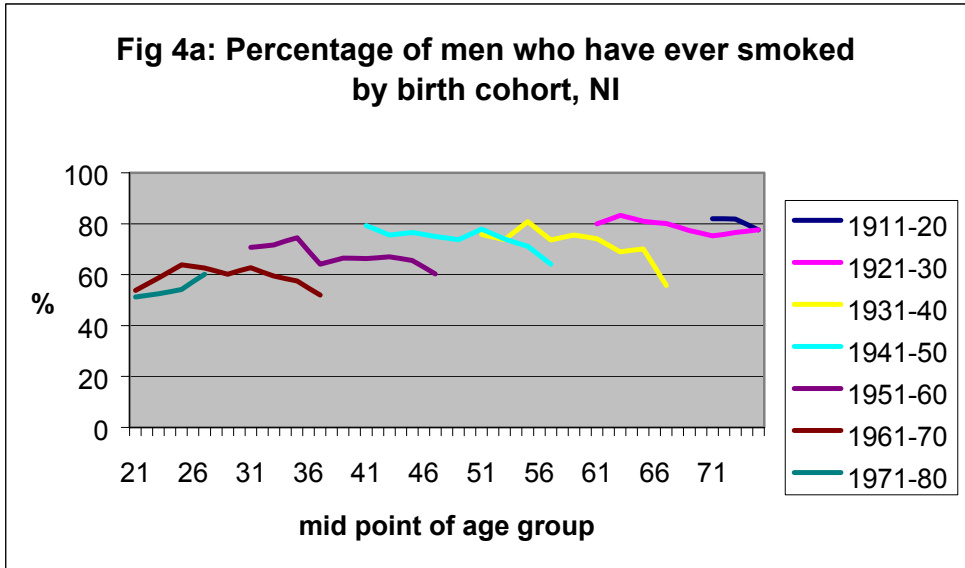
Table 2 presents data on the average daily cigarette consumption *amongst* smokers by age and sex for 2002. The proportion reporting smoking 20 cigarettes or more a day generally increases with age, and there is little difference by gender, with the exception of those aged 65 and over. In 2002, two-fifths of smokers were ‘heavy’ smokers a further two-fifths ‘moderate’ and one fifth ‘light’.

Table 2: Patterns of average daily cigarette consumption amongst current smokers by age and sex (%), Northern Ireland 2002

	Under 10 a day	10-19 a day	20 or more a day	(N)
Men				
16-24	23	41	36	(133)
25-34	28	38	34	(131)
35-49	22	37	41	(187)
50-64	14	40	45	(139)
65 and over	20	34	46	(61)
All	21	39	40	(651)
Women				
16-24	16	44	39	(122)
25-34	28	37	35	(163)
35-49	18	42	40	(209)
50-64	17	36	47	(148)
65 and over	29	36	36	(62)
All	21	39	40	(704)

Source: Authors’ own analysis CHS 2002.

Changes in patterns of smoking by age reflect both period and cohort effects, and a clearer picture of trends in smoking behaviour across the life course is obtained by examining the patterns within particular birth cohorts. Figures 4a and 4b present the proportion of respondents that report ‘ever having smoked’ using 3 year moving averages plotted against the mid-point of the age group for the cohort. ‘Ever smokers’ include both current smokers and ex-smokers. The general decline in the propensity to smoke over the last two decades is reflected in the lower proportion of men who state that they have ever smoked amongst successive birth cohorts at all ages, with the exception of the youngest cohort (Figure 4a). However, this is not the case amongst women, where higher proportions of successive cohorts of women report ever having smoked. For example, around 60% of women born in 1951-60 report ever having smoked compared to about half of women born in 1931-40. Within birth cohorts, there is a slight downward trend by age – particularly at older ages, reflecting the differential survivorship of lifetime non-smokers as compared with lifetime ever-smokers (see also Appendix Tables A5a and A5b).

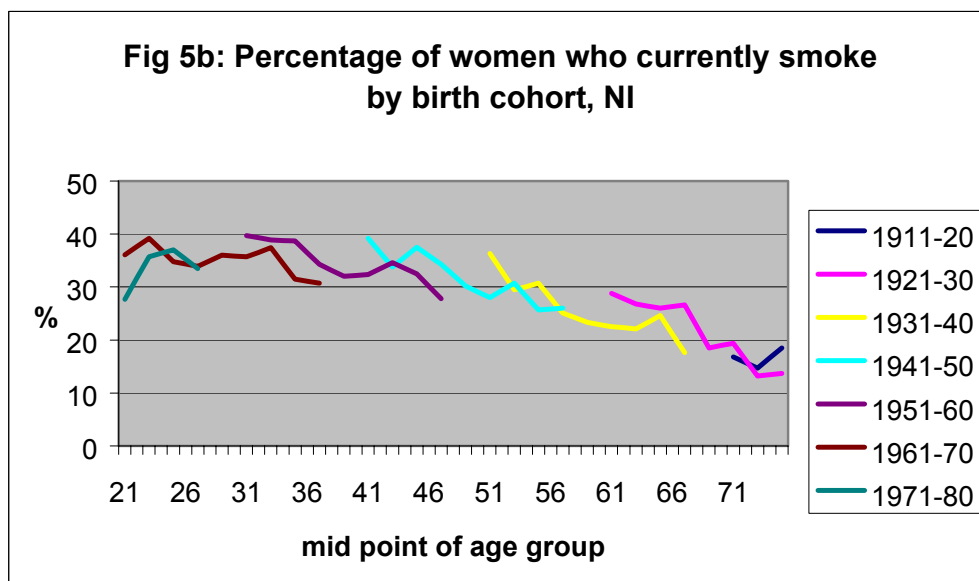
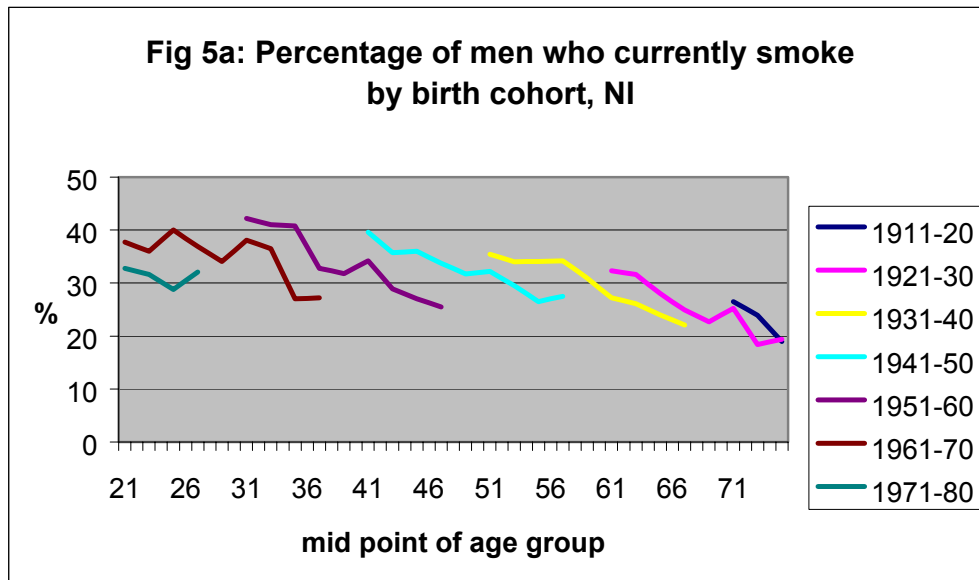


Note: Age is the mid-point of the ten year age range of each birth cohort in the relevant CHS year. For example, the cohort born in 1931-40 is aged 46-55 in 1986. Thus the mid-point of 51 is taken to represent that cohort in that year.

Source: Authors' own analysis CHS 1986-2002.

Figures 5a and 5b show the prevalence of smoking amongst each cohort by age and sex. A decrease in the prevalence of smoking by age within birth cohorts may be the result of either smoking cessation or selective mortality, with smokers being more likely to die than non-smokers. Selective mortality is only likely to affect the oldest age groups, and therefore the downward gradients in Figures 5a and 5b primarily reflect the tendency to give up smoking with increasing age amongst each cohort. Only for the youngest cohort

of women is there any upward trend in the prevalence of smoking, as young women join the ranks of smokers during their late teens and early 20s. The decrease in the proportion smoking by age amongst men observed *within* birth cohorts is much greater than that observed in cross-sectional data (see also Appendix Tables A6a and A6b).



Source: Authors' own analysis CHS 1986-2002.

Although smoking is generally more common amongst men than women, men are also more likely to give up than women, particularly amongst the younger cohorts. For example, amongst the cohort born 1961-70, at age 21, 38 percent of men reported that they currently smoked, compared to 36 percent of women. However, amongst the same

birth cohort at age 37, the gender differential has reversed with a higher proportion of women currently smoking than men (34% vs. 27%). Similar differences in smoking behaviour by gender were found for Britain (Evandrou and Falkingham, 2002) and have been reported in birth cohort studies for other countries, such as the US (Escobedo and Peddicord, 1996), West Germany (Brenner, 1993) and Canada (Ferrence, 1988).

Patterns of smoking behaviour by gender and birth cohort are reflected in Tables 3a and 3b, which illustrate the trends in the death rates from major smoking-related diseases, including cancer of the trachea, bronchus and lung. Ischaemic heart disease (IHD), bronchitis and emphysema (B&E), and chronic airways obstruction (CAO) are also recognised as being related to smoking, although the aetiology is less clear cut. The likelihood of dying from lung cancer, IHD and B&E at any given chronological age generally falls between successive birth cohorts - with the notable exception of a rise in lung cancer between women born in 1921-25 and those born in 1926-30. There is also evidence of some relative deterioration in death rates amongst women born in 1946-50 compared to earlier cohorts. Death rates from CAO do not appear to be consistently improving between successive cohorts. However CAO was only introduced as a separate disease classification in ICD-9 in 1978, and the rise may reflect the increasing tendency for doctors to enter this on the death certificate as they become more familiar with the classification over time.

Interestingly, although the death rates at any age are lower for women than men, the proportionate improvement in mortality from lung cancer between successive cohorts of women is also significantly lower. For example, the likelihood of dying at age 55-59 fell from 1690 per million for men born in 1921-25 to 911 per million for men born in 1936-40, i.e. a fall of 46%; the corresponding fall for women was just 28% (i.e. from 614 to 440 per million). Similarly, the likelihood of men dying at age 40-44 fell by 47% from 165 per million born in 1931-35 to 87 per million for those born in 1950-55; the corresponding fall for women was only 36% (i.e. from 75 to 48 per million). This differential by gender reflects the differences in rates of smoking cessation between men and women noted previously. If the targets for reducing deaths from cancer set out in *Our Healthier Nation* (DoH, 1999) are to be achieved, then the gender differences in smoking behaviour need to be addressed.

Table 3a Men: Death rates from malignant neoplasm of trachea, bronchus and lung (ICD 62), Ischaemic heart disease (ICD 410-414), Bronchitis and emphysema (ICD 490-492) and Chronic airways obstruction (ICD 496) by age and birth cohort (rates per million population), N. Ireland.

Lung cancer (inc bronchus & trachea (ICD 162))

	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50	1950-55	1956-60	1961-65
25-29						7	4	11	6
30-34					30	16	20	7	10
35-39				75	88	49	20	50	
40-44			165	154	158	62	87		
45-49		354	274	299	242	228			
50-54	969	826	706	571	555				
55-59	1690	1464	1367	911					
60-64	2582	2458	1893						
65-69	3647	3228							
70-74	4437								

Ischaemic heart disease (ICD 410-414)

	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50	1950-55	1956-60	1961-65
25-29						37	23	21	10
30-34					131	120	104	75	58
35-39				331	370	287	172	139	
40-44			1209	943	752	632	385		
45-49		2547	2250	1561	1359	873			
50-54	4498	4348	3610	2532	1844				
55-59	7780	6508	4613	3459					
60-64	10398	8286	6512						
65-69	13170	10331							
70-74	16938								

Bronchitis and emphysema (ICD 490-492)

	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50	1950-55	1956-60	1961-65
25-29									
30-34					4				
35-39				23	18				
40-44			36	25	14				
45-49		118	81	26	14				
50-54	335	186	89	74	55				
55-59	441	133	122	87					
60-64	425	320	202						
65-69	532	320							
70-74	623								

Chronic airways obstruction (ICD 496)

	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50	1950-55	1956-60	1961-65
25-29									
30-34					4				
35-39									
40-44			0	5	32				
45-49			16	36	73				
50-54	5	55	122	74	60				
55-59	229	312	238	173					
60-64	659	561	570						
65-69	1386	1178							
70-74	2048								

Table 3b Women: Death rates from malignant neoplasm of trachea, bronchus and lung (ICD 62), Ischaemic heart disease (ICD 410-414), Bronchitis and emphysema (ICD 490-492) and Chronic airways obstruction (ICD 496) by age and birth cohort (rates per million population), N. Ireland.

Lung cancer (inc bronchus & trachea (ICD 162))

	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50	1950-55	1956-60	1961-65
25-29						4			3
30-34					4	4	16	4	9
35-39				29	13	41	8	21	
40-44			75	69	62	41	48		
45-49		181	97	109	84	145			
50-54	230	355	234	195	323				
55-59	614	528	490	440					
60-64	861	1039	841						
65-69	1226	1634							
70-74	1813								

Ischaemic heart disease (ICD 410-414)

	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50	1950-55	1956-60	1961-65
25-29						12	8	4	0
30-34					22	25	4	18	19
35-39				63	44	53	24	21	
40-44			204	191	88	85	96		
45-49		436	368	332	289	162			
50-54	978	917	889	595	439				
55-59	2352	1773	1299	957					
60-64	3606	2948	2348						
65-69	5320	5114							
70-74	7806								

Bronchitis and emphysema (ICD 490-492)

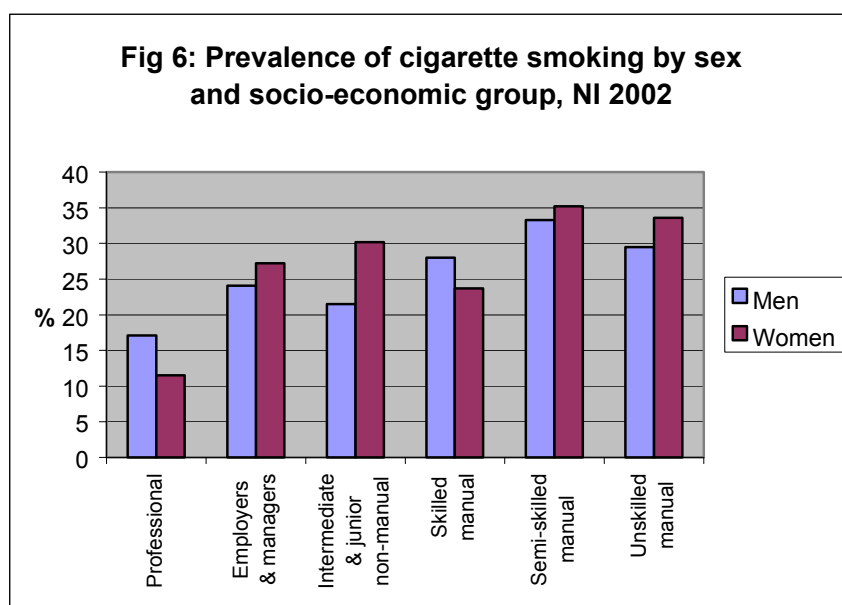
	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50	1950-55	1956-60	1961-65
25-29						8			
30-34					4	4			
35-39				10		4			
40-44			40	20	9				
45-49		88	41	10	13	12			
50-54	163	101	42	15	36				
55-59	166	87	96	41					
60-64	150	148	76						
65-69	296	279							
70-74	236								

Chronic airways obstruction (ICD 496)

	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50	1950-55	1956-60	1961-65
25-29									
30-34									
35-39									
40-44				5	4				
45-49		5	15	20	22	16			
50-54		30	26	55	67				
55-59	96	200	181	174					
60-64	342	464	339						
65-69	712	879							
70-74	1317								

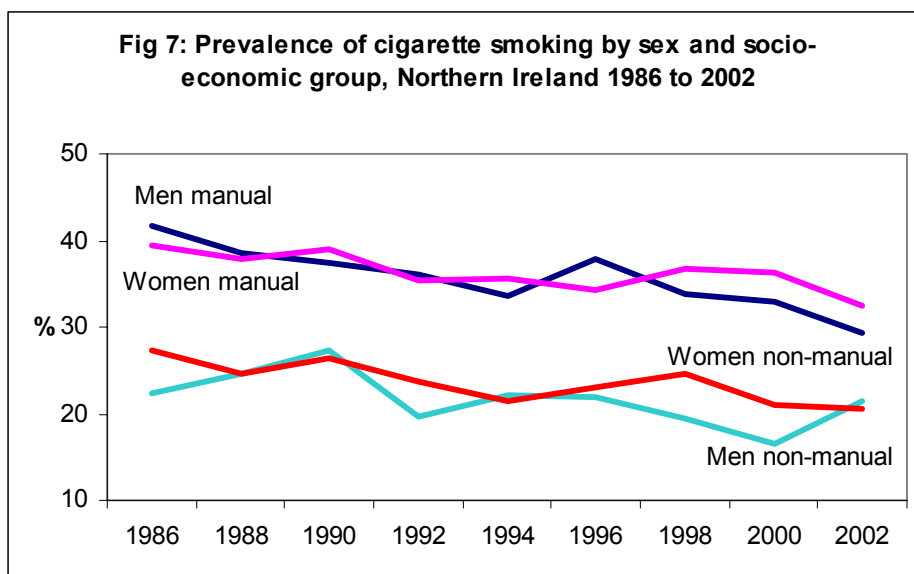
4. Socio-economic Differentials in Cigarette Smoking

Figure 6 shows a clear gradient in the prevalence of cigarette smoking by socio-economic group amongst both men and women. There is a clear gradient in the prevalence of cigarette smoking by socio-economic group amongst both men and women. In 2002, men working in semi-skilled manual occupations were twice as likely to report that they currently smoked than men employed in professional jobs (33% versus 17%). Similarly women in semi-skilled or unskilled manual occupations were *three times* as likely to smoke as professional women (i.e. 35% & 33% versus 11%). The proportions who have never smoked varies by socio-economic group and gender (see Figures A1 and A2 in Appendix). For example, in 2000 54% of men and 52% of women from professional backgrounds reported never having smoked compared to 36% of men and women from unskilled manual occupations.



Source: Authors' own analysis CHS 2002.

The clear differential between men and women in manual and non-manual occupations is also evident in Figure 7, which shows the trends in the prevalence of smoking over the period 1986-2002. Although the overall prevalence of smoking has fallen over time, it is notable that by the end of the period a higher proportion of both manual and non-manual women smoke than their male counterparts.



Source: Authors' own analysis CHS 1986-2002.

Tables 4 and 5 shed further light on recent trends in smoking by socio-economic group and gender, presenting the odds ratios of smoking of men and women from manual occupations versus non-manual occupations (Table 4), and *within* occupations of women versus men (Table 5).

Table 4: Socio-economic differentials in the prevalence of cigarette smoking by sex (odds ratios of manual versus non-manual), NI 1986 - 2002.

Year	Men			Women		
	Manual	Non-manual	Odds ratio	Manual	Non-manual	Odds ratio
1986	0.416	0.224	2.47	0.394	0.274	1.72
1988	0.386	0.246	1.93	0.378	0.246	1.86
1990	0.375	0.272	1.61	0.389	0.264	1.77
1992	0.361	0.197	2.30	0.353	0.237	1.76
1994	0.337	0.222	1.78	0.357	0.214	2.04
1996	0.378	0.219	2.17	0.342	0.231	1.73
1998	0.339	0.195	2.12	0.367	0.245	1.79
2000	0.329	0.165	2.48	0.362	0.209	2.15
2002	0.293	0.215	1.51	0.325	0.205	1.87

Note: The odds ratio is defined as the probability of occurrence over the probability of non-occurrence. In 2000, the probability of a man from manual background smoking was 0.329 and from a non-manual background was 0.165. Thus the odds of smoking for a manual man are $0.329/0.671 = 0.490$ and for a non-manual man are $0.165/0.835 = 0.198$. The odds of smoking are 2.48 times greater (i.e. $0.490/0.198$) when the man works in a manual occupation than when he works in a non-manual occupation.

Source: Authors' own analysis CHS 1986-2002.

As Table 4 illustrates, the odds of a man smoking were 2.47 times greater if they were from a manual background compared to non-manual in 1986. The odds ratio is virtually the same in 2000; however there has been little stability over the fifteen year period with

the two end points masking both falls and rises over time. Interestingly, in 2002 the odds ratio drops to 1.51, primarily as a result of the increased probability of smoking amongst non-manual men rather than the fall in smoking amongst manual men³.

Table 5: Gender differentials in the prevalence of cigarette smoking by socio-economic group (odds ratios of women versus men), NI 1986 - 2002.

Year	Non-manual			Manual		
	Women	Men	Odds ratio	Women	Men	Odds ratio
1986	0.274	0.224	1.31	0.394	0.416	0.91
1988	0.246	0.246	1.00	0.378	0.386	0.97
1990	0.264	0.272	0.96	0.389	0.375	1.06
1992	0.237	0.197	1.27	0.353	0.361	0.97
1994	0.214	0.222	0.95	0.357	0.337	1.09
1996	0.231	0.219	1.07	0.342	0.378	0.86
1998	0.245	0.195	1.34	0.367	0.339	1.13
2000	0.209	0.165	1.34	0.362	0.329	1.16
2002	0.325	0.293	1.16	0.205	0.215	0.94

Source: Authors' own analysis CHS 1986-2000.

Two main points emerge from the analysis. First, there has been little progress in narrowing the gap between socio-economic groups in terms of smoking behaviour over the last two decades. Indeed, in 2000 the odds of smoking were over two times greater when the woman worked in a manual occupation than when she worked in a non-manual occupation (up from 1.7 in 1986)(Table 4). Secondly, within manual groups, the rate of smoking cessation has been faster amongst men than women. In 1986, men from manual occupations had the highest rates of smoking (42%) but by 2000 women from manual backgrounds had replaced them at the top of the 'smoking league'. In 2000, the odds of a person from a manual background being a smoker were 1.16 higher if they were a woman rather than a man (Table 5). Amongst smokers, those with the greatest likelihood of being *heavy* smokers (i.e. smoking 20 or more cigarettes a day) were women from professional backgrounds and men from skilled manual backgrounds (Table 6).

³ The risk in non manual men smoking is due to a significant ($p<0.1$) rise in the percentage of professional men reporting being a current smoker, from 9% in 2000 to 17% in 2001.

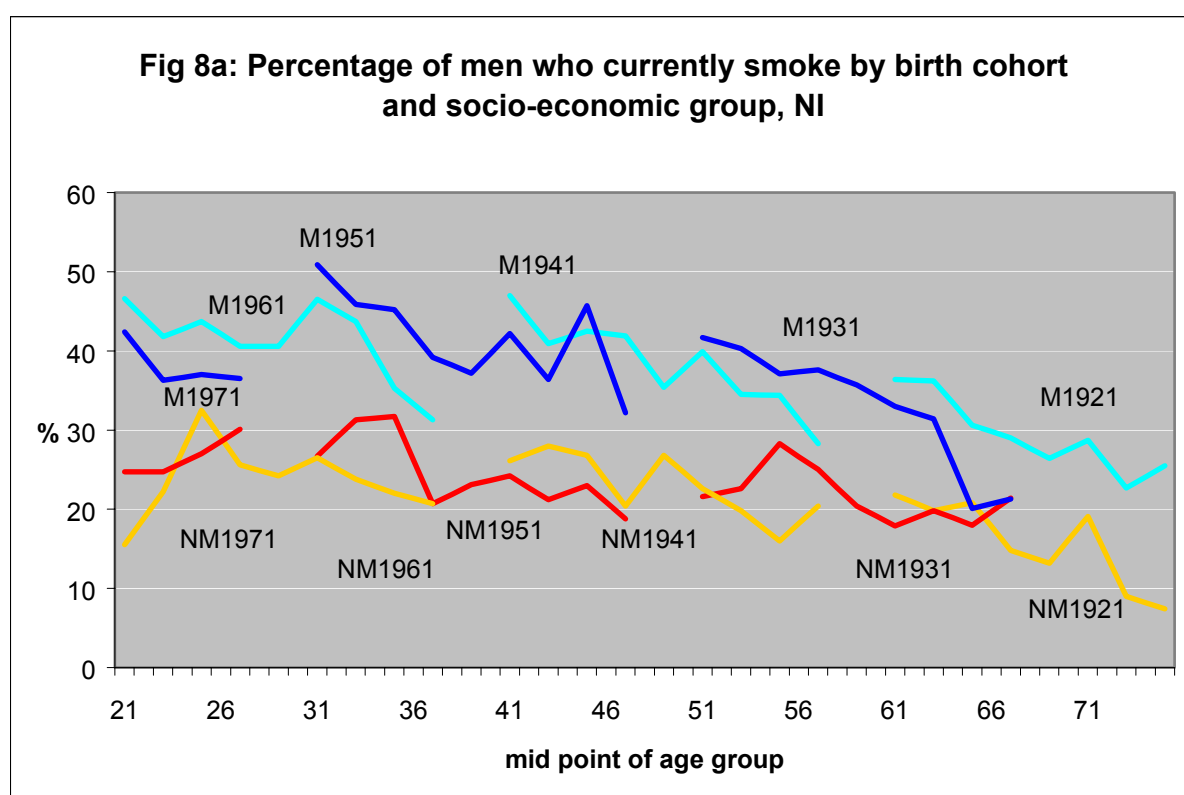
Table 6: Average daily cigarette consumption by socio-economic group and sex (%), Northern Ireland 2002

	Under 10 a day	10-19 a day	20 or more a day	(N)
Men				
Prof, Employers & Managers	25	40	36	(73)
Intermediate & Junior non-manual	27	38	35	(103)
Skilled manual	19	37	44	(231)
Semi & unskilled manual	22	43	35	(134)
Women				
Prof, Employers & Managers	27	29	44	(34)
Intermediate & Junior non-manual	25	40	35	(241)
Skilled manual	20	44	36	(50)
Semi & unskilled manual	22	40	38	(259)

Source: Authors' own analysis CHS 2002.

5. Socio-economic Differentials in Smoking Behaviour Across Cohorts

Further light can be shed by examining trends in smoking behaviour by age for different socio-economic groups within birth cohorts. Although low cell counts mean that there is significant variability, some trends are nevertheless clear. The trajectories of the prevalence of cigarette smoking in Figure 8a suggests that a lower proportion of each successive generation of manual and non-manual men are smoking than amongst their predecessors at the same age, with the notable exception of the youngest cohort of non manual men.

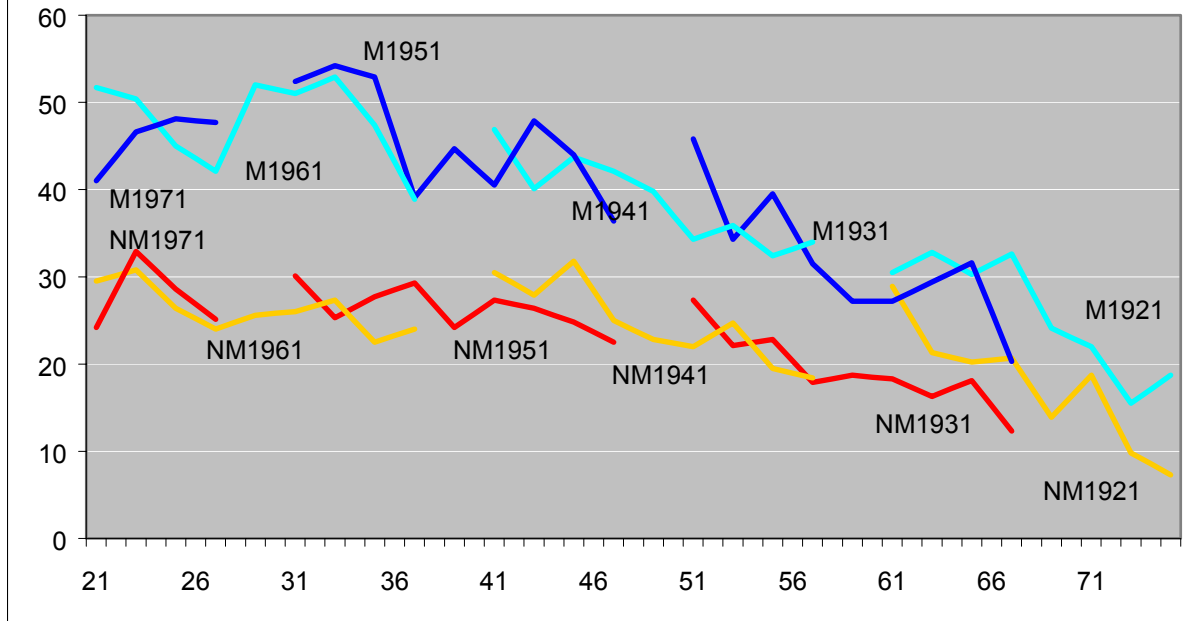


Note: M = manual occupational backgrounds. NM = non-manual occupational backgrounds.

Source: Authors' own analysis CHS 1986-2002.

Similarly, it appears that younger generations of women are also smoking less, again with the exception of women born in 1971-80 (Figure 8b). It is also clear from Figure 8b that the gap between the smoking behaviour of women from manual and non-manual backgrounds is widening amongst successive generations of women (i.e. the gap between the blue and red lines).

Fig 8b: Percentage of women who currently smoke by birth cohort and socio-economic group, NI



Source: Authors' own analysis CHS 1986-2002.

Table 7a: Socio-economic differentials in the prevalence of cigarette smoking within birth cohort, by sex and age (odds ratios of manual v non-manual), NI.

	Men			Women		
	Manual	Non-manual	Odds ratio	Manual	Non-manual	Odds ratio
1931-40						
Age 55	0.37	0.28	1.5	0.40	0.23	2.2
Age 65	0.20	0.11	2.1	0.32	0.18	2.1
			widening			narrowing
1941-50						
Age 45	0.43	0.27	2.0	0.44	0.32	1.7
Age 55	0.34	0.14	3.1	0.32	0.20	2.0
			widening			widening
1951-60						
Age 35	0.45	0.32	1.8	0.53	0.28	2.9
Age 45	0.46	0.28	2.2	0.44	0.25	2.4
			widening			narrowing
1961-70						
Age 25	0.44	0.33	1.6	0.45	0.26	2.3
Age 35	0.35	0.17	2.7	0.47	0.22	3.3
			widening			Widening

Source: Authors' own analysis CHS 1986-2000.

Inequalities in smoking behaviour between socio-economic groups appear to be generally widening both *within* birth cohorts with rising age, as non-manual groups (especially amongst men) give up smoking at a faster rate than manual groups (Table 7a) and *between* cohorts at any given chronological age (Table 7b). For example, amongst women aged 45, the odds of a woman born in 1941-50 smoking were 1.7 greater if they were from a manual background compared to non-manual. However amongst those women born in 1951-60 the odds had risen to 2.4 at the same age. Public health campaigns need to be more effective in targeting women, especially young women and women from manual backgrounds, in order to reduce inequalities in death rates from smoking related diseases.

Table 7b: Socio-economic differentials in the prevalence of cigarette smoking at selected ages by sex and birth cohort (odds ratios manual v non-manual), NI.

	Men			Women		
	Manual	Non-manual	Odds ratio	Manual	Non-manual	Odds ratio
Age 25						
1961-70	0.44	0.33	1.6	0.45	0.26	2.3
1971-80	0.37	0.19	2.5	0.48	0.29	2.3
			widening			same
Age 35						
1951-60	0.45	0.32	1.8	0.53	0.28	2.9
1961-70	0.35	0.17	2.7	0.47	0.22	3.3
			widening			widening
Age 45						
1941-50	0.43	0.27	2.0	0.44	0.32	1.7
1951-60	0.46	0.28	2.2	0.44	0.25	2.4
			widening			widening
Age 55						
1931-40	0.37	0.28	1.5	0.40	0.23	2.2
1941-50	0.34	0.14	3.1	0.32	0.20	2.0
			widening			narrowing
Age 65						
1921-30	0.31	0.21	1.7	0.30	0.20	1.7
1931-40	0.20	0.11	2.1	0.32	0.18	2.1
			widening			widening

Source: Authors' own analysis CHS 1986-2000.

6. Smoking Trends Summary

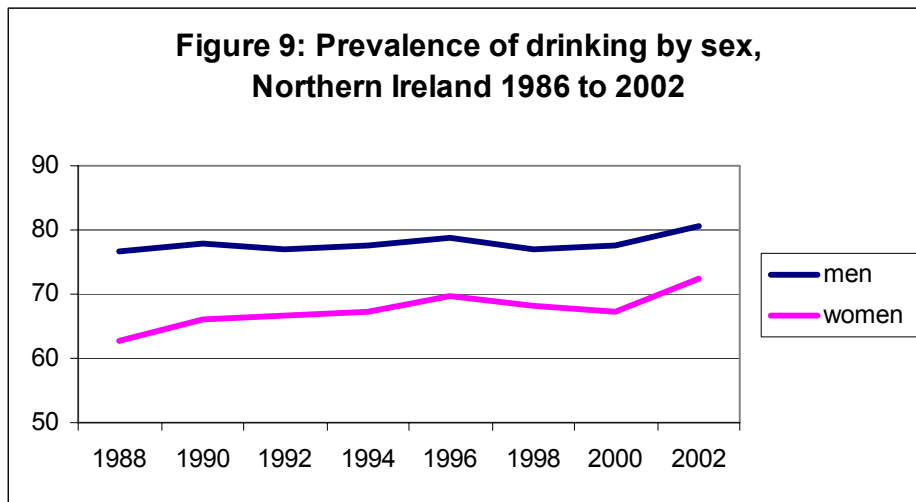
- Over the last fifteen years the prevalence of cigarette smoking in Northern Ireland has declined substantially. In 1986, 35 percent of men and 32 percent of women over age 16 were current cigarette smokers; by 2002 these proportions had fallen to 27 percent and 26 percent respectively.
- The decline in smoking has been significantly less marked amongst women, compared to men, and by 2002 a similar proportion of both men and women were current smokers.
- Smoking cessation rises with age as a higher proportion of older age groups report being ex-smokers than younger age groups.
- Cross-sectionally, a greater proportion of women have never smoked than men of the same age; and this is particularly the case amongst older women.

- The general decline in the propensity to smoke over the last two decades is reflected in the lower proportion of men who state that they have ever smoked amongst successive birth cohorts at all ages.
- This is not, however, the case amongst women, where *higher* proportions of successive birth cohorts of women report ever having smoked.
- Although smoking is generally more common amongst men than women, men (especially amongst the younger cohorts) are also more likely to give up than women and their *relative* improvement in mortality from smoking related diseases is higher.
- Gender differences in smoking behaviour need to be addressed if the targets for reducing deaths from lung cancer are to be achieved.

- There is a clear gradient in the prevalence of cigarette smoking by socio-economic group amongst both men and women. In 2002, men working in semi-skilled manual occupations were twice likely to report that they currently smoked than men employed in professional jobs (33% versus 17%). Similarly women in semi-skilled or unskilled manual occupations were *over three times* as likely to smoke as professional women (i.e. 35% & 34% versus 11%).
- There appears to have been little progress in narrowing the gap between socio-economic groups in terms of smoking behaviour over the last two decades.
- Within manual groups, the rate of smoking cessation has been faster amongst men than women. By 2002, more women from manual backgrounds smoked than any other group.
- Inequalities in smoking behaviour between socio-economic groups appear to be generally widening both *within* birth cohorts with rising age, and *between* cohorts at any given chronological age.
- Public health campaigns need to be more effective in targeting women, especially young women and women from manual backgrounds, in order to reduce inequalities in death rates from smoking related diseases.

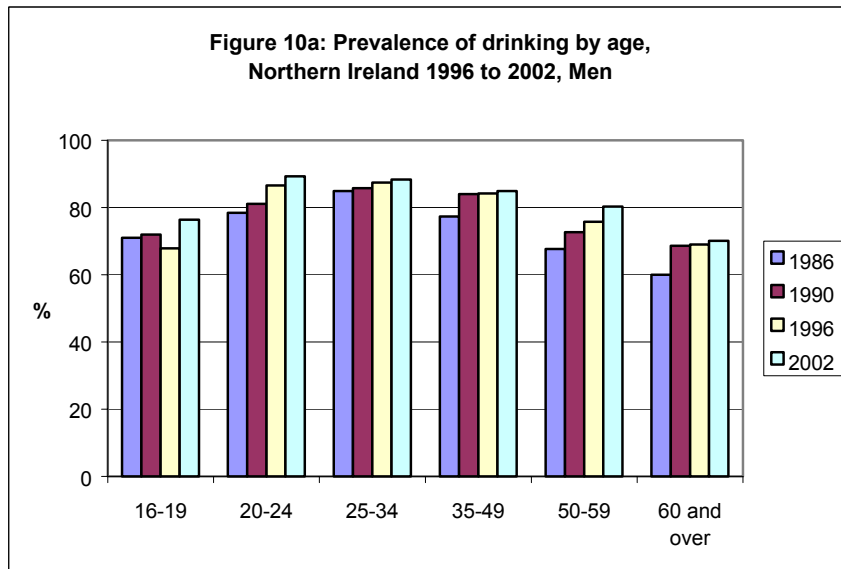
7. Trends in Alcohol Consumption by Age and Birth Cohort

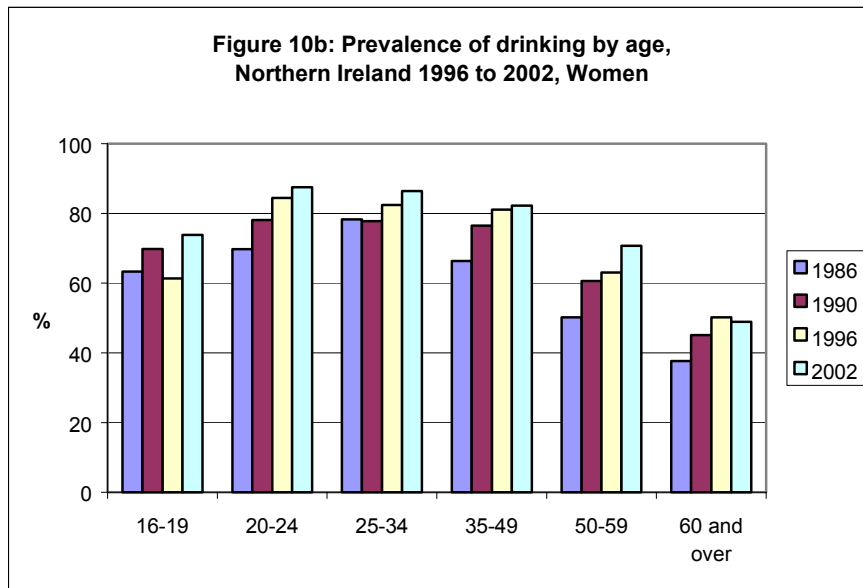
In contrast to the trends in smoking behaviour, the proportion of men and women who are current drinkers has *increased* significantly during the last two decades; from 73% of men and 59% of women in 1986 to 81% and 73% respectively in 2002 (Figure 9 and Appendix Table A7). Men were more likely than women to drink alcohol over this period, although the gap has narrowed across time.



Source: Authors' own analysis CHS 1986-2002.

The prevalence of current drinking varies by age, rising in the 20s and then falling amongst older age groups. The tendency towards an increased prevalence of current drinking over time is found within all age groups (see also Appendix Table A8).





Source: Authors' own analysis CHS 1986-2000.

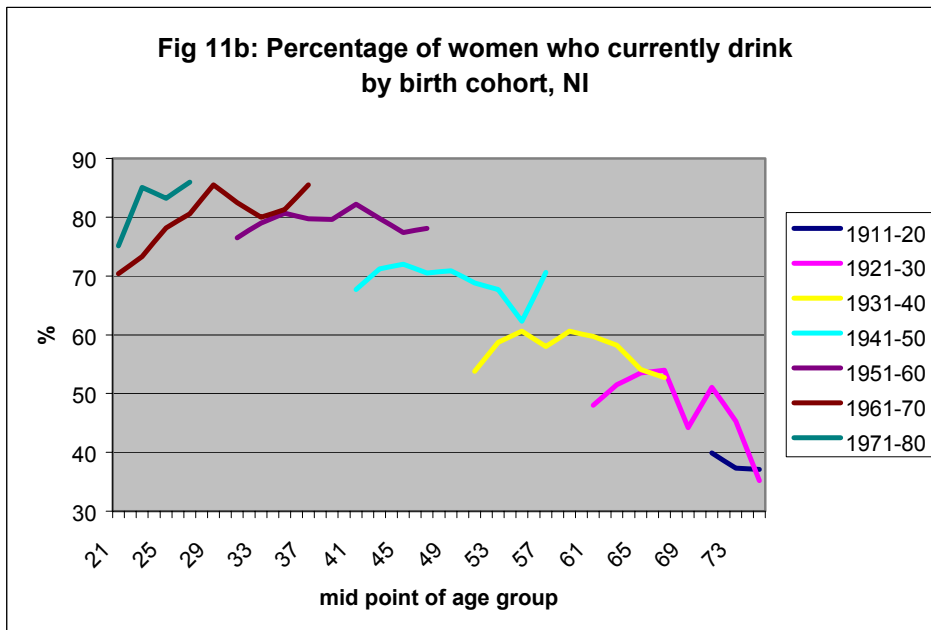
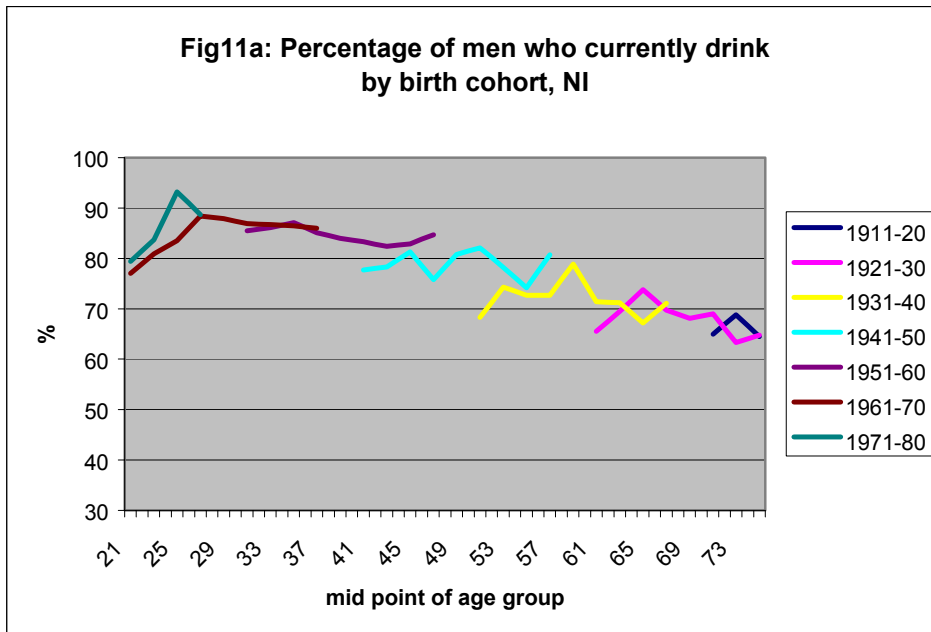
In 2002, a significantly higher proportion of women reported being lifetime abstainers (i.e. never having drunk alcohol) than men. This was the case for all age groups, with the notable exception of 16-19 year olds (Table 8). Older women were significantly more likely to have never drunk alcohol than younger women. For example, nearly half (47.8%) of women over 60 reported being lifetime abstainers compared with just 10% of women aged 25-34.

Table 8: Drinkers, ex-drinkers and lifetime abstainers by sex and age (%), Northern Ireland 2002

	Drinker	Ex-drinker	Lifetime abstainer	(N)
Men				
16-19	76	1	23	(106)
20-24	89	3	7	(121)
25-34	88	2	9	(291)
35-49	85	7	8	(497)
50-59	80	8	11	(299)
60 and over	70	9	21	(478)
Women				
16-19	74	3	23	(103)
20-24	88	3	10	(144)
25-34	86	4	10	(442)
35-49	82	5	13	(691)
50-59	71	7	23	(406)
60 and over	49	9	42	(617)

Source: Authors' own analysis CHS 2002.

As with smoking, changes in the pattern of current drinking by age reflects both period and cohort effects, and a clearer picture of trends in drinking behaviour across the life course is obtained by examining the patterns within particular birth cohorts. Two points stand out from Figures 11a and 11b. First, drinking is more common amongst successive birth cohorts at the same age. Second, the trend towards an increased prevalence of current drinking between birth cohorts is significantly more marked amongst women than men (see also Appendix Tables A9a and A9b).



Source: Authors' own analysis CHS 1986-2002.

These changes in the patterns of drinking by gender and birth cohort may have implications for the future health of women. Tables 9a and 9b present data on trends in the death rates from two drinking-related diseases: alcohol dependence syndrome (ADS) (ICD 303) and chronic liver disease and cirrhosis (ICD 571). The data show that there has been virtually no improvement in the male and female death rates from chronic liver disease and cirrhosis between birth cohorts at the same chronological age, and there are signs that mortality from ADS is actually increasing amongst successive cohorts of men and women. Death rates are higher amongst men than women. However, given that rates of current drinking have increased significantly amongst younger cohorts of women –who have yet to enter the higher risk age groups - it is possible that female death rates from these causes of death may increase in the future.

Table 9a Men: Death rates from Alcohol dependence syndrome (ICD 303) and Chronic liver disease and cirrhosis (ICD 571) by age and birth cohort (rates per million population), N. Ireland.

Alcohol dependence syndrome (ICD 303)									
	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50	1950-55	1956-60	1961-65
25-29						11	11		3
30-34					13		4	14	13
35-39				37	4		12	21	
40-44			36		5	21	64		
45-49		31		15	41	75			
50-54	31	22	17	53	51				
55-59	50	35	41	87					
60-64	12	62	80						
65-69	40	75							
70-74	49								
Chronic liver disease and cirrhosis (ICD 571)									
	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50	1950-55	1956-60	1961-65
25-29							4	4	
30-34					4	12	24	11	22
35-39				19	35	20	24	39	
40-44			41	15	59	50	67		
45-49		77	59	93	64	58			
50-54	108	93	100	100	97				
55-59	145	127	145	190					
60-64	174	172	172						
65-69	209	204							
70-74	97								

Source: derived by authors using unpublished data on deaths by cause and age for men and women and mid-year population estimates by single year of age and sex for the period 1971-2000 from GRO.

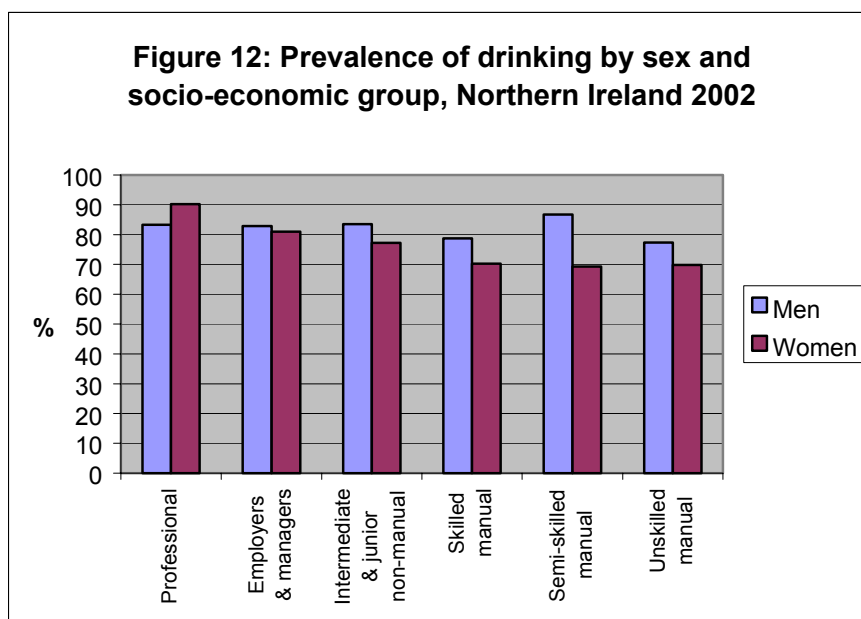
Table 9b Women: Death rates from Alcohol dependence syndrome (ICD 303) and Chronic liver disease and cirrhosis (ICD 571) by age and birth cohort (rates per million population), N. Ireland.

Alcohol dependence syndrome (ICD 303)									
	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50	1950-55	1956-60	1961-65
25-29									
30-34									
35-39				10					
40-44			5	5	9	8			
45-49		10		15	18	20			
50-54	5		21	60	36				
55-59	10	10	16	20					
60-64	5	32	16						
65-69	11								
70-74	24								
Chronic liver disease and cirrhosis (ICD 571)									
	1921-25	1926-30	1931-35	1936-40	1941-45	1946-50	1950-55	1956-60	1961-65
25-29									
30-34					4	4			
35-39				24	18	8			
40-44			30	15	18	32			
45-49		54	51	25	49	61			
50-54	58	96	73	110	103				
55-59	146	113	106	51					
60-64	140	132	115						
65-69	164	150							
70-74	121								

Source: derived by authors using unpublished data on deaths by cause and age for men and women and mid-year population estimates by single year of age and sex for the period 1971-2000 from GRO.

8. Socio-economic Differentials in Alcohol Consumption

Drinking varies with socio-economic group, with the highest prevalence of current drinkers in 2002 being amongst professional groups and the lowest amongst skilled manual women (69%) (Figure 12). There is little variation by socio-economic group in the prevalence of men who had never drunk alcohol (Table 10). However, women from a manual socio-economic background are significantly more likely to be lifetime abstainers than women from a non-manual background.



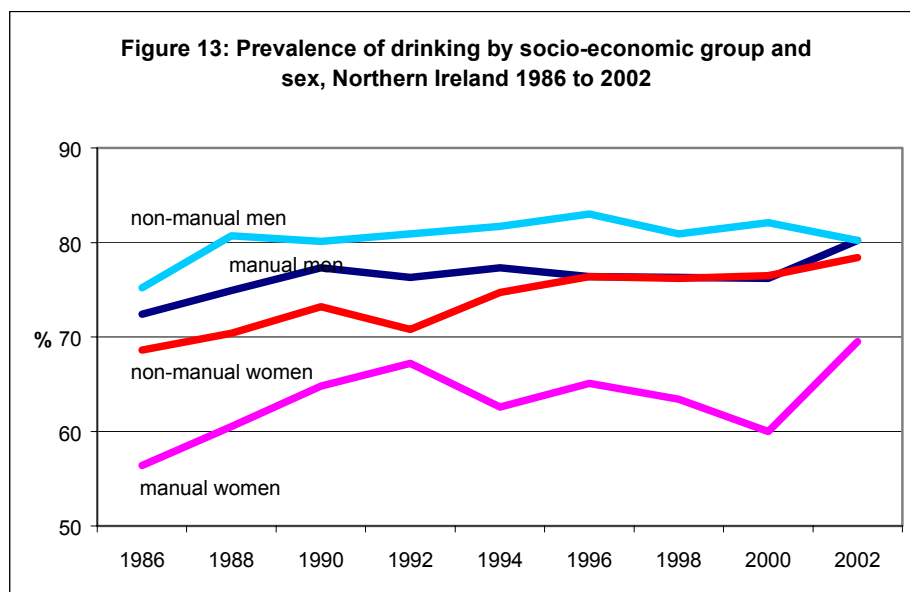
Source: Authors' own analysis CHS 2002.

Table 10: Drinkers, ex-drinkers and lifetime abstainers by sex and socio-economic group (%), Northern Ireland 2002

	Drinker	Ex-drinker	Lifetime abstainer	(N)
Men				
Professional	83	3	14	(102)
Employers & managers	83	3	14	(164)
Intermediate & junior non-manual	84	5	12	(387)
Skilled manual	79	8	13	(652)
Semi-skilled manual	87	3	10	(211)
Unskilled manual	77	14	9	(124)
Women				
Professional	90	4	6	(51)
Employers & managers	86	4	10	(94)
Intermediate & junior non-manual	77	5	18	(1098)
Skilled manual	70	8	22	(191)
Semi-skilled manual	69	7	24	(592)
Unskilled manual	70	3	27	(106)

Source: Authors' own analysis CHS 2000.

Figure 13 shows trends in current drinking amongst men and women by socio-economic over the last two decades. Most striking is the rise in the prevalence of current drinking amongst women from non-manual backgrounds, whose rates of drinking now match those of manual men. There has also been a steep rise in the proportion of manual women who report current drinking in the last two years (up from 60% in 2000 to nearly 70% in 2002).



Source: Authors' own analysis CHS 1986-2002.

Tables 11 and 12 shed further light on recent trends in drinking by socio-economic group and gender, presenting the odds ratios of current drinking of men and women from non-manual occupations versus manual occupations (Table 11), and *within* occupations of men versus women (Table 12). Over the period 1986 to 2002 there has been a considerable amount of variability in the extent of socio-economic differentials in current drinking and conclusions as to whether these differentials have widened or narrowed depends on both the start and end date for comparison. For example, in 1986 the odds of drinking were 1.16 times greater when a man worked in a non-manual occupation than when he worked in a manual occupation; by 2000 this had increased to 1.43. The rise between 1986 and 2000 in the odds of a non-manual women drinking as compared to manual women was even greater; from 1.69 to 2.17 – leading to the conclusion that socio-economic differentials in drinking behaviour were widening. However a different conclusion would be reached if one compared the situation in 1988 with that in 2002, i.e. that the differential had stayed broadly the same or even narrowed.

Table 11: Socio-economic differentials in the prevalence of current drinking by sex (odds ratios of non-manual versus manual), NI 1986 - 2002.

Year	Men			Women		
	Non-Manual	Manual	Odds ratio	Non-Manual	Manual	Odds ratio
1986	0.752	0.724	1.16	0.686	0.564	1.69
1988	0.807	0.749	1.40	0.704	0.605	1.55
1990	0.801	0.773	1.18	0.732	0.648	1.48
1992	0.809	0.763	1.32	0.708	0.672	1.18
1994	0.817	0.773	1.31	0.747	0.626	1.76
1996	0.83	0.764	1.51	0.764	0.651	1.74
1998	0.809	0.763	1.32	0.762	0.634	1.85
2000	0.821	0.762	1.43	0.765	0.6	2.17
2002	0.833	0.802	1.23	0.784	0.695	1.59

Source: Authors' own analysis CHS 1986-2002.

Overall, there has been little change in the relative propensity to currently drink by gender *within* occupational backgrounds; the odds of a non-manual man drinking as opposed to a non-manual women were around 1.4 in both 1986 and 2002, and men from manual backgrounds were over twice as likely to be current drinkers than manual women.

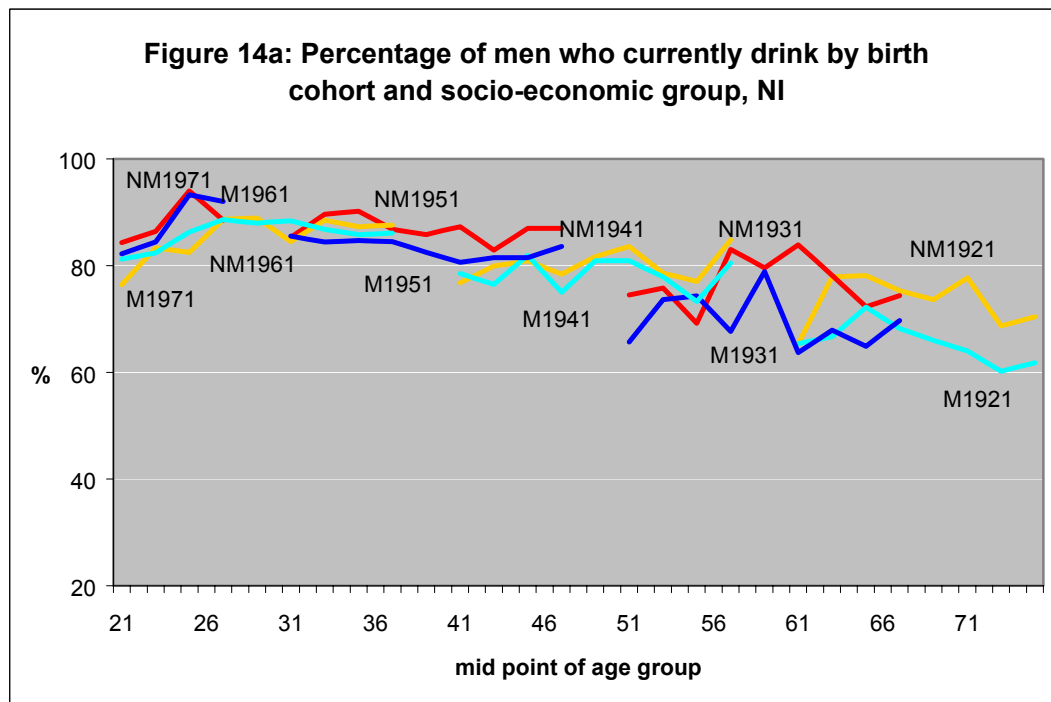
Table 12: Gender differentials in the prevalence of current drinking by socio-economic group (odds ratios of men versus women), NI 1986 - 2002.

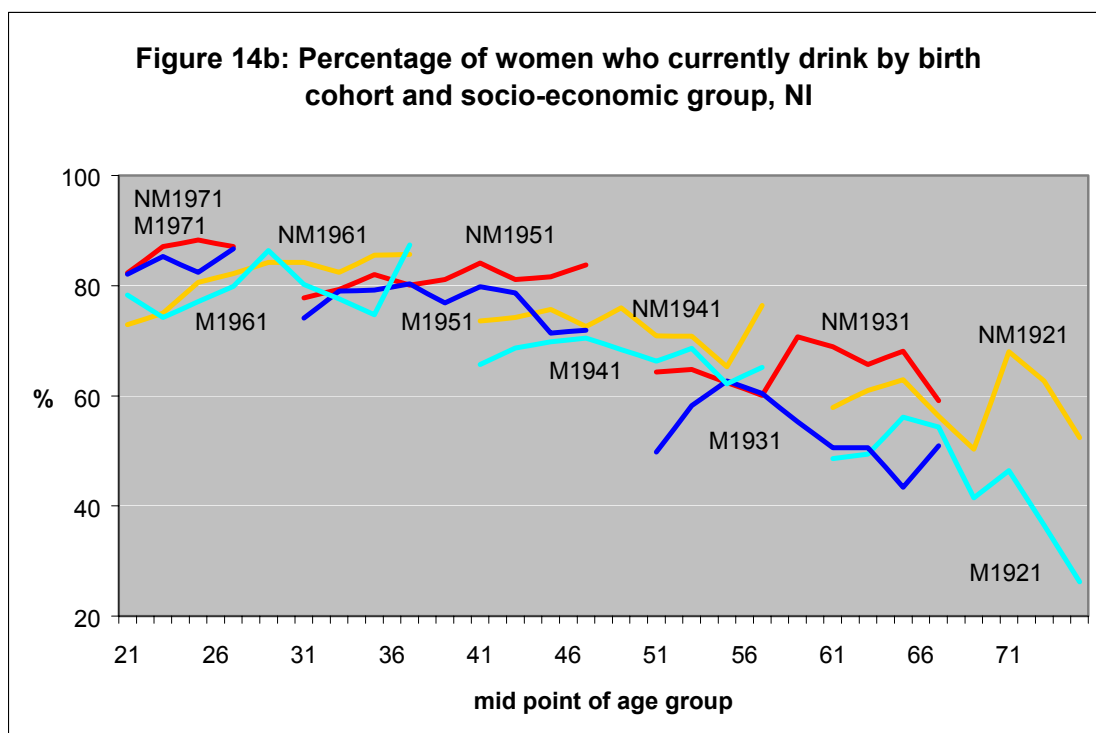
Year	Non-manual			Manual		
	Men	Women	Odds ratio	Men	Women	Odds ratio
1986	0.752	0.686	1.39	0.724	0.564	2.03
1988	0.807	0.704	1.76	0.749	0.605	1.95
1990	0.801	0.732	1.47	0.773	0.648	1.85
1992	0.809	0.708	1.75	0.763	0.672	1.57
1994	0.817	0.747	1.51	0.773	0.626	2.03
1996	0.83	0.764	1.51	0.764	0.651	1.74
1998	0.809	0.762	1.32	0.763	0.634	1.86
2000	0.821	0.765	1.41	0.762	0.6	2.13
2002	0.833	0.781	1.40	0.802	0.695	1.78

Source: Authors' own analysis CHS 1986-2002.

9. Socio-economic Differentials in Alcohol Consumption Across Cohorts

Figures 14a and 14b show trends in the prevalence of current drinking amongst men and women by socio-economic background amongst the six birth cohorts since 1921. There are a couple of key points to note. First, there is an upward trend in current drinking amongst successive cohorts within each socio-economic group. This is most marked amongst women. For example, at age 45, 76% of women of non-manual backgrounds born in 1941-50 were current drinkers. However, amongst non-manual women born in 1951-60 at the same age, 82% were current drinkers (see also Table 13). Second, the gap between non-manual and manual groups appears to be narrowing between successive cohorts (i.e. the gap between the blue/light blue and red/orange lines is becoming smaller). Amongst men born in 1971-81 and 1961-71, there is little difference in the prevalence of current drinking by socio-economic group. However, socio-economic differentials remain amongst younger cohorts of women.





Source: Authors' own analysis CHS 1986-2000.

Table 13: Prevalence of current drinking at selected ages by sex, socio-economic group and birth cohort, NI.

	Men		Women	
	Non-manual	Manual	Non-manual	Manual
Age 25				
1961-70	82.5	86.3	80.6	77.1
1971-80	94.0	93.3	88.3	82.4
Age 35				
1951-60	90.2	84.7	82.2	79.2
1961-70	87.3	85.8	85.5	74.7
Age 45				
1941-50	80.9	81.9	75.7	69.8
1951-60	80.7	81.5	81.6	71.4
Age 55				
1931-40	69.2	74.3	62.4	62.7
1941-50	77.0	73.3	65.3	62.2
Age 65				
1921-30	78.1	72.2	62.9	56.1
1931-40	72.3	64.9	68.1	43.4

Source: Authors' own analysis CHS 1986-2000.

10. Drinking Trends Summary

- The proportion of men and women who are current drinkers has *increased* significantly during the last two decades, from 73% of men and 59% of women in 1986 to 81% and 73% respectively in 2002.
- Men were more likely than women to drink alcohol in each year over this period (1986-2002), although the gap has narrowed across time.
- In 2002, a significantly higher proportion of women reported being lifetime abstainers than men.
- Older women were significantly more likely to have never drunk alcohol than younger women. For example, over two-fifths (42%) of women over 60 reported being lifetime abstainers compared with just 10% of women aged 25-34.
- Looking at changes across birth cohorts, drinking is more common amongst successive birth cohorts at the same age.
- The trend towards an increased prevalence of current drinking between birth cohorts is significantly more marked amongst women than men. These changes in the patterns of drinking by gender and birth cohort may have implications for the future health of women.

- Drinking varies with socio-economic group, with the highest prevalence of current drinkers in 2002 being amongst professional men and women and the lowest amongst skilled manual women (69%).
- Women from a manual socio-economic background are significantly more likely to be lifetime abstainers than women from a non-manual background.
- Current drinking has increased amongst men and women from all socio-economic groups. Most striking is the rise in the prevalence of current drinking amongst women from non-manual backgrounds, whose rates of drinking now match those of manual men.

- Socio-economic differentials in current drinking have varied over the period 1986 to 2002, both widening and narrowing.
- There is an upward trend in current drinking amongst successive birth cohorts within each socio-economic group. This is most marked amongst women. For example, at age 45, 76% of women of non-manual backgrounds born in 1941-50 were current drinkers. However amongst non-manual women born ten years later, in 1951-60, 82% were current drinkers at the same age.
- The gap between non-manual and manual groups appears to be narrowing somewhat between successive cohorts and there is little difference in the prevalence of current drinking by socio-economic group amongst men born in 1971-81 and 1961-71. However, socio-economic differentials remain amongst younger cohorts of women.

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Appendix

Tables

Table A1 Sample size of ten year birth cohorts in selected years of the Continuous Household Survey (CHS), Northern Ireland, 1986-2002

Year	Birth Cohort						1971-80
	1911-20	1921-30	1931-40	1941-50	1951-60	1961-70	
1986							
All	628	792	818	1017	1114	1325	
Male	282	367	392	492	543	667	
Female	346	425	426	525	571	658	
1988							
All	642	855	867	1110	1283	1422	
Male	275	383	419	548	629	700	
Female	367	472	448	562	654	722	
1990							
All	578	856	890	1066	1232	1252	
Male	253	415	435	520	590	593	
Female	325	441	455	546	642	659	
1992							
All		687	794	1060	1260	1193	
Male		323	391	529	610	573	
Female		364	403	531	650	620	
1994							
All		787	796	968	1196	1192	
Male		341	398	461	578	573	
Female		446	398	507	618	619	
1996							
All		642	727	899	1030	1168	1039
Male		297	348	442	496	531	525
Female		345	384	457	534	637	514
1998							
All		548	698	884	989	1047	952
Male		233	319	428	490	464	466
Female		315	379	456	499	583	486
2000							
All		448	633	868	960	1155	892
Male		197	297	433	453	532	426
Female		251	336	435	507	623	466
2002							
All		417	560	814	912	1057	913
Male		184	266	375	455	510	426
Female		233	294	439	457	547	487

Table A2: Prevalence of cigarette smoking amongst adults aged 16 and over by sex (%), Northern Ireland 1986 to 2002

	Men	Women
1986	35.4 (33.4 - 37.4)	32.1 (30.3 - 33.8)
1988	34.0 (32.2 - 35.9)	30.8 (29.2 - 32.5)
1990	33.9 (32.1 - 35.8)	31.9 (30.2 - 33.5)
1992	30.8 (29.0 - 32.7)	28.8 (27.2 - 30.4)
1994	29.1 (27.2 - 30.9)	27.4 (25.9 - 29.0)
1996	31.0 (29.0 - 33.0)	27.4 (25.7 - 29.1)
1998	27.9 (25.9 - 29.2)	29.2 (27.4 - 30.9)
2000	26.0 (23.9 - 28.0)	27.6 (25.9 - 29.4)
2002	26.5 (24.8 - 28.3)	25.9 (24.2 - 27.5)

Note: numbers in brackets indicate 95% confidence interval around point estimate.
Source: authors' own analysis CHS 1986-2000.

Table A3: Prevalence of cigarette smoking by age and sex (%), Northern Ireland 1986 to 2002

	1986	1992	1996	2002
Men				
16-24	35.9 (30.6-41.3)	32.0 (27.2-36.8)	31.5 (26.2-36.9)	32.4 (27.8-36.9)
25-34	42.8 (38.2-47.4)	33.5 (29.4-37.7)	38.8 (33.8-43.8)	31.9 (27.3-36.4)
35-49	38.0 (34.1-42.0)	34.1 (30.5-37.7)	34.2 (30.2-38.1)	26.4 (23.1-29.6)
50-64	33.9 (29.6-38.2)	31.5 (27.4-35.5)	28.9 (24.7-33.1)	25.5 (21.9-29.2)
65 and over	24.5 (20.3-28.7)	20.6 (16.7-24.5)	21.3 (17.3-25.4)	16.1 (12.4-19.8)
Women				
16-24	35.2 (30.3-40.1)	28.4 (24.4-32.5)	26.3 (21.6-31.1)	31.4 (26.8-36.1)
25-34	39.3 (35.2-43.5)	32.9 (29.2-36.6)	37.0 (33.0-41.0)	32.7 (28.5-36.8)
35-49	39.2 (35.6-42.8)	35.5 (32.3-38.8)	32.1 (28.6-35.5)	28.6 (25.3-31.8)
50-64	32.7 (29.0-36.5)	27.9 (24.2-31.6)	24.4 (20.8-28.1)	25.6 (22.0-29.1)
65 and over	12.9 (10.1-15.7)	16.3 (13.3-19.3)	15.3 (12.3-18.3)	11.8 (9.1-14.6)

Note: numbers in brackets indicate 95% confidence interval around point estimate.
Source: authors' own analysis CHS 1986-2002.

Table A4: Cigarette smoking behaviour by age and sex (%), Northern Ireland 2002

	Smoker	Ex-smoker	Never smoked	Total	(N)
Men					
16-24	32.4	28.5	39.2	100%	(411)
25-34	31.9	25.8	42.3	100%	(411)
35-49	26.4	29.5	44.1	100%	(709)
50-64	25.6	36.2	38.2	100%	(544)
65 and over	16.1	46.7	37.2	100%	(379)
Women					
16-24	31.4	29.1	39.4	100%	(388)
25-34	32.7	24.8	42.5	100%	(499)
35-49	28.6	27.3	44.1	100%	(732)
50-564	25.6	36.1	38.3	100%	(579)
65 and over	11.8	31.1	57.1	100%	(524)

Source: authors' own analysis CHS 2002.

Table A5a: Percentage of men who have ever smoked by birth cohort

Mid point of age group	1911-20	1921-30	1931-40	1941-50	1951-60	1961-70	1971-80
21						53.8	51.2
23						58.7	52.4
25						63.8	54.2
27						62.6	60.2
29						60.2	
31					70.7	62.7	
33					71.6	59.4	
35					74.5	57.4	
37					64.0	51.9	
39					66.5		
41				79.2	66.3		
43				75.6	67.0		
45				76.5	65.5		
47				75.0	60.3		
49				73.7			
51			75.8	77.9			
53			73.7	74.0			
55			80.8	71.1			
57			73.6	64.1			
59			75.5				
61		79.9	74.1				
63		83.3	68.9				
65		80.9	70.1				
67		80.1	55.8				
69		77.3					
71	81.9	75.2					
73	81.8	76.5					
75	77.5	77.6					

Source: authors' own analysis CHS 1986-2002.

Table A5b: Percentage of women who have ever smoked by birth cohort

Mid point of age group	1911-20	1921-30	1931-40	1941-50	1951-60	1961-70	1971-80
21						52.5	45.9
23						53.9	56.5
25						53.3	51.1
27						53.8	57.2
29						56.6	
31					63.0	58.0	
33					58.5	53.6	
35					64.8	53.3	
37					58.9	56.1	
39					58.3		
41				57.3	57.0		
43				57.0	59.8		
45				58.9	55.5		
47				58.6	59.3		
49				53.6			
51			56.0	52.0			
53			53.7	55.4			
55			54.2	53.0			
57			47.8				
59			49.3				
61		54.6	48.7				
63		50.5	43.6				
65		50.1	51.1				
67		51.7	48.9				
69		42.6					
71	41.0	44.0					
73	36.7	41.2					
75	42.5	40.8					

Source: authors' own analysis CHS 1986-2002.

Table A6a: Percentage of men who currently smoke by birth cohort

Mid point of age group	1911-20	1921-30	1931-40	1941-50	1951-60	1961-70	1971-80
21						37.7	32.8
23						36.0	31.6
25						40.0	28.8
27						36.9	32.1
29						34.1	
31					42.2	38.1	
33					41.0	36.5	
35					40.8	27.0	
37					32.8	27.2	
39					31.8		
41				39.6	34.2		
43				35.7	28.9		
45				36.0	26.4		
47				33.7	25.5		
49				31.7			
51			35.4	32.2			
53			34.0	29.5			
55			34.1	26.5			
57			34.2	27.5			
59			30.9				
61		32.3	27.2				
63		31.6	26.1				
65		28.0	24.0				
67		24.9	22.1				
69		22.7					
71	26.5	25.2					
73	23.9	18.4					
75	19.0	19.4					

Source: authors' own analysis CHS 1986-2002.

Table A6b: Percentage of women who currently smoke by birth cohort

Mid point of age group	1911-20	1921-30	1931-40	1941-50	1951-60	1961-70	1971-80
21						36.1	27.7
23						39.2	35.7
25						34.8	37.0
27						33.9	33.5
29						36.0	
31					39.7	35.7	
33					38.9	37.4	
35					38.7	31.5	
37					34.3	30.7	
39					32.0		
41				39.2	32.4		
43				33.8	34.6		
45				37.5	32.5		
47				34.3	27.8		
49				30.2			
51			36.3	28.0			
53			29.5	30.7			
55			30.7	25.7			
57			25.1	26.0			
59			23.3				
61		28.8	22.5				
63		26.8	22.1				
65		26.0	24.6				
67		26.6	17.6				
69		18.5					
71	16.8	19.4					
73	14.7	13.2					
75	18.5	13.7					

Source: authors' own analysis CHS 1986-2002.

Table A7: Prevalence of drinking by sex (%), Northern Ireland 1986 to 2000

	Men	Women
1986	72.9 (71.0-74.7)	58.8 (57.0-60.6)
1988	76.7 (75.0-78.3)	62.8 (61.1-64.5)
1990	77.8 (76.2-79.4)	66.1 (64.4-67.7)
1992	77.0 (75.3-78.6)	66.7 (65.1-68.4)
1994	77.7 (76.0-79.4)	67.2 (65.6-68.9)
1996	78.7 (76.9-80.4)	69.8 (68.1-71.6)
1998	77.1 (75.3-79.0)	68.3 (66.5-70.1)
2000	77.6 (75.7-79.5)	67.2 (65.4-69.0)
2002	80.5 (78.7-82.4)	72.5 (70.7-74.2)

Note: numbers in brackets indicate 95% confidence interval around point estimate.
Source: authors' own analysis CHS 1986-2002.

Table A8: Prevalence of drinking by sex (%), Northern Ireland 1986 to 2002

	1986	1990	1996	2000
Men				
16-19	71.0	71.9	67.9	76.4
20-24	78.4	81.1	86.6	89.3
25-34	84.9	85.7	87.4	88.3
35-49	77.3	84	84.2	84.9
50-59	67.7	72.7	75.7	80.3
60 and over	60.0	68.6	69.0	70.1
Women				
16-19	63.3	69.8	61.3	73.8
20-24	69.7	78.1	84.5	87.5
25-34	78.3	77.8	82.4	86.4
35-49	66.3	76.5	81.1	82.2
50-59	50.2	60.6	63	70.7
60 and over	37.7	45.1	50.2	48.9

Source: authors' own analysis CHS 1986-2002.

Table A9a: Percentage of Men who currently drink by birth cohort

Mid point of age group	1911-20	1921-30	1931-40	1941-50	1951-60	1961-70	1971-80
21						77.0	79.4
23						80.9	83.7
25						83.5	93.2
27						88.4	88.7
29						87.9	
31					85.5	86.9	
33					86.1	86.7	
35					87.1	86.5	
37					85.1	86.0	
39					84.0		
41				77.7	83.3		
43				78.3	82.4		
45				81.3	82.9		
47				75.8	84.7		
49				80.8			
51			68.3	82.1			
53			74.3	78.2			
55			72.7	74.2			
57			72.7	80.7			
59			78.9				
61		65.5	71.4				
63		69.5	71.2				
65		73.8	67.2				
67		69.7	71.1				
69		68.1					
71	65.0	69.0					
73	68.8	63.3					
75	64.5	64.8					

Source: authors' own analysis CHS 1986-2002.

Table A9b: Percentage of Women who currently drink by birth cohort

Mid point of age group	1911-20	1921-30	1931-40	1941-50	1951-60	1961-70	1971-80
21						70.4	75.1
23						73.3	85.1
25						78.2	83.2
27						80.6	86.0
29						85.5	
31					76.5	82.5	
33					79.0	80.0	
35					80.7	81.3	
37					79.7	85.5	
39					79.6		
41				67.7	82.2		
43				71.2	79.8		
45				72.0	77.4		
47				70.5	78.1		
49				70.9			
51			53.8	68.8			
53			58.7	67.7			
55			60.6	62.3			
57			58.0	70.6			
59			60.6				
61		48.0	59.7				
63		51.5	58.2				
65		53.5	54.1				
67		54.0	52.7				
69		44.2					
71	39.9	51.1					
73	37.3	45.3					
75	37.1	35.2					

Source: authors' own analysis CHS 1986-2002.

Figures

