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# CLS Briefings



Following lives from birth and through the adult years

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The Centre for Longitudinal Studies (CLS) is an ESRC Resource Centre based at the Institute of Education, University of London. CLS is responsible for three of Britain's birth cohort studies:

- **1958 National Child Development Study (NCDS)**
- **1970 British Cohort Study (BCS70)**
- **Millennium Cohort Study (MCS)**

The studies involve multiple surveys of large numbers of individuals from birth and throughout their lives. Over the years they have collected detailed information on education and employment, family and parenting, physical and mental health, and social attitudes. Because they are longitudinal studies following the same groups of people throughout their lives, they show how histories of health, wealth, education,

family and employment are interwoven for individuals, vary between them and affect outcomes and achievements in later life. Through comparing the different generations in the three cohorts, we can chart social change and start to untangle the reasons behind it. Findings from the studies have contributed to debates and enquiries in a wide range of policy areas over the last half-century.

The aim of CLS Briefings is to provide examples of findings from the three cohort studies. Although the findings they include are not exhaustive, they give an idea of the work that has been carried out and the scope of the studies for future research. Data from the 1958, 1970 and Millennium cohorts is available free of charge from the UK Data Archive ([www.data-archive.ac.uk](http://www.data-archive.ac.uk)), which is administered by the Economic and Social Data Service, University of Essex.

## Drinking and smoking

**Drinking and smoking are two major health concerns in today's society. Britain is known for its binge drinking culture, particularly amongst the young, and a smoking ban, already in place in Scotland, will be introduced in England in the summer. Recent press headlines have reported that pregnant teenagers are smoking to reduce the birthweight of their children.**

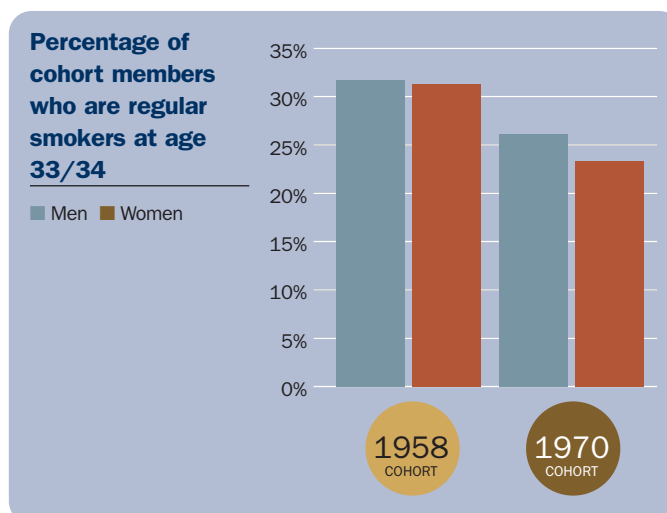
In October 2006 the Department of Health published the Health Profile of England, a collection of data summarising the health status of the population. In 2004, 23% of women and 26% of men were smokers, and it estimated for the period 1998-2000 that on average 86,500 deaths per year were caused by smoking. An earlier Department of Health report (2004) calculated that the annual cost of smoking to the NHS in England is between £1.4 and £1.7 billion. The Health Profile of England also includes data on alcohol consumption. In 2004 22% of women and 39% of men exceeded the recommended alcohol consumption limits (more than three units per day for women, four for men). In the same year 10% of women and 22% of men were binge drinking (consuming six units of alcohol on at least one day a week for women, eight units for men). An increase in alcohol-related hospital admissions of more than 80% in the last ten years was also reported.

Longitudinal data from the 1958, 1970 and millennium (2000-2001) birth cohort studies can help us to ascertain the long-term impacts of drinking and smoking over the life course. The studies can also reveal patterns in behaviour over time, and using cross-cohort comparisons we can see if

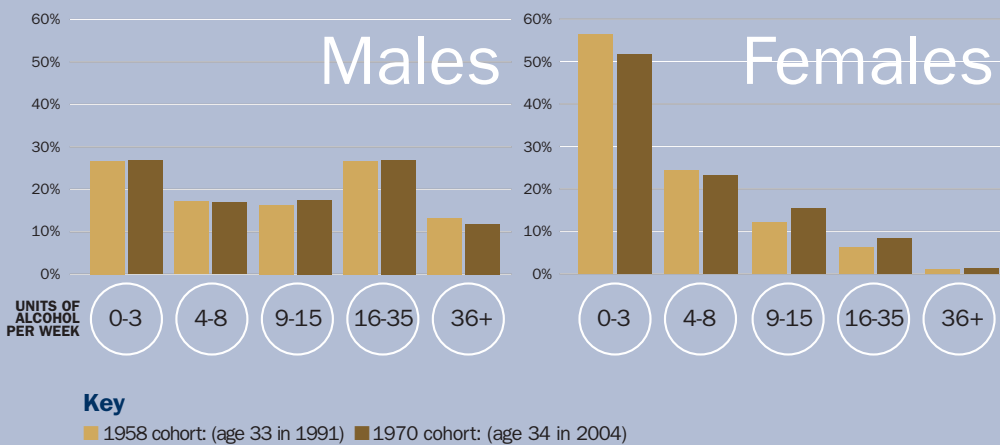
there are any generational differences in drinking and smoking habits.

### Smoking

While it is too early to start collecting information on smoking from members of the millennium cohort, data on parental smoking have been recorded. Bartley et al (2004) reported that 28.4% of mothers smoked at the time of the first survey, when the cohort baby was nine months old. The lowest rates were seen in England (27.3%) and the highest were in Wales (37.6%).



**Alcohol consumption of males and females in their early 30s, comparing the 1958 and 1970 cohorts**



As can be seen from the bar charts here, which compare the cohort born in 1958 with the cohort born in 1970, there is very little difference between the cohorts in terms of the weekly alcohol consumption of men in their early 30s. However, women born in 1970 report drinking more units of alcohol per week than women born in 1958.

**Which people are most likely to be smokers?**

In the 1958 cohort, individuals from manual social backgrounds and those with no qualifications were more likely to be a smoker at age 41, or to have been a persistent smoker across the lifecourse. Among adolescent light smokers, individuals who gained higher qualifications were less likely to smoke at age 41 (16%) than those with no qualifications (83%). When adolescent heavy smokers were examined, smoking prevalence in later life was more similar for those with qualifications than those without (Jefferis et al, 2003).

**Individuals from manual social backgrounds and those with no qualifications were more likely to smoke through the lifecourse**

When Schoon and Parsons (2003) examined the younger 1970 cohort, they found similar smoking patterns – those working in unskilled jobs and those with the lowest levels of qualifications were most likely to smoke – at age 30 just 20% of men educated to degree-level smoked compared with 47% men with no qualifications. For women, the comparable figures were 14% and 42%. Couples where one or both partners were employed were least likely to smoke, while those where neither worked were the most likely to smoke.

The mothers of the millennium cohort showed marked differences in smoking behaviour depending on their socioeconomic circumstances. Only 8% of mothers and 18% of fathers in the higher professional/managerial category smoked when their children were nine months. However, approximately half of all those in semi-routine/routine jobs were smoking at this time. There was also a distinct difference between those who had once smoked but had given up – amongst the professional/managerial group, 44.3% had given up compared with 15-16% of those working in semi-routine/routine roles (Bartley et al, 2005).

**Smoking and pregnancy**

There is a long history of using data from the cohort studies to understand the effects of smoking during pregnancy. The original survey of the 1958 cohort revealed that smoking in

the second and third trimester of pregnancy was strongly associated with reduced birth weight. This survey also revealed that smokers were more likely to have spontaneous abortions (Butler, Goldstein and Ross, 1972).

In 1983, Rush and Cassano’s research on the 1970 cohort revealed that not only was maternal smoking during pregnancy found to significantly decrease birthweight, it also increased the risk of perinatal mortality among the children of smokers in the manual social classes.

Although children of mothers who smoked during pregnancy were lighter at birth than those born to non-smoking mothers, from adolescence (age 11 for girls, 16 for boys) these children had the greatest risk of being in the fattest 10% in terms of Body Mass Index (BMI) (1958 cohort). By the age of 33 the children of smoking mothers had a 40% greater risk of being obese compared with the children of non-smokers (Power and Jefferis, 2002).

Not only has research on the 1958 cohort found links between maternal smoking during pregnancy and weight, other studies have revealed that the children of mothers who smoked during pregnancy had fewer educational qualifications (Fogelman and Manor, 1988).

**Drinking**

**Alcohol consumption in the cohort studies**

Schoon and Parsons (2003) also studied alcohol consumption in the 1958 and 1970 cohorts. They found that men in the 1958 cohort tended to drink less as they got older, particularly if they worked in unskilled occupations. In both the 1958 and 1970 cohorts, women in non-manual jobs drank the most whilst women in unskilled jobs drank the least. And unlike men, women drank more as they got older. Couples with children drank the least. The heaviest drinkers were single men and women of all age groups with no children, as well as men and women living in households where there were no earners.

### Unlike men, women were found to drink more as they got older

Bartley et al (2004) found for millennium cohort mothers in 2001/2002 that the highest incidences of "never drinking" were in areas with high minority ethnic populations, while the lowest rates were in the most affluent areas. The highest number of frequent drinkers (more than three times per week) was seen in advantaged areas and among mothers working in managerial/professional jobs. Generally though, mothers' alcohol consumption was much lower than that of fathers. Overall, 29.7% of fathers drank more than three times per week and of those who drank, 35.2% consumed more than 14 units each week. Similar to the pattern for mothers, the highest rates of frequent drinking among fathers were seen for those in managerial or professional jobs.

### Frequent drinking was most common for men and women in management/professional jobs

#### Binge drinking

In 2004 Jefferis, Power and Manor researched binge drinking in the 1958 cohort and its relationship to drinking in adolescence. Binge drinking was defined as drinking 10 or more units of alcohol on one occasion for men or 7 or more units for women. They found, amongst other things, that binge drinking is common in British men and women throughout adulthood – it is not just confined to the early 20s. At age 42 approximately one in three men and one in seven women reported usual alcohol consumption levels indicative of binge drinking. The results also showed that men were more likely than women to binge drink and for both genders teenage heavy drinkers had an increased risk of repeated binge drinking in adulthood.

### Binge drinking is not just confined to individuals in their 20s – at age 42 approximately 1 in 3 men and 1 in 7 women were binge drinkers

#### Drink and divorce

Hope, Power and Rodgers (1998) looked into the relationship between parental separation and problem drinking in early adulthood. Although they only found a weak relationship at age 23, by the age of 33 there was a stronger and more consistent relationship in the 1958 cohort. Higher levels of alcohol consumption, heavy drinking and problem drinking were apparent for 33 year olds who had experienced parental divorce in childhood.

### High levels of alcohol consumption and problem drinking were linked to parental divorce in childhood for people in their 30s

Power, Rodgers and Hope (1999) then examined how the divorces of the cohort members themselves impacted on their drinking behaviours. They found that divorced men and women had the highest levels of alcohol consumption at both 23 and 33 years while married people had the lowest. High rates of alcohol consumption persisted for men and women who never married.

This briefing summarises a small selection of the research findings based on data from the 1958, 1970 and millennium birth cohort studies. For more information on any of the

research featured here, full references are listed under *Further reading*. Researchers interested in pursuing further research should refer to page 4, which provides an overview of some of the questions on drinking and smoking asked of cohort members and their families.

#### Further Reading

Bartley, M., Calderwood, L., Jayaweera, H., Plewis, I. and Ward, K. (2005) 'Children's origins'. In S. Dex and H. Joshi (eds) *Children of the 21st century: from birth to nine months*, Bristol: The Policy Press.

Bartley, M., Kelly, Y., Schoon, I. and Hope, S. (2004) 'Parent health'. In S. Dex and H. Joshi (eds) *Millennium Cohort Study first survey: a user's guide to initial findings*, London: Centre for Longitudinal Studies.

Butler, N., Goldstein, H. and Ross, E.M. (1972) 'Cigarette smoking in pregnancy: its influence on birth weight and perinatal mortality', *British Medical Journal*, 2: 127-130.

Department of Health (2004) *Choosing health: making healthy choices easier*, London: Department of Health.

Department of Health (2006) *Health profile of England*, London: Department of Health.

Fogelman, K. and Manor, O. (1988) 'Smoking in pregnancy and development into early adulthood', *British Medical Journal*, 297: 1233-1236.

Hope, S., Power, C. and Rodgers, B. (1998) 'The relationship between parental separation in childhood and problem drinking in adulthood', *Addiction*, 93(4): 505-514.

Jefferis, B., Graham, H., Manor, O. and Power, C. (2003) 'Cigarette consumption and socio-economic circumstances in adolescence as predictors of adult smoking', *Addiction*, 98(12): 1765-1772.

Jefferis, B., Power, C. and Manor, O. (2004) 'Adolescent drinking level and adult binge drinking in a national birth cohort', *Addiction*, 100: 543-549.

Power, C., and Jefferis, B. (2002) 'Fetal environment and subsequent obesity: a study of maternal smoking' *International Journal of Epidemiology*, 31: 413-419.

Power, C., Rodgers, B. and Hope, S. (1999) 'Heavy alcohol consumption and marital status: disentangling the relationship in a national study of young adults', *Addiction*, 94(10): 1477-1487.

Rush, D. and Cassano, P. (1983) 'Relationship of cigarette smoking and social class to birth-weight and perinatal mortality among all births in Britain, 5-11 April 1970', *Journal of Epidemiology and Community Health*, 37: 249-255.

Schoon, I. and Parsons, S. (2003) 'Lifestyle and health-related behaviour'. In E. Ferri, J. Bynner and M. Wadsworth (eds) *Changing Britain, changing lives: three generations at the turn of the century*, London: Institute of Education.

The information in this briefing paper was sourced and edited by Jessica Henniker Major, CLS Marketing and Communications Manager.

## A selection of questions on smoking and drinking in the 1958, 1970 and millennium cohort studies

This list, together with the variable names, is available at [www.cls.ioe.ac.uk/briefings](http://www.cls.ioe.ac.uk/briefings)

### 1958 National Child Development Study

QUESTION	AGE
Did the cohort member's mother smoke in the year before pregnancy?	0
Did the cohort member's mother change her smoking habits during pregnancy?	0
What is the cohort member's smoking status?	16, 23, 33, 42
What is the number of cigarettes smoked by the cohort member?	16, 23, 33, 42
What is the number of cigarettes smoked by the cohort member's mother/father?	16
Did the cohort member smoke in the year before pregnancy?	23, 33, 42
Did the cohort member change her smoking habits in pregnancy?	23, 33, 42
What is the number and type of alcoholic drinks consumed by the cohort member in the last week?	16, 23, 33, 42
How frequently does the cohort member drink alcohol?	23, 33, 42
At what age did the cohort member first experience problems with alcohol?	42

### 1970 British Cohort Study

QUESTION	AGE
What was the cohort member's mother's smoking habit in pregnancy?	0
Does the cohort member's mother/father smoke?	5
What were the cohort member's mother's/father's smoking habits since 1970?	5
How long has the cohort member's mother smoked?	10
What is the cohort member's smoking status?	16, 26, 30
What is the number of cigarettes smoked by the cohort member per week/daily?	10, 16, 30
Did the cohort member smoke in the year before pregnancy?	30
Did the cohort member change her smoking habits in pregnancy?	30
What is the total number of units of alcohol consumed in the past week?	16
How frequently does the cohort member drink alcohol?	16, 26, 30
What number and type of alcoholic drinks did the cohort member consume in the last week?	16, 26, 30
At what age did the cohort member first experience problems with alcohol?	30
What type of vocational qualifications has the cohort member obtained since April 1986?	30

### 2000-2001 Millennium Cohort Study (MCS)

QUESTION	AGE
What are the main respondent's/partner's current smoking habits?	9 months
How many cigarettes does the main respondent/partner smoke per day?	9 months
How many cigarettes has the main respondent/partner smoked in the last two years?	9 months
Has the main respondent/partner ever smoked?	9 months
How many cigarettes did the main respondent/partner smoke before pregnancy?	9 months
Did the main respondent/partner smoke change their smoking habits during pregnancy?	9 months
How frequently does the main respondent/partner drink alcohol?	9 months
How frequently did the main respondent/partner drink alcohol before pregnancy?	9 months
What is the main respondent's smoking status?	3
How many cigarettes does the main respondent smoke per day?	3

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