Pseudo-cohort analysis of British smoking data

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Why research about smoking?

• Smoking largest cause of preventable deaths in UK

• Main contributor to higher death rates in the manual compared with non-manual group
Analysis

- Previous method: time trends

- New method: Pseudo-cohort analysis
What is pseudo-cohort analysis?

• Cohort analysis
  - panel data
  - same individual

• Pseudo-cohort analysis
  - cross-sectional data
  - average experience of a given cohort

• For example
  - aged 20 to 25 in a 1980 survey
    = 21 to 26 in 1981
    = 22 to 27 in 1982
    = 44 to 49 in 2004.
General Household Survey

- High quality
- Cross-sectional survey
- Great Britain
- Annual data from 1972
- Government source of smoking data

- Large-scale (364,000 in this study)
Smoking among men

Percentage

Age

0 10 20 30 40 50 60 70 80

20 30 40 50 60 70
Smoking among men

1916-1920
(90)
unadjusted
Smoking among men

1916-1920
(90)
unadjusted
Smoking among men

1916-1920
(90)
Smoking among men

Percentage

Age
Smoking among men

Percentage

Age
Smoking among men
Smoking among men

![Graph showing smoking percentage among men by age.](image-url)
Smoking among men

Percentage

Age

1956-1960
(50)
Smoking among men

Percentage

Age

0 10 20 30 40 50 60 70 80

0 10 20 30 40 50 60 70

20 40 60 80
Smoking among men

![Graph showing the percentage of smoking among men by age. The graph has two lines representing different groups, with a decrease in smoking percentage as age increases.]
Smoking among men

Percentage of smoking among men at different ages.
Smoking among men

Percentage

Age
Smoking among men

Percentage

Age
Smoking among men
Smoking among men born about 80 years ago

![Graph showing the percentage of smoking among men of different ages. The graph compares men (M) and non-smokers (NM). The percentage decreases with age.](image)
Smoking among men born about 50 years ago
Smoking among men born about 50 years ago

![Graph showing smoking percentage over age for M and NM genders.](image-url)
Predicting future trends

• Future predictions unreliable
• Useful to theorise

• Unknowns:
  1) What happens when current cohorts age.
  2) Those born after 1985
Possible future trends?

Percentage

Age
Possible future trends?
Socio-economic inequalities –
main findings

Manual were always more likely to smoke than non-manual

• People born in first half of the 20th century:
High rates of taking up smoking
Manual & non-manual gave up at similar rates

• People born in second half of the 20th century:
Less likely to start smoking
Manual & non-manual gave up at different rates
Manual smokers - vast majority don’t give up
Pseudo-cohort analysis:

• Tells us much more than just time trend data

• Disentangles impact of earlier from recent cohorts

• Throws light on future smoking trends
Publications


• **Davy M** (2007) Socio-economic inequalities in smoking: an examination of generational trends in Great Britain, *Health Statistics Quarterly* 34. (To be published on the 24th May 07)

• www.statistics.gov.uk/statbase/Product.asp?vlnk=6725