

Socio-economic Measurement Issues

Peter Davis
Public Health, University of Otago
[Symposium, 8 August, Wellington]

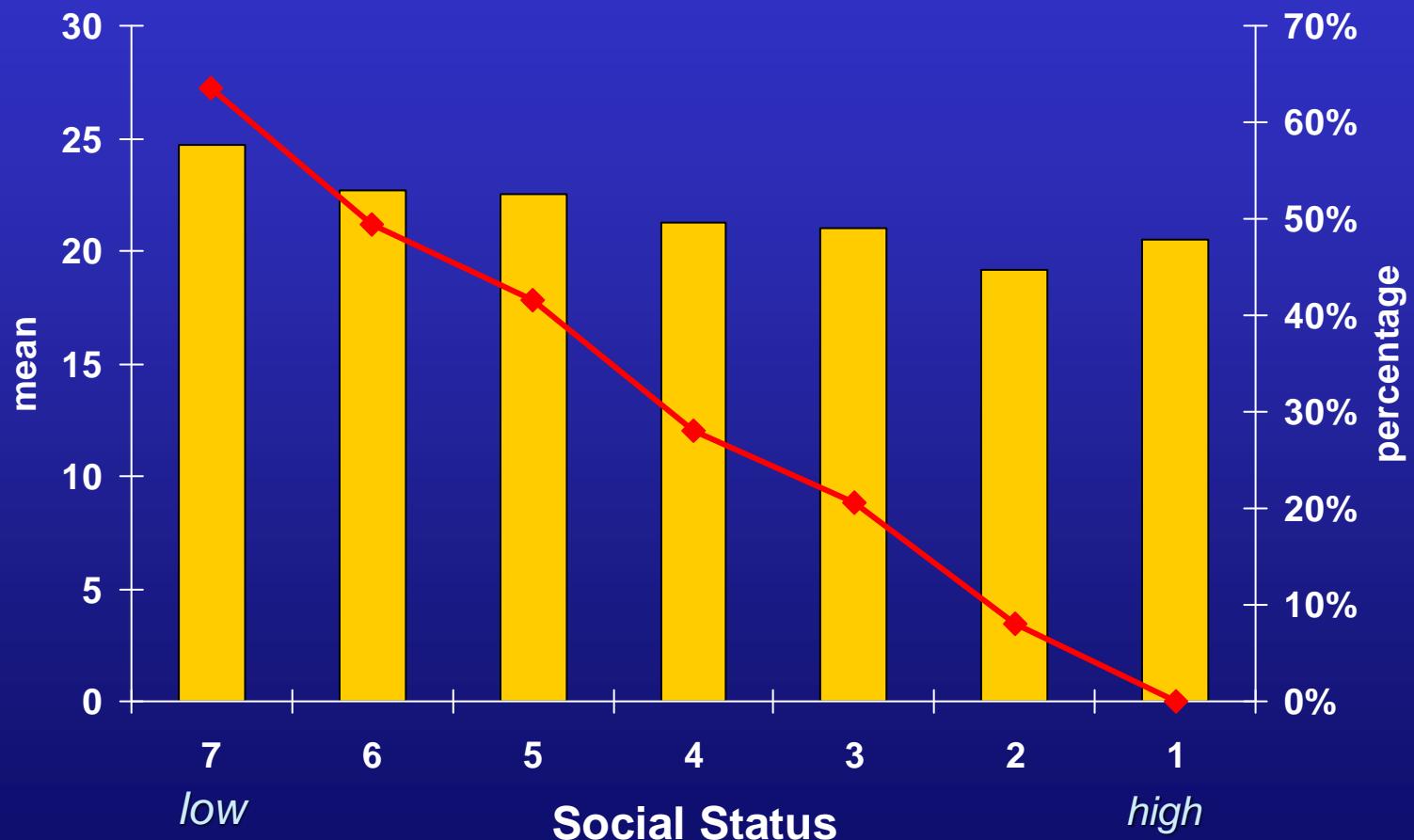
Preamble

- An exercise in applied social science:
 - Technically sophisticated
 - Conceptually pragmatic, pluralistic
 - Coherence is problem-centred
- An interface with policy and practice:
 - Working with other disciplines
 - Interplay with stakeholders
 - Implications for policy and practice

Outline

- “Catching the inequalities wave”?
- Measurement issues:
 - What are the underlying concepts?
 - What are the available measures?
 - What explanations can we sustain?
- Explanation issues:
 - Taking social structure seriously
 - Identifying pathways
 - Trying social simulation

Mean Number of Decayed, Missing & Filled Teeth and Percentage Edentulous by Social Status : Canterbury NZ, Adults 35-44 years, 1973-74



Underlying Terms & Concepts

- Discrete, categorical
 - Class
 - Social class
 - Occupational class
 - Socio-economic stratum
- Ordered, graduated, continuous
 - Socio-economic score
 - Income
 - Education
 - Deprivation

Measures and Markers

- Occupational position (NZSEI)
 - structural location
- Income and education
 - resource inequality
- Car and house ownership
 - marker
- Area deprivation (NZDep)
 - descriptor

Issues of Explanation

- Income and smoking
 - a “causal” factor (affordability)?
 - a marker of group membership?
 - a precipitant (culture of poverty)?
- Car ownership and mortality
 - a “causal” factor (mobility)?
 - a marker of group membership?
 - a precipitant (isolation)?

Taking Structure Seriously

- Role of public policy
- Income and education
 - resource inequality
 - markers of structural location
 - causal factors
- Structured social inequality
 - durable structure of inequality
 - mitigate associated life chances

Identifying Pathways

- Structural location
 - parental SES
- Unwanted health outcomes
 - social gradient in smoking among adolescents
- Pathways
 - primary socialisation (parents)
 - secondary socialisation (peers)

Parental SES and Cigarette Smoking at Age 21

Elley-Irving Group	N = SES group	%	%
		Any Smoking	Daily Smoking
I	115	31.30	26.09
II	96	36.46	32.29
III	265	35.09	32.45
IV	288	41.32	37.85
V	139	50.36	47.48
VI	108	46.30	42.59
Total	1011	39.86	36.40

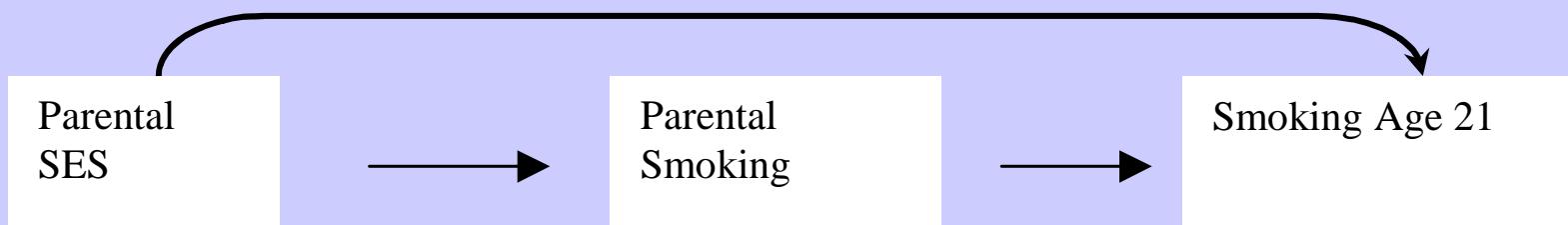
Odds Ratios of Any and Daily Smoking at Age 21 by Parental SES at Birth

Elley-Irving Group	Odds Ratios of Any Smoking at 21	Odds Ratios of Daily Smoking at 21
I	1.0	1.0
II	1.17	1.19
III	1.37	1.42
IV	1.60	1.70
V	1.88	2.03
VI	2.20	2.42

Parental SES \longrightarrow Parental Smoking \longrightarrow Smoking at age 21

Unadjusted and Adjusted (for Parental Smoking) Odds Ratios for SES and Smoking at Age 21

Elley-Irving Group	Unadjusted Odds Ratios	Adjusted Odds Ratios
<i>Any Smoking</i>		
I	1.0	1.0
II	1.17	1.12
III	1.37	1.25
IV	1.60	1.40
V	1.88	1.56
VI	2.20	1.74
<i>Daily Smoking</i>		
I	1.0	1.0
II	1.19	1.14
III	1.42	1.31
IV	1.70	1.50
V	2.03	1.71
VI	2.42	1.96



Unadjusted and Adjusted (for 5 intervening variables) Odds Ratios for SES and Smoking at Age 21

Elley-Irving Group	Unadjusted Odds Ratios (95% CL)	Adjusted Odds Ratios (95% CL)
<i>Any Smoking</i>		
I	1.0	1.0
II	1.17	0.99
III	1.37	0.98
IV	1.60	0.98
V	1.88	0.97
VI	2.20	0.96
<i>Daily Smoking</i>		
I	1.0	1.0
II	1.19	1.02
III	1.42	1.04
IV	1.70	1.06
V	2.03	1.08
VI	2.42	1.10

Trying Simulation

- Existing data approaches
 - relatively static
 - non-experimental
- Alternative scientific explanations
 - e.g. structural vs. bio/social/psych.
- Shortage of data and resources
 - simulate inequality processes
 - test ability to reproduce patterns