

4 Health inequalities by equivalised income

A large and growing overseas literature documents an association between income and health, with persons from low income households typically having the poorest health. Research has shown, for example, that infants from low income households have worse overall health and higher hospital admission rates (Seguin et al. 2003) and that children from economically disadvantaged backgrounds have a higher prevalence of asthma and associated morbidity (Simon et al. 2003) and are more likely to experience decreased resistance to upper respiratory infections in adulthood (Cohen et al. 2004). Studies among adults have shown that those from low income households are more likely to experience depression (Lorant et al. 2002; Martikainen et al. 2003), to report their general health as fair or poor (Huisman et al. 2003; Frank et al. 2003), to have days off work due to ill health (Norris et al. 2003), and to report greater levels of physical impairment and functional limitation (Lynch et al. 1997; Lantz et al. 2001; Marra et al. 2004). A related body of work shows that persons from low income households are likely to have greater difficulty accessing and affording appropriate health care (Schoen & Doty 2004), are treated differently by the health care system from their more affluent counterparts (McCall et al. 2004), and are less likely to seek out preventive health care such as vaccinations (Pena-Rey et al. 2004) or use of mammography or Pap smear screening (Blanchard et al. 2004; Tumiel-Berhalter et al. 2004; Ogedegbe et al. 2005). Further, the results of surveys indicate that low income respondents are more likely to report that they smoke cigarettes (Schuster et al. 2002; Taira et al. 1997; Barbeau et al. 2004), are insufficiently physically active to accumulate health benefits (Eyler 2003; Craig et al. 2004; Stelmach et al. 2004), are overweight or obese (Drewnowski & Specter 2004; Huot et al. 2004; Li et al. 2004), and have food and nutrient intakes that are least consistent with dietary guidelines or healthy eating messages (Subar et al. 1995; Guthrie & Lin 2002; Bhargava 2004).

Research conducted in Australia generally concurs with the findings of overseas studies. Specifically, persons from low income households report higher levels of morbidity (Adams et al. 2003; Clarke et al. 2002), poorer oral health (Sanders & Spencer 2004), and higher levels of hospital episodes and doctor visits and lower rates of mammography and Pap smear screening (Mathers 1994a; Taylor et al. 2001). Moreover, persons with low income are more likely to engage in behaviours that are less conducive to good long-term health – they are more likely to smoke cigarettes (Turrell et al. 2002; Siahpush 2003; Siahpush et al. 2003; Phung et al. 2002), be less physically active during leisure time (Mathers 1994a), and to engage in dietary practices that put them at greater risk of chronic diseases such as coronary heart disease, diabetes and some cancers (Turrell et al. 2003; Giskes et al. 2002; Worsley et al. 2003).

This chapter examines income-based socioeconomic health inequalities among infants and children (0–14 years), young adults (15–24 years), working-age adults (25–64 years) and older persons (65 years and over). We use an income indicator known as ‘equivalised income’ which is an adjusted measure that takes into account the composition and requirements of a family, or income unit. The 1989–90, 1995 and 2001 NHS data files provide equivalised income deciles, based on income of the income unit (see glossary for definition of income unit). The Henderson Simplified Equivalence Scale was used to calculate equivalised income in the 1989–90 and 1995 surveys. This scale adjusts income based on labour force information, unit composition, and household and other costs. Due to the sampling methodology of the 2001 NHS it was not possible to use the Henderson scale to derive equivalised income; instead, a simpler OECD scale was

applied to income of the income unit. The OECD scale requires information on unit composition only. Because of the use of different scales, in this report no inter-survey comparisons are made for equivalised income, and we present the results for the 2001 NHS only. The equivalised income data available for the 2001 NHS is in deciles; for the purpose of this report deciles have been collapsed into quintiles. In this chapter the term 'low income' is used to refer to households in quintile 5.

Equivalent income data are not available for a weighted estimate of 22.2% of persons in the 2001 NHS (18.0% of respondents). Respondents with an equivalised income quintile that was missing were excluded from all analyses involving equivalised income.

4.1 Persons aged 0–14 years

Tables 4.1 and 4.2 and Figures 4.1 and 4.2 present associations between equivalised income and a range of health indicators for males and females aged 0–14 years in 2001.

- Asthma: Compared with males from the highest income category (i.e. quintile 1), rates were 41% higher among males from low income households.
- Bronchitis/emphysema: Rates were 182% higher among males from low income households.
- Sun protection: Males from low income households were significantly more likely (106%) to have not received or taken sun protection in the month before the survey. The corresponding figure for females from low income households was 164%.
- Breastfeeding: Male and female infants from low income households were more likely not to have been breastfed (519% and 185% respectively).
- Dental consultations: Males from low income households were 41% less likely to have consulted a dentist.

Table 4.1: Health indicators by equivalised income quintile, males aged 0–14 years, 2001

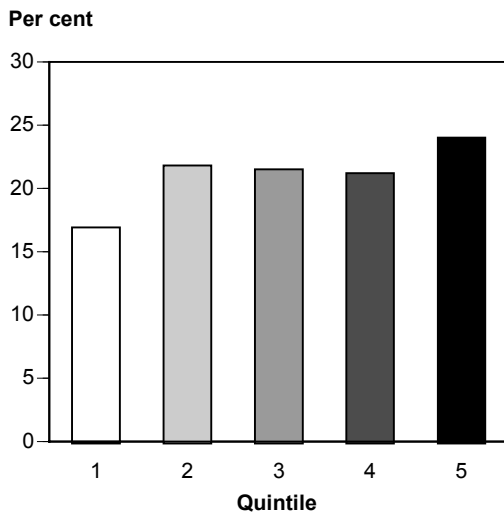
Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Morbidity			
Days away from school			
Quintile 1	16.9	1.00	
Quintile 2	21.8	1.29	0.90, 1.83
Quintile 3	21.5	1.27	0.89, 1.81
Quintile 4	21.2	1.25	0.87, 1.80
Quintile 5	24.0	1.42	0.98, 2.06
Asthma			
Quintile 1	13.4	1.00	
Quintile 2	11.9	0.89	0.64, 1.23
Quintile 3	15.7	1.17	0.86, 1.60
Quintile 4	17.4	1.30	0.96, 1.77
Quintile 5	18.9	1.41	1.02, 1.95
Bronchitis/emphysema			
Quintile 1	1.3	1.00	
Quintile 2	2.0	1.48	0.56, 3.89
Quintile 3	2.7	2.03	0.82, 5.00
Quintile 4	2.3	1.76	0.69, 4.50
Quintile 5	3.7	2.82	1.12, 7.10
Health-related behaviours			
Salt use (usually add salt to food after cooking)			
Quintile 1	4.6	1.00	
Quintile 2	26.3	5.68	1.96, 16.49
Quintile 3	11.5	2.50	0.82, 7.58
Quintile 4	15.5	3.35	1.11, 10.10
Quintile 5	6.3	1.37	0.40, 4.69
Sun protection (none in previous month)			
Quintile 1	3.4	1.00	
Quintile 2	4.7	1.39	0.74, 2.60
Quintile 3	5.5	1.64	0.90, 2.99
Quintile 4	5.5	1.63	0.88, 3.01
Quintile 5	7.0	2.06	1.11, 3.82
Health-related risk factors			
Not breastfed			
Quintile 1	3.6	1.00	
Quintile 2	9.1	2.51	0.94, 6.73
Quintile 3	13.0	3.60	1.41, 9.18
Quintile 4	14.6	4.04	1.59, 10.26
Quintile 5	22.4	6.19	2.40, 15.94
Time breastfed (less than 12 weeks)			
Quintile 1	24.1	1.00	
Quintile 2	32.3	1.34	0.87, 2.07
Quintile 3	34.0	1.41	0.93, 2.14
Quintile 4	33.3	1.38	0.90, 2.11
Quintile 5	28.8	1.19	0.72, 1.97

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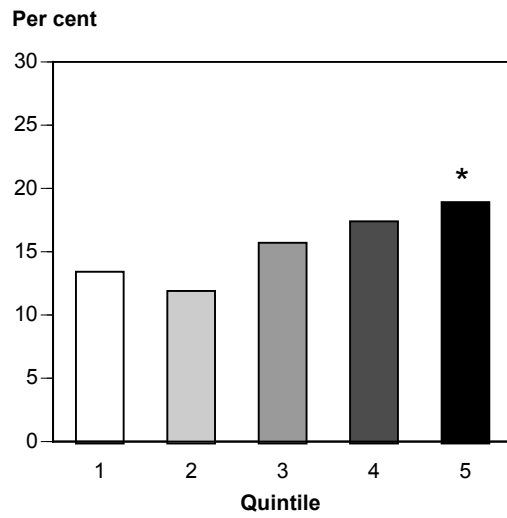
Table 4.1 (continued): Health indicators by equivalised income quintile, males aged 0–14 years, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Health service use (in the previous 2 weeks)			
Doctor consultation			
Quintile 1	19.5	1.00	
Quintile 2	19.3	0.99	0.76, 1.28
Quintile 3	20.0	1.03	0.79, 1.33
Quintile 4	18.7	0.96	0.74, 1.24
Quintile 5	19.1	0.98	0.73, 1.30
GP consultation			
Quintile 1	17.9	1.00	
Quintile 2	16.9	0.95	0.72, 1.25
Quintile 3	17.9	1.00	0.76, 1.31
Quintile 4	16.7	0.94	0.71, 1.23
Quintile 5	15.6	0.87	0.64, 1.19
Specialist consultation			
Quintile 1	3.4	1.00	
Quintile 2	4.6	1.35	0.73, 2.49
Quintile 3	3.8	1.10	0.59, 2.05
Quintile 4	2.7	0.79	0.41, 1.50
Quintile 5	4.2	1.23	0.63, 2.39
Dental consultation			
Quintile 1	6.9	1.00	
Quintile 2	6.8	0.98	0.63, 1.50
Quintile 3	7.5	1.08	0.71, 1.66
Quintile 4	5.9	0.85	0.54, 1.36
Quintile 5	4.1	0.59	0.36, 0.98

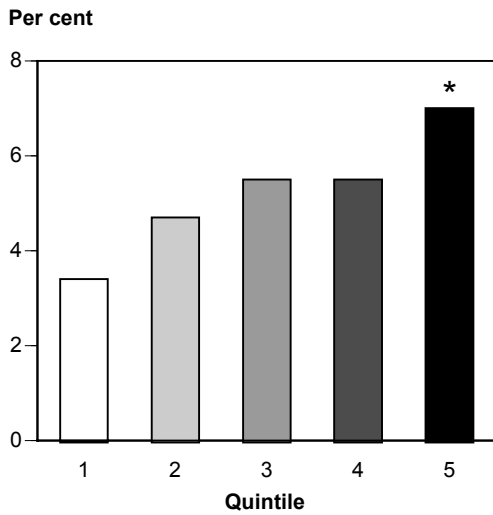
Days away from school



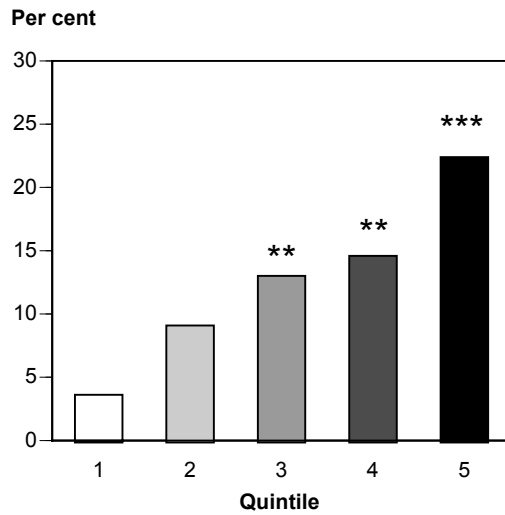
Asthma as a long-term condition



Sun protection (none in previous month)



Not breastfed



Note: Quintile 1 = high income, quintile 5 = low income.

Rate differs significantly from quintile 1 at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 4.1: Health indicators by equivalised income quintile, males aged 0-14 years, 2001

Table 4.2: Health indicators by equivalised income quintile, females aged 0–14 years, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Morbidity			
Days away from school			
Quintile 1	18.7	1.00	
Quintile 2	19.4	1.04	0.74, 1.46
Quintile 3	22.7	1.22	0.88, 1.69
Quintile 4	22.6	1.21	0.87, 1.68
Quintile 5	16.5	0.88	0.61, 1.28
Asthma			
Quintile 1	10.7	1.00	
Quintile 2	11.0	1.03	0.70, 1.51
Quintile 3	9.3	0.87	0.59, 1.26
Quintile 4	14.3	1.34	0.93, 1.93
Quintile 5	9.5	0.89	0.59, 1.35
Bronchitis/emphysema			
Quintile 1	1.3	1.00	
Quintile 2	1.8	1.37	0.38, 4.92
Quintile 3	1.6	1.20	0.34, 4.21
Quintile 4	2.5	1.89	0.55, 6.54
Quintile 5	1.0	0.78	0.20, 3.13
Health-related behaviours			
Salt use (usually add salt to food after cooking)			
Quintile 1	10.9	1.00	
Quintile 2	6.9	0.63	0.20, 1.95
Quintile 3	14.9	1.37	0.52, 3.59
Quintile 4	19.5	1.79	0.69, 4.61
Quintile 5	15.2	1.39	0.53, 3.66
Sun protection (none in last month)			
Quintile 1	4.3	1.00	
Quintile 2	5.8	1.35	0.74, 2.48
Quintile 3	7.5	1.76	0.99, 3.12
Quintile 4	8.7	2.03	1.17, 3.54
Quintile 5	11.3	2.64	1.49, 4.67
Health-related risk factors			
Not breastfed			
Quintile 1	7.2	1.00	
Quintile 2	7.2	1.00	0.45, 2.22
Quintile 3	8.9	1.24	0.59, 2.59
Quintile 4	15.1	2.09	1.04, 4.20
Quintile 5	20.5	2.85	1.39, 5.85
Time breastfed (less than 12 weeks)			
Quintile 1	25.4	1.00	
Quintile 2	28.1	1.10	0.69, 1.77
Quintile 3	36.8	1.45	0.94, 2.23
Quintile 4	32.6	1.28	0.83, 2.00
Quintile 5	34.7	1.37	0.81, 2.31

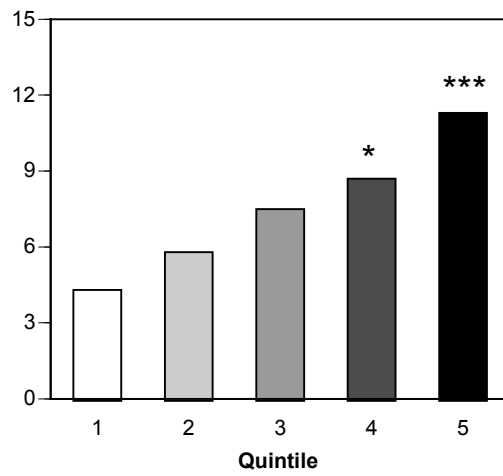
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Table 4.2 (continued): Health indicators by equivalised income quintile, females aged 0–14 years, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Health service use (in the previous 2 weeks)			
Doctor consultation			
Quintile 1	16.7	1.00	
Quintile 2	14.7	0.88	0.66, 1.18
Quintile 3	15.6	0.93	0.70, 1.23
Quintile 4	18.6	1.11	0.84, 1.46
Quintile 5	14.9	0.89	0.65, 1.23
GP consultation			
Quintile 1	13.0	1.00	
Quintile 2	13.5	1.04	0.75, 1.43
Quintile 3	14.3	1.10	0.81, 1.48
Quintile 4	17.2	1.32	0.98, 1.78
Quintile 5	13.1	1.00	0.71, 1.42
Specialist consultation			
Quintile 1	4.2	1.00	
Quintile 2	1.9	0.46	0.23, 0.91
Quintile 3	2.5	0.61	0.31, 1.17
Quintile 4	2.0	0.47	0.24, 0.94
Quintile 5	3.8	0.90	0.45, 1.79
Dental consultation			
Quintile 1	9.4	1.00	
Quintile 2	7.5	0.80	0.52, 1.23
Quintile 3	6.7	0.72	0.47, 1.10
Quintile 4	7.1	0.76	0.50, 1.15
Quintile 5	7.2	0.76	0.45, 1.28

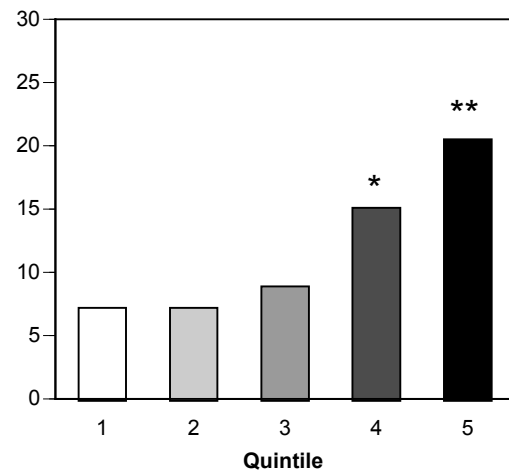
Sun protection (none in previous month)

Per cent



Not breastfed

Per cent



Note: Quintile 1 = high income, quintile 5 = low income.

Rate differs significantly from quintile 1 at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 4.2: Health indicators by equivalised income quintile, females aged 0-14 years, 2001

4.2 Persons aged 15–24 years

Tables 4.3 and 4.4 and Figures 4.3 and 4.4 present associations between equivalised income and a range of health indicators for males and females aged 15–24 years.

- Self-assessed health: Compared with females in the highest income category (i.e. quintile 1), females from low income households were significantly more likely to assess their health as fair or poor.
- Bronchitis/emphysema: The rate was noticeable higher among females from low income households.
- Smoking: Rates were significantly higher (95%) among females from low income households.
- Salt use: The rate of discretionary salt use was 77% higher among males from low income households.
- Food security: Males and females from low income households were significantly more likely to report that they ran out of food in the previous 12 months and couldn't afford to buy more.

Males aged 15–24 from low income households also reported that they were more likely (337%) not to have taken sun protection measures in the month before the survey, and they were less likely (53%) to have visited a dentist.

Table 4.3: Health indicators by equivalised income quintile, males aged 15–24 years, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Morbidity			
Self-assessed health status (fair or poor)			
Quintile 1	7.3	1.00	
Quintile 2	9.2	1.26	0.38, 4.17
Quintile 3	7.1	0.96	0.29, 3.20
Quintile 4	8.9	1.21	0.37, 3.94
Quintile 5	11.6	1.58	0.51, 4.90
Days away from study/school or work			
Quintile 1	18.9	1.00	
Quintile 2	17.0	0.90	0.56, 1.43
Quintile 3	18.6	0.98	0.61, 1.57
Quintile 4	20.1	1.06	0.67, 1.69
Quintile 5	16.3	0.86	0.55, 1.36
Asthma			
Quintile 1	18.6	1.00	
Quintile 2	13.4	0.72	0.43, 1.21
Quintile 3	14.9	0.80	0.47, 1.38
Quintile 4	17.3	0.93	0.55, 1.57
Quintile 5	20.8	1.12	0.69, 1.80

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Table 4.3 (continued): Health indicators by equivalised income quintile, males aged 15–24 years, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Bronchitis/emphysema			
Quintile 1	1.2	1.00	
Quintile 2	1.3	1.11	0.19, 6.65
Quintile 3	0.0	0.00	—
Quintile 4	0.8	0.72	0.10, 5.12
Quintile 5	2.3	1.97	0.41, 9.49
Health-related behaviours			
Alcohol risk			
Quintile 1	16.5	1.00	
Quintile 2	13.5	0.82	0.41, 1.65
Quintile 3	16.6	1.01	0.50, 2.03
Quintile 4	12.2	0.74	0.31, 1.76
Quintile 5	8.0	0.49	0.20, 1.20
Insufficient physical activity			
Quintile 1	50.2	1.00	
Quintile 2	53.6	1.07	0.79, 1.43
Quintile 3	53.0	1.06	0.78, 1.42
Quintile 4	35.3	0.70	0.50, 0.99
Quintile 5	49.3	0.98	0.73, 1.32
Smoking			
Quintile 1	31.2	1.00	
Quintile 2	27.4	0.88	0.53, 1.45
Quintile 3	32.2	1.03	0.63, 1.69
Quintile 4	36.5	1.17	0.67, 2.06
Quintile 5	47.7	1.53	0.94, 2.50
Salt use (usually add salt to food after cooking)			
Quintile 1	18.1	1.00	
Quintile 2	18.2	1.01	0.62, 1.64
Quintile 3	21.4	1.18	0.74, 1.88
Quintile 4	22.2	1.23	0.74, 2.03
Quintile 5	32.0	1.77	1.14, 2.74
Food insecurity (ever ran out of food in last 12 months & couldn't afford more)			
Quintile 1	1.0	1.00	
Quintile 2	4.6	4.41	0.94, 20.76
Quintile 3	5.6	5.35	1.11, 25.77
Quintile 4	14.1	13.47	3.01, 60.18
Quintile 5	10.4	9.92	2.25, 43.66
Sun protection (none in previous month)			
Quintile 1	7.0	1.00	
Quintile 2	6.8	0.97	0.36, 2.61
Quintile 3	19.7	2.80	1.18, 6.66
Quintile 4	18.0	2.56	1.06, 6.17
Quintile 5	30.8	4.37	1.98, 9.67

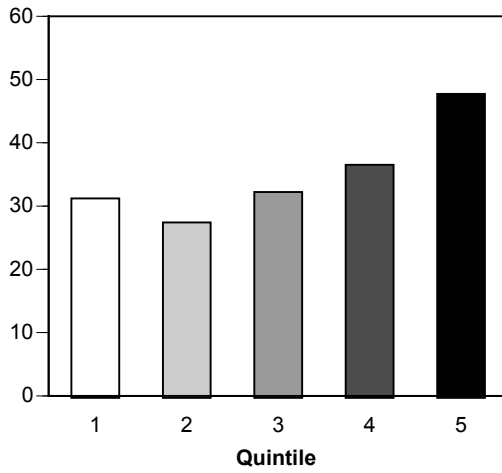
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Table 4.3 (continued): Health indicators by equivalised income quintile, males aged 15–24 years, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Health-related risk factors			
Overweight (but not obese)			
Quintile 1	23.5	1.00	
Quintile 2	23.6	1.00	0.64, 1.57
Quintile 3	29.6	1.26	0.82, 1.94
Quintile 4	18.0	0.77	0.45, 1.30
Quintile 5	17.8	0.76	0.45, 1.29
Obese			
Quintile 1	6.4	1.00	
Quintile 2	3.5	0.55	0.20, 1.52
Quintile 3	5.1	0.79	0.29, 2.19
Quintile 4	13.7	2.14	0.84, 5.43
Quintile 5	8.4	1.32	0.55, 3.15
Health service use			
Doctor consultation			
Quintile 1	14.4	1.00	
Quintile 2	16.1	1.11	0.64, 1.94
Quintile 3	10.3	0.71	0.41, 1.25
Quintile 4	17.6	1.22	0.71, 2.09
Quintile 5	17.7	1.23	0.73, 2.05
GP consultation			
Quintile 1	13.4	1.00	
Quintile 2	16.1	1.19	0.68, 2.11
Quintile 3	9.6	0.72	0.40, 1.30
Quintile 4	15.8	1.18	0.66, 2.09
Quintile 5	15.1	1.12	0.65, 1.94
Specialist consultation			
Quintile 1	2.6	1.00	
Quintile 2	0.0	0.00	—
Quintile 3	2.2	0.85	0.22, 3.19
Quintile 4	3.4	1.32	0.36, 4.86
Quintile 5	4.0	1.55	0.43, 5.62
Dental consultation			
Quintile 1	8.8	1.00	
Quintile 2	5.3	0.60	0.31, 1.15
Quintile 3	5.7	0.65	0.34, 1.22
Quintile 4	8.8	1.01	0.44, 2.30
Quintile 5	4.1	0.47	0.22, 1.00

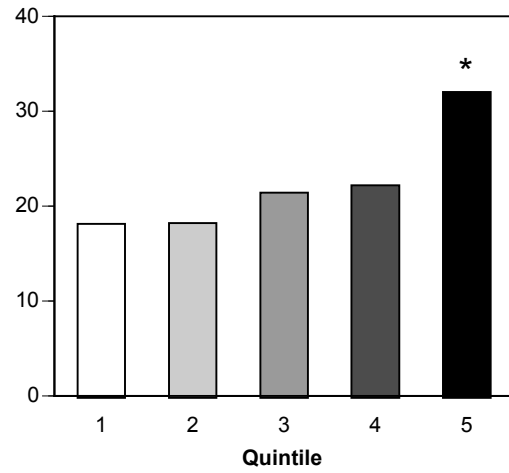
Classified as a regular smoker

Per cent



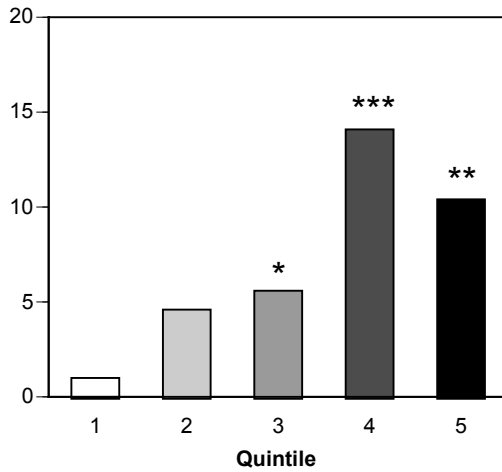
Salt use (usually add to food after cooking)

Per cent



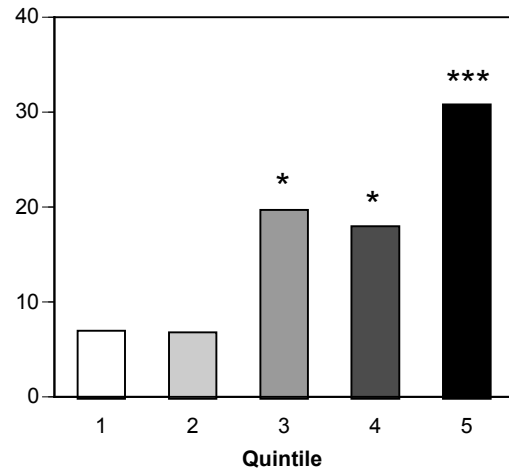
Food insecurity

Per cent



Sun protection (none in previous month)

Per cent



Note: Quintile 1 = high income, quintile 5 = low income.

Rate differs significantly from quintile 1 at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 4.3: Health indicators by equivalised income quintile, males aged 15–24 years, 2001

Table 4.4: Health indicators by equivalised income quintile, females aged 15–24 years, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Morbidity			
Self-assessed health status (fair or poor)			
Quintile 1	6.2	1.00	
Quintile 2	7.3	1.18	0.41, 3.40
Quintile 3	11.3	1.83	0.71, 4.72
Quintile 4	14.3	2.30	0.93, 5.67
Quintile 5	20.9	3.38	1.39, 8.24
Days away from study/school or work			
Quintile 1	25.3	1.00	
Quintile 2	22.6	0.89	0.59, 1.36
Quintile 3	26.3	1.04	0.68, 1.59
Quintile 4	19.8	0.78	0.51, 1.20
Quintile 5	23.8	0.94	0.62, 1.42
Asthma			
Quintile 1	13.8	1.00	
Quintile 2	18.7	1.35	0.81, 2.25
Quintile 3	12.0	0.87	0.49, 1.54
Quintile 4	19.6	1.42	0.85, 2.37
Quintile 5	22.1	1.60	0.98, 2.60
Bronchitis/emphysema			
Quintile 1	0.0	—	
Quintile 2	2.5	—	—
Quintile 3	2.5	—	—
Quintile 4	0.6	—	—
Quintile 5	5.4	—	—
Health-related behaviours			
Alcohol risk			
Quintile 1	6.1	1.00	
Quintile 2	5.9	0.96	0.35, 2.64
Quintile 3	5.7	0.94	0.34, 2.59
Quintile 4	5.1	0.83	0.28, 2.48
Quintile 5	7.9	1.30	0.46, 3.65
Insufficient physical activity			
Quintile 1	71.1	1.00	
Quintile 2	67.1	0.94	0.73, 1.22
Quintile 3	70.5	0.99	0.77, 1.28
Quintile 4	73.2	1.03	0.80, 1.33
Quintile 5	64.8	0.91	0.71, 1.17
Smoking			
Quintile 1	21.6	1.00	
Quintile 2	21.3	0.99	0.57, 1.71
Quintile 3	31.7	1.46	0.87, 2.45
Quintile 4	29.9	1.38	0.82, 2.32
Quintile 5	42.1	1.95	1.20, 3.17

(continued)

Table 4.4 (continued): Health indicators by equivalised income quintile, females aged 15–24 years, 2001

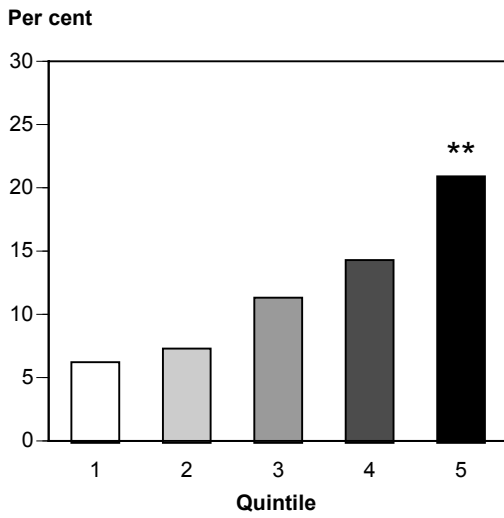
Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Salt use (usually add salt to food after cooking)			
Quintile 1	15.6	1.00	
Quintile 2	12.9	0.83	0.48, 1.45
Quintile 3	16.0	1.03	0.60, 1.77
Quintile 4	14.9	0.96	0.56, 1.64
Quintile 5	18.5	1.19	0.71, 1.99
Food insecurity (ever ran out of food in last 12 months & couldn't afford more)			
Quintile 1	3.0	1.00	
Quintile 2	1.8	0.61	0.14, 2.54
Quintile 3	3.6	1.19	0.31, 4.60
Quintile 4	13.2	4.43	1.31, 14.97
Quintile 5	12.4	4.15	1.24, 13.87
Sun protection (none in previous month)			
Quintile 1	10.8	1.00	
Quintile 2	11.2	1.04	0.38, 2.87
Quintile 3	10.8	1.00	0.34, 2.99
Quintile 4	13.8	1.28	0.43, 3.82
Quintile 5	19.9	1.85	0.70, 4.89
Health-related risk factors			
Overweight (but not obese)			
Quintile 1	12.0	1.00	
Quintile 2	11.2	0.93	0.49, 1.78
Quintile 3	10.9	0.91	0.46, 1.80
Quintile 4	10.0	0.83	0.42, 1.63
Quintile 5	14.7	1.22	0.63, 2.37
Obese			
Quintile 1	3.4	1.00	
Quintile 2	2.9	0.86	0.18, 4.12
Quintile 3	5.9	1.77	0.38, 8.17
Quintile 4	8.5	2.52	0.56, 11.36
Quintile 5	4.7	1.38	0.31, 6.23
Health service use			
Doctor consultation			
Quintile 1	22.4	1.00	
Quintile 2	20.5	0.91	0.59, 1.41
Quintile 3	22.3	0.99	0.63, 1.57
Quintile 4	23.7	1.06	0.68, 1.63
Quintile 5	28.7	1.28	0.84, 1.96
GP consultation			
Quintile 1	21.2	1.00	
Quintile 2	18.3	0.86	0.55, 1.36
Quintile 3	21.0	0.99	0.62, 1.59
Quintile 4	22.0	1.04	0.66, 1.63
Quintile 5	23.1	1.09	0.70, 1.70

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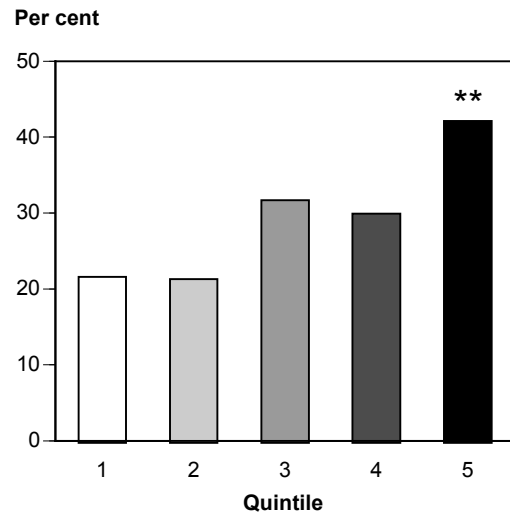
Table 4.4 (continued): Health indicators by equivalised income quintile, females aged 15–24 years, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Specialist consultation			
Quintile 1	2.3	1.00	
Quintile 2	3.1	1.36	0.41, 4.52
Quintile 3	4.4	1.94	0.60, 6.31
Quintile 4	1.7	0.74	0.21, 2.64
Quintile 5	6.7	2.92	0.92, 9.31
Dental consultation			
Quintile 1	10.0	1.00	
Quintile 2	12.6	1.26	0.66, 2.39
Quintile 3	8.8	0.88	0.45, 1.73
Quintile 4	7.3	0.73	0.36, 1.49
Quintile 5	7.6	0.75	0.39, 1.47

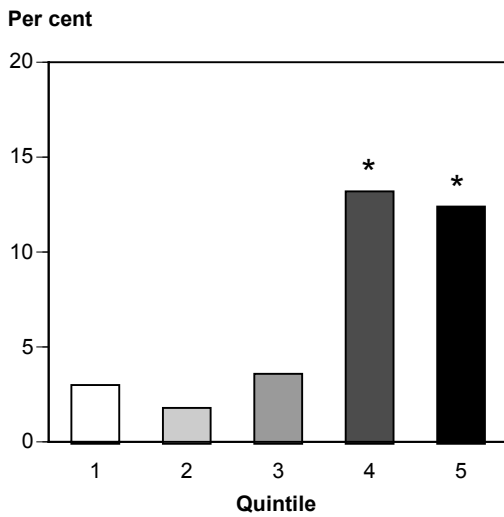
Self-assessed health as 'fair' or 'poor'



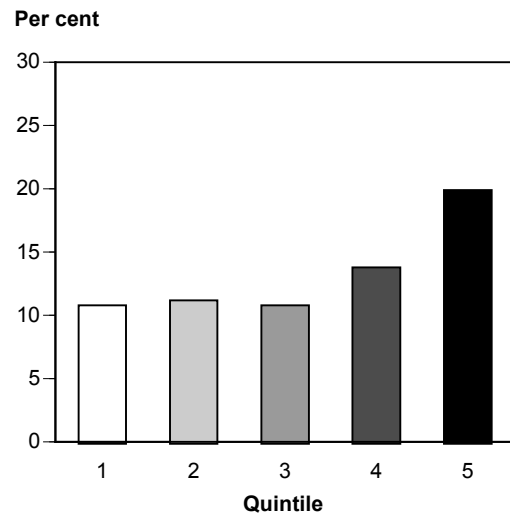
Classified as a regular smoker



Food insecurity



Sun protection (none in previous month)



Note: Quintile 1 = high income, quintile 5 = low income.

Rate differs significantly from quintile 1 at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 4.4: Health indicators by equivalised income quintile, females aged 15-24 years, 2001

4.3 Persons aged 25–64 years

Tables 4.5 and 4.6 and Figures 4.5 and 4.6 present associations between equivalised income and a range of health indicators for males and females aged 25–64 years.

Males and females from low income households (i.e. quintile 5) rated their own health more poorly, and reported a number of long-term conditions more often than those from households in the highest income category (i.e. quintile 1).

- Self-assessed health: Males and females from low income households were significantly more likely to rate their health as fair or poor (males 261%, females 222%).
- Days away from study or work: Persons from low income households were significantly more likely to report that they experienced days away from study or work owing to illness (males 34% higher, females 20% higher).
- Arthritis: Reported rates were 96% higher among males from low income households, and 93% higher among females from low income households.
- Asthma: Reported rates were 36% higher among females from low income households.
- Bronchitis/emphysema: For males, rates were 128% higher among those from low income households, and 65% higher for females from low income households.
- Diabetes: Females from low income households had reported rates of diabetes that were 156% higher than their counterparts from households in the highest income category.

Persons from low income households were also more likely to engage in a number of risky or potentially harmful health-related behaviours.

- Insufficient physical activity: Persons from low income households were more likely to undertake levels of physical activity that were insufficient to accumulate health benefits (males 19% higher, females 10% higher).
- Smoking: Being a regular smoker was significantly more likely to be reported by males (83%) and females (119%) from low income households.
- Salt use: Rates of discretionary salt use were 58% higher for males from low income households, and 49% higher for females from low income households.
- Food security: Males and females from low income households were significantly more likely to report that they experienced food insecurity.

However, males and females from low income households were significantly less likely to report consuming alcohol at risky levels (males 25% less likely, females 42%).

Persons aged 25–64 years from low income households were more likely to be classified as obese (males 29%, females 61%), and females from low income households were more likely to have reported experiencing hypertension as a long-term condition (72% higher than females from quintile 1).

Persons from low income households were significantly more likely to have visited a doctor (males 79%, females 20%) and more likely to have consulted a GP (males 85%, females 36%).

Females aged 25–64 years from low income households were also more likely to have reported never having had a mammogram (171%) or Pap smear (79%), and more likely (51%) to report that their last Pap smear was 2 or more years ago.

Table 4.5: Health indicators by equivalised income quintile, males aged 25–64 years, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Morbidity			
Self-assessed health status (fair or poor)			
Quintile 1	9.5	1.00	
Quintile 2	13.1	1.38	1.10, 1.73
Quintile 3	16.6	1.75	1.39, 2.19
Quintile 4	22.4	2.36	1.87, 2.97
Quintile 5	34.3	3.61	2.96, 4.40
Days away from study or work			
Quintile 1	14.2	1.00	
Quintile 2	14.9	1.05	0.86, 1.28
Quintile 3	13.8	0.97	0.79, 1.20
Quintile 4	15.5	1.09	0.86, 1.38
Quintile 5	19.1	1.34	1.09, 1.65
Arthritis			
Quintile 1	9.9	1.00	
Quintile 2	10.7	1.08	0.84, 1.37
Quintile 3	13.2	1.33	1.04, 1.69
Quintile 4	13.6	1.37	1.06, 1.77
Quintile 5	19.4	1.96	1.58, 2.44
Asthma			
Quintile 1	9.3	1.00	
Quintile 2	7.7	0.83	0.64, 1.08
Quintile 3	6.3	0.67	0.50, 0.91
Quintile 4	9.3	1.00	0.74, 1.36
Quintile 5	8.0	0.86	0.64, 1.17
Bronchitis/emphysema			
Quintile 1	1.7	1.00	
Quintile 2	3.3	1.88	1.14, 3.08
Quintile 3	2.6	1.48	0.88, 2.48
Quintile 4	4.0	2.32	1.38, 3.90
Quintile 5	4.0	2.28	1.41, 3.69
Diabetes			
Quintile 1	3.5	1.00	
Quintile 2	3.3	0.96	0.59, 1.55
Quintile 3	1.7	0.48	0.27, 0.86
Quintile 4	4.4	1.27	0.77, 2.11
Quintile 5	4.7	1.35	0.88, 2.07

(continued)

Table 4.5 (continued): Health indicators by equivalised income quintile, males aged 25–64 years, 2001

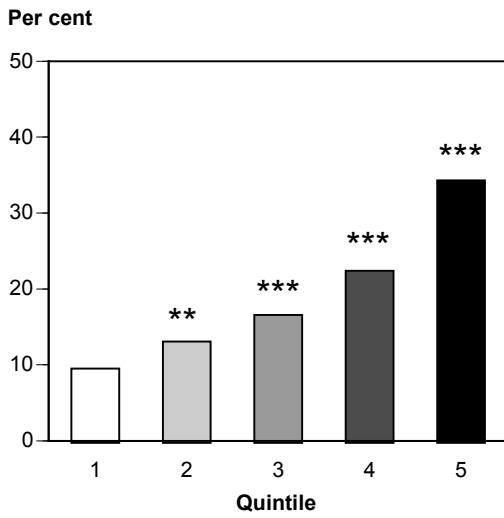
Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Neoplasms			
Quintile 1	1.7	1.00	
Quintile 2	0.9	0.56	0.27, 1.15
Quintile 3	1.8	1.06	0.55, 2.04
Quintile 4	1.7	1.01	0.48, 2.13
Quintile 5	2.9	1.75	0.99, 3.08
Health-related behaviours			
Alcohol risk			
Quintile 1	15.7	1.00	
Quintile 2	13.3	0.85	0.70, 1.03
Quintile 3	15.8	1.01	0.83, 1.23
Quintile 4	9.8	0.62	0.48, 0.81
Quintile 5	11.8	0.75	0.59, 0.96
Insufficient physical activity			
Quintile 1	58.1	1.00	
Quintile 2	68.4	1.18	1.07, 1.30
Quintile 3	69.3	1.19	1.08, 1.32
Quintile 4	73.4	1.26	1.13, 1.41
Quintile 5	68.9	1.19	1.06, 1.32
Smoking			
Quintile 1	21.3	1.00	
Quintile 2	29.0	1.36	1.18, 1.58
Quintile 3	27.9	1.31	1.12, 1.53
Quintile 4	33.6	1.58	1.34, 1.87
Quintile 5	38.9	1.83	1.57, 2.13
Salt use (usually add salt to food after cooking)			
Quintile 1	24.2	1.00	
Quintile 2	28.3	1.17	1.01, 1.36
Quintile 3	31.7	1.31	1.13, 1.52
Quintile 4	35.2	1.46	1.23, 1.72
Quintile 5	38.2	1.58	1.36, 1.85
Food security			
Quintile 1	1.0	1.00	
Quintile 2	1.9	1.91	1.06, 3.43
Quintile 3	3.6	3.56	2.02, 6.27
Quintile 4	8.2	8.05	4.70, 13.78
Quintile 5	16.4	16.07	9.71, 26.59
Health-related risk factors			
Overweight (but not obese)			
Quintile 1	45.3	1.00	
Quintile 2	47.3	1.04	0.93, 1.17
Quintile 3	45.7	1.01	0.89, 1.14
Quintile 4	38.7	0.85	0.74, 0.99
Quintile 5	38.8	0.86	0.74, 0.99

(continued)

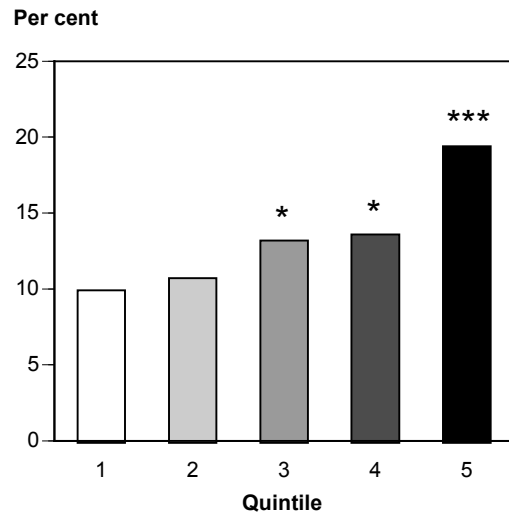
Table 4.5 (continued): Health indicators by equivalised income quintile, males aged 25–64 years, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Obese			
Quintile 1	16.1	1.00	
Quintile 2	17.5	1.09	0.90, 1.32
Quintile 3	16.1	1.00	0.81, 1.23
Quintile 4	20.2	1.25	1.01, 1.56
Quintile 5	20.8	1.29	1.05, 1.59
Hypertension			
Quintile 1	8.8	1.00	
Quintile 2	10.0	1.14	0.89, 1.46
Quintile 3	9.8	1.12	0.86, 1.44
Quintile 4	9.8	1.12	0.83, 1.49
Quintile 5	10.0	1.14	0.88, 1.47
Health service use			
Doctor consultation			
Quintile 1	17.2	1.00	
Quintile 2	17.4	1.01	0.84, 1.22
Quintile 3	18.9	1.10	0.91, 1.33
Quintile 4	25.4	1.48	1.21, 1.80
Quintile 5	30.7	1.79	1.50, 2.13
GP consultation			
Quintile 1	15.1	1.00	
Quintile 2	15.0	0.99	0.81, 1.20
Quintile 3	17.0	1.12	0.92, 1.37
Quintile 4	23.4	1.54	1.26, 1.90
Quintile 5	27.9	1.85	1.53, 2.23
Specialist consultation			
Quintile 1	4.6	1.00	
Quintile 2	4.9	1.06	0.75, 1.51
Quintile 3	4.2	0.92	0.63, 1.35
Quintile 4	4.3	0.95	0.61, 1.48
Quintile 5	6.3	1.38	0.97, 1.98
Dental consultation			
Quintile 1	5.4	1.00	
Quintile 2	4.0	0.75	0.52, 1.09
Quintile 3	4.2	0.78	0.53, 1.14
Quintile 4	5.3	0.99	0.68, 1.44
Quintile 5	6.9	1.29	0.92, 1.81

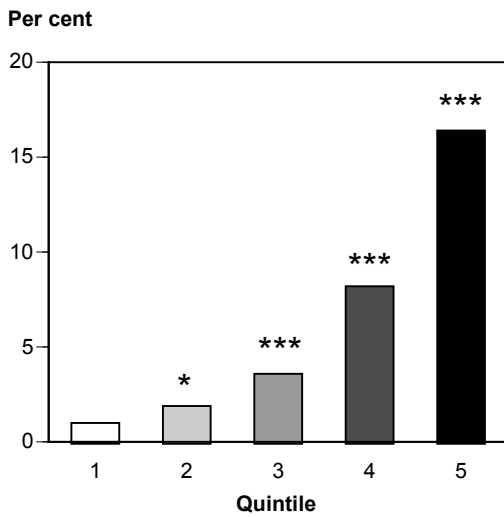
Self-assessed health as 'fair' or 'poor'



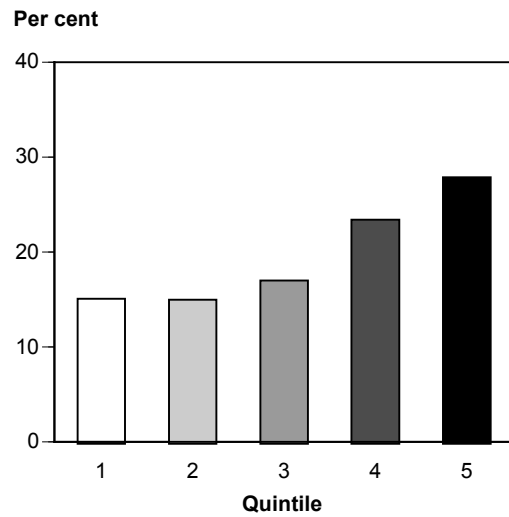
Experienced arthritis as long-term condition



Food insecurity



Visited a GP in last 2 weeks



Note: Quintile 1 = high income, quintile 5 = low income.

Rate differs significantly from quintile 1 at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 4.5: Health indicators by equivalised income quintile, males aged 25–64 years, 2001

Table 4.6: Health indicators by equivalised income quintile, females aged 25–64 years, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Morbidity			
Self-assessed health status (fair or poor)			
Quintile 1	9.2	1.00	
Quintile 2	10.6	1.16	0.90, 1.49
Quintile 3	13.4	1.46	1.13, 1.88
Quintile 4	21.5	2.35	1.87, 2.95
Quintile 5	29.6	3.22	2.61, 3.98
Days away from study or work			
Quintile 1	17.3	1.00	
Quintile 2	15.4	0.89	0.74, 1.08
Quintile 3	17.7	1.02	0.85, 1.24
Quintile 4	17.7	1.03	0.85, 1.25
Quintile 5	20.7	1.20	1.00, 1.43
Arthritis			
Quintile 1	11.7	1.00	
Quintile 2	14.9	1.28	1.02, 1.61
Quintile 3	15.0	1.29	1.02, 1.62
Quintile 4	19.5	1.67	1.35, 2.08
Quintile 5	22.6	1.93	1.59, 2.36
Asthma			
Quintile 1	11.0	1.00	
Quintile 2	11.7	1.06	0.84, 1.34
Quintile 3	12.0	1.09	0.86, 1.39
Quintile 4	12.9	1.17	0.93, 1.47
Quintile 5	15.0	1.36	1.09, 1.71
Bronchitis/emphysema			
Quintile 1	2.9	1.00	
Quintile 2	2.3	0.80	0.50, 1.28
Quintile 3	3.8	1.31	0.84, 2.04
Quintile 4	3.6	1.24	0.81, 1.88
Quintile 5	4.8	1.65	1.11, 2.45
Diabetes			
Quintile 1	1.6	1.00	
Quintile 2	2.0	1.22	0.61, 2.43
Quintile 3	2.2	1.37	0.71, 2.64
Quintile 4	2.5	1.54	0.81, 2.96
Quintile 5	4.2	2.56	1.43, 4.61
Neoplasms			
Quintile 1	1.7	1.00	
Quintile 2	1.0	0.60	0.31, 1.19
Quintile 3	1.7	0.99	0.50, 1.96
Quintile 4	1.8	1.07	0.57, 2.00
Quintile 5	1.6	0.94	0.54, 1.66

(continued)

Table 4.6 (continued): Health indicators by equivalised income quintile, females aged 25–64 years, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Health-related behaviours			
Alcohol risk			
Quintile 1	13.0	1.00	
Quintile 2	8.8	0.68	0.54, 0.86
Quintile 3	7.9	0.61	0.47, 0.79
Quintile 4	6.5	0.50	0.38, 0.65
Quintile 5	7.5	0.58	0.45, 0.75
Insufficient physical activity			
Quintile 1	65.9	1.00	
Quintile 2	75.4	1.15	1.04, 1.26
Quintile 3	77.8	1.18	1.07, 1.30
Quintile 4	75.4	1.14	1.04, 1.26
Quintile 5	72.8	1.10	1.00, 1.22
Smoking			
Quintile 1	15.9	1.00	
Quintile 2	19.2	1.21	1.01, 1.45
Quintile 3	19.7	1.24	1.03, 1.50
Quintile 4	27.9	1.75	1.48, 2.08
Quintile 5	34.7	2.19	1.85, 2.58
Salt use (usually add salt to food after cooking)			
Quintile 1	17.3	1.00	
Quintile 2	20.2	1.17	0.98, 1.41
Quintile 3	20.8	1.21	1.00, 1.46
Quintile 4	26.8	1.55	1.30, 1.85
Quintile 5	25.8	1.49	1.26, 1.78
Food security			
Quintile 1	1.0	1.00	
Quintile 2	1.9	1.79	1.01, 3.17
Quintile 3	4.0	3.78	2.25, 6.36
Quintile 4	10.3	9.85	6.14, 15.79
Quintile 5	17.0	16.29	10.30, 25.75
Risk factors			
Overweight (but not obese)			
Quintile 1	28.2	1.00	
Quintile 2	26.7	0.95	0.81, 1.11
Quintile 3	25.6	0.91	0.77, 1.07
Quintile 4	26.4	0.94	0.79, 1.11
Quintile 5	21.7	0.77	0.65, 0.91
Obese			
Quintile 1	13.6	1.00	
Quintile 2	18.0	1.32	1.07, 1.63
Quintile 3	19.7	1.44	1.16, 1.79
Quintile 4	19.8	1.45	1.18, 1.79
Quintile 5	21.9	1.61	1.31, 1.96

(continued)

Table 4.6 (continued): Health indicators by equivalised income quintile, females aged 25–64 years, 2001

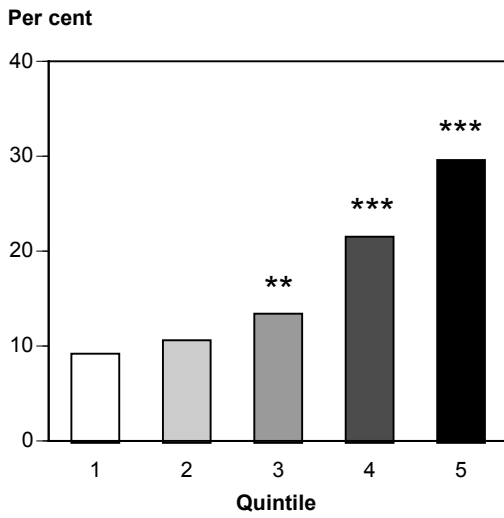
Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Hypertension			
Quintile 1	7.8	1.00	
Quintile 2	9.1	1.17	0.87, 1.58
Quintile 3	7.6	0.99	0.72, 1.35
Quintile 4	10.7	1.38	1.03, 1.84
Quintile 5	13.3	1.72	1.33, 2.23
Health service use			
Doctor consultation			
Quintile 1	28.0	1.00	
Quintile 2	25.5	0.91	0.78, 1.06
Quintile 3	28.6	1.02	0.87, 1.20
Quintile 4	31.1	1.11	0.95, 1.30
Quintile 5	33.7	1.20	1.04, 1.39
GP consultation			
Quintile 1	21.8	1.00	
Quintile 2	22.0	1.01	0.85, 1.20
Quintile 3	25.2	1.16	0.97, 1.38
Quintile 4	27.6	1.27	1.07, 1.50
Quintile 5	29.8	1.36	1.17, 1.60
Specialist consultation			
Quintile 1	9.4	1.00	
Quintile 2	6.9	0.73	0.55, 0.97
Quintile 3	6.8	0.72	0.53, 0.98
Quintile 4	6.6	0.70	0.52, 0.94
Quintile 5	8.4	0.89	0.68, 1.17
Dental consultation			
Quintile 1	7.8	1.00	
Quintile 2	7.3	0.94	0.70, 1.27
Quintile 3	5.2	0.67	0.48, 0.93
Quintile 4	6.2	0.80	0.59, 1.10
Quintile 5	5.8	0.75	0.55, 1.02
Mammogram			
50–64 years			
Quintile 1	5.7	1.00	
Quintile 2	12.5	2.20	1.33, 3.65
Quintile 3	12.2	2.15	1.26, 3.69
Quintile 4	15.6	2.74	1.64, 4.58
Quintile 5	15.4	2.71	1.72, 4.27
Time since last mammogram			
50–64 years			
Quintile 1	21.6	1.00	
Quintile 2	22.7	1.05	0.71, 1.57
Quintile 3	19.5	0.90	0.61, 1.35
Quintile 4	21.8	1.01	0.70, 1.47
Quintile 5	25.2	1.17	0.83, 1.65

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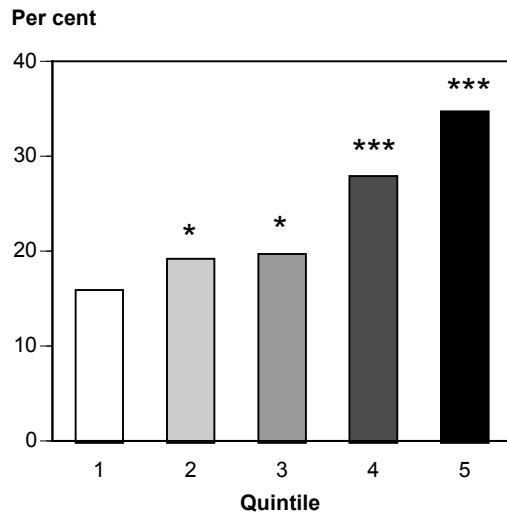
Table 4.6 (continued): Health indicators by equivalised income quintile, females aged 25–64 years, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Pap smear			
Quintile 1	4.0	1.00	
Quintile 2	4.8	1.22	0.83, 1.79
Quintile 3	3.3	0.84	0.53, 1.32
Quintile 4	4.7	1.18	0.77, 1.82
Quintile 5	7.1	1.79	1.24, 2.58
Last Pap smear 2 or more years ago			
Quintile 1	26.7	1.00	
Quintile 2	31.7	1.19	1.01, 1.39
Quintile 3	34.4	1.29	1.10, 1.52
Quintile 4	33.9	1.27	1.08, 1.49
Quintile 5	40.2	1.51	1.29, 1.75

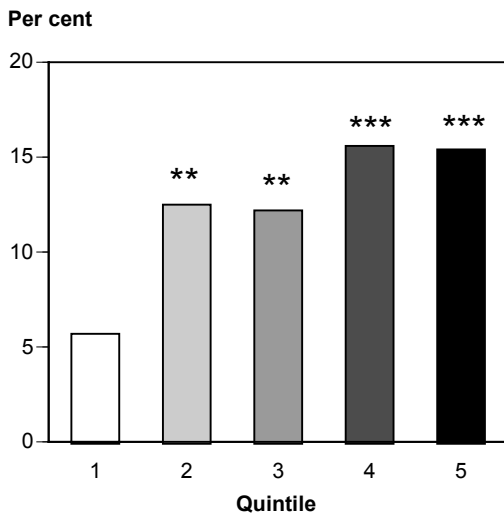
Self-assessed health as 'fair' or 'poor'



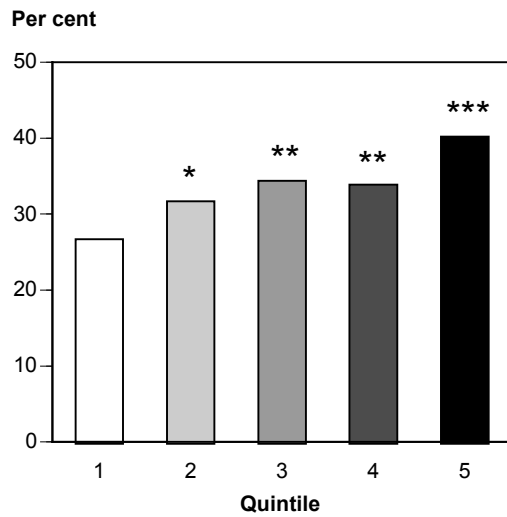
Classified as a regular smoker



Never had a mammogram (50-64 years)



Last Pap smear 2 or more years ago



Note: Quintile 1 = high income, quintile 5 = low income.

Rate differs significantly from quintile 1 at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 4.6: Health indicators by equivalised income quintile, females aged 25-64 years, 2001

4.4 Persons aged 65 years and over

Tables 4.7 and 4.8 and Figures 4.7 and 4.8 presents associations between equivalised income and a range of health indicators for males and females aged 65 years and over.

Compared with persons in the highest income category (i.e. quintile 1), those from low income households had poorer self-rated health, and were more likely to report that they experienced a number of long-term conditions:

- Self-assessed health: Males and females from low income households were more likely to assess their overall health as poor or fair (males 108%, females 160%).
- Bronchitis/emphysema: Rates were significantly higher among males from low income households, although the rates were estimated with very low precision as indicated by the extremely wide confidence intervals.
- Diabetes: rates were significantly higher (263%) among males from low income households.

Males aged 65 years and over from low income households were also more likely to report that they were regular smokers. However, males and females from low income households were less likely than their higher income counterparts to consume alcohol at risky levels (males 67% less likely, and females 78%).

Finally, females from low income households were significantly more likely to have reported that they experienced hypertension as a long-term condition.

Table 4.7: Health indicators by equivalised income quintile, males aged 65 years and over, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Morbidity			
Self-assessed health status (fair or poor)			
Quintile 1	19.8	1.00	
Quintile 2	22.8	1.15	0.59, 2.27
Quintile 3	31.8	1.60	0.89, 2.89
Quintile 4	32.7	1.65	0.96, 2.86
Quintile 5	41.2	2.08	1.21, 3.59
Arthritis			
Quintile 1	40.0	1.00	
Quintile 2	40.8	1.02	0.61, 1.71
Quintile 3	37.8	0.95	0.58, 1.53
Quintile 4	40.0	1.00	0.64, 1.56
Quintile 5	38.0	0.95	0.61, 1.48
Asthma			
Quintile 1	3.2	1.00	
Quintile 2	7.8	2.47	0.62, 9.89
Quintile 3	7.1	2.25	0.65, 7.84
Quintile 4	8.3	2.63	0.81, 8.59
Quintile 5	8.5	2.67	0.82, 8.72

(continued)

Table 4.7 (continued): Health indicators by equivalised income quintile, males aged 65 years and over, 2001

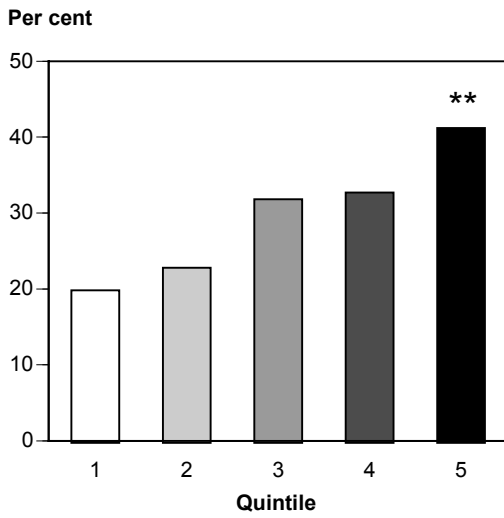
Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Bronchitis/emphysema			
Quintile 1	0.5	1.00	
Quintile 2	7.1	13.54	1.67, 110.04
Quintile 3	8.9	16.79	2.22, 127.11
Quintile 4	11.3	21.35	2.95, 154.64
Quintile 5	13.5	25.54	3.52, 185.25
Diabetes			
Quintile 1	3.3	1.00	
Quintile 2	2.8	0.86	0.22, 3.45
Quintile 3	8.5	2.57	0.85, 7.74
Quintile 4	10.8	3.29	1.19, 9.09
Quintile 5	11.9	3.63	1.30, 10.09
Neoplasms			
Quintile 1	14.1	1.00	
Quintile 2	7.6	0.54	0.19, 1.56
Quintile 3	7.4	0.53	0.20, 1.37
Quintile 4	9.5	0.67	0.29, 1.59
Quintile 5	6.4	0.46	0.19, 1.10
Health-related behaviours			
Alcohol risk			
Quintile 1	15.6	1.00	
Quintile 2	6.4	0.41	0.17, 0.97
Quintile 3	8.5	0.54	0.25, 1.16
Quintile 4	8.6	0.55	0.31, 1.00
Quintile 5	5.1	0.33	0.17, 0.62
Insufficient physical activity			
Quintile 1	59.2	1.00	
Quintile 2	56.1	0.95	0.61, 1.46
Quintile 3	59.0	1.00	0.67, 1.47
Quintile 4	67.0	1.13	0.79, 1.62
Quintile 5	74.8	1.26	0.89, 1.80
Smoking			
Quintile 1	1.3	1.00	
Quintile 2	1.3	0.97	0.16, 5.81
Quintile 3	7.7	5.79	1.32, 25.33
Quintile 4	8.6	6.52	1.58, 26.98
Quintile 5	15.7	11.89	2.91, 48.47
Salt use (usually add salt to food after cooking)			
Quintile 1	30.2	1.00	
Quintile 2	26.3	0.87	0.49, 1.53
Quintile 3	34.5	1.14	0.70, 1.88
Quintile 4	40.2	1.33	0.85, 2.07
Quintile 5	44.5	1.47	0.95, 2.29

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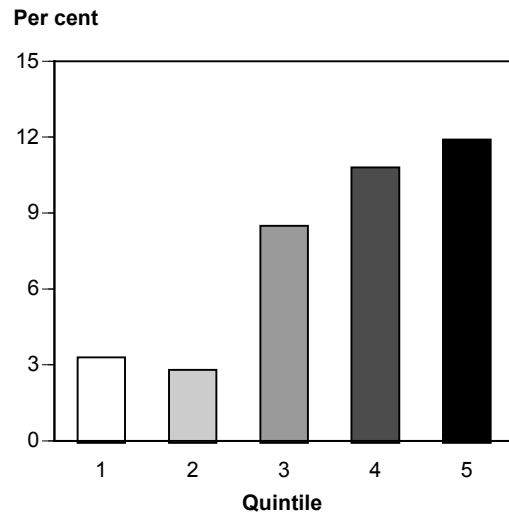
Table 4.7 (continued): Health indicators by equivalised income quintile, males aged 65 years and over, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Health-related risk factors			
Overweight (but not obese)			
Quintile 1	49.4	1.00	
Quintile 2	42.0	0.85	0.53, 1.37
Quintile 3	39.6	0.80	0.52, 1.24
Quintile 4	41.6	0.84	0.57, 1.25
Quintile 5	47.1	0.95	0.65, 1.41
Obese			
Quintile 1	14.6	1.00	
Quintile 2	8.6	0.59	0.22, 1.56
Quintile 3	11.1	0.76	0.33, 1.73
Quintile 4	13.4	0.91	0.44, 1.92
Quintile 5	13.1	0.89	0.43, 1.88
Hypertension			
Quintile 1	47.4	1.00	
Quintile 2	37.6	0.79	0.49, 1.29
Quintile 3	36.7	0.77	0.51, 1.19
Quintile 4	38.3	0.81	0.55, 1.18
Quintile 5	32.4	0.68	0.46, 1.01
Health service use			
Doctor consultation			
Quintile 1	38.7	1.00	
Quintile 2	37.4	0.97	0.56, 1.66
Quintile 3	43.0	1.11	0.68, 1.81
Quintile 4	46.2	1.20	0.76, 1.88
Quintile 5	45.1	1.17	0.74, 1.83
GP consultation			
Quintile 1	28.0	1.00	
Quintile 2	34.5	1.23	0.68, 2.24
Quintile 3	39.4	1.41	0.81, 2.43
Quintile 4	43.1	1.54	0.92, 2.57
Quintile 5	42.5	1.52	0.91, 2.53
Specialist consultation			
Quintile 1	11.8	1.00	
Quintile 2	9.5	0.80	0.31, 2.11
Quintile 3	9.8	0.83	0.35, 1.97
Quintile 4	9.8	0.83	0.38, 1.85
Quintile 5	9.2	0.78	0.35, 1.74
Dental consultation			
Quintile 1	9.7	1.00	
Quintile 2	10.5	1.08	0.39, 2.97
Quintile 3	4.4	0.45	0.16, 1.24
Quintile 4	10.0	1.03	0.46, 2.31
Quintile 5	4.2	0.43	0.18, 1.01

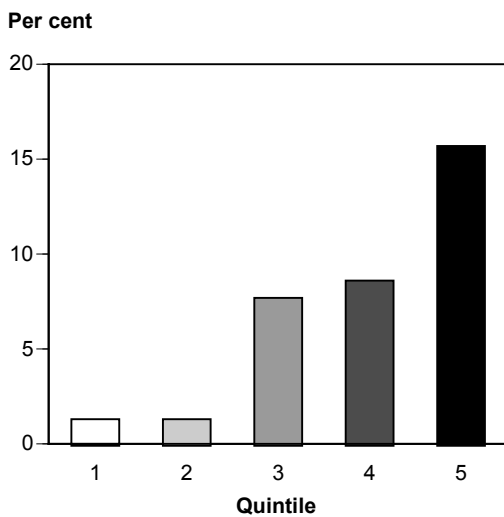
Self-assessed health as 'fair' or 'poor'



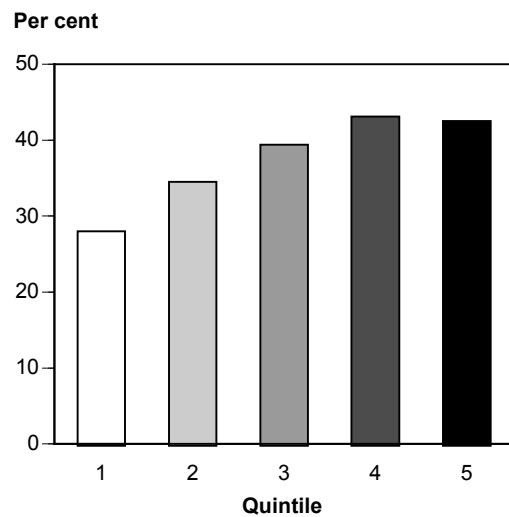
Experienced diabetes as long-term condition



Classified as a regular smoker



Visited a GP in the last 2 weeks



Note: Quintile 1 = high income, quintile 5 = low income.

Rate differs significantly from quintile 1 at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 4.7: Health indicators by equivalised income quintile, males aged 65 years and over, 2001

Table 4.8: Health indicators by equivalised income quintile, females aged 65 years and over, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Morbidity			
Self-assessed health status (fair or poor)			
Quintile 1	13.8	1.00	
Quintile 2	27.2	1.97	0.85, 4.59
Quintile 3	27.0	1.96	0.87, 4.39
Quintile 4	33.0	2.39	1.13, 5.09
Quintile 5	35.9	2.60	1.23, 5.50
Arthritis			
Quintile 1	48.2	1.00	
Quintile 2	52.7	1.09	0.65, 1.84
Quintile 3	53.2	1.10	0.69, 1.77
Quintile 4	53.9	1.12	0.73, 1.72
Quintile 5	53.4	1.11	0.72, 1.70
Asthma			
Quintile 1	5.0	1.00	
Quintile 2	7.2	1.42	0.30, 6.68
Quintile 3	10.4	2.06	0.47, 9.04
Quintile 4	10.8	2.14	0.52, 8.76
Quintile 5	8.9	1.77	0.44, 7.22
Bronchitis/emphysema			
Quintile 1	1.8	1.00	
Quintile 2	9.1	5.09	0.61, 42.30
Quintile 3	2.8	1.57	0.19, 13.04
Quintile 4	8.9	4.99	0.69, 36.11
Quintile 5	6.6	3.68	0.51, 26.71
Diabetes			
Quintile 1	16.6	1.00	
Quintile 2	13.2	0.79	0.27, 2.32
Quintile 3	10.7	0.64	0.23, 1.81
Quintile 4	10.8	0.65	0.26, 1.61
Quintile 5	11.2	0.67	0.27, 1.67
Neoplasms			
Quintile 1	1.0	1.00	
Quintile 2	4.2	4.38	0.46, 42.08
Quintile 3	3.9	4.07	0.47, 34.80
Quintile 4	4.3	4.44	0.60, 32.89
Quintile 5	3.8	3.93	0.53, 28.96
Health-related behaviours			
Alcohol risk			
Quintile 1	22.6	1.00	
Quintile 2	12.9	0.57	0.23, 1.45
Quintile 3	6.6	0.29	0.12, 0.72
Quintile 4	5.1	0.23	0.10, 0.49
Quintile 5	5.1	0.22	0.10, 0.49

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Table 4.8 (continued): Health indicators by equivalised income quintile, females aged 65 years and over, 2001

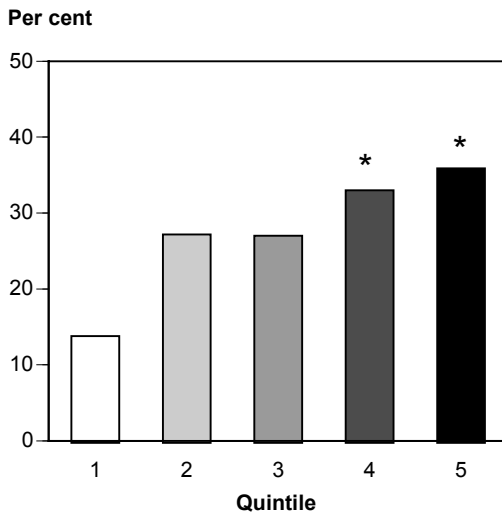
Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
Insufficient physical activity			
Quintile 1	72.4	1.00	
Quintile 2	74.0	1.02	0.67, 1.55
Quintile 3	75.3	1.04	0.71, 1.52
Quintile 4	79.8	1.10	0.78, 1.56
Quintile 5	80.6	1.11	0.79, 1.57
Smoking			
Quintile 1	10.2	1.00	
Quintile 2	1.9	0.18	0.04, 0.81
Quintile 3	8.0	0.78	0.26, 2.36
Quintile 4	7.1	0.69	0.25, 1.94
Quintile 5	8.5	0.83	0.30, 2.26
Salt use (usually add salt to food after cooking)			
Quintile 1	16.7	1.00	
Quintile 2	16.6	1.00	0.38, 2.62
Quintile 3	19.1	1.14	0.48, 2.73
Quintile 4	24.3	1.46	0.64, 3.30
Quintile 5	26.7	1.60	0.71, 3.60
Health-related risk factors			
Overweight (but not obese)			
Quintile 1	26.2	1.00	
Quintile 2	31.3	1.19	0.59, 2.42
Quintile 3	38.6	1.47	0.77, 2.82
Quintile 4	33.6	1.28	0.70, 2.36
Quintile 5	32.3	1.23	0.67, 2.26
Obese			
Quintile 1	9.6	1.00	
Quintile 2	18.4	1.92	0.62, 5.94
Quintile 3	12.3	1.28	0.42, 3.90
Quintile 4	18.5	1.93	0.71, 5.26
Quintile 5	19.4	2.03	0.75, 5.49
Hypertension			
Quintile 1	26.2	1.00	
Quintile 2	41.4	1.58	0.85, 2.95
Quintile 3	43.3	1.66	0.93, 2.95
Quintile 4	45.1	1.72	1.01, 2.95
Quintile 5	45.0	1.72	1.01, 2.94
Health service use			
Doctor consultation			
Quintile 1	32.2	1.00	
Quintile 2	45.5	1.41	0.82, 2.42
Quintile 3	32.9	1.02	0.61, 1.70
Quintile 4	43.4	1.35	0.86, 2.13
Quintile 5	46.5	1.45	0.92, 2.27

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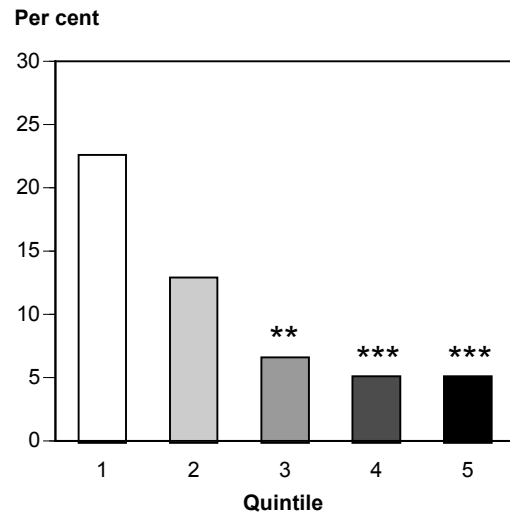
Table 4.8 (continued): Health indicators by equivalised income quintile, females aged 65 years and over, 2001

Health indicator/income	2001		
	Per cent	Rate ratio	95% CI
GP consultation			
Quintile 1	29.2	1.00	
Quintile 2	38.6	1.32	0.75, 2.34
Quintile 3	28.3	0.97	0.57, 1.67
Quintile 4	40.1	1.37	0.85, 2.22
Quintile 5	42.8	1.47	0.91, 2.36
Specialist consultation			
Quintile 1	3.8	1.00	
Quintile 2	12.0	3.20	0.88, 11.62
Quintile 3	10.3	2.75	0.81, 9.39
Quintile 4	8.9	2.37	0.74, 7.58
Quintile 5	9.1	2.43	0.76, 7.74
Dental consultation			
Quintile 1	1.8	1.00	
Quintile 2	2.9	1.63	0.27, 9.73
Quintile 3	8.9	4.95	1.11, 22.13
Quintile 4	4.5	2.50	0.60, 10.50
Quintile 5	2.5	1.42	0.33, 6.03

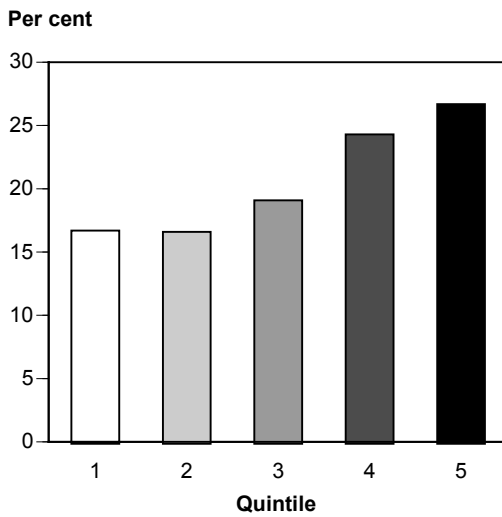
Self-assessed health as 'fair' or 'poor'



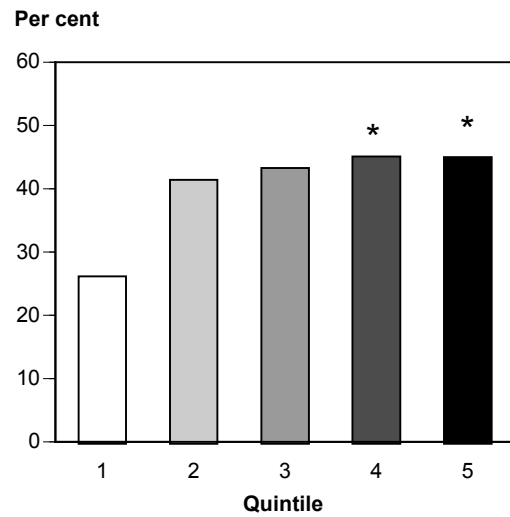
High-risk alcohol consumption



Salt use (usually add to food after cooking)



Hypertension as a long-term condition



Note: Quintile 1 = high income, quintile 5 = low income.

Rate differs significantly from quintile 1 at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 4.8: Health indicators by equivalised income quintile, females aged 65 years and over, 2001

4.5 Summary and discussion

This chapter has examined health-related inequalities by equivalised income for males and females aged 0–14, 15–24, 25–64, and 65 years or more using data from the 2001 National Health Survey. At the beginning of the 21st century, there were considerable income-based health inequalities in Australia. Respondents from low income families, for example, were more likely to report experiencing poorer health (i.e. self-assessed general health and long-term conditions); they were more likely to engage in behaviours that were potentially detrimental to health (i.e. higher rates of smoking and adding salt to food, greater physical inactivity); they were more likely to report food insecurity (i.e. having run out of food and not able to afford more) and to exhibit an adverse risk-factor profile (i.e. obesity, hypertension); and they reportedly made greater use of GP services overall but were less likely to use health care services for preventive reasons (for example, dental consultations, Pap smear screening and mammograms). These findings are consistent with results reported in previous overseas and Australian studies (see Introduction section).

A number of issues need to be considered when interpreting the findings of this analysis of equivalised income and health. First, unlike all other chapters in this report, this chapter was based on data for only one time-point (i.e. 2001), hence no intersurvey comparisons were made. This was due to differences in the sampling methodology and survey design between the 1989–90 and 1995 surveys, and the 2001 survey – in the former two surveys the measure of equivalised income was based on the Henderson Simplified Equivalence Scales, whereas in the latter survey equivalised income was based on the simpler OECD scale (see ABS 2003a for further details).

Second, equivalised income data were not available for approximately 18% of respondents (a weighted estimate of 22% of persons in the 2001 NHS). Part of this was again due to the sampling method used by the ABS (ABS 2003a); however, it is also likely that some respondents refused to provide income-related information, or provided insufficient data for a reliable estimate of equivalised income to be derived, leading to possible biases in the results if the non-reporting of income was different by socioeconomic group. A study of income non-response in the 1995 NHS found that 9.8% of persons aged 15–64 had missing data for income (Turrell 2000). Propensity to not report income increased with age (15–29 years 5.8%, 30–49 10.6%, 50–64 13.8%) although no gender differences were found (males 10.2%, females 9.3%). Income non-response was not strongly or consistently related to education or occupation for males, although there was a suggested association among these variables for females, with highly educated women and those in professional occupations being less likely to report their income. However, strong associations were evident between income non-response, labour force status and main income source. Rates were highest among the employed and those in receipt of an income from their own business or partnership and lowest among the unemployed and those in receipt of government pension or benefit (which excluded the unemployed).

Third, the equivalised income data were provided by the ABS in the form of deciles; and for the purposes of this report these were combined to form quintiles. Different estimates of health inequality were likely to have been obtained if the statistical groupings had been based on deciles rather than quintiles.

Finally, there is the question of how one interprets the findings of this chapter. Specifically, are the significant associations between income and each health-related outcome to be seen as evidence of the direct impact of income per se, or is income more appropriately viewed as a marker of socioeconomic position more generally? Each significant association reported in this

chapter is more likely capturing both processes, although the balance between the two types of interpretation is partly dependent on the outcome being investigated. For example, the strong association found between equivalised income and food security very likely reflected the direct impact of a low income family's capacity to purchase food, whereas the relationship between equivalised income and discretionary salt use was more likely to reflect the influence of other related socioeconomic factors such as education (i.e. income and education correlate, and the latter has been associated with lower levels of knowledge about recommended dietary practices [Turrell 1997; Turrell & Kavanagh 2006]). The direct impact of income is also likely to be evident in the lower rates of dental consultations among low income households, whereas the impact is possibly more indirect (reflecting other socioeconomic processes) for outcomes such as breastfeeding, sun protection, or use of preventive health care services such as Pap smears and mammograms.