

5 Health inequalities by education

A person's level of education is an important determinant of health, partly through its link with future occupational opportunities and income potential. In addition, education provides knowledge and skills to help individuals maintain and improve their own health and access health services (AIHW 2004a).

Education level also acts as a simple and well-established indicator of socioeconomic position. Overseas studies measuring health outcomes by levels of education typically find that less educated persons have poorer health. Higher levels of educational attainment are significantly associated with lower mortality rates for most major causes of death (Feldman et al. 1989; Mackenbach et al. 1997; Cavelaars et al. 2000) and lower rates of self-reported illness (Monden et al. 2003). Smoking, insufficient physical activity, high blood pressure and obesity – all important risk factors affecting health – are also less common among persons with more education (Lynch et al. 1997; Luoto et al. 1994).

Australian health research supports the link between less education and poorer health status. Broadhead (1985) and Mathers (1994a) note that individuals with higher levels of education report fewer illnesses and have better mental health than those with lower levels of education. Obesity, body mass index (BMI) and blood pressure levels, as well as combinations of risk factors are elevated in persons with less education (Simons et al. 1986; Bennett 1995). Smoking rates are higher among those disadvantaged by less education (Hill et al. 1998). Conwell et al. (2003) found that adolescent smoking is positively associated with teenage mothers' lower levels of education at the time of pregnancy. Persons with less than 12 years of education are also more likely to be physically inactive than those who complete secondary school or complete a TAFE or tertiary qualification (Owen & Bauman 1992; AIHW 2004b). Less educated persons are more likely to obtain a greater proportion of their dietary energy from fats and sugars, consume fewer micronutrients and have less knowledge about nutrition (Smith & Baghurst 1992, 1993; Turrell 1997). They also consult GPs more often, but dentists less often (Wiggers et al. 1995).

Numerous state/territory and national surveys collect information on education and health. In this chapter, we examine health inequalities among males and females aged 25–64 years, and 65 years and over, according to their reported levels of education in the 1989–90, 1995 and 2001 ABS National Health Surveys. Categorisation of education varied somewhat across the three surveys, so for comparisons, the highest reported level of education has been reclassified into three groups – no post-school qualification, diploma/vocational qualification and bachelor degree or higher (Box 5.1). Where possible, health indicators by education level are compared across all three surveys – detailed definitions for each health indicator are given in Chapter 2 'Data issues and methods'. The 1989–90 survey lacked some of the questions that appeared in later surveys or worded questions differently, so in some cases no results appear for that particular survey.

Box 5.1: Education categorisation

In this report highest level of education is used as an indicator of socioeconomic position for persons aged 25 years and over. In the 1995 NHS, approximately half of the adult respondents were asked to give information on their highest qualification completed, whereas the 1989–90 and 2001 surveys asked all adult respondents. Those respondents who were not asked about their highest qualification have been excluded from all analysis of education in this report. Based on responses to a number of questions regarding education, the ABS allocated respondents to a particular qualification category. The table below shows the categories used for each National Health Survey.

Highest qualification categories

1989–90 NHS	1995 NHS	2001 NHS
1. Bachelor degree or higher	1. Higher degree	1. Higher degree, postgraduate diploma, bachelor degree
2. Trade/apprenticeship	2. Postgraduate diploma	2. Undergraduate diploma, associate diploma
3. Certificate/diploma	3. Bachelor degree	3. Basic/ Skilled vocational qualification
4. Other	4. Undergraduate diploma	4. Has qualification but level not stated
5. No post-school qualification	5. Associate diploma	5. No post-school qualification
	6. Skilled vocational	9. Not stated
	7. Basic vocational	
	8. Educational qualification inadequately described	
	9. No higher qualifications	

To enable comparison across the three surveys, highest qualification was subsequently recategorised as:

1989–90 NHS

Bachelor degree or higher	Group 1
Diploma/vocational	Groups 2 and 3
No post-school qualification	Group 5

1995 NHS

Bachelor degree or higher	Groups 1, 2 and 3
Diploma/vocational	Groups 4, 5, 6 and 7
No post-school qualification	Group 9

2001 NHS

Bachelor degree or higher	Group 1
Diploma/vocational	Groups 2 and 3
No post-school qualification	Group 5

Respondents for whom highest educational qualification was categorised by the ABS as ‘not applicable’, ‘not adequately described’ or ‘not stated’, or listed as ‘other’ were also excluded from all analysis involving education. This equates to a weighted estimate of 1.5% of persons aged 25 years and over in the 1989–90 NHS (1.4% of respondents), 0.5% in the 1995 NHS (0.4%), and 2.5% in the 2001 NHS (2.5%).

5.1 Persons aged 25–64 years

Males and females aged 25–64 years with lower educational qualifications – i.e. no post-school qualification or a diploma/vocational qualification – rated their own health more poorly, and reported a number of illnesses more often than those with a bachelor degree or higher (Tables 5.1 and 5.2).

- Self-assessed health: Males and females with no post-school qualification were more likely to report their health as fair or poor in 1995 (males 197% higher, females 138% higher) and 2001 (males 135% higher, females 87% higher).
- Arthritis: This condition was reported consistently more often among persons with no post-school qualifications across all three surveys. In 2001, males and females with no post-school qualifications were 97% and 27% respectively more likely to report arthritis.
- Bronchitis or emphysema: Males with no post-school qualifications were significantly more likely to report this condition in 1989–90 (100% higher) and in 1995 (81% higher) but not in 2001. Females with no post-school qualifications were significantly more likely to report bronchitis or emphysema in 1995 (79% higher) but not in 1989–90 or 2001.
- Diabetes prevalence: In 2001, females with no post-school qualifications were more likely to report this condition (79% higher).

Males and females aged 25–64 years with lower educational qualifications were more likely to engage in a number of risky or harmful health-related behaviours.

- Alcohol risk: Males with no post-school qualifications were more likely to consume alcohol at risky levels for all three surveys (62% higher in 2001). In contrast, risky drinking among females who had no post-school qualifications was consistently lower across all three surveys (29% lower in 2001).
- Insufficient physical activity: This was consistently higher for males and females with no post-school qualifications for all three surveys. Figures 5.2 and 5.5 graph the association between education and rates of insufficient physical activity for males and females respectively.
- Smoking: Males and females with lower education levels reported higher smoking rates across all three surveys. In 2001, rates of smoking were 156% higher for males and 113% higher for females with no post-school qualifications. Figure 5.6 graphs the association between education and rates of smoking for females.
- Salt use: Males with no post-school qualifications were more likely to report discretionary salt use in 1995 (77% higher) and 2001 (106% higher). Females with no post-school qualifications were more likely to report salt use in 2001 (76% higher).
- No food security: Males with no post-school qualifications were more likely to report food insecurity in 1995 (138% higher) and 2001 (189% higher). Females with no post-school qualifications were more likely to report food insecurity in 2001 (175% higher).

Not only were health risk behaviours poorer in those with lower educational qualifications, but also several important health risk factors were higher.

- Obesity: In all three surveys, persons with lower levels of education reported higher rates of obesity. In 2001, obesity rates among the least educated were 77% higher for males and 65% higher for females. Figures 5.3 and 5.7 graph the association between education and rates of obesity for males and females respectively.

- Hypertension: In 1989–90 and 1995, females with no post-school qualifications were more likely to report this condition (81% and 73% respectively).

Persons with lower educational qualifications were also more likely to visit a doctor, but less likely to use a number of other health services.

- Doctor consultation: Visits to a doctor, and more specifically, those to a GP, were higher for less educated males across all three surveys (46% higher in 2001). Among women with lower educational qualifications, only respondents in the 2001 survey reported significantly higher GP consultation rates. Figure 5.4 graphs the association between education and rates of GP use for males.
- Dental consultations: Males and females with lower educational qualifications reported visiting a dentist less frequently in all three surveys (2001, 34% lower for males and 41% lower for females).
- Women aged 50–64 years never having a mammogram: Figure 5.8 graphs the association between education and rates of mammogram use. In 2001, rates of never having had a mammogram were 105% higher among women with no post-school qualifications.
- Pap smear: The 1989–90 survey indicated that women with lower educational qualifications were more likely to have had a Pap smear, although this was not replicated in the 1995 and 2001 surveys. A higher proportion of women with lower educational qualifications, however, reported having their last Pap smear more than 2 years ago—31% higher in 2001 and 30% higher in 1995.

Table 5.1: Health indicators by education level, males aged 25–64 years, 1989 to 2001

Health indicators/education	1989–90			1995			2001		
	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI
Morbidity									
Self-assessed health status (fair or poor)									
Bachelor degree or higher	..	..	..	6.4	1.00		9.4	1.00	
Diploma/vocational	..	..	..	12.2	1.92	1.46, 2.52	16.3	1.74	1.42, 2.14
No post-school qualification	..	..	..	19.0	2.97	2.29, 3.87	22.0	2.35	1.92, 2.88
Days away from study or work									
Bachelor degree or higher	11.7	1.00		5.6	1.00		15.3	1.00	
Diploma/vocational †	13.4	1.15	0.98, 1.34	8.4	1.48	1.12, 1.96	15.5	1.01	0.85, 1.20
No post-school qualification †‡	13.1	1.12	0.96, 1.31	9.6	1.70	1.29, 2.24	15.7	1.03	0.86, 1.22
Arthritis									
Bachelor degree or higher	5.3	1.00		9.8	1.00		7.0	1.00	
Diploma/vocational †‡	11.1	2.12	1.68, 2.68	14.0	1.43	1.14, 1.79	13.9	1.98	1.56, 2.52
No post-school qualification	10.3	1.95	1.54, 2.47	16.5	1.67	1.34, 2.09	13.8	1.97	1.55, 2.50
Asthma									
Bachelor degree or higher	4.8	1.00		6.8	1.00		8.8	1.00	
Diploma/vocational	4.7	0.97	0.77, 1.22	7.0	1.03	0.80, 1.33	7.4	0.85	0.67, 1.07
No post-school qualification	5.5	1.13	0.90, 1.42	6.9	1.02	0.80, 1.32	8.0	0.92	0.73, 1.16
Bronchitis/emphysema									
Bachelor degree or higher	1.5	1.00		2.0	1.00		2.1	1.00	
Diploma/vocational	2.7	1.82	1.16, 2.84	2.8	1.39	0.85, 2.29	3.6	1.68	1.07, 2.65
No post-school qualification	2.9	2.00	1.28, 3.12	3.6	1.81	1.11, 2.95	2.7	1.27	0.80, 2.01

(continued)

Table 5.1 (continued): Health indicators by education level, males aged 25–64 years, 1989 to 2001

Health indicators/education	1989–90			1995			2001		
	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI
Morbidity									
Diabetes									
Bachelor degree or higher	1.0	1.00		2.0	1.00		2.8	1.00	
Diploma/vocational	1.1	1.15	0.64, 2.05	2.0	0.99	0.56, 1.76	3.3	1.19	0.76, 1.86
No post-school qualification	1.6	1.65	0.94, 2.90	2.8	1.41	0.82, 2.45	3.2	1.14	0.73, 1.78
Neoplasms									
Bachelor degree or higher	1.6	1.00		1.7	1.00		1.8	1.00	
Diploma/vocational	1.7	1.12	0.71, 1.79	1.5	0.93	0.54, 1.59	2.0	1.11	0.64, 1.92
No post-school qualification	1.8	1.14	0.72, 1.81	1.6	0.96	0.56, 1.65	1.4	0.78	0.44, 1.39
Health-related behaviours									
Alcohol risk									
Bachelor degree or higher	10.1	1.00		7.4	1.00		9.6	1.00	
Diploma/vocational	16.3	1.62	1.38, 1.90	9.9	1.33	1.04, 1.69	16.1	1.69	1.38, 2.06
No post-school qualification	16.4	1.62	1.38, 1.91	13.7	1.84	1.46, 2.33	15.5	1.62	1.32, 1.98
Insufficient physical activity									
Bachelor degree or higher	58.3	1.00		58.5	1.00		56.9	1.00	
Diploma/vocational	68.3	1.17	1.09, 1.25	68.2	1.16	1.06, 1.27	67.8	1.19	1.09, 1.30
No post-school qualification	72.2	1.24	1.16, 1.32	70.6	1.21	1.10, 1.32	70.5	1.24	1.13, 1.36
Smoking									
Bachelor degree or higher	18.4	1.00		13.2	1.00		14.7	1.00	
Diploma/vocational	32.6	1.77	1.58, 1.99	25.5	1.94	1.63, 2.31	29.7	2.03	1.73, 2.37
No post-school qualification ⁺	39.4	2.14	1.91, 2.40	36.1	2.74	2.31, 3.25	37.5	2.56	2.20, 2.99
Salt use									
Bachelor degree or higher	..	..	..	21.5	1.00		18.4	1.00	
Diploma/vocational	..	..	..	31.6	1.47	1.10, 1.97	31.0	1.68	1.45, 1.96
No post-school qualification	..	..	..	38.0	1.77	1.33, 2.35	37.9	2.06	1.77, 2.39
Food security									
Bachelor degree or higher	..	..	..	2.3	1.00		2.2	1.00	
Diploma/vocational	..	..	..	4.2	1.80	0.79, 4.10	4.4	1.98	1.35, 2.91
No post-school qualification	..	..	..	5.6	2.38	1.07, 5.30	6.4	2.89	1.98, 4.22
Health-related risk factors									
Overweight (but not obese)									
Bachelor degree or higher	34.4	1.00		44.8	1.00		42.6	1.00	
Diploma/vocational ⁺	40.9	1.19	1.09, 1.31	43.7	0.98	0.88, 1.09	45.8	1.08	0.97, 1.20
No post-school qualification ⁺⁺	40.6	1.18	1.08, 1.29	43.1	0.96	0.86, 1.07	42.8	1.01	0.90, 1.12
Obese									
Bachelor degree or higher	4.8	1.00		7.4	1.00		11.8	1.00	
Diploma/vocational	9.0	1.89	1.49, 2.40	13.8	1.87	1.44, 2.42	17.1	1.45	1.20, 1.76
No post-school qualification [†]	11.8	2.47	1.96, 3.12	15.7	2.13	1.65, 2.75	20.9	1.77	1.46, 2.14
Hypertension									
Bachelor degree or higher	7.1	1.00		9.9	1.00		9.7	1.00	
Diploma/vocational	8.0	1.12	0.90, 1.39	12.4	1.25	1.00, 1.58	9.7	1.00	0.80, 1.26
No post-school qualification	8.1	1.14	0.91, 1.41	11.4	1.15	0.92, 1.44	10.1	1.04	0.82, 1.30

(continued)

Table 5.1 (continued): Health indicators by education level, males aged 25–64 years, 1989 to 2001

Health indicators/education	1989–90			1995			2001		
	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI
Health service use									
Doctor consultation									
Bachelor degree or higher	13.4	1.00		15.6	1.00		15.5	1.00	
Diploma/vocational	15.6	1.17	1.01, 1.36	18.9	1.21	1.01, 1.45	19.5	1.26	1.06, 1.49
No post-school qualification	16.8	1.26	1.08, 1.45	20.7	1.33	1.12, 1.58	22.6	1.46	1.23, 1.72
GP consultation									
Bachelor degree or higher	..	..	..	13.7	1.00		13.4	1.00	
Diploma/vocational	..	..	..	17.1	1.24	1.03, 1.50	17.3	1.29	1.08, 1.56
No post-school qualification	..	..	..	18.9	1.37	1.14, 1.65	20.6	1.54	1.28, 1.85
Specialist consultation									
Bachelor degree or higher	..	..	..	3.4	1.00		4.3	1.00	
Diploma/vocational	..	..	..	3.3	0.98	0.66, 1.47	4.8	1.13	0.81, 1.57
No post-school qualification	..	..	..	3.2	0.94	0.63, 1.41	4.3	1.00	0.71, 1.40
Dental consultation									
Bachelor degree or higher	6.9	1.00		7.1	1.00		6.8	1.00	
Diploma/vocational	4.4	0.64	0.52, 0.80	5.8	0.81	0.61, 1.08	4.2	0.61	0.46, 0.81
No post-school qualification	3.9	0.56	0.45, 0.70	4.6	0.66	0.49, 0.88	4.5	0.66	0.50, 0.88

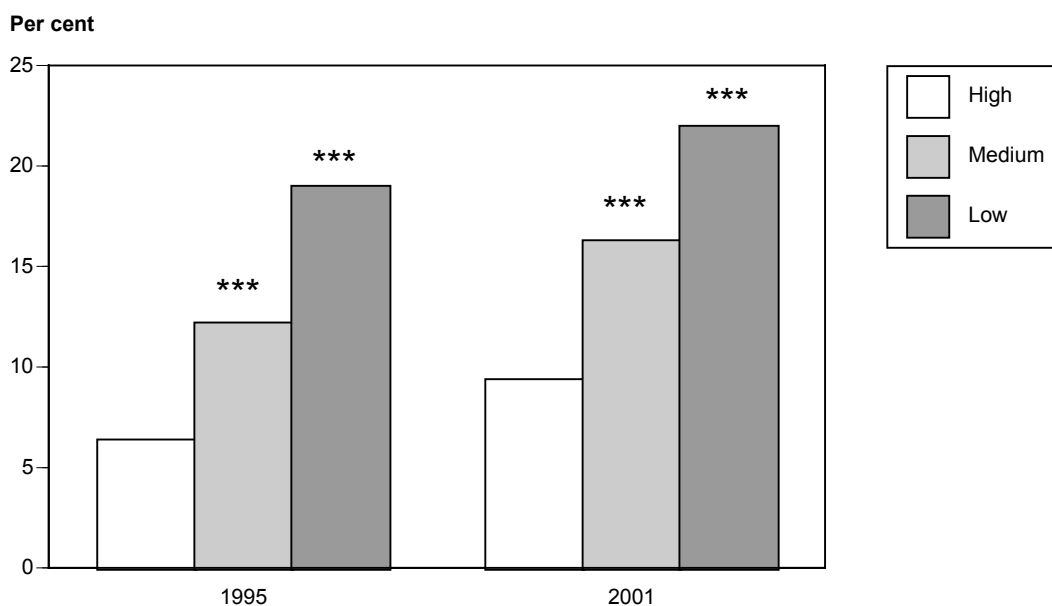
.. Data not available or not comparable.

+ 1989–90 rate ratio differs significantly from 1995 rate ratio at $p \leq 0.05$.

† 1989–90 rate ratio differs significantly from 2001 rate ratio at $p \leq 0.05$.

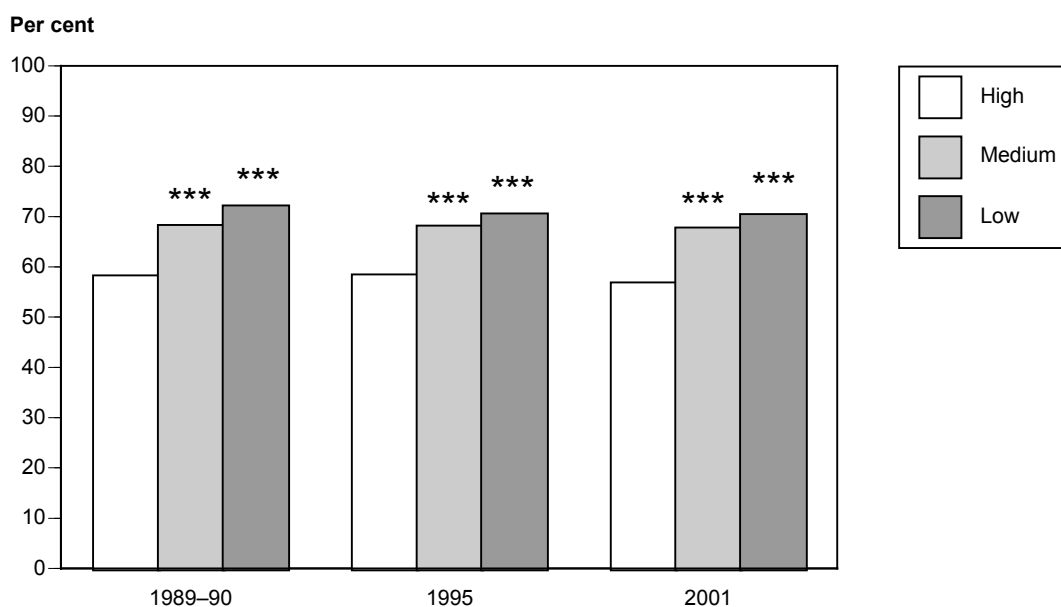
‡ 1995 rate ratio differs significantly from 2001 rate ratio at $p \leq 0.05$.

Note: A weighted equivalent of 1,430 males (1 male respondent) were excluded from the overweight (but not obese) and obese analyses as BMI classification could not be accurately established.



Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.
 Rate differs significantly from Bachelor degree or higher at *p < 0.05, **p < 0.01, ***p < 0.001.

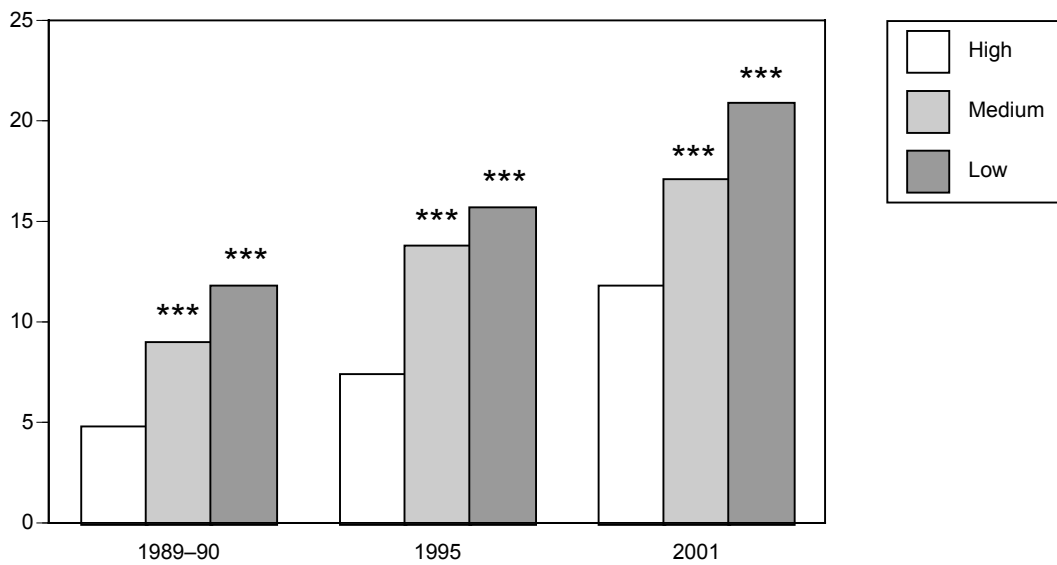
Figure 5.1: Percentage of males aged 25–64 who reported their general health as ‘fair’ or ‘poor’, by level of education, 1995 and 2001



Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.
 Rate differs significantly from Bachelor degree or higher at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 5.2: Percentage of males aged 25–64 who were classified as engaging in insufficient physical activity, by level of education, 1989–90, 1995 and 2001

Per cent

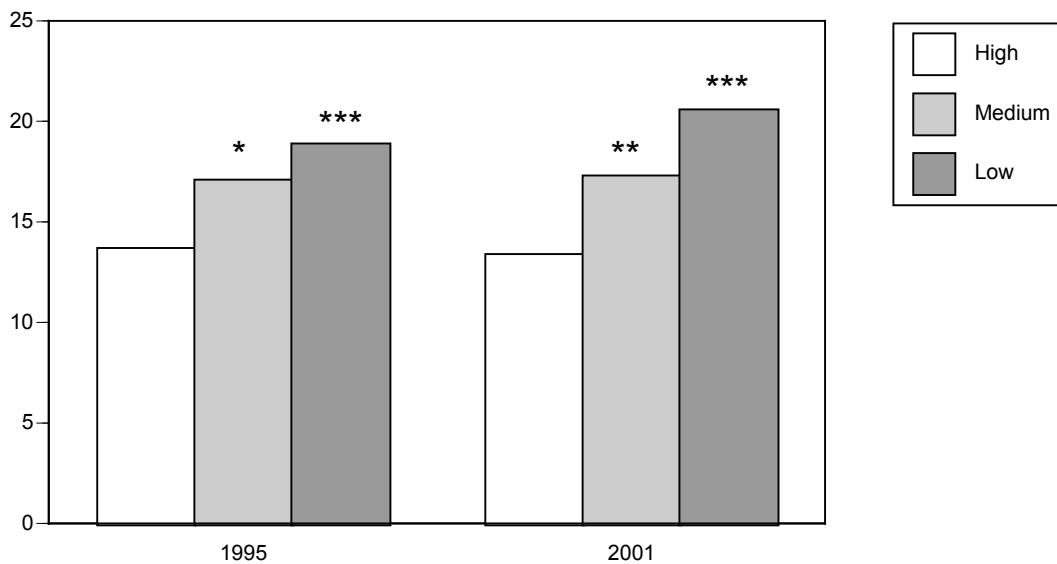


Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.

Rate differs significantly from Bachelor degree or higher at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 5.3: Percentage of males aged 25-64 who were classified as obese, by level of education, 1989-90, 1995 and 2001

Per cent



Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.

Rate differs significantly from Bachelor degree or higher at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 5.4: Percentage of males aged 25-64 who reported visiting a GP in the 2 weeks before the survey, by level of education, 1995 and 2001

Table 5.2: Health indicators by education level, females aged 25–64 years, 1989 to 2001

Health indicators/education	1989–90			1995			2001		
	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI
Morbidity									
Self-assessed health status (fair or poor)									
Bachelor degree or higher				7.2	1.00		9.9	1.00	
Diploma/vocational				10.8	1.51	1.14, 2.00	15.6	1.57	1.27, 1.94
No post-school qualification				17.0	2.38	1.84, 3.07	18.6	1.87	1.53, 2.29
Days away from study or work									
Bachelor degree or higher	17.7	1.00		11.1	1.00		20.4	1.00	
Diploma/vocational [†]	15.5	0.87	0.75, 1.02	10.0	0.90	0.72, 1.14	17.9	0.88	0.75, 1.02
No post-school qualification ^{†‡}	13.8	0.78	0.67, 0.90	10.0	0.90	0.73, 1.12	16.4	0.81	0.70, 0.93
Arthritis									
Bachelor degree or higher	12.3	1.00		12.1	1.00		14.1	1.00	
Diploma/vocational ^{†‡}	14.3	1.17	0.92, 1.49	19.3	1.59	1.26, 2.00	15.9	1.13	0.93, 1.37
No post-school qualification	15.8	1.29	1.02, 1.62	20.4	1.68	1.36, 2.09	17.9	1.27	1.06, 1.52
Asthma									
Bachelor degree or higher	6.3	1.00		10.4	1.00		11.6	1.00	
Diploma/vocational	6.7	1.07	0.84, 1.36	9.7	0.93	0.74, 1.17	13.9	1.20	0.98, 1.47
No post-school qualification	6.0	0.95	0.76, 1.21	9.6	0.92	0.75, 1.14	12.2	1.06	0.87, 1.28
Bronchitis/emphysema									
Bachelor degree or higher	2.7	1.00		2.5	1.00		3.1	1.00	
Diploma/vocational	2.8	1.02	0.67, 1.55	4.1	1.61	1.02, 2.54	3.5	1.12	0.77, 1.64
No post-school qualification	3.4	1.26	0.85, 1.87	4.5	1.79	1.17, 2.74	4.3	1.38	0.97, 1.97
Diabetes									
Bachelor degree or higher	0.5	1.00		1.9	1.00		1.6	1.00	
Diploma/vocational	0.7	1.25	0.43, 3.57	1.4	0.70	0.38, 1.28	2.2	1.33	0.73, 2.40
No post-school qualification	1.3	2.35	0.87, 6.39	2.8	1.43	0.86, 2.38	2.9	1.79	1.04, 3.07
Neoplasms									
Bachelor degree or higher	1.7	1.00		2.5	1.00		1.4	1.00	
Diploma/vocational	2.5	1.41	0.84, 2.36	1.9	0.79	0.46, 1.34	1.5	1.13	0.63, 2.01
No post-school qualification	1.8	1.04	0.63, 1.73	2.4	0.96	0.60, 1.53	1.7	1.27	0.74, 2.19
Health-related behaviours									
Alcohol risk									
Bachelor degree or higher	11.4	1.00		7.4	1.00		11.3	1.00	
Diploma/vocational [†]	7.7	0.67	0.55, 0.83	6.9	0.93	0.71, 1.22	9.2	0.81	0.66, 1.00
No post-school qualification	7.2	0.63	0.52, 0.77	5.4	0.73	0.57, 0.94	8.0	0.71	0.58, 0.86
Insufficient physical activity									
Bachelor degree or higher	67.4	1.00		70.7	1.00		64.4	1.00	
Diploma/vocational	72.2	1.07	0.99, 1.16	70.8	1.00	0.92, 1.10	71.4	1.11	1.02, 1.21
No post-school qualification	77.0	1.14	1.06, 1.23	77.2	1.09	1.01, 1.18	76.9	1.20	1.10, 1.29
Smoking									
Bachelor degree or higher	13.7	1.00		11.4	1.00		13.3	1.00	
Diploma/vocational	22.7	1.65	1.39, 1.95	18.6	1.63	1.33, 2.01	21.7	1.63	1.38, 1.93
No post-school qualification	28.9	2.10	1.79, 2.48	26.0	2.29	1.89, 2.77	28.3	2.13	1.82, 2.49
Salt use									
Bachelor degree or higher	..	..	..	17.3	1.00		14.6	1.00	
Diploma/vocational [†]	16.3	0.94	0.66, 1.36	20.0	1.37	1.15, 1.63
No post-school qualification [†]	22.4	1.30	0.94, 1.81	25.7	1.76	1.50, 2.08

(continued)

Table 5.2 (continued): Health indicators by education level, females aged 25–64 years, 1989 to 2001

Health indicators/education	1989–90			1995			2001		
	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI
Food security									
Bachelor degree or higher	..	..	..	3.6	1.00		2.7	1.00	
Diploma/vocational	..	..	..	4.1	1.14	0.55, 2.32	5.6	2.07	1.50, 2.87
No post-school qualification	..	..	..	6.8	1.89	0.97, 3.66	7.5	2.75	2.02, 3.75
Health-related risk factors									
Overweight (but not obese)									
Bachelor degree or higher	17.2	1.00		23.4	1.00		27.5	1.00	
Diploma/vocational †	20.7	1.20	1.02, 1.42	22.8	0.97	0.82, 1.15	24.8	0.90	0.78, 1.04
No post-school qualification + †	25.1	1.46	1.25, 1.72	27.2	1.16	0.99, 1.36	26.3	0.96	0.83, 1.09
Obese									
Bachelor degree or higher	6.4	1.00		9.2	1.00		12.7	1.00	
Diploma/vocational	8.4	1.31	1.00, 1.71	11.9	1.30	1.02, 1.66	17.8	1.40	1.15, 1.72
No post-school qualification	12.7	1.98	1.54, 2.55	15.3	1.67	1.33, 2.09	21.0	1.65	1.37, 2.00
Hypertension									
Bachelor degree or higher	5.3	1.00		7.0	1.00		7.8	1.00	
Diploma/vocational	7.8	1.48	1.03, 2.12	9.9	1.41	1.06, 1.89	10.1	1.29	0.99, 1.70
No post-school qualification	9.6	1.81	1.28, 2.56	12.1	1.73	1.33, 2.25	10.1	1.29	1.00, 1.67
Health service use									
Doctor consultation									
Bachelor degree or higher	20.9	1.00		23.8	1.00		26.7	1.00	
Diploma/vocational	23.1	1.10	0.96, 1.27	27.3	1.15	0.98, 1.34	30.0	1.12	0.98, 1.28
No post-school qualification	22.9	1.09	0.95, 1.25	27.3	1.15	1.00, 1.32	28.5	1.07	0.94, 1.21
GP consultation									
Bachelor degree or higher	..	..	..	20.5	1.00		21.2	1.00	
Diploma/vocational	..	..	..	23.5	1.14	0.97, 1.35	25.6	1.21	1.04, 1.40
No post-school qualification	..	..	..	23.4	1.14	0.98, 1.33	25.5	1.20	1.04, 1.38
Specialist consultation									
Bachelor degree or higher	..	..	..	5.2	1.00		9.2	1.00	
Diploma/vocational	..	..	..	6.7	1.28	0.94, 1.75	7.8	0.84	0.66, 1.07
No post-school qualification	..	..	..	6.5	1.25	0.93, 1.66	6.9	0.75	0.59, 0.93
Dental									
Bachelor degree or higher	10.4	1.00		5.6	1.00		9.8	1.00	
Diploma/vocational + ‡	6.4	0.61	0.49, 0.77	7.3	1.30	0.96, 1.76	6.5	0.66	0.52, 0.84
No post-school qualification + ‡	4.7	0.45	0.36, 0.56	4.9	0.87	0.65, 1.17	5.8	0.59	0.47, 0.75
Mammogram									
Women 50–64 years									
Bachelor degree or higher	58.2	1.00		19.9	1.00		7.9	1.00	
Diploma/vocational	59.9	1.03	0.80, 1.32	15.0	0.75	0.49, 1.15	9.3	1.18	0.72, 1.94
No post-school qualification †	65.6	1.13	0.89, 1.43	24.1	1.21	0.83, 1.75	16.1	2.05	1.31, 3.21
Time since last mammogram									
Women 50–64 years									
Bachelor degree or higher	..	..	..	14.0	1.00		19.8	1.00	
Diploma/vocational	..	..	..	12.9	0.93	0.53, 1.61	22.8	1.15	0.79, 1.68
No post-school qualification	..	..	..	19.1	1.37	0.84, 2.24	21.4	1.08	0.76, 1.54

(continued)

Table 5.2 (continued): Health indicators by education level, females aged 25–64 years, 1989 to 2001

Health indicators/education	1989–90			1995			2001		
	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI
Pap smear									
Bachelor degree or higher	8.3	1.00		4.5	1.00		5.1	1.00	
Diploma/vocational †	5.2	0.63	0.49, 0.80	3.5	0.77	0.53, 1.11	4.8	0.94	0.68, 1.29
No post-school qualification	6.5	0.78	0.62, 0.97	4.2	0.93	0.67, 1.27	4.8	0.94	0.70, 1.26
Time since last pap smear									
Bachelor degree or higher	..	..	..	22.3	1.00		27.4	1.00	
Diploma/vocational	..	..	..	24.3	1.09	0.92, 1.29	32.6	1.19	1.04, 1.37
No post-school qualification	..	..	..	29.0	1.30	1.11, 1.52	35.8	1.31	1.15, 1.49

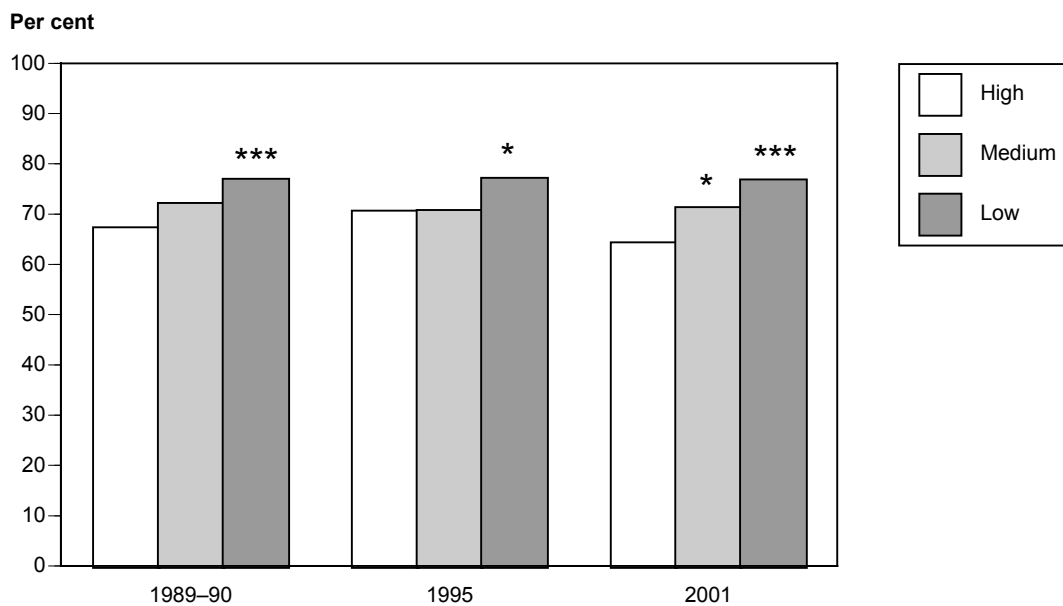
.. Data not available or not comparable.

+ 1989–90 rate ratio differs significantly from 1995 rate ratio at $p \leq 0.05$.

† 1989–90 rate ratio differs significantly from 2001 rate ratio at $p \leq 0.05$.

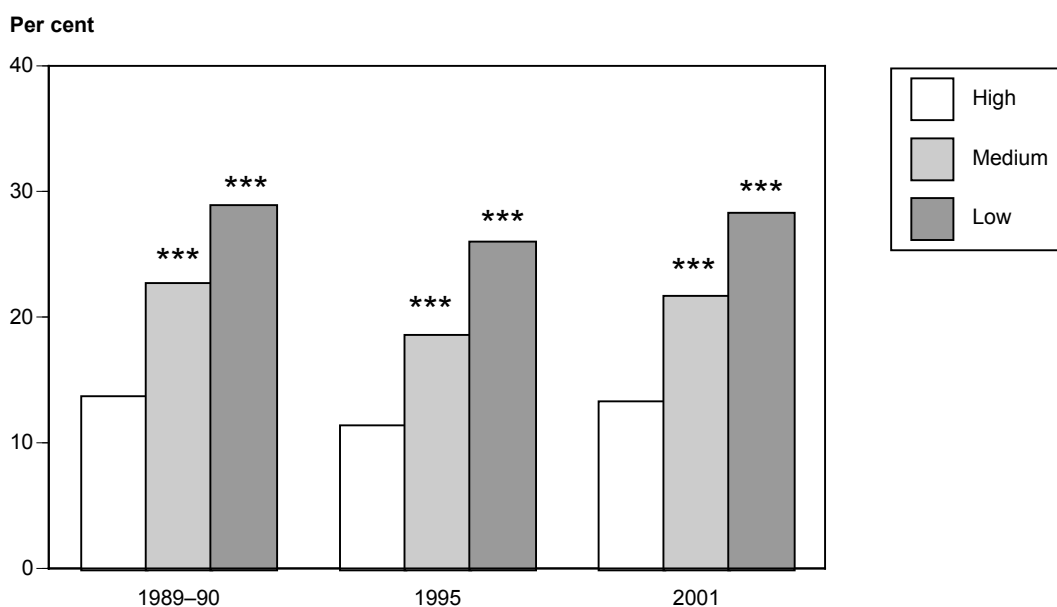
‡ 1995 rate ratio differs significantly from 2001 rate ratio at $p \leq 0.05$.

Note: A weighted equivalent of 2,053 females (7 female respondents) were excluded from the overweight (but not obese) and obese analyses as BMI classification could not be accurately established.



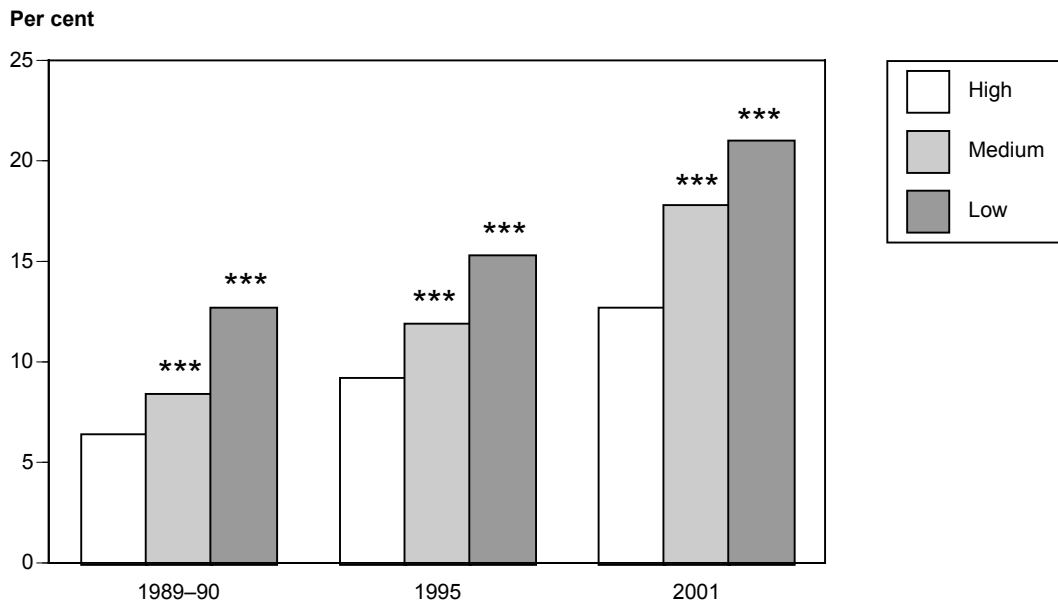
Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.
 Rate differs significantly from Bachelor degree or higher at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 5.5: Percentage of females aged 25-64 who were classified as engaging in insufficient physical activity, by level of education, 1989-90, 1995 and 2001



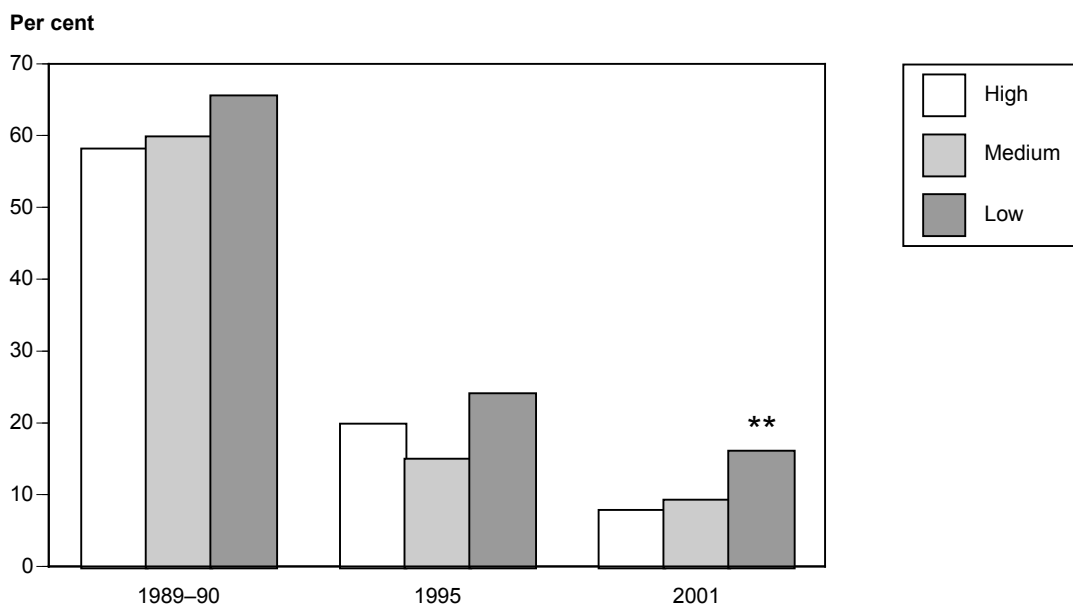
Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.
 Rate differs significantly from Bachelor degree or higher at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 5.6: Percentage of females aged 25-64 who were classified as regular smokers, by level of education, 1989-90, 1995 and 2001



Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.
 Rate differs significantly from Bachelor degree or higher at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 5.7: Percentage of females aged 25-64 who were classified as obese, by level of education, 1989-90, 1995 and 2001



Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.
 Rate differs significantly from Bachelor degree or higher at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 5.8: Percentage of females aged 50-64 years who reported never having had a mammogram, by level of education, 1989-90, 1995 and 2001

5.2 Persons aged 65 years and over

Tables 5.3 and 5.4 show the association between education level and health for males and females aged 65 years and over, as reported in the 1989–90, 1995 and 2001 ABS National Health Surveys.

Persons aged 65 years and over with lower educational qualifications were significantly more likely to report a number of poorer health outcomes or adverse health behaviours.

- Self-assessed health rated as fair or poor: In 1995, males with no post-school qualification rated their health as only fair or poor at twice the rate (106% higher) of males with a bachelor degree or higher. Figure 5.9 graphs the association between education and rates of self-assessed health for males.
- Bronchitis/emphysema: Males with a diploma or vocational qualification had a rate 261% higher, and males with no post-school qualifications had a rate 275% higher than males with a bachelor degree or higher in 2001. In contrast, females aged 65 years and over with a diploma or vocational qualification in the 1989–90 survey reported only 33% of the level of bronchitis and emphysema of females with a bachelor degree or higher. Females with no post-school qualifications reported only 43% of the same level.
- Alcohol risk: In the 2001 survey, males with no post-school qualifications were 152% more likely to report drinking alcohol at risk levels. However, in 1995, females with no post-school qualifications reported risk alcohol drinking at only 41% of the rate of females with a bachelor degree or higher.
- Smoking: The 2001 survey found that males with a diploma/vocational qualification, or no post-school qualification, were far more likely to report smoking (688% and 858% respectively) than males with a bachelor degree or higher.
- Salt use: In the 2001 survey, males aged 65 years and over with a diploma/vocational qualification, or with no post-school qualifications were more likely to add salt to food after cooking than males with a bachelor degree or higher. This was also the case among females answering the 1995 survey.
- Obesity: Males with lower educational qualifications were more likely to be obese, at least for the 1989–90 and 2001 surveys. The 1995 survey also found that females aged 65 years and over with diploma/vocational or no post-school qualifications were more obese than females with bachelor degree qualifications or higher. Figure 5.10 graphs the association between education and rates of obesity for males.
- GP consultation: The 2001 survey found that males with lower educational qualifications were more likely to consult a GP. Figure 5.11 graphs the association between education and rates of GP use for males.
- Dental consultation: In 1989–90 and 1995, males with lower educational qualifications were less likely to consult a dentist. Figure 5.12 graphs the association between education and rates of dental consultation for males.

Table 5.3: Health indicators by education level, males aged 65 years and over, 1989 to 2001

Health indicators/education	1989–90			1995			2001		
	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI
Morbidity									
Self-assessed health status (fair or poor)									
Bachelor degree or higher	..	..	..	20.2	1.00		27.3	1.00	
Diploma/vocational	..	..	..	33.5	1.66	0.97, 2.84	30.1	1.10	0.77, 1.58
No post-school qualification	..	..	..	41.6	2.06	1.23, 3.47	38.4	1.41	1.00, 1.98
Arthritis									
Bachelor degree or higher	25.8	1.00		31.2	1.00		39.4	1.00	
Diploma/vocational	31.4	1.22	0.86, 1.71	41.0	1.31	0.88, 1.95	40.4	1.03	0.75, 1.41
No post-school qualification	35.1	1.36	0.97, 1.90	39.7	1.27	0.86, 1.87	37.5	0.95	0.70, 1.30
Asthma									
Bachelor degree or higher	4.4	1.00		7.7	1.00		6.6	1.00	
Diploma/vocational	5.6	1.28	0.55, 2.98	8.0	1.05	0.37, 3.00	8.7	1.31	0.64, 2.70
No post-school qualification	5.0	1.14	0.50, 2.63	7.1	0.93	0.34, 2.57	6.7	1.01	0.50, 2.07
Bronchitis/emphysema									
Bachelor degree or higher	7.4	1.00		9.9	1.00		3.0	1.00	
Diploma/vocational [†]	10.1	1.35	0.72, 2.54	14.1	1.43	0.68, 3.02	10.7	3.61	1.12, 11.58
No post-school qualification [†]	8.2	1.11	0.60, 2.06	12.6	1.28	0.62, 2.63	11.1	3.75	1.18, 11.87
Diabetes									
Bachelor degree or higher	4.2	1.00		9.5	1.00		7.0	1.00	
Diploma/vocational	5.0	1.17	0.50, 2.75	8.6	0.90	0.42, 1.93	10.7	1.54	0.73, 3.22
No post-school qualification	5.4	1.28	0.56, 2.94	10.9	1.15	0.56, 2.36	10.3	1.47	0.71, 3.05
Neoplasms									
Bachelor degree or higher	6.7	1.00		6.7	1.00		11.4	1.00	
Diploma/vocational	7.2	1.07	0.51, 2.24	6.5	0.98	0.43, 2.24	9.3	0.82	0.46, 1.46
No post-school qualification	7.8	1.16	0.57, 2.38	8.9	1.34	0.62, 2.94	7.4	0.65	0.37, 1.15
Health-related behaviours									
Alcohol risk									
Bachelor degree or higher	6.8	1.00		10.9	1.00		3.3	1.00	
Diploma/vocational ^{††}	5.3	0.78	0.43, 1.42	5.5	0.51	0.19, 1.34	6.3	1.94	0.87, 4.35
No post-school qualification ^{††}	6.4	0.94	0.53, 1.68	6.4	0.59	0.24, 1.49	8.2	2.52	1.16, 5.49
Insufficient physical activity									
Bachelor degree or higher	61.0	1.00		59.1	1.00		57.5	1.00	
Diploma/vocational	63.1	1.03	0.82, 1.30	66.5	1.13	0.82, 1.54	64.0	1.11	0.85, 1.46
No post-school qualification	68.8	1.13	0.90, 1.40	71.8	1.22	0.90, 1.64	72.5	1.26	0.97, 1.64
Smoking									
Bachelor degree or higher	9.8	1.00		12.7	1.00		1.2	1.00	
Diploma/vocational ^{††}	14.6	1.48	0.86, 2.56	13.4	1.06	0.53, 2.15	9.6	7.88	3.16, 19.64
No post-school qualification ^{††}	16.6	1.69	0.99, 2.90	16.0	1.26	0.64, 2.48	11.7	9.58	3.89, 23.62
Salt use									
Bachelor degree or higher	..	..	..	32.7	1.00		27.9	1.00	
Diploma/vocational	..	..	..	28.7	0.88	0.40, 1.94	41.1	1.47	1.02, 2.13
No post-school qualification	..	..	..	41.5	1.27	0.59, 2.73	41.1	1.47	1.03, 2.11
Food security									
Bachelor degree or higher	..	..	..	0.0	—		2.0	1.00	
Diploma/vocational	..	..	..	0.3	—	—	0.6	0.27	0.03, 2.64
No post-school qualification	..	..	..	0.9	—	—	0.9	0.47	0.06, 3.79

(continued)

Table 5.3 (continued): Health indicators by education level, males aged 65 years and over, 1989 to 2001

Health indicators/education	1989–90			1995			2001		
	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI
Health-related risk factors									
Overweight (but not obese)									
Bachelor degree or higher	34.6	1.00		42.9	1.00		39.5	1.00	
Diploma/vocational	35.1	1.01	0.77, 1.33	34.4	0.80	0.57, 1.14	44.2	1.12	0.81, 1.55
No post-school qualification	36.1	1.04	0.80, 1.36	39.8	0.93	0.67, 1.29	43.6	1.11	0.80, 1.52
Obese									
Bachelor degree or higher	0.3	1.00		2.7	1.00		4.0	1.00	
Diploma/vocational ⁺⁺	6.8	20.50	2.85, 147.66	5.6	2.04	0.62, 6.74	15.0	3.73	1.50, 9.24
No post-school qualification ⁺⁺	8.2	24.71	3.45, 176.87	8.2	2.99	0.94, 9.52	12.6	3.13	1.27, 7.71
Hypertension									
Bachelor degree or higher	17.8	1.00		31.4	1.00		37.5	1.00	
Diploma/vocational	23.6	1.32	0.91, 1.93	34.1	1.08	0.73, 1.60	33.4	0.89	0.65, 1.22
No post-school qualification	23.6	1.32	0.92, 1.91	35.2	1.12	0.77, 1.63	36.6	0.98	0.72, 1.33
Health service use									
Doctor consultation									
Bachelor degree or higher	32.9	1.00		31.8	1.00		32.6	1.00	
Diploma/vocational	34.3	1.04	0.77, 1.41	40.2	1.26	0.83, 1.93	42.5	1.30	0.93, 1.83
No post-school qualification	31.4	0.95	0.71, 1.28	41.0	1.29	0.86, 1.94	45.2	1.39	1.00, 1.93
GP consultation									
Bachelor degree or higher	..	..	..	29.6	1.00		26.1	1.00	
Diploma/vocational	..	..	..	36.5	1.23	0.79, 1.91	38.6	1.48	1.01, 2.18
No post-school qualification	..	..	..	37.8	1.28	0.83, 1.95	41.8	1.60	1.10, 2.34
Specialist consultation									
Bachelor degree or higher	..	..	..	7.8	1.00		12.0	1.00	
Diploma/vocational	..	..	..	7.5	0.97	0.40, 2.32	12.2	1.02	0.60, 1.72
No post-school qualification	..	..	..	5.7	0.74	0.31, 1.73	8.4	0.70	0.41, 1.18
Dental consultation									
Bachelor degree or higher	8.1	1.00		19.5	1.00		12.3	1.00	
Diploma/vocational	4.7	0.57	0.32, 1.03	5.0	0.25	0.12, 0.55	5.9	0.48	0.25, 0.90
No post-school qualification [‡]	2.4	0.30	0.16, 0.55	3.8	0.20	0.09, 0.41	7.3	0.59	0.32, 1.09

.. Data not available or not comparable.

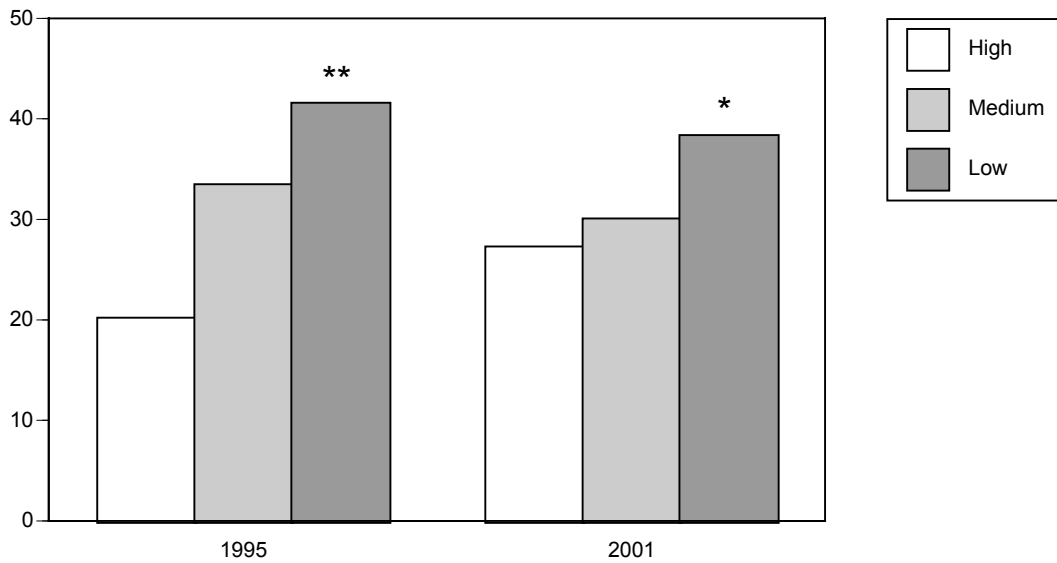
— Data unable to be calculated.

+ 1989–90 rate ratio differs significantly from 1995 rate ratio at $p \leq 0.05$.

† 1989–90 rate ratio differs significantly from 2001 rate ratio at $p \leq 0.05$.

‡ 1995 rate ratio differs significantly from 2001 rate ratio at $p \leq 0.05$.

Per cent

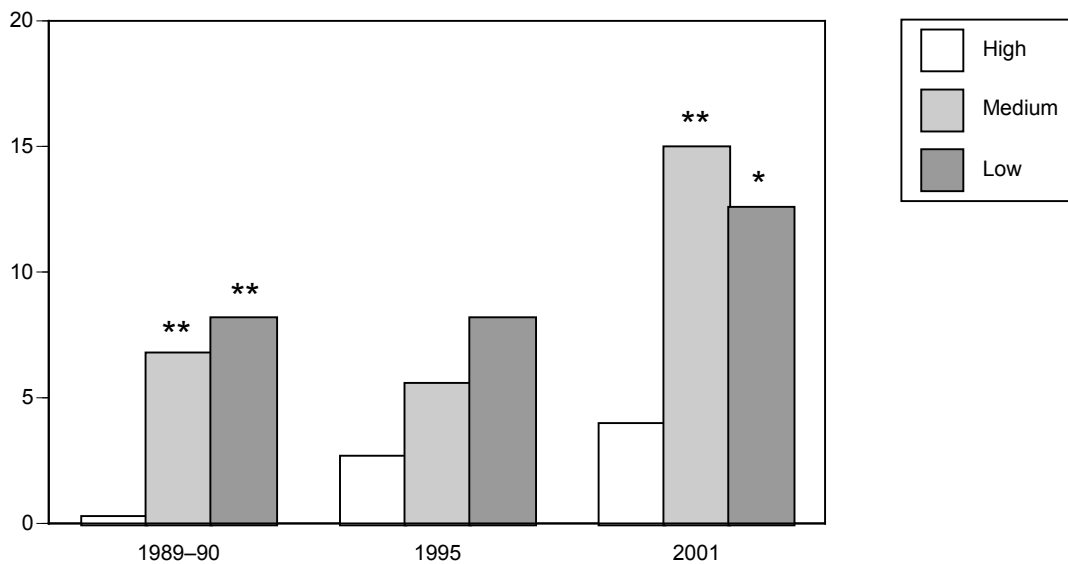


Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.

Rate differs significantly from Bachelor degree or higher at * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Figure 5.9: Percentage of males aged 65 years and over who reported their general health as 'fair' or 'poor', by level of education, 1995 and 2001

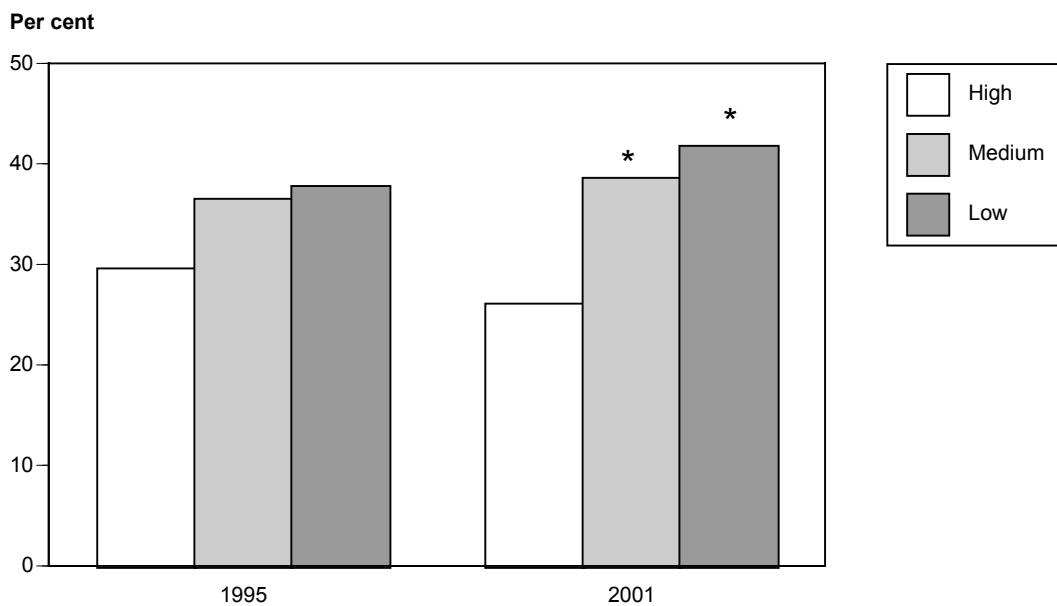
Per cent



Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.

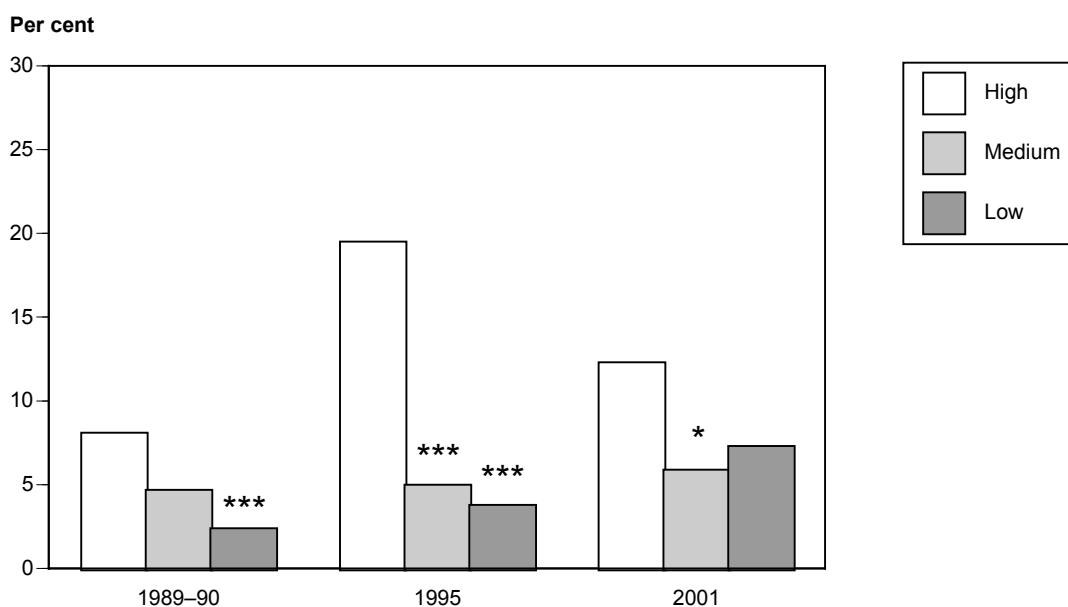
Rate differs significantly from Bachelor degree or higher at * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Figure 5.10: Percentage of males aged 65 years and over who were classified as obese, by level of education, 1989-90, 1995 and 2001



Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.
 Rate differs significantly from Bachelor degree or higher at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 5.11: Percentage of males aged 65 years and over who reported visiting a GP in the 2 weeks before the survey, by level of education, 1995 and 2001



Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.
 Rate differs significantly from Bachelor degree or higher at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 5.12: Percentage of males aged 65 years and over who reported visiting a dentist in the 2 weeks before the survey, by level of education, 1989-90, 1995 and 2001

Table 5.4: Health indicators by education level, females aged 65 years and over, 1989 to 2001

Health indicators/education	1989–90			1995			2001		
	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI
Morbidity									
Self-assessed health status (fair or poor)									
Bachelor degree or higher	..	..	..	35.2	1.00		34.8	1.00	
Diploma/vocational	..	..	..	31.7	0.90	0.50, 1.62	31.5	0.90	0.58, 1.41
No post-school qualification	..	..	..	35.4	1.01	0.58, 1.75	34.4	0.99	0.65, 1.50
Arthritis									
Bachelor degree or higher	29.1	1.00		56.2	1.00		47.2	1.00	
Diploma/vocational	44.1	1.52	0.95, 2.41	54.2	0.96	0.63, 1.47	56.1	1.19	0.85, 1.66
No post-school qualification	44.1	1.52	0.96, 2.39	56.2	1.00	0.68, 1.48	53.1	1.13	0.82, 1.54
Asthma									
Bachelor degree or higher	7.9	1.00		6.6	1.00		12.6	1.00	
Diploma/vocational	4.6	0.57	0.23, 1.47	5.3	0.81	0.27, 2.39	10.5	0.83	0.40, 1.72
No post-school qualification	5.0	0.63	0.26, 1.54	8.3	1.26	0.46, 3.42	9.5	0.75	0.38, 1.48
Bronchitis/emphysema									
Bachelor degree or higher	11.9	1.00		5.0	1.00		5.0	1.00	
Diploma/vocational [†]	4.0	0.33	0.15, 0.76	4.8	0.97	0.28, 3.41	6.8	1.35	0.47, 3.87
No post-school qualification [†]	5.1	0.43	0.20, 0.92	6.4	1.28	0.40, 4.05	7.5	1.48	0.54, 4.03
Diabetes									
Bachelor degree or higher	1.1	1.00		0.6	1.00		12.8	1.00	
Diploma/vocational ^{††}	3.4	3.06	0.41, 22.56	3.9	7.02	0.92, 53.36	11.4	0.89	0.44, 1.77
No post-school qualification ^{††}	4.4	3.94	0.55, 28.19	8.2	14.79	2.06, 106.01	11.3	0.88	0.46, 1.67
Neoplasms									
Bachelor degree or higher	6.7	1.00		13.3	1.00		3.3	1.00	
Diploma/vocational	4.7	0.70	0.29, 1.68	5.9	0.45	0.14, 1.38	4.7	1.42	0.42, 4.85
No post-school qualification	4.6	0.69	0.30, 1.57	4.8	0.36	0.13, 1.00	2.9	0.88	0.27, 2.84
Health-related behaviours									
Alcohol risk									
Bachelor degree or higher	2.4	1.00		10.3	1.00		7.0	1.00	
Diploma/vocational [†]	6.5	2.74	0.66, 11.28	6.9	0.67	0.28, 1.60	6.9	0.99	0.41, 2.37
No post-school qualification [†]	3.4	1.45	0.36, 5.87	4.3	0.41	0.20, 0.87	5.5	0.79	0.34, 1.82
Insufficient physical activity									
Bachelor degree or higher	76.2	1.00		68.0	1.00		66.6	1.00	
Diploma/vocational	75.0	0.98	0.72, 1.35	78.0	1.15	0.78, 1.69	79.6	1.20	0.90, 1.59
No post-school qualification	81.3	1.07	0.79, 1.45	79.1	1.16	0.81, 1.67	81.2	1.22	0.93, 1.60
Smoking									
Bachelor degree or higher	9.4	1.00		5.5	1.00		4.0	1.00	
Diploma/vocational	10.0	1.06	0.43, 2.64	7.6	1.39	0.46, 4.15	6.9	1.73	0.53, 5.67
No post-school qualification	10.7	1.13	0.47, 2.74	8.4	1.53	0.57, 4.15	7.7	1.93	0.61, 6.08
Salt use									
Bachelor degree or higher	..	..	..	3.5	1.00		25.1	1.00	
Diploma/vocational [†]	14.1	4.03	1.12, 14.44	22.7	0.91	0.55, 1.48
No post-school qualification [†]	20.2	5.78	1.82, 18.33	25.3	1.01	0.64, 1.58
Food security									
Bachelor degree or higher	..	..	..	0.0	—		0.8	1.00	
Diploma/vocational	..	..	..	2.0	—	—	1.1	1.30	0.16, 10.76
No post-school qualification	..	..	..	2.0	—	—	1.5	1.89	0.26, 13.99

(continued)

Table 5.4 (continued): Health indicators by education level, females aged 65 years and over, 1989 to 2001

Health indicators/education	1989–90			1995			2001		
	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI	Per cent	Rate ratio	95% CI
Health-related risk factors									
Overweight (but not obese)									
Bachelor degree or higher	22.6	1.00		9.2	1.00		21.2	1.00	
Diploma/vocational ⁺	24.4	1.08	0.62, 1.86	28.6	3.11	0.98, 9.89	37.3	1.76	1.07, 2.89
No post-school qualification ⁺	26.7	1.18	0.70, 2.01	26.2	2.85	0.91, 8.88	31.1	1.47	0.92, 2.36
Obese									
Bachelor degree or higher	3.9	1.00		0.3	1.00		17.7	1.00	
Diploma/vocational ⁺⁺	9.0	2.27	0.71, 7.24	5.2	17.77	2.36, 133.50	16.6	0.94	0.51, 1.73
No post-school qualification ^{++†}	10.6	2.68	0.86, 8.36	12.4	42.05	5.88, 300.71	18.2	1.03	0.59, 1.81
Hypertension									
Bachelor degree or higher	20.9	1.00		33.4	1.00		49.2	1.00	
Diploma/vocational	30.8	1.47	0.87, 2.49	37.6	1.13	0.65, 1.94	44.2	0.90	0.63, 1.28
No post-school qualification [†]	31.1	1.49	0.89, 2.48	41.9	1.25	0.75, 2.10	43.4	0.88	0.64, 1.22
Health service use									
Doctor consultation									
Bachelor degree or higher	35.9	1.00		38.2	1.00		33.0	1.00	
Diploma/vocational	36.2	1.01	0.66, 1.55	41.9	1.09	0.67, 1.79	41.8	1.26	0.85, 1.87
No post-school qualification	36.1	1.00	0.66, 1.52	38.4	1.01	0.64, 1.59	42.9	1.30	0.90, 1.88
GP consultation									
Bachelor degree or higher	..	..	..	34.4	1.00		29.8	1.00	
Diploma/vocational	..	..	..	38.6	1.12	0.66, 1.91	38.9	1.30	0.86, 1.97
No post-school qualification	..	..	..	35.9	1.04	0.63, 1.72	38.2	1.28	0.86, 1.90
Specialist consultation									
Bachelor degree or higher	..	..	..	5.9	1.00		8.0	1.00	
Diploma/vocational	..	..	..	7.4	1.24	0.47, 3.29	7.7	0.97	0.43, 2.19
No post-school qualification	..	..	..	6.7	1.13	0.46, 2.79	10.0	1.25	0.58, 2.67
Dental									
Bachelor degree or higher	5.9	1.00		5.1	1.00		9.1	1.00	
Diploma/vocational [‡]	5.6	0.96	0.38, 2.44	9.4	1.86	0.63, 5.43	5.2	0.58	0.27, 1.21
No post-school qualification	2.6	0.45	0.18, 1.11	4.9	0.96	0.35, 2.64	3.3	0.37	0.19, 0.72

.. Data not available or not comparable.

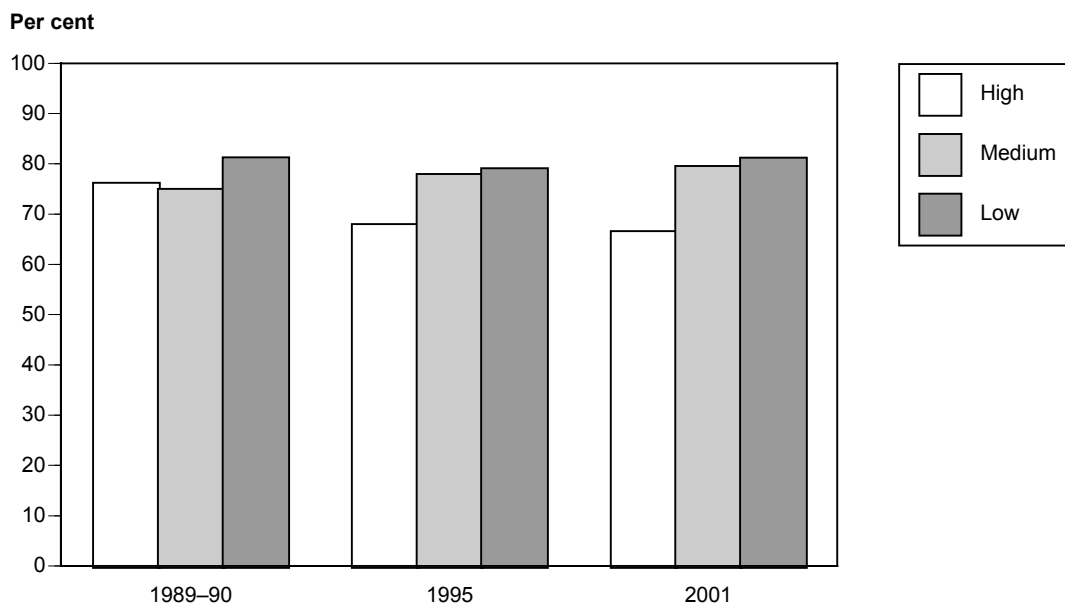
— Data unable to be calculated.

+ 1989–90 rate ratio differs significantly from 1995 rate ratio at $p \leq 0.05$.

† 1989–90 rate ratio differs significantly from 2001 rate ratio at $p \leq 0.05$.

‡ 1995 rate ratio differs significantly from 2001 rate ratio at $p \leq 0.05$.

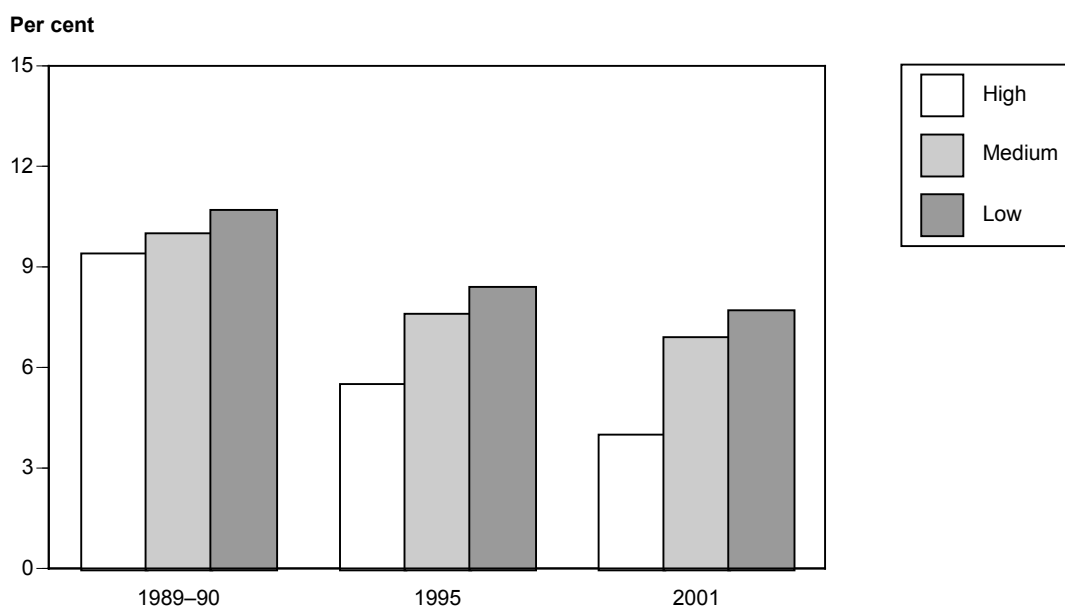
Note: A weighted equivalent of 2,430 females (4 female respondents) were excluded from the overweight (but not obese) and obese analyses as BMI classification could not be accurately established.



Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.

Rate differs significantly from Bachelor degree or higher at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 5.13: Percentage of females aged 65 years and over who were classified as engaging in insufficient physical activity, by level of education, 1989-90, 1995 and 2001



Note: High = Bachelor degree or higher, Medium = Diploma/vocational, Low = No post-school qualification.

Rate differs significantly from Bachelor degree or higher at *p < 0.05, **p < 0.01, ***p < 0.001.

Figure 5.14: Percentage of females aged 65 years and over who were classified as regular smokers, by level of education, 1989-90, 1995 and 2001

5.3 Summary and discussion

This chapter examined health-related inequalities by level of education for males and females aged 25–64 years, and 65 years and over, for the period 1989–90, 1995 and 2001, as reported in ABS National Health Surveys. Each of these surveys showed that persons with lower educational qualifications reported poorer health-related and risk factor behaviours, along with heightened morbidity and greater health service use.

Males and females aged 25–64 years with no post-school qualifications rated their own health as poorer, reported higher levels of arthritis and bronchitis, and placed themselves at greater health risk through adverse behaviours such as risk drinking (but only among males), smoking and not exercising enough. Correspondingly, higher levels of obesity were reported. Males and females in this age group with lower educational qualifications also consulted a GP more often, but visited a dentist less often. Women with lower educational qualifications were less likely to have had a Pap smear, and if they did have one, reported longer time periods since their last Pap smear. These findings tend to be consistent across each of the surveys in which the health indicator was measured.

With results from only three surveys (and in some cases just two), conclusions about trends in inequalities by level of education are premature. However, based on the available data in these surveys, there is some indication that doctor consultations among males aged 25–64 years with lower educational qualifications are increasing. Also, reported rates of obesity among females aged 25–64 years with lower educational qualifications are increasing. This is at odds with some studies which have shown that obesity is positively associated with socioeconomic status in developed countries, particularly among women (Sobel & Stunkard 1989; Seidell 1995; WHO 1998).

Males and females aged 65 years and over with no post-school qualifications also reported poorer health behaviours and outcomes, but for many fewer indicators than reported by the younger age group. In 2001, males aged 65 years and over with lower educational qualifications reported higher levels of bronchitis and emphysema, risk alcohol drinking, smoking, salt use, obesity and GP visits.

Less health inequality among those aged 65 years and over is, at first glance, at odds with other research which finds that educational attainment levels are typically fixed at an earlier age (Liberatos et al. 1988; Berkman & Macintyre 1997). It might be expected that, barring any other changes in socioeconomic position, inequalities appearing in younger age groups (25–64 years) would persist into older age (65 years and over) (Mathers 1994b). However, in this instance, the non-appearance of numerous inequalities in the older age group is more likely to be due to small sample sizes ruling out statistically significant differences.

The data presented here generally reinforce the findings of the numerous overseas studies that have examined the link between level of education and inequality in self-reported illness (Monden et al. 2003), and health risk factors such as smoking, insufficient physical activity, high blood pressure and obesity (Lynch et al. 1997; Luoto et al. 1994). The results from this chapter also concur with previous Australian studies that found that individuals with higher education levels have less morbidity (Broadhead 1985; Mathers 1994a, 1994b), and better health risk factor profiles (Owen & Bauman 1992; Bennett 1995; Hill et al. 1998; Conwell et al. 2003).

Higher levels of education are often seen as leading to higher income and occupational attainment. However, Susser et al. (1985) and Liberatos et al. (1988) pointed out that a high level of education does not necessarily lead to a well-paid, high-status occupation, leaving open to question whether education by itself provides a sufficient measure of socioeconomic position.

Mathers (1994a) found that substantial health differentials remained after taking into account other socioeconomic factors such as family income and employment status, and argued that education level remains an important independent predictor of health status and health service use.

Note that, by itself, information about level of education provides few details about the actual relationship between education and health. Further research about the resources provided through education and how education interacts with other socioeconomic determinants is needed in order to more fully understand the association, and to best plan appropriate education-based interventions aimed at reducing health inequalities.

