



Health Outcomes

Overall Health Status

As measured by the SF-1

Stage 3
Epidemiological Series Report # 2011 - 24
December 2011



Introduction

The following overview presents information about the overall health status among the participants of the North West Adelaide Health Study, and the demographics, chronic conditions and risk factors associated with fair or poor health. Stage 1 of the study was conducted between 2000 and 2003, with Stage 2 conducted from 2004 to 2006, and Stage 3 conducted from 2008 to 2010.

Measurement and definition of overall health status

A single question asking respondents to rate their general health is increasingly being used in population studies as an indication of overall health status. The proportion of participants with fair or poor health was based on data obtained from the self report questionnaire. Participants were asked the first question of the Short Form 36 (SF36) quality of life instrument: (SF1) “In general would you say your health is: Excellent, Very Good, Good, Fair or Poor?” For analytical purposes, responses have been dichotomised as “Excellent, Very Good or Good” and “Fair or Poor” health.

Proportion of levels of overall health status – Stage 1, Stage 2 & Stage 3

The proportion of the levels of overall health status for participants for Stages 1, 2 and 3 is shown in Table 1. Overall, in Stage 1, **18.0%** (95% CI 16.8-19.2) of respondents reported fair or poor health and in Stage 2, **17.3%** (95% CI 16.0-18.6) and in Stage 3, **17.5%** (95% CI 15.7-19.5) of study participants reported fair or poor health status.

Table 1: Proportion of levels of overall health status

	Stage 1		Stage 2		Stage 3	
	n	%	n	%	n	%
Excellent	300	7.4	328	10.1	219	8.3
Very Good	1344	33.3	1054	32.4	839	31.8
Good	1667	41.3	1312	40.3	1098	41.6
Fair	648	16.1	510	15.7	398	15.1
Poor	76	1.9	52	1.6	59	2.2
Total	4036	100.0	3254	100.0	2638	100.0

* Note: The weighting of data can result in rounding discrepancies or totals not adding.

Explanation of statistical terms used in this report

Incident rate is a measure of risk of developing a condition or risk factor within a specified period of time, often one year but in this report per 1000 person years. This allows for different amounts of observation times among participants between the baseline and Stage 3 results (ranging from 2000-2003 to 2008-2010). The incident rates were calculated without adjusting for age in this report. *For example, in a population of 1000 people, if 28 people develop a disease over two years, this would be expressed as 14 incident cases over 1000 person years (28 cases per 1000 divided by 2 years).*

Hazard ratio (HR) is the ratio of the hazard rates corresponding to a chronic condition or risk factor developing in the different groups over time – in this case, the time since the baseline examination (between 2000 and 2003). This allows for different amounts of observation times among participants between the baseline and Stage 3 results (ranging from 2000-2003 to 2008-2010). *For example, looking at cardiovascular disease, a hazard ratio of 2 for overweight or obese people implies that twice as many people with this risk factor have developed cardiovascular disease in this time compared to the reference group (those who are underweight or who have a healthy weight with a hazard ratio of 1).*

Adjusting for age is a technique used to better allow populations to be compared when the age profiles of the populations are quite different.

Tables 2 and 3 present the incidence rate per 1000 person years among those participants who did not report having a fair or poor health status at baseline Stage 1 (357 incident cases).

Demographic profile of those with a fair or poor health status

The risk of having a fair or poor health status among those participants who did not report having a fair or poor health status at baseline was statistically significantly higher among those aged 60 years and over, adults living together (both related and unrelated), or those who were unemployed, undertaking home duties or retired, and statistically significantly lower among those with a bachelor degree or higher educational level or those earning a gross annual household income of more than \$40,001 (Table 2).

Table 2: Hazard ratios for demographic variables associated with fair or poor health status

Variable	n	New Cases (N) [†]	Incidence rate (1000 person yrs) [†]	HR (95%CI)**	p value**
Sex					
Male	1340	166	18.9	1	
Female	1371	191	20.6	1.00 (0.79-1.26)	0.973
Age group					
Up to 49 years	1617	165	15.2	1	
50 to 59 years	428	53	17.8	1.23 (0.89-1.71)	0.206
60 years and over	666	139	33.3	2.32 (1.79-3.00)	<0.001
Highest education level obtained*					
Secondary	1121	160	18.5	1	
Trade/apprenticeship/cert/diploma	1130	154	17.1	0.96 (0.75-1.24)	0.779
Bachelor degree or higher	351	27	7.5	0.61 (0.38-0.95)	0.031
Gross annual household income*					
Up to \$20,000	550	119	34.6	1	
\$20,001- 40,000	678	110	23.7	0.85 (0.62-1.15)	0.294
\$40,001- 60,000	629	64	14.8	0.55 (0.37-0.83)	0.004
More than \$60,000	730	47	9.6	0.37 (0.24-0.59)	<0.001
Family structure*					
Family & children, two biological/ adoptive parents	940	95	15.1	1	
Adult living with partner, no children	707	107	21.8	0.96 (0.67-1.36)	0.809
Adult living alone	342	65	29.4	1.10 (0.75-1.60)	0.637
Adults – related/unrelated, living together	258	43	27.6	1.56 (1.00-2.42)	0.049
Step/sole/shared parenting & other	232	25	16.4	1.01 (0.62-1.64)	0.969
Marital status*					
Married or living with partner	1813	244	19.9	1	
Separated/divorced	208	28	19.7	0.97 (0.69-1.35)	0.840
Widowed	171	34	33.3	0.90 (0.60-1.36)	0.618
Never married	511	51	15.5	1.29 (0.82-2.03)	0.274
Work status*					
Full time employed	1129	106	13.7	1	
Part time/casual employed	475	59	18.1	1.25 (0.85-1.84)	0.249
Unemployed	77	17	34.9	2.98 (1.46-6.11)	0.003
Home duties/retired	834	161	30.1	1.47 (1.05-2.05)	0.022
Student/other	174	8	7.4	0.69 (0.35-1.38)	0.295

* Don't know/ refused/ not stated category not reported

** All variables adjusted for age (except for age group) to calculate hazard ratio

† Not adjusted for age

Chronic conditions and risk factors profile of those with a fair or poor health status

The risk of developing a fair or poor health status among those participants who did not report having a fair or poor health status at baseline was statistically significantly higher among those who had diabetes, arthritis or a current mental health condition, those with high blood pressure or high total cholesterol, or those who were current smokers or obese, and statistically significantly lower in those who undertook some exercise, than those without these risk factors (Table 3).

Table 3: Hazard ratios for risk factors and chronic diseases associated with a fair or poor health status

Variable	n	New Cases (N) [†]	Incidence rate (1000 person yrs) [†]	HR (95%CI)**	p value**
Diabetes					
No	2565	322	18.8	1	
Yes	146	35	38.9	1.54 (1.05-2.27)	0.028
Arthritis					
No	2045	232	16.9	1	
Yes	522	107	31.2	1.39 (1.08-1.79)	0.011
Current mental health condition					
No	2430	307	19.0	1	
Yes	269	48	27.2	1.48 (1.08-2.03)	0.015
Smoking*					
Non-smoker	1318	147	16.9	1	
Ex-smoker	849	116	20.5	1.10 (0.84-1.44)	0.489
Current smoker	538	94	26.0	1.91 (1.41-2.58)	<0.001
Alcohol risk					
Non-drinker/ No risk	1422	188	20.4	1	
Low risk	1121	148	19.3	0.99 (0.78-1.26)	0.937
Intermediate to very high risk	155	18	16.9	0.98 (0.53-1.79)	0.941
Physical activity					
Sedentary	634	107	25.4	1	
Undertakes some exercise	1861	210	17.0	0.70 (0.53-0.92)	0.011
BMI[^]					
Underweight/Normal (under 25)	988	81	12.2	1	
Overweight (25 to 29.9)	1048	136	19.6	1.35 (0.96-1.90)	0.082
Obese (30 and over)	672	139	31.8	2.30 (1.67-3.17)	<0.001
High total cholesterol (≥5.5mmol/L)[^]					
No	1681	185	16.6	1	
Yes	988	167	25.3	1.38 (1.09-1.75)	0.008
High blood pressure (≥140/90mmHg)[^]					
No	1928	199	15.4	1	
Yes	783	158	30.8	1.54 (1.18-2.00)	0.001

* Don't know/ refused/ not stated category not reported

** All variables adjusted for age (except for age group) to calculate hazard ratio

† Not adjusted for age

[^] Biomedical measurement

This document is one of a series of reports concerning Stage 3 of the North West Adelaide Health Study. Please see the website for other reports in the series - www.health.adelaide.edu.au/pros/data/nwahs/.

CONTACT DETAILS

Population Research & Outcome Studies – The University of Adelaide
 Level 3, 122 Frome Street, Adelaide SA 5000
 (☎) PO Box 498 Adelaide SA 5001
 Telephone (08) 8313 1214 Facsimile (08) 8313 1228
 Email pros.nwahs@adelaide.edu.au

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