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Supporting Information

Supplementary results

**This appendix was part of the submitted manuscript and has been peer reviewed.
It is posted as supplied by the authors.**

Appendix to: Gong JY, Williams ED, Salim A, et al. Socio-economic position and the prevalence of ten chronic diseases in Australia, 2021: a whole of population census data analysis. *Med J Aust* 2025; doi: 10.5694/mja2.70032.

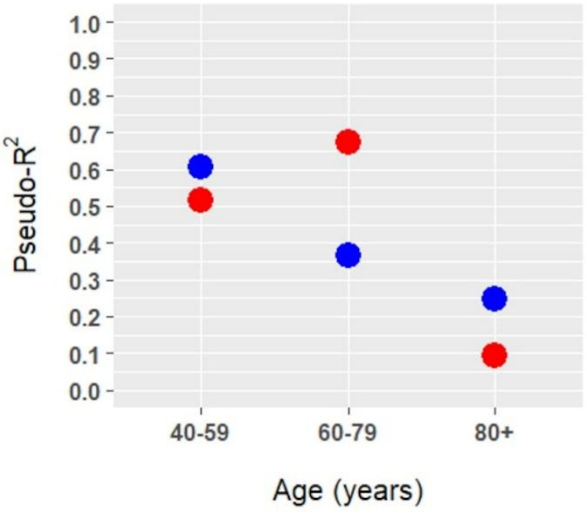
Supplementary results

Table 1. Proportional increase in the prevalence of chronic disease per decile decrease in the Index of Relative Socio-economic Disadvantage (IRSD) or category decrease in weekly income category (i.e., increasing disadvantage), by sex and age group

Age-group & chronic disease	IRSD		Weekly income	
	Women	Men	Women	Men
40–59 years				
Arthritis	8.1%	6.8%	10.0%	9.8%
Asthma	5.5%	1.6%	4.1%	0.5%
Cancer	-0.4%	0.1%	-0.3%	0.8%
Dementia	16.4%	16.5%	48.7%	46.0%
Diabetes	13.9%	9.7%	14.9%	12.6%
Heart disease	12.3%	6.2%	11.2%	6.8%
Kidney disease	11.3%	9.6%	13.7%	12.7%
Lung disease	18.4%	16.9%	23.1%	24.7%
Mental health condition	8.3%	8.4%	13.5%	17.6%
Stroke	13.9%	11.6%	24.5%	18.5%
60–79 years				
Arthritis	4.0%	4.4%	5.0%	6.0%
Asthma	5.2%	3.1%	5.6%	1.9%
Cancer	-0.5%	-0.8%	0.4%	0.6%
Dementia	8.3%	9.2%	20.8%	17.7%
Diabetes	9.5%	6.5%	11.6%	6.8%
Heart disease	5.3%	2.1%	5.2%	2.0%
Kidney disease	9.9%	7.1%	17.2%	6.7%
Lung disease	10.6%	11.0%	13.3%	14.8%
Mental health condition	8.5%	8.1%	14.8%	16.0%
Stroke	8.8%	7.4%	18.5%	10.7%
≥80 years				
Arthritis	1.6%	2.6%	2.6%	6.1%
Asthma	2.7%	2.9%	5.1%	11.2%
Cancer	-0.9%	-1.1%	3.3%	0.6%
Dementia	3.6%	4.5%	6.4%	5.6%
Diabetes	5.0%	3.6%	15.3%	4.9%
Heart disease	1.7%	0.0%	5.1%	0.9%
Kidney disease	6.0%	3.8%	20.9%	9.3%
Lung disease	3.8%	4.7%	12.4%	9.3%
Mental health condition	5.7%	7.1%	13.9%	16.0%
Stroke	2.9%	2.4%	12.0%	9.8%

Figure 1. The proportion of age- and sex-specific variation in the prevalence of at least one chronic condition (measured using pseudo-R^2) explained by the Index of Relative Socio-economic Disadvantage (IRSD) (blue) or weekly income level (red), by sex

a) Women



b) Men

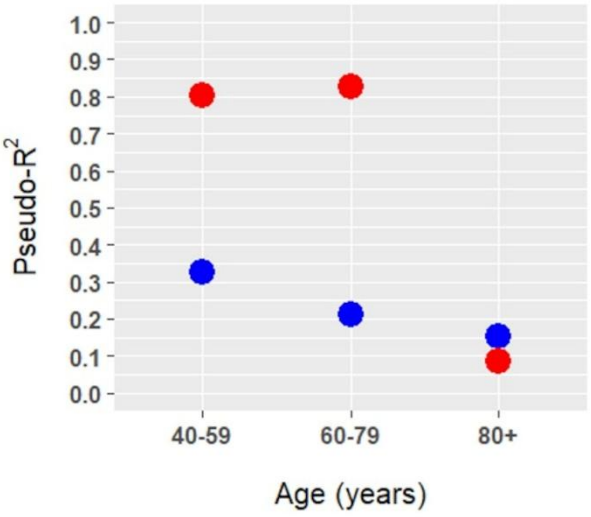
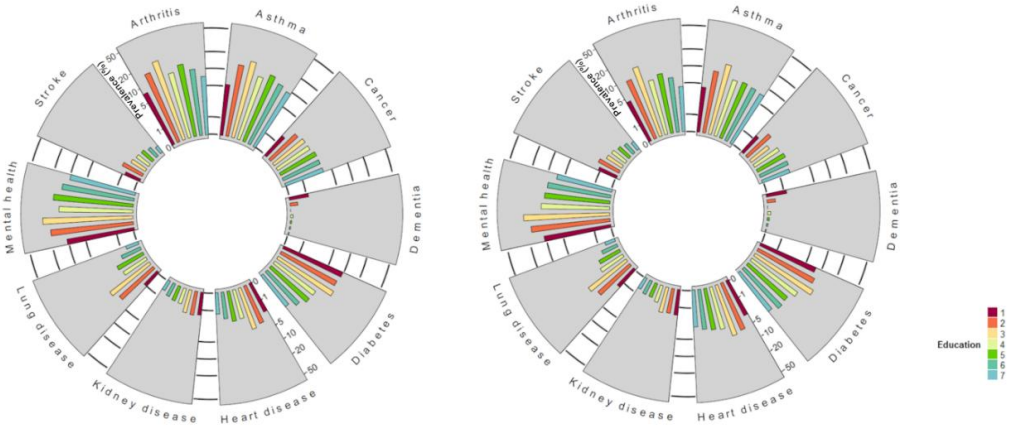


Figure 2. Age-standardised prevalence of ten chronic diseases by level of highest educational attainment, by sex and age group*

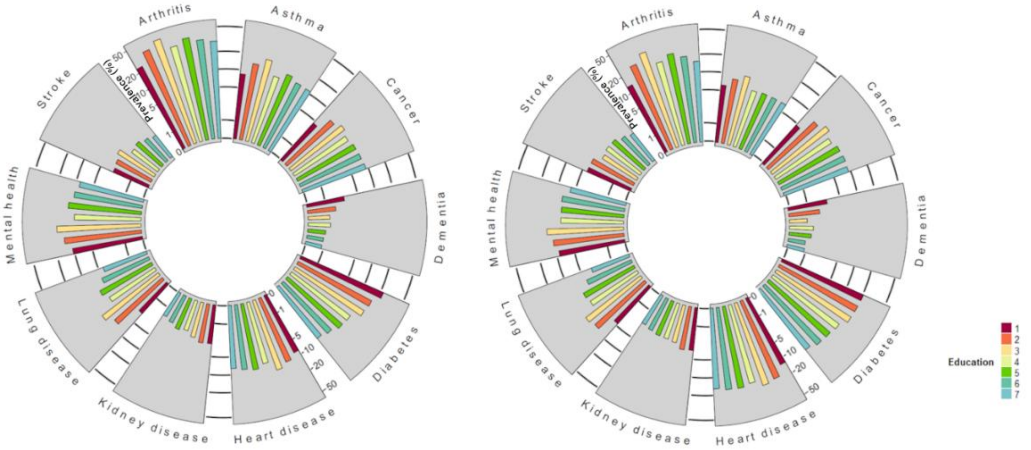
a) 40–59 years: women

b) 40–59 years: men



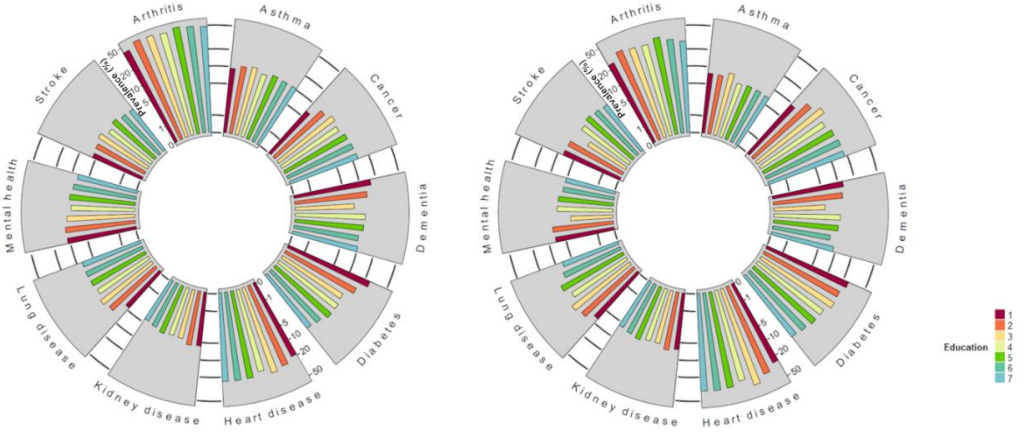
c) 60–79 years: women

d) 60–79 years: men



e) ≥80 years: women

f) ≥80 years: men

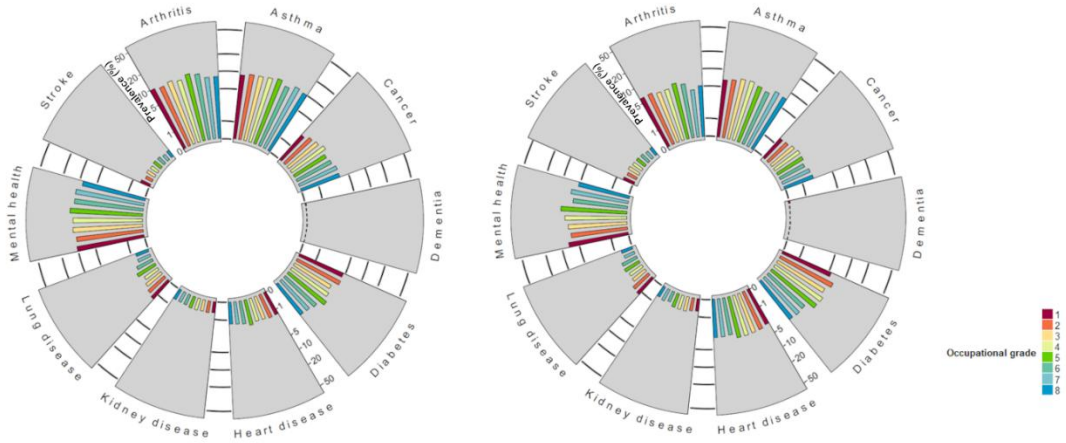


* Levels of educational attainment: 1 no educational attainment, 2 secondary education (year 9 or below), 3 certificate I or II, 4 secondary education (year 10 and above), 5 certificate III or IV, 6 diploma, and 7 bachelor degree or postgraduate studies.

Figure 3. Age-standardised prevalence of ten chronic diseases by occupational grade, by sex and age group*

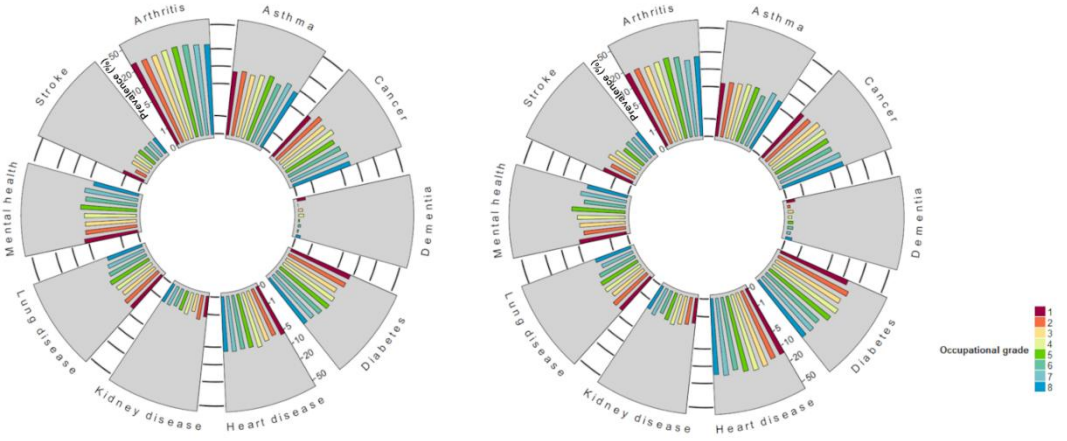
a) 40–59 years: women

b) 40–59 years: men



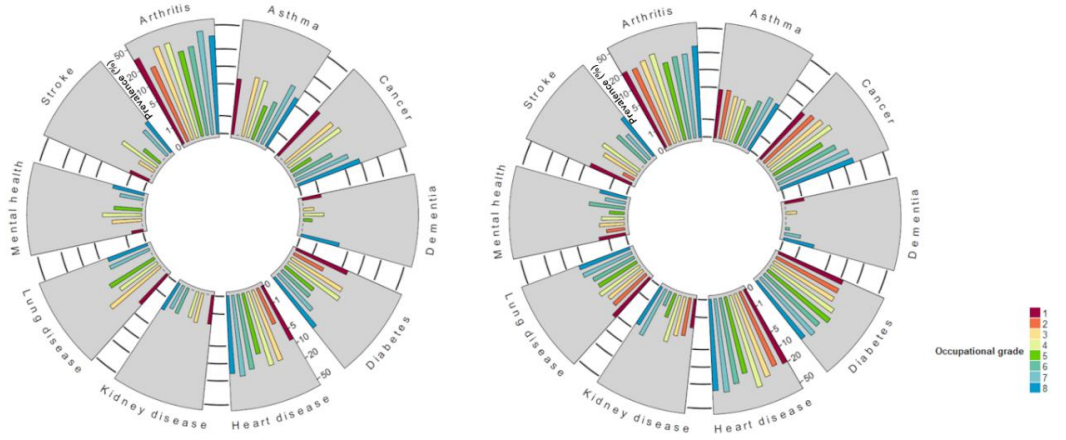
c) 60–79 years: women

d) 60–79 years: men



e) ≥80 years: women

f) ≥80 years: men



* Occupational grades: 1 labourers, 2 machinery operators or drivers, 3 sales workers, 4 clerical and administrative workers, 5 community and personal service workers, 6 technicians and trade workers, 7 professionals, and 8 managers.

STROBE Statement—Checklist of items that should be included in reports of *cross-sectional studies*

Note: The page numbers in this checklist refer to the submitted manuscript, not to the published article or its Supporting Information file.

	Item No	Recommendation	
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	✓
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	✓
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	✓
Objectives	3	State specific objectives, including any prespecified hypotheses	✓
Methods			
Study design	4	Present key elements of study design early in the paper	✓
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	✓
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants	✓
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	✓
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	✓
Bias	9	Describe any efforts to address potential sources of bias	✓
Study size	10	Explain how the study size was arrived at	✓
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	✓
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	✓
		(*b*) Describe any methods used to examine subgroups and interactions	✓
		(*c*) Explain how missing data were addressed	✓
		(*d*) If applicable, describe analytical methods taking account of sampling strategy	NA
		(*e*) Describe any sensitivity analyses	NA
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	✓
		(b) Give reasons for non-participation at each stage	NA
		(c) Consider use of a flow diagram	✓
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	✓
		(b) Indicate number of participants with missing data for each variable of interest	✓
Outcome data	15*	Report numbers of outcome events or summary measures	✓
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make	✓

		clear which confounders were adjusted for and why they were included	
		(*b*) Report category boundaries when continuous variables were categorized	✓
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	NA
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	✓
Discussion			
Key results	18	Summarise key results with reference to study objectives	✓
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	✓
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	✓
Generalisability	21	Discuss the generalisability (external validity) of the study results	✓
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	✓

*Give information separately for exposed and unexposed groups.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.