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Generalisability of data from the 45 and Up Study

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Project Overview

- Gathered empirical evidence on generalisability of relative risk estimates according to response rate and study design
- Using data from:
 - 45 and Up Study baseline questionnaire
 - NSW Population Health Survey
- These studies are independent and drawn from the same target population

45 and Up Study

- Data available on 103,042 participants at March 2009
- With an Accessibility Remoteness Index of Australia score (ARIA+) available
- Response rate of 18%

NSW Population Health Survey

- Uses computer assisted telephone interviewing
- Households contacted using random digit dialing
- Appropriate for estimates of prevalence in NSW
- 14,796 respondents aged ≥ 45 years answered the 2006 (N=5,480) and 2007 (N=9,316) survey
- Response rate of 59.3% and 63.6%, respectively

Questionnaire Items

- Questionnaire items were compared and categorised as:
 - Highly comparable
 - Moderately comparable
 - Not comparable

Analysis

- Calculated 20 pre-determined odds ratios (ORs) for each survey, consisting of:
 - 10 ORs where exposure and outcome variables were highly comparable
 - 10 ORs where exposure and/or outcome variables were only moderately comparable
- All ORs adjusted for age, sex and remoteness

Social and Demographic Characteristics	45 and Up Study		Health Survey	
	n	weighted % (95% C.I.)	n	weighted % (95% C.I.)
Sex				
Male	48851	48.0 (47.6, 48.4)	5766	48.4 (47.4, 49.5)
Female	52961	52.0 (51.6, 52.4)	9030	51.6 (50.5, 52.6)
Age				
45-54 years	28519	36.0 (35.6, 36.4)	3849	36.8 (35.7, 37.9)
55-64 years	32692	28.5 (28.2, 28.9)	4440	28.7 (27.7, 29.6)
65-74 years	22364	18.4 (18.1, 18.6)	3649	18.7 (17.9, 19.4)
75-84 years	14780	12.8 (12.6, 13.0)	2412	13.2 (12.6, 13.8)
≥ 85 years	3457	4.3 (4.1, 4.4)	449	2.6 (2.3, 2.9)

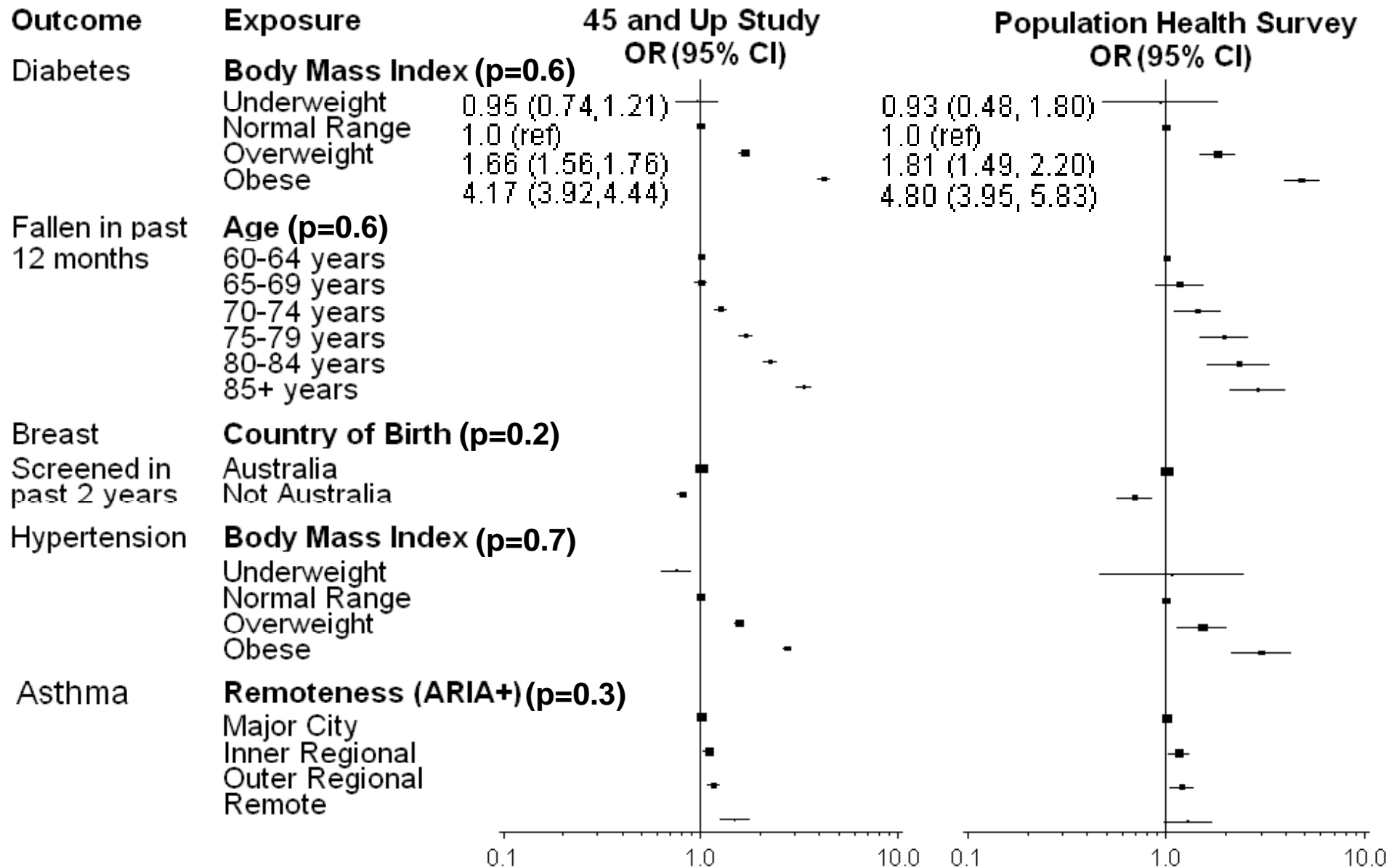
Social and Demographic Characteristics	45 and Up Study		Health Survey	
	n	weighted % (95% C.I.)	n	weighted % (95% C.I.)
Remoteness				
Major City	44146	69.1 (68.8, 69.4)	6718	60.6 (59.6, 61.6)
Inner Regional	36640	22.7 (22.5, 23.0)	4351	24.4 (23.5, 25.2)
Outer Regional	18926	7.6 (7.5, 7.7)	3086	12.2 (11.6, 12.7)
Remote	2100	0.6 (0.5, 0.6)	456	1.3 (1.2, 1.5)
Missing	0	-	185	1.5 (1.2, 1.8)
Language other than English spoken at home				
No	92230	87.4 (87.1, 87.7)	13379	89.5 (88.7, 90.3)
Yes	9580	12.6 (12.3, 12.9)	986	10.4 (9.6, 11.2)
Missing	2	0.0 (0.0, 0.0)	17	0.1 (0.0, 0.2)

Social and Demographic Characteristics	45 and Up Study		Health Survey	
	n	weighted % (95% C.I.)	n	weighted % (95% C.I.)
Teeth				
Some/all natural teeth	88501	88.0 (87.8, 88.2)	9321	90.3 (89.7, 90.9)
No natural teeth	9953	8.7 (8.5, 8.9)	1427	9.7 (9.1, 10.3)
Missing	3358	3.3 (3.2, 3.5)	6	0.0 (0.0, 0.1)
Body Mass Index				
Underweight	1461	1.5 (1.4, 1.6)	230	1.9 (1.6, 2.3)
Normal Range	35219	35.6 (35.2, 35.9)	4214	38.4 (37.2, 39.6)
Overweight	37373	36.6 (36.2, 36.9)	3774	36.0 (34.8, 37.2)
Obese	20271	19.2 (18.9, 19.5)	2205	20.5 (19.4, 21.5)
Missing	7488	7.1 (6.9, 7.3)	373	3.2 (2.8, 3.7)

Social and Demographic Characteristics	45 and Up Study		Health Survey	
	n	weighted % (95% C.I.)	n	weighted % (95% C.I.)
Current Smoker				
No	94199	92.4 (92.2, 92.6)	9468	88.1 (87.3, 89.0)
Yes	7603	7.6 (7.4, 7.8)	1292	11.8 (11.0, 12.7)
Missing	10	0.0 (0.0, 0.0)	7	0.1 (0.0, 0.1)
Ever diagnosed with Hypertension				
No	72023	72.1 (71.7, 72.4)	1189	55.2 (52.6, 57.8)
Yes	25144	22.9 (22.6, 23.2)	1086	44.6 (42.0, 47.2)
Missing	4645	5.0 (4.9, 5.2)	6	0.2 (0.0, 0.4)

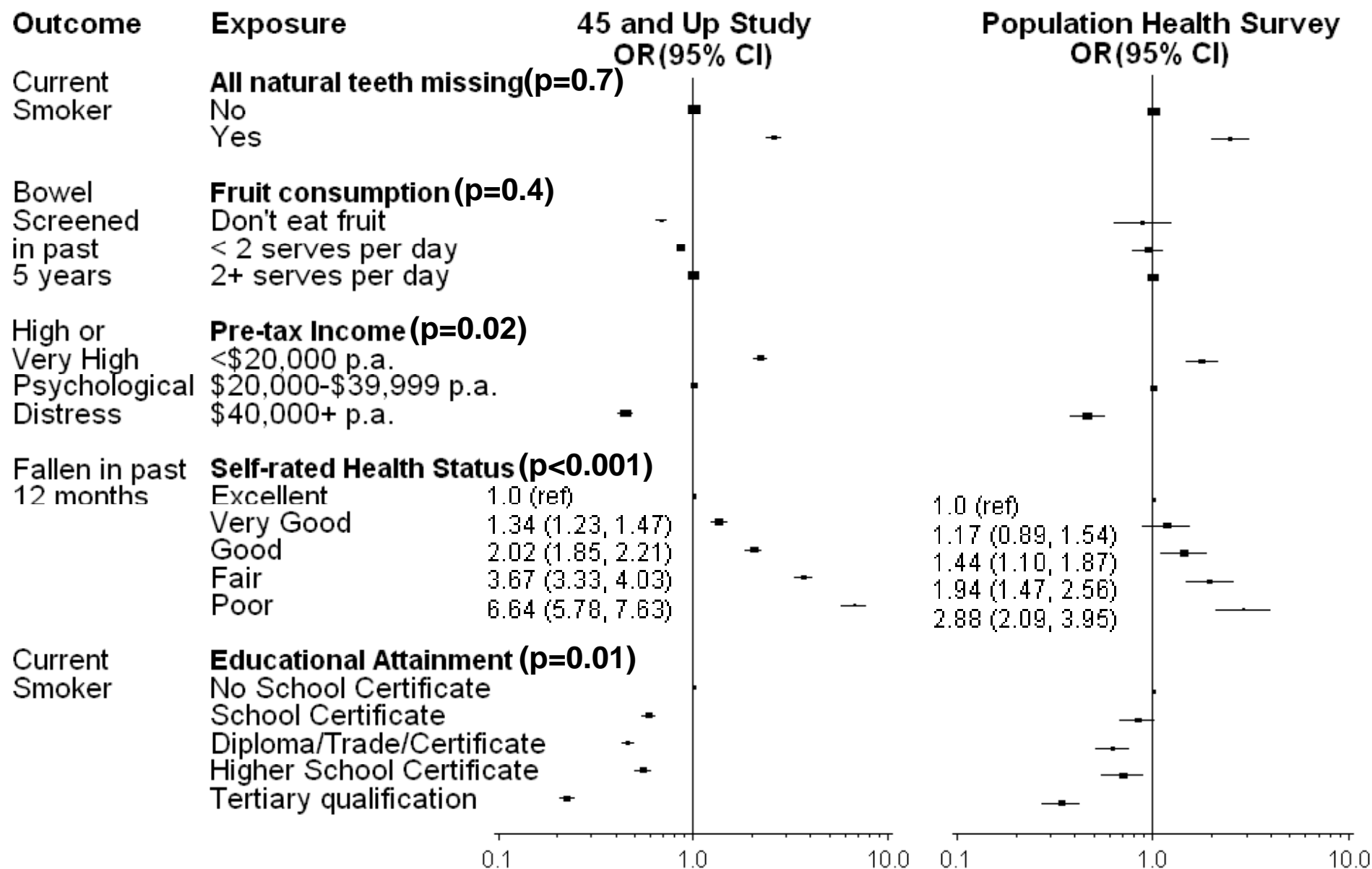
Highly comparable variables

Odds Ratios adjusted for age, sex and remoteness



Moderately comparable variables

Odds Ratios adjusted for age, sex and remoteness



Summary

- Relationships remained consistent regardless of the underlying response rate and survey design
- Minor differences in the wording of questions can effect estimates of risk
- This work provides empirical support for basic epidemiological principles

Acknowledgements

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