



# Inequalities in socio-economic characteristics and health and wellbeing of men with and without disabilities: a cross-sectional analysis of the baseline wave of the Australian Longitudinal Study on Male Health

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## Abstract

**Background:** Internationally, men with disabilities have higher rates of social and economic disadvantage and poorer health and wellbeing than men without disabilities. No single study has provided comprehensive, population-level information about the magnitude of such differences among adult men using a well-validated instrument to measure disability.

**Methods:** We analysed baseline data from Ten to Men – an Australian longitudinal study of male health. Ten to Men

## Background

Australians with disabilities have significantly worse life outcomes than their peers without disabilities. They have lower levels of social and economic wellbeing and poorer health on a variety of health status measures, including ones unrelated to their impairment [1, 2]. For example, people with disabilities are more likely to be overweight or obese, smoke, be physically inactive and have poor diets; they also have poorer self-rated health, life satisfaction, and mental health [3–12]. They have higher rates of chronic conditions such as diabetes and heart disease and are more likely to use clinical services but less likely to use preventative health care [8, 13–17].

The inequalities extend beyond direct measures of health and wellbeing. Compared to Australians without disabilities, Australians with disabilities have lower levels of employment, education, income, community participation and social support, and higher levels of housing stress, poverty and inter-personal violence [10, 12, 18–20]. Inequalities between people with and without disabilities in Australia are starker than in other Organisation for Economic Cooperation and Development (OECD) countries. Relative to Australians without disabilities, the income of Australians with disabilities is the lowest of all OECD countries and they have one of the lowest levels of labour force participation [21]. Analyses of national data

included country of birth (Australia, other); language spoken at home (English, other); and Aboriginal and Torres Strait Islander (ATSI, not ATSI). Relationship status was coded as married or in a de facto relationship, separated or divorced or widowed, and single. Area of residence was defined as metropolitan, inner regional, and outer regional. Socio-economic variables included education (did or did not complete secondary school); house-

On the other hand, men with disabilities were less likely to be residing in metropolitan areas or living in a married or de facto relationship.

#### Socio-economic characteristics

Men with disabilities were more disadvantaged than non-disabled men on all but two of the 12 socio-economic variables analysed (Table 2). They were less

Table 2 Socioeconomic characteristics of men with and without disabilities

	Disability		No disability		P value
		%		%	
<b>Education</b>					
Completed secondary	357	39.4	7598	61.9	< 0.001
Did not complete secondary	549	60.6	4678	38.1	
<b>Household income (annual)</b>					
≥ \$150,000	92	11.8	2417	22.3	< 0.001
\$100,000–\$149,999	124	15.9	2901	26.8	
\$50,000–\$99,999	268	34.4	3773	34.8	
\$30,000–\$49,999	142	18.2	1108	10.2	
\$1–\$29,999	144	18.5	561	5.2	
Nil/negative	9	1.2	70	0.7	
<b>Labour force status</b>					
Employed	578	63.1	10,808	87.2	< 0.001
Unemployed	127	13.9	984	7.9	
Not in the labour force	211	23.0	597	4.8	
<b>Skill level<sup>a</sup></b>					
High	142	26.4	4022	39.1	< 0.001
Medium	209	38.8	3692	35.9	
Low	187	34.8	2581	25.1	
<b>Employment arrangements<sup>a</sup></b>					
Permanent	378	67.1	7447	70.0	= 0.113
Fixed term/casual	99	17.6	1540	14.5	
Self employed	86	15.3	1646	15.5	
<b>Number of hours worked<sup>a</sup></b>					
Mean, SD	39.3	19.3	41.7	15.9	< 0.001
<b>Hours of work preferred<sup>a</sup></b>					
About right amount	243	43.9	5606	52.7	< 0.001
Prefer fewer hours	179	32.3	3357	31.6	
Prefer more hours	132	23.8	1673	15.7	
<b>Access to paid leave<sup>a</sup></b>					
Yes	312	65.0	6217	68.5	= 0.111
No	168	35.0	2862	31.5	
<b>Shortage of money</b>					
No	410	45.1	8612	70.2	< 0.001
Yes	500	55.0	3663	29.8	
<b>Housing tenure</b>					
Outright owner	134	14.8	1881	15.2	< 0.001
Mortgagor	341	37.7	6302	51.1	
Rented accommodation	371	41.0	3530	28.6	
Other	59	6.5	626	5.1	
<b>Housing affordability</b>					
Affordable	425	55.2	6800	63.2	< 0.001
Unaffordable	345	44.8	3960	36.8	

Table 2 Socioeconomic characteristics of men with and without disabilities (C )

SEIFA					
Q5 (less disadvantaged)	102	10.8	2406	19.1	< 0.001
Q4	152	16.1	2759	21.9	
Q3	198	21.0	2957	23.4	
Q2	226	24.0	2279	18.1	
Q1 (more disadvantaged)	264	28.0	2221	17.6	

<sup>a</sup>Among employed men

was likely to last, for a period of six months or more. Using this definition, the estimated prevalence of disability among 15 to 54 year old men was 18.1 % in the most recent wave of the Household, Income and Labour Dynamics in Australia Survey (HILDA) (unpublished analysis). The ABS Survey of Disability, Ageing and Carers, which uses an extensive range of questions to determine disability status and characteristics, found the crude prevalence of any disability among 15 to 54 year old males was 11.2 % and the prevalence of severe disabilities was 2.3 % [20].

Our findings correspond with those of previous Australian studies using HILDA and the ABS surveys – the Survey of Disability, Ageing and Carers and General Household Social Survey [12, 22, 34–37]. However, this paper adds to the existing literature by covering a broader range of social and economic domains and indicators of health and wellbeing and using an internationally validated instrument to measure disability. Moreover, whereas previous studies have focused largely on health status measures, ours includes measures of subjective wellbeing or life satisfaction. While our estimates of the associations

Table 3 Social support, participation, and discrimination of men with and without disabilities

	Disability		No disability		P value
		%		%	
<b>Social support</b>					
Mean (SD)	60.1	30.0	70.5	26.1	< 0.001
<b>Group membership</b>					
Yes	268	29.4	4758	38.9	< 0.001
No	643	70.6	7472	61.1	
<b>Community service</b>					
Yes	171	18.8	3081	25.2	< 0.001
No	739	81.2	9155	74.8	
<b>Community events</b>					
Sometimes/very often	234	25.7	4573	37.3	< 0.001
Never/rarely	677	74.3	7698	62.7	
<b>Discrimination</b>					
No	347	39.0	6612	54.4	< 0.001
Yes	544	61.1	5540	45.6	

between disability and socio-economic disadvantage and disability and mental health are consistent with those found elsewhere, the differences we report are higher than reported previously. For example, previous analyses of HILDA have reported a 2–3 point lower MCS score among people with disabilities [35, 36], while we estimated a nine point difference (nearly one standard deviation) in Ten to Men. This difference probably reflects the way disability was coded using the Washington Group questions, where we only categorised people as disabled who reported ‘a lot of difficulty or could not do at all’ across at least one of the six core domains. Although HILDA uses SF-36 and Ten to Men uses SF-12, this is not a convincing explanation for the discrepancy because validation studies in European countries found very high correlations between the component scores derived from the SF-12 and SF-36 [38].

#### Strengths and limitations

The strengths of the study are its national scope, large sample size, comprehensive range of measures across



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#### Declaration

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#### Availability of data and materials

Ten to Men response data are available to researchers via a request and review process. Information on accessing Ten to Men data is available at <http://www.tentomen.org.au/index.php/researchers.html>. Copies of Wave 1 questionnaires, Wave 1 data books, and the Ten to Men Data User's Manual are also available at that site.

Enquires about potential collaborations including sub-studies involving members of the Ten to Men cohort can be addressed to the Study Coordinator at [info@tentomen.org.au](mailto:info@tentomen.org.au).

#### Authors' contributions

AK, ZA and ALaM were responsible for the analytical design. ZA and SS undertook data analysis. AK, ZA, EE, AM, RB, ALaM, JP and DS interpreted the analysis. AK and ZA drafted the manuscript. All authors undertook critical revision of the manuscript and have approved this manuscript version for submission.

#### Competing interests

The authors declare that they have no competing interests.

#### Consent for publication

Not applicable.

#### Ethics approval and consent to participate

The Australian Longitudinal Study on Male Health was approved by the University of Melbourne Human Research Ethics Committee (HREC 1237897 & 1237376). Participants provided written consent for their participation.

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