




## Social networks in older Australian men and women

Deirdre McLaughlin<sup>1</sup>, Dimitrios Vagenas<sup>1</sup>, Nancy Pachana<sup>1</sup>, Osvaldo Almeida<sup>2</sup>, Annette Dobson<sup>1</sup>

<sup>1</sup>University of Queensland, Herston, QLD  
<sup>2</sup>University of Western Australia, Perth, WA

**Men, Women and Ageing Project**  
 NHMRC/ARC Ageing Well,  
 Ageing Productively Grant


## Men, Women and Ageing Project

- Pooling data from :
  - Australian Longitudinal Study on Women's Health (ALSWH) 1921-1926 cohort and
  - The Health in Men Study (HIMS)




## Australian Longitudinal Study on Women's Health

- Cohort study – health, well-being and health service use of Australian women
- Social view of health
- Started 1996 – to continue until at least 2015
- National – over 40,000 participants
- Funded by Australian Department of Health & Ageing

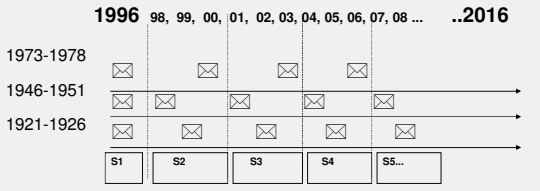


## Australian Longitudinal Study on Women's Health: outline


- Three age groups: 18-23 (1973-1978 cohort), 45-50 (1946-1951 cohort) and 70-75 years (1921-1926 cohort) in 1996
- Sampled randomly from Medicare database
- Systematic over-sampling in rural/remote areas
- Postal surveys every 3 years
- Additional sub-studies on particular issues



## Australian Longitudinal Study on Women's Health: Study Design



Currently completing S5 for 1921-1926 cohort and piloting S5 for 1973-1978 cohort



## Australian Longitudinal Study on Women's Health: Older participants aged 70-75 in 1996

	Survey 1 1996	Survey 2 1999	Survey 3 2002	Survey 4 2005
Deaths since last survey		529	569	769
Too frail/withdrawn since last survey		368	779	888
Non-respondents		1101	1540	1372
Respondents	12,432	10,434	8,647	7,158
Retention (% of eligible)		90.5%	84.9%	83.9%

## Health in Men Study

- Men aged 65-83 randomly sampled from electoral roll in 1996-9 for screening trial for Abdominal Aortic Aneurysm (AAA)
- Followed up in 2001-4 for first HIMS study
- Perth area only
- Physical examination, biomarkers, questionnaire
- Funded by NHMRC project grants

## Health In Men Study: participants

AAA attendees	12,203 (100%)
Deaths before HIMS	2,379 (20%)
Non-participants in HIMS	4,240 (35%)
Questionnaire only	1,322 (11%)
HIMS attendees	4,262 (35%)

~ 43% survivors of AAA attended  
HIMS2008 currently in progress

## HIMS and ALSWH questionnaire items in common

- Medical history
- Falls
- CAMDEX (eg sleep)
- SF36
- Medications
- Smoking
- Hearing & sight problems
- Availability of health services
- Living arrangements
- Housing
- Social support
- Neighbourhood
- Family support

## Social Support

- Social support exerts a generally beneficial effect on the health and survival of older people
- Reduced mortality in those who report strong social support (both cause specific and all cause mortality)
- Larger social networks and satisfaction with support associated with better self-rated health and reduced morbidity.

## Gender differences in social networks

- Women generally have larger networks than men
- But some evidence this may diminish with increasing age
- Low support associated with increased mortality in older women
- Low support related to increased morbidity in older men
- Marriage more protective for men

## Social networks in older adults

- Development and maintenance of networks may be affected by a number of factors
- Widows report greater social support
- Men tend to rely on their wives for their social interactions
- Higher education = larger networks
- Immigrants = greater social isolation

## Social networks in older adults

- Presence of chronic conditions
  - Most older adults have at least one chronic health condition
- Age related decrements in physical abilities may limit opportunities to socialise
- Poor mental health, especially depression, in late adulthood associated with reduced social support

## This study

- ❖ Are there differences in the size of social networks and satisfaction with those networks in older Australian men and women?
- ❖ Are the factors that are associated with network size and satisfaction the same in men and women?

## *Materials & Methods*

## Participants

- 3,168 urban women from the 1921-1926 cohort of the ALSWH who responded to Survey 2 (1999), mean age 75.3 years (SD 1.5)
- 5,354 HIMS men who were surveyed between 2001 and 2004, mean age 75.7 years (SD 4.2)

## Outcome Variables

- Duke Social Support Index (Koenig et al, 1993), abbreviated version
- Network subscale – measures the size and structure of the social network
  - Scores range from 0 to 21, higher scores indicate more social contacts
  - Satisfaction subscale – measures perceived satisfaction with behavioural or emotional support obtained from social network
  - Scores range from 6 to 18, higher scores = greater satisfaction

## Explanatory Variables

- Demographics: marital status, country of birth, education
- Measures of morbidity
  - Mental health
  - Slips or falls and subsequent injury/treatment
  - Difficulties seeing, hearing, speaking
  - Chronic conditions – arthritis, diabetes, hypertension, heart disease, asthma and bronchitis

# RESULTS

## Descriptive statistics

Categorical variables				
Variables		%		P ( $\chi^2$ test)
		Men (n=5354)	Women (n=3168)	
Education	Lower	16	26	0.0001
	Middle	37	37	
	Higher	46	33	
	Missing	0	4	
Marital Status	Married/ De facto	86	50	0.0001
	Widowed	6	40	
	Separated/ Divorced/ Single	8	10	
	Missing	0	0	
Country of Birth	Australia	61	71	0.0001
	Europe	33	22	
	Asia	4	2	
	Other	2	1	
	Missing	0	5	

## Descriptive statistics

Continuous variables				
Variables		Men	Women	P (t test)
		(n=5354)	(n=3168)	
Age	mean	75.73	75.32	<0.0001
	sd	4.16	1.46	
Mental health Index	mean	0.17	0.19	<0.0001
	sd	0.12	0.13	
Falls index	mean	0.15	0.15	0.48
	sd	0.24	0.24	
Senses Index	mean	0.13	0.10	<0.0001
	sd	0.20	0.18	
Chronic conditions index	mean	0.18	0.19	0.012
	sd	0.18	0.18	

## Descriptive statistics

Outcome variables				
		Men	Women	P (t test)
		(n=5354)	(n=3168)	
Social Network	mean	8.73	10.47	<0.0001
	sd	4.21	4	
P ( $\chi^2$ test)				
Satisfaction (2 categories)	percentage satisfied	0.46	0.65	0.0047

## Network size

Categorical variables				
		Men	Women	Difference (W-M)
				95% CI
Intercept		8.66*	10.03*	1.37 (1.29, 1.46)
Education	Higher	0.69*	0.49*	0.20 (-0.62, 0.23)
	Lower	-0.24	-0.42*	0.18 (-0.67, 0.32)
	Middle	0.00	0.00	0.00
Marital status	Separated/Divorced/Single	-0.15	0.90*	1.04 (0.40, 1.68)
	Widowed	1.20*	1.30*	0.10 (-0.45, 0.65)
Country of Birth	Married/De facto	0.00	0.00	0.00
	Asia	-0.53	-0.74	-0.21 (-1.50, 1.07)
	Europe	-0.72*	-0.72*	0.00 (-0.42, 0.43)
	Other	-0.97*	-1.74*	-0.77 (-2.20, 0.66)
	Australia	0.00	0.00	0.00

## Network size

Continuous variables				
		Men	Women	Difference (W-M)
				95% CI
Age		-0.09*	0.00	0.09 (-0.02, 0.19)
Mental health Index		-4.20*	-6.57*	-2.37 (-3.88, -0.85)
Falls index		-0.01	0.39	0.40 (-0.38, 1.18)
Senses Index		-1.15*	-0.70	0.45 (-0.58, 1.48)
Chronic conditions index		-0.54	0.08	0.62 (-0.46, 1.70)

## Satisfaction

		Categorical Variables		Ratio (W:M)	
		Men	Women		95% CI
<i>Intercept</i>		0.78*	0.98	1.26	(1.20, 1.31)
<i>Education</i>	Higher	1.05	0.89	0.84	(0.68, 1.05)
	Lower	1.07	0.93	0.87	(0.67, 1.14)
	Middle	1.00	1.00	1.00	
<i>Marital status</i>	Separated/Divorced/Single	0.50*	0.76*	1.52	(1.07, 2.15)
	Widowed	0.89	0.97	1.09	(0.82, 1.46)
	Married/De facto	1.00	1.00	1.00	
<i>Country of Birth</i>	Asia	0.75	0.84	1.11	(0.56, 2.23)
	Europe	0.74*	0.73*	0.98	(0.78, 1.23)
	Other	0.82	0.75	0.92	(0.42, 2.03)
	Australia	1.00	1.00	1.00	

## Satisfaction

	Continuous Variables		Ratio (W:M)	
	Men	Women		95% CI
<i>Age</i>	1.00	1.05	1.05	(0.99, 1.10)
<i>Mental health Index</i>	0.01	0.01*	0.49	(0.18, 1.36)
<i>Falls index</i>	0.64*	0.82	1.29	(0.84, 1.97)
<i>Senses index</i>	0.47*	0.28*	0.59	(0.33, 1.06)
<i>Chronic conditions index</i>	0.91	1.38	1.52	(0.85, 2.71)

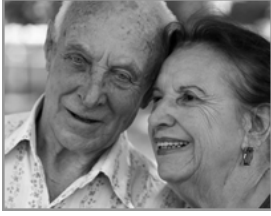
## Conclusions

- The results of this large study of older Australian men and women indicate that gender differences exist in
  - the size of their social networks and
  - their satisfaction with social support.
- Gender differences are also apparent in variables which
  - may influence the development and maintenance of social networks and
  - the satisfaction with support provided

- The absence of an intimate relationship (except for widows or widowers) and poor mental health show significant gender differences
- Older men who are divorced, separated or single have significantly smaller social networks than women with a similar marital status
- Additionally, these men are significantly less satisfied with the social support they receive than are the women

- Poor mental health impacts more on the social networks of older women than older men
- Older women with poor mental health may be less likely to receive adequate social support
  - because their friends may be less tolerant of their distress or
  - because depression may lead to withdrawal from their social networks

- This study included variables which had previously been independently associated with social support in older adults
- Our calculation of dimensions of multimorbidity allowed for the likelihood that older men and women would report multiple co morbid conditions
- There may be additional factors (e.g. cognition) that could be included in future studies.



Please visit our website for more details on our project

[Menwomenandageing.org](http://Menwomenandageing.org)