



Musculoskeletal Conditions

Hand pain

Stage 2

Epidemiological Series Report # 2007-12

April 2007

Introduction

The following overview presents the prevalence of hand pain among the participants of the North West Adelaide Health Study, and the demographic and risk factors associated with hand pain. Stage 1 (baseline examination) of the study was undertaken between 2000 and 2003, with Stage 2 (second examination) conducted from 2004 to 2006.

Measurement of hand pain, aching or stiffness

Information relating to hand pain and arthritis was only been collected in Stage 2 and was obtained from the telephone interview. Respondents are asked whether they have pain, aching or stiffness in their hands, either at rest or when moving, on most days for at least a month. Respondents who did have pain, aching or stiffness were also asked the AUSCAN[®] Hand Osteoarthritis Index, which is a series of questions examining hand pain, stiffness and functioning¹, and whether they had ever been told by a doctor that they have hand arthritis.

Prevalence of hand pain, aching or stiffness – Stage 2 (self report)

The self reported prevalence of hand pain, aching or stiffness is shown in Table 1. Overall, in Stage 2, **13.7%** (95% CI 12.6-14.9) of study participants reported that they had hand pain, aching or stiffness.

Table 1: Prevalence of hand pain aching or stiffness

	Stage 2	
	n	%
No hand pain aching or stiffness	3012	86.3
Hand pain, aching or stiffness	477	13.7
Total	3489	100.0

Note: (Stage 2) 13 participants did not know and were excluded

Prevalence of hand arthritis – Stage 2

Participants with hand pain, aching or stiffness were asked if they had ever been told by a doctor that they had arthritis. Overall, 4.8% (95% CI 4.2-5.6) of respondents reported that they had been told that they had hand arthritis (Table 2).

Table 2: Prevalence of hand arthritis

	Stage 2	
	n	%
Yes, osteoarthritis	65	1.9
Yes, rheumatoid arthritis	27	0.8
Yes, don't know type	77	2.2
No	3315	95.2
Total	3496	100.0

Note: (Stage 2) 18 participants did not provide a response and were excluded

The prevalence of hand problems in Stage 2 was 13.7%.

The prevalence of hand arthritis was 4.8%.

¹ Bellamy N (2003): AUSCAN Osteoarthritis Index. User Guide II. Queensland

Demographic profile of respondents with hand pain, aching or stiffness

The prevalence of hand pain, aching or stiffness was statistically significantly higher among females, those aged 50 years, adults living with a partner and no children or adults living alone, those widowed or those retired or undertaking home duties. Respondents with higher than secondary, earning more than \$20,000 or never married were significantly less likely to state they had hand pain, aching or stiffness (Table 3).

Table 3: Univariate Odds Ratios for demographic variables associated with hand pain, aching or stiffness

Variable	n	%	OR	(95% CI)	p value
Sex					
Male	196/1712	11.5	1.00		
Female	281/1778	15.8	1.45	(1.19-1.76)	< 0.001
Age group					
20 to 49 years	166/2027	8.1	1.00		
50 to 59 years	115/576	19.8	2.79	(2.16-3.62)	< 0.001
60 years and over	197/855	22.5	3.27	(2.61-4.09)	< 0.001
Highest education level obtained*					
Secondary	241/1398	17.1	1.00		
Trade/apprenticeship/cert/diploma	152/1172	12.9	0.71	(0.57-0.89)	0.003
Bachelor degree or higher	41/558	7.4	0.39	(0.27-0.54)	< 0.001
Gross annual household income*					
Up to \$20,000	135/577	23.1	1.00		
\$20,001- 40,000	105/723	14.4	0.56	(0.42-0.74)	< 0.001
\$40,001- 60,000	93/689	13.4	0.51	(0.38-0.69)	< 0.001
More than \$60,000	86/1063	8.1	0.29	(0.22-0.39)	< 0.001
Family structure*					
Family & children, 2 biological/adoptive parents	127/1197	10.6	1.00		
Adult living with partner, no children	163/872	18.7	1.92	(1.50-2.47)	< 0.001
Adult living alone	69/412	16.6	1.68	(1.22-2.30)	0.001
Adults – related/unrelated, living together	38/330	11.4	1.08	(0.73-1.58)	0.71
Step/sole/shared parenting & other	40/340	11.7	1.11	(0.76-1.62)	0.60
Marital status*					
Married or living with partner	311/2153	14.4	1.00		
Separated/divorced	44/269	16.2	1.15	(0.81-1.62)	0.44
Widowed	44/197	22.3	1.70	(1.19-2.43)	0.004
Never married	39/567	6.8	0.44	(0.31-0.62)	0.002
Work status*					
Full time employed	151/1465	10.3	1.00		
Part time/casual employed	65/538	12.1	1.20	(0.88-1.63)	0.25
Unemployed	6/75	7.9	0.75	(0.32-1.76)	0.51
Home duties/retired	200/953	21.0	2.32	(1.54-2.92)	< 0.001
Student/other	15/150	10.3	1.00	(0.57-1.74)	0.99

*Not stated category not reported

Those with hand pain, aching or stiffness more likely to be:

- Female;
- aged 50 years and over;
- adults living alone or with a partner and no children;
- .widowed; or
- retired or undertaking home duties.

Hand pain, aching and stiffness and AUSCAN scores

All respondents with hand pain were asked the AUSCAN® Hand Osteoarthritis Index. The AUSCAN has three scoring dimensions, pain, stiffness and physical functioning. The average scores for respondents who provided a sufficient number of responses to calculate a score are reported in Table 4.

Table 4: Mean AUSCAN scores for pain, stiffness and physical functioning

	N	Min	Max	Mean	SD
Pain	475	0	20	5.59	4.89
Stiffness	474	0	4	1.01	1.11
Physical functioning	458	0	36	9.88	9.56

Hand pain, aching and stiffness and grip strength

Participants undertaking a clinic assessment were tested for grip strength. Those with hand pain, aching or stiffness had a statistically significantly lower grip strength on both the left and right hands compared to those without pain, aching or stiffness (Table 5).

Table 5: Mean grip strength for participants with hand pain, aching or stiffness

	N	Left Mean	Left SD	N	Right Mean	Right SD
No pain/aching/stiffness	2677	34.63	12.06	2674	36.49	12.43
Pain/aching/stiffness	430	28.47	13.84	429	29.41	13.76

statistically significant difference, t-test $p < 0.05$

Quality of Life profile of participants with hand pain, aching or stiffness

Figure 1 shows the mean scores of the SF-36 subscales for those with and without hand pain, aching or stiffness. People with hand problems scored statistically significantly lower in all domains of the SF-36.

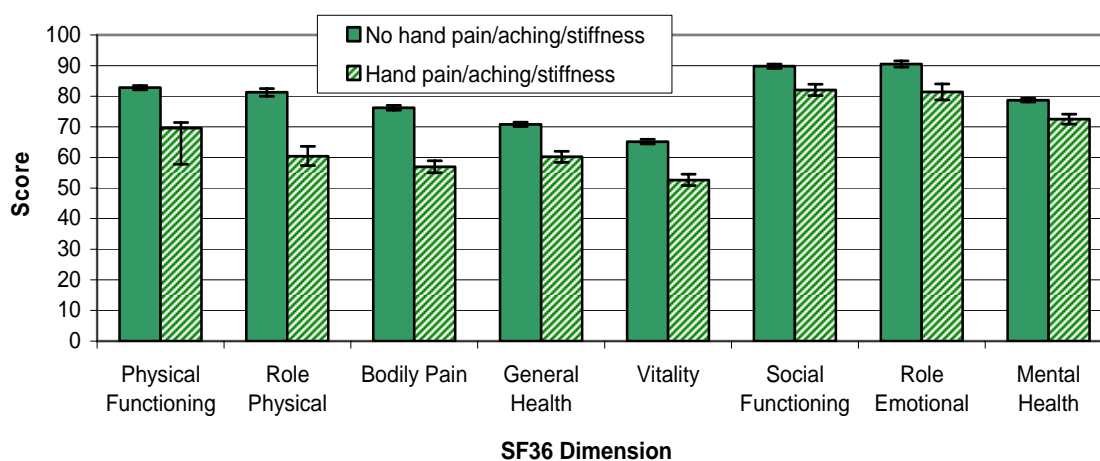


Figure 1: SF-36 mean scores for participants with and without hand pain, aching or stiffness

This document is one of a series of reports concerning Stage 2 of the North West Adelaide Health Study. Please see website for other reports in the series - <http://www.health.sa.gov.au/pros>

CONTACT DETAILS:

Population Research & Outcome Studies Unit – South Australian Department of Health
 PO Box 287 Rundle Mall Level 8 CitiCentre, 11 Hindmarsh Square, Adelaide SA 5000
 Telephone (08) 8226 7042 Facsimile (08) 8226 6244 Email: pros@health.sa.gov.au

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Participants with pain, aching or stiffness had lower grip strength

Participants with hand pain, aching or stiffness scored statistically significantly lower on all dimensions of the SF36