North West Adelaide Health Study

The effect of leisure time and occupational physical activity on shoulder pain

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Background

Leisure Time Physical Activity (LTPA)

- Physical benefits
  - Musculoskeletal function
- Psychosocial benefits
  - Physiological
  - Social

Background

Shoulder pain

Multiple risk factors for work related shoulder pain

- Physical
  - Repetition, vibration, load
- Psychosocial
  - Work related, non-work related
- Individual
  - Coping skills, work style, behaviour

Current Evidence

Effect of LTPA on musculoskeletal disease

- Some evidence of positive effects
- Predominant back and neck outcomes
- Few studies with focus on shoulder pain
- Workplace study populations
- No similar studies in Australia

Aim

To examine the potential for the protective effects of leisure time physical activity on shoulder pain in a working population

Methods

The North West Adelaide Health Study

- Participants working full or part time from 2000 – 2004
- Cross - sectional analysis

Leisure Time Physical Activity

- Self report
- Frequency, duration, intensity

Occupational Physical Activity (OPA)

- Job title

Methods – Outcomes

Current shoulder pain

- SPADI

Variables controlled for potential confounding :

- Age and gender
- Smoking
- BMI ≥ 30kg/m²
- Education and Income
- Depression – Centre for Epidemiological Studies Depression Scale

Data Analysis

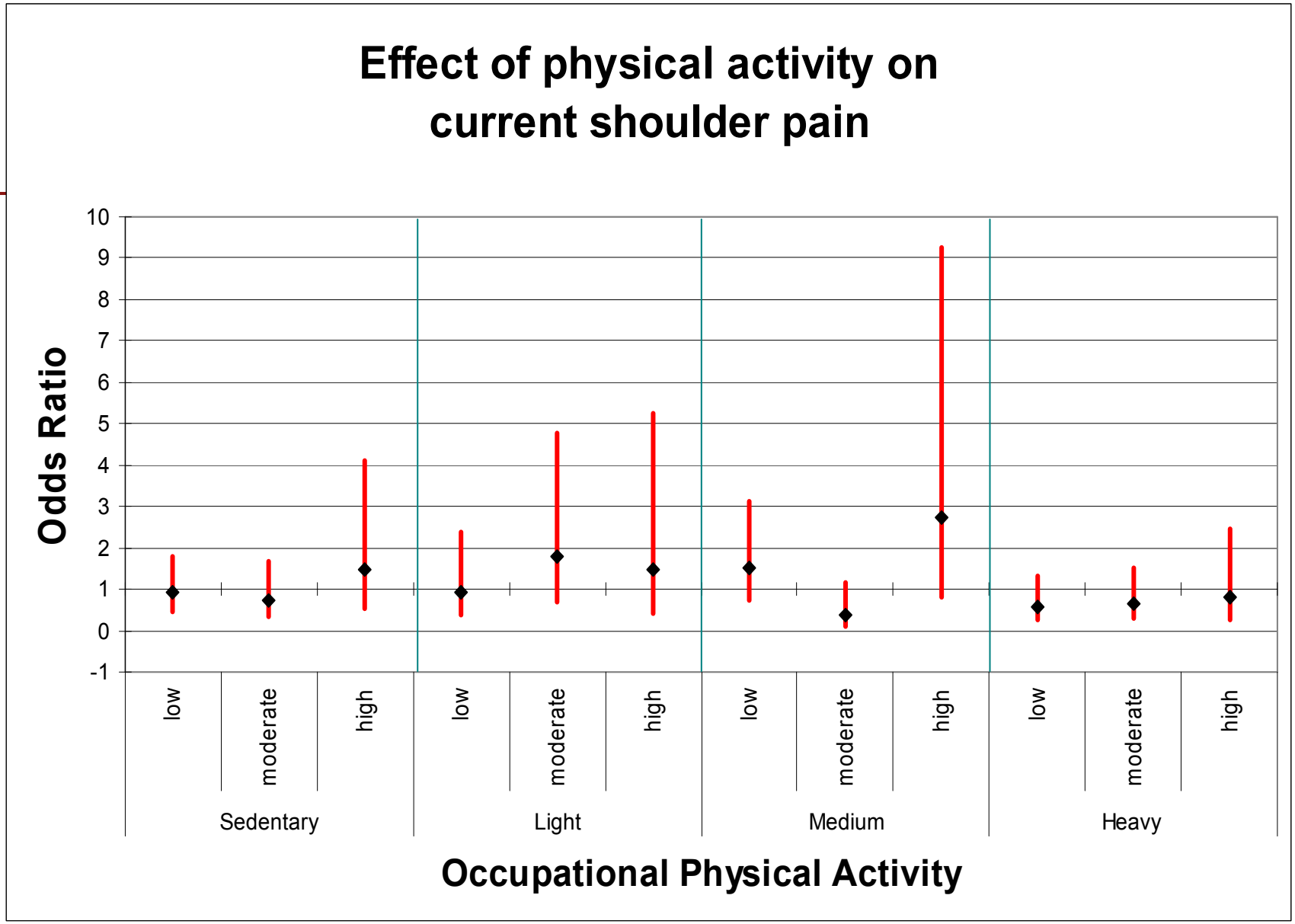
Logistic regression

- Univariate analysis
- Multivariate analysis
  - Retaining variables with $p \leq 0.05$
- Effect of LTPA, stratified by OPA level

Results

		Odds Ratio	CI
Age	30- 39 years	2.03	0.76-5.44
	40- 49 years	2.57	0.99-6.68
	50- 59 years	3.58	1.37-9.32
	60- 69 years	4.05	1.45-11.31
	70 + years	3.06	0.3- 31.50
Current Smoker		1.53	1.13-2.07
BMI $\geq 30 kg/m^2$		1.46	1.03-2.06
Depression		2.44	1.62-3.62

Effect of physical activity on current shoulder pain



Discussion

No association between LTPA, OPA and shoulder pain

- Consistent with other literature
- Shoulder pain associated with:
  - Age, depression, obesity and current smoking
  - Suggestion of a protective effect seen with LTPA in heavy OPA

Limitations

Study design

- Cross- sectional

Selection bias

- Healthy worker effect

Misclassification

- Leisure time physical activity
- Occupational physical activity

Conclusion

- No effect of leisure time physical activity on shoulder pain
- Shoulder pain associated with
  - Current smoking, obesity, depression
  - Potentially modifiable risk factors
  - Targets of further preventive strategies against shoulder pain
- Other health benefits of LTPA

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Ethics approval

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