

# A Systematic Review and Meta-Analysis on Gait Changes in Older People with Chronic Pain

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## Introduction

### Background

The prevalence of pain among people aged 60 and above is twice as high as in people aged under 60, with 60% of older people suffering from acute and chronic pain. Pain can result in changes to mobility, specifically gait. For older people, this can increase fall risk, which in turn will have an impact on quality of life and well-being.

This systematic review and meta-analysis aimed to establish the effect of pain and fear of pain on gait in older people.

## Methods

### Eligibility criteria

- Older people aged  $\geq 60$  years
- Objective measures of gait (gait speed, stride length, cadence, and double-limb support)
- Assessment of pain severity

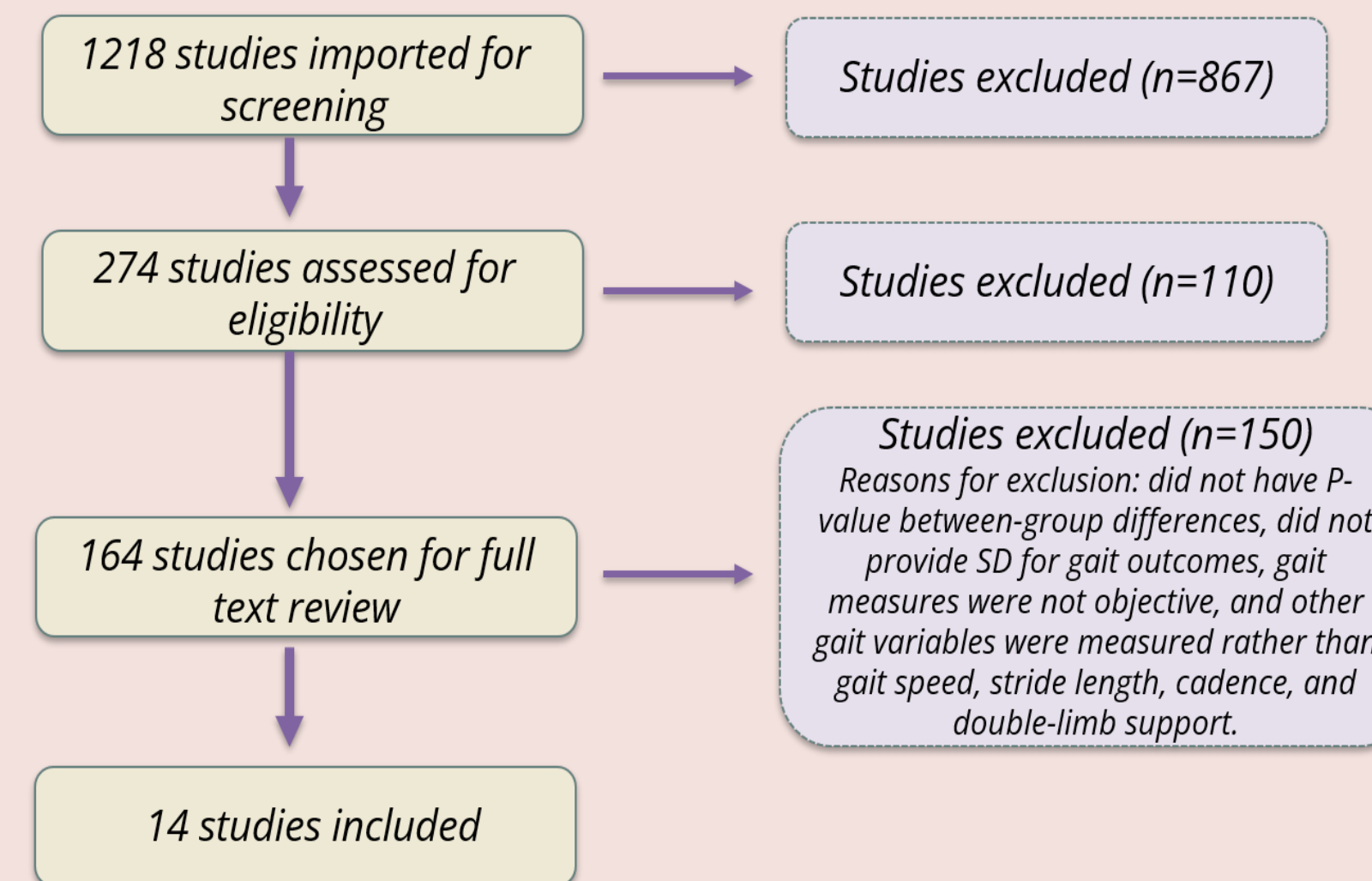
### Search strategy

- Searches for articles were conducted in February 2023

PubMed and Embase (Ovid)

## Results

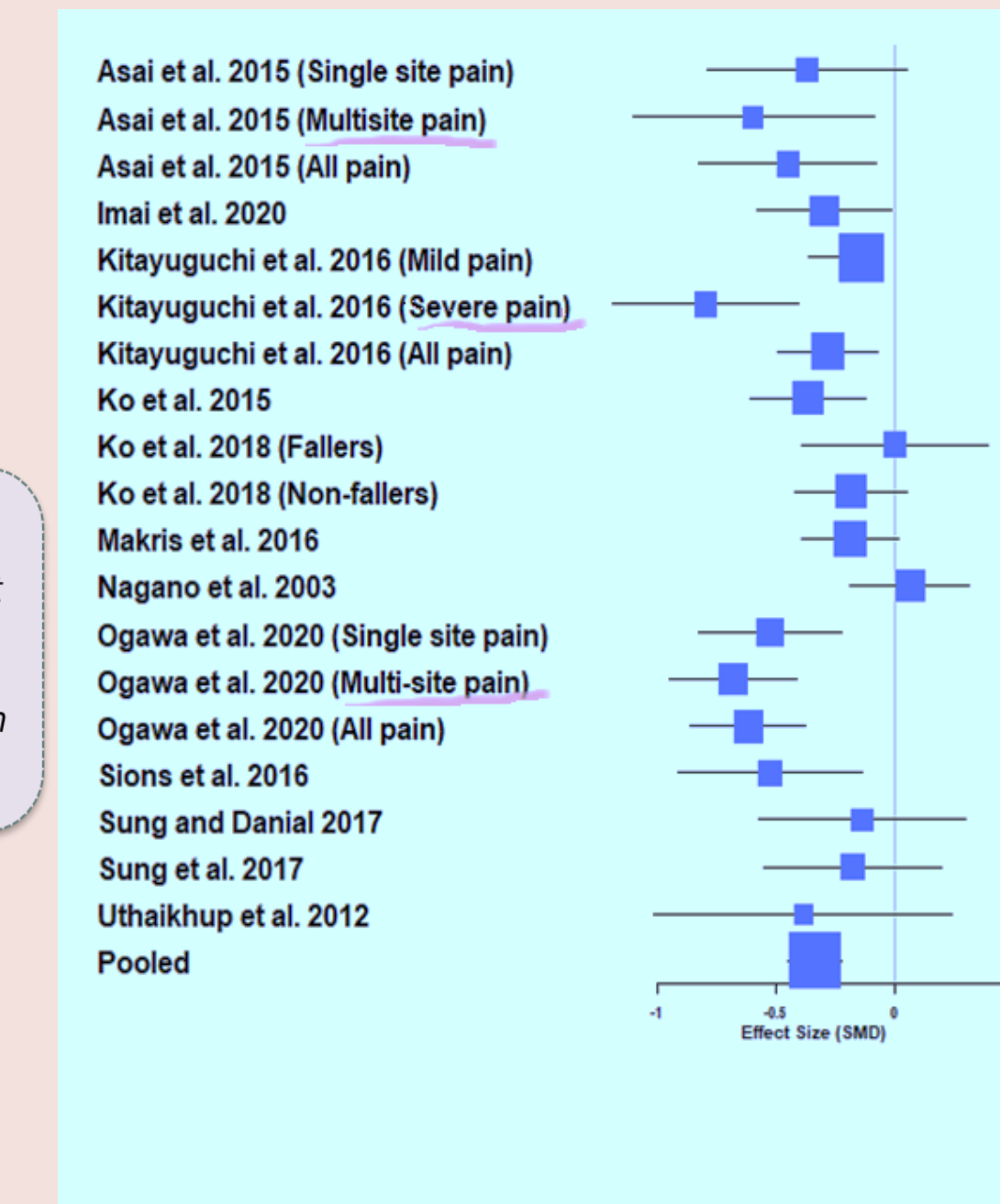
### Search results



### Studies characteristics

| Number of participants                        | Mean age (Pain group) | Mean age (control) | Pain assessment tool                             | Location of pain   | Quality of studies |
|---|-----------------------|--------------------|--|--|--------------------|
| 2875  | 71.0 years            | 69.6 years         | Asking questions (50%)<br>VAS (21%)<br>NRS (14%) | Back (36%)<br>Knee (28%)<br>Neck (14%)<br>Multi-site pain (7%) | Moderate and high  |
| 41% experiencing pain<br>59% healthy controls |                       |                    |  |  |                    |

### Gait speed



## Conclusion

An older person's walking speed is greatly impacted by persistent pain. More evidence is required on the effect of pain on other gait characteristics. These findings highlight the need for comprehensive pain management approaches that improve mobility and general quality of life in our ageing population while also relieving pain.

Chronic pain significantly decreases gait speed by 0.3 SMD in older people

### Other gait variables

There were no significant differences between people with pain and those without pain in terms of cadence, stride length, and double limb support time.

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