Workplace based rehabilitation of upper limb conditions: A Systematic Review

MUNIRA HOOSAIN B.SC.OT (UCT), M.OT (SU)
SUSAN DE KLERK, MARLETTE BURGER
Background
In support of workplace based rehabilitation...
Early identification and treatment
Collaboration
Reduced travel time and loss of work time
Use of actual job tasks in rehabilitation
Objective

effectiveness
workplace-based
rehabilitative
workers with upper limb conditions
work performance, pain, absenteeism, productivity and other outcomes, including ergonomic risk and mental health.
Methods

PRISMA
TRANSPARENT REPORTING OF SYSTEMATIC REVIEWS AND META-ANALYSES

PROSPERO
International prospective register of systematic reviews
Inclusion criteria

Studies
Participants
Interventions
Outcomes
Search strategy

Databases
- Cochrane
- Pubmed
- Scopus
- Web of Science
- Academic Search Premier, Africa-Wide Information, CINAHL
- OTSeeker
- PEDro
**PRISMA flow diagram**

**Identification**
- Records identified through database searching (n=1071)

**Screening**
- Duplicates (n=155)
  - Records after duplicates removed (n=916)

**Eligibility**
- Records screened (n=916)

**Included**
- Records excluded (n=808+28)

- Full text articles assessed for eligibility (n=80)
  - Full text articles excluded (n=55)

- Studies included in narrative synthesis (n=17; combined from 28 articles)

Additional records identified through screening reference lists of included articles (n=3)
Data extraction and analysis
Quality appraisal

9 high quality
7 medium quality
1 low quality

ALL INCLUDED
Types of studies

- Randomised controlled trials = 15
- Prospective parallel group = 1
- Single group = 1
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Types of workers

- 9 - Office/computer workers
- 2 - Industrial workers
- 2 - Slaughterhouse workers
- 1 - Lab technicians & office workers
- 1 - Medium work
- 1 - Managers, clerks, postal carriers, electrical/mechanical workers
- 1 - Healthcare workers, clerical, warehouse
Interventions

- Exercise
- Ergonomic controls
- Ergonomic training and workstation adjustments
- Clinic vs workplace based work hardening
- Nurse case manager training
- Physiotherapy vs Feldenkrais
- Ambulant myofeedback training
Exercise (n=6)

Positive results on pain, strength, functional ability, work ability, absenteeism, medication use.
Ergonomic controls (n=3)
Ergonomic training and workstation adjustments (n=4)
Work hardening (n=1)

Clinic based

Workplace based
Nurse case manager training (n=1)
Feldenkrais vs Physiotherapy (n=1)
Ambulant myofeedback training (n=1)
Strengths

- 9 databases used
- No language or date restrictions
Limitations

- No meta-analysis
- No grey literature – publication bias
- Search strategy – 7/8 studies from previous review not found!
Recommendations: Practice

Exercise programs work!

Workstation adjustment and ergonomic training
  ◦ Reduce ergonomic risk, MS symptoms, productivity

Ergonomic controls - varied

Workplace based work hardening, case manager training, Feldenkrais – implement with caution

Ambulant myofeedback training – not recommended
Recommendations: Research

Diversity!

High vs Low to middle income
Want to know more?