Rehabilitation and work ability: a systematic literature review
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CRD summary
The authors concluded that any type of rehabilitation may have an effect at an early stage of decreased work ability. They also concluded that multimodal medical rehabilitation needs to be combined with vocational rehabilitation, in order to reduce absenteeism and disability pensions in those with chronic disability. Due to poorly described statistical methods, the authors’ conclusions cannot be considered reliable.

Authors’ objectives
To evaluate the effectiveness of rehabilitation on sickness absenteeism, return to work and disability pensions among persons of working age.

Searching
The databases MEDLINE and PsycINFO were searched from 1970 to 2005. Search terms were reported. Reference lists of meta-analyses and systematic reviews were also searched.

Study selection
Eligible for inclusion in the review were original studies of any design that had a study population of working age.

Studies that were not conducted in a true working environment, such as classes or courses or among students; that did not provide information about study design and results in sufficient detail; and dissertations were excluded from the review.

Study designs included in the review were randomised controlled trials, cluster randomised controlled trials, clinical trials and cohort studies. Settings were population, occupational, healthcare and insurance based. The start of study recruitment, where reported, ranged from 1973 to 2002. The mean age of participants ranged from 37 to 56 years. Types of rehabilitation included in the review were: exercise, multimodal, return to work, counselling, education, psychological, vocational, and ergonomic. Rehabilitative interventions on participants with symptoms but no diagnosed disease or disorder were classified as "early rehabilitation", whereas rehabilitative interventions aimed at employees with chronic disease were classified as "rehabilitation". Outcome measures were sick leave less than one month, sick leave less than six months, disability pension, return to work, and physical well-being.

The authors did not state how the papers were selected for review, or how many reviewers performed the selection.

Assessment of study quality
Study quality (referred to as "results quality" by the authors) was assessed on sample size, control group, number of drop-outs and those missing from analyses, randomisation, treatment allocation, and follow-up time. The authors classified study quality as "poor" or "moderate" or "good", but it was unclear what constituted a poor, moderate or good quality study.

The authors did not state how the validity assessment was performed.

Data extraction
Data were extracted in order to calculate median rate difference per 1000 person-years, and median and mean risk ratios and 95% confidence intervals.

The authors did not state how many reviewers performed the data extraction.

Methods of synthesis
It appears that risk ratios were combined in a meta-analysis using the inverse variance method.

Results of the review
Forty five studies were included in the review (24 randomised controlled trials, one cluster randomised trial, three clinical trials and 17 cohort studies). Follow-up ranged from two weeks to five and a half years. Study quality was predominately moderate (31 studies), with 12 studies rated poor and two studies rated good.

The authors stated that there was a relationship between a number of interventions and outcomes. However, an examination of the mean risk ratios and 95% confidence intervals (CIs), revealed that there was only one statistically significant association, that of vocational rehabilitation and an increased return to work (mean risk ratio 1.50, 95% CI: 1.09 to 2.05). It should be noted that the authors stated this finding was based on weak evidence.

Authors' conclusions
Any type of rehabilitation may have an effect at an early stage of decreased work ability, being ineffective later on if applied as the only mode of rehabilitation. Where chronic disability is already present, multimodal medical rehabilitation needs to be combined with vocational rehabilitation in order to reduce absenteeism and disability pensions. It is essential that the workplace is integrated into rehabilitation.

CRD commentary
The review addressed a clear research question. The inclusion criteria were adequate. The search strategy was adequate. Study quality was assessed, but the authors did not specify what criteria were used to define poor, moderate or good quality studies. Therefore, the reliability of the evidence cannot be determined. The authors did not state how many reviewers were involved in any of these review process, nor how disagreements were resolved, so the review may be subject to reviewer error or bias. The methods of statistical analysis were poorly described and made interpretation of the results difficult. The authors also stated that there were a number of associations between interventions and outcomes, when in fact it appeared that only vocational rehabilitation was associated with an increase in return to work. The authors' conclusions do not appear to reflect the evidence presented and cannot be considered reliable.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that more research is needed to clarify the true potential of different types of rehabilitation.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.