Organizational wellness programs: a meta-analysis
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CRD summary
The authors concluded that participation in an organisational wellness program was associated overall with lower absenteeism rates and higher job satisfaction. However, due to methodological limitations, paucity of study details and low methodological quality of the included studies, the authors’ conclusions may not be reliable.

Authors' objectives
To evaluate the effectiveness of participation in organisational wellness programmes on absenteeism and job satisfaction.

Searching
InfoTrac, ProQuest, PsycINFO and Dissertation Abstracts International were searched from 1980 to 2005. Search terms were reported. Reference lists of retrieved articles were scanned and organisational publications and websites were searched for additional articles. Published and unpublished studies were eligible for inclusion.

Study selection
Studies that compared participation against non participation of organisational wellness programs (comprehensive or fitness only) conducted either on or off site and reported outcomes on absenteeism and/or job satisfaction that were published between 1980 and 2005 were eligible for inclusion. Included studies had to report effect sizes.

The type of wellness programmes in the included studies were mainly fitness only programmes; others included education only or were comprehensive programmes that appeared to include physical, psychological and informational components. Control groups in the included studies were no treatment and no treatment during study with allowed subsequent participation. Large corporate studies and smaller controlled interventions were included. Organisations in the included studies represented a number of sectors including public, banking, automotive, transportation, education, medical, food, insurance and pharmaceutical. Absenteeism was assessed using voluntary or involuntary methods or both. Job satisfaction was assessed using a range of relevant tools.

The authors stated neither how papers were selected for the review nor how many reviewers performed the selection.

Assessment of study quality
Validity assessment criteria included controlling for pre-test differences, reliability of job satisfaction measures and method of calculation for absenteeism. Studies that meet all these criteria were deemed to be of high methodological rigour. Studies which did not utilise any of these criteria were deemed to be of low methodological rigour.

Two reviewers independently assessed validity; disagreements were resolved through discussion.

Data extraction
Data were extracted for the type of absenteeism measure (involuntary, voluntary plus involuntary or not reported) and type of job satisfaction measure. For each study a standardized mean difference effect size (ES) (size of treatment effect compared to the control group) was calculated using Cohen's $d$ statistic. Two reviewers independently extracted data. Disagreements were resolved through discussion.

Methods of synthesis
Results from individual studies were combined using methods by Lipsey and Wilson. Pooled weighted effect sizes with 95% confidence intervals (CI) were calculated separately for each outcome of interest. Heterogeneity was assessed with the $Q$ statistic. Sensitivity analyses were conducted to explore the effect of the type of wellness program and methodological rigour of each study on the results. Publication bias was assessed using the fail-safe $N$ calculation.
Results of the review
Seventeen studies were included in the review (n=7,705 for absenteeism and n=2,480 for job satisfaction). Eight studies had a quasi-experimental design, one was described as experimental, four as longitudinal, and two as other. Only two studies were reported to use random assignment to groups. Five studies that assessed absenteeism were rated as high methodological quality and five as low quality. Three studies that evaluated job satisfaction were rated as high methodological quality and four studies as low quality.

Findings indicated that participation in an organisational wellness program was associated with lower levels of absenteeism (ES -0.30, 95% CI -0.48 to -0.22, p<0.00; 10 studies, n=7,705). The effect size was considered low to moderate. There was evidence of significant statistical heterogeneity for this analysis (p<0.05). Sensitivity analysis found neither type of wellness program nor level of methodological quality had any statistical effect on the results.

Findings also reported that participants in wellness programs were more likely to report higher job satisfaction (ES 0.42, 95% CI 0.05 to 0.80, p<0.03; seven studies, n=2,480). The effect size was considered moderate. Evidence of statistical heterogeneity was found for this analysis (p<0.01). Sensitivity analysis suggested there might be a possible effect of low methodological quality studies on the results for job satisfaction (p=0.01), but not for high methodological studies.

There was some evidence of publication bias for methodological rigour of studies that evaluated job satisfaction. No evidence of publication bias was found for other analyses.

Authors' conclusions
The findings suggested that participation in an organisational wellness program was associated overall with lower absenteeism rates and higher job satisfaction.

CRD commentary
Inclusion criteria were clearly defined for intervention, outcomes and study design, but not for participants. Some relevant sources were searched, although a number of the named databases were gateways to other databases, so the exact databases searched was unclear. Some attempts were made to reduce publication bias. Formal assessment of publication bias was conducted and was not found for overall results; some indications of publication bias were indicated for sensitivity analyses. It was unclear whether language limitations were applied. Methods were used to minimise reviewer errors and bias in the assessment of validity and extraction of data, but it was unclear whether similar steps were taken in study selection. Validity was assessed using specified criteria and results of the assessment were reported. No details were reported for participants and only limited details were reported on interventions. It was, therefore, not possible to determine the generalisability of the findings and whether it was appropriate to combine the studies in a meta analysis. Samples sizes were small for some of the included studies. Less than half of the included studies were of high methodological rigour and only two studies were reported as being randomised. A number of studies reported participants as being self-selected. Non-randomised studies were subject to various potential biases and the results form these studies and any synthesis may not be reliable. Due to methodological limitations, paucity of study details and low methodological quality of the included studies, the authors' conclusions may not be reliable.

Implications of the review for practice and research
Practice: The authors stated no implications for practice.
Research: The authors stated that further methodologically robust research was needed to evaluate variables including incentives for participating in wellness programs, organisational support and work-life balance.

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Bibliographic details
Record Status
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.