Comprehensive health promotion interventions at the workplace: experiences with health circles in Germany
Aust B, Ducki A

CRD summary
This review assessed the effectiveness of health circles (comprehensive worksite health promotion interventions). The authors concluded that there was weak evidence that health circles improve physical and psychosocial working conditions and workers' health, well-being and sickness absence. Given the paucity of the evidence base reviewed, the authors' conclusions may be overly optimistic. Further research is warranted.

Authors' objectives
To assess the effects of health circles (comprehensive worksite health promotion interventions).

Searching
Several German and international databases were searched from 1980 to 2001: PSYNDEX, SOMED, PsycFIRST (via OCLC), MEDLINE, PsycLIT, ZPID: Datenbank, Diplomarbeiten, Social Sciences Index (via OCLC), Dissertation Abstracts Online (via OCLC), OPAC of the German Library Frankfurt, and Psychologische Online Dokumente. The search terms were given in the paper. Journals, books and conference proceedings were handsearched.

Study selection
Study designs of evaluations included in the review
Properly conducted randomised controlled trials (RCTs), non-randomised controlled trials and studies without a control group or randomisation, but that included an evaluation, were eligible for inclusion.

Specific interventions included in the review
Studies of health circles were eligible for inclusion. Most of the included studies used interventions based on the Dusseldorf model (mixed hierarchy meetings), while some used the Berlin model (employees only). The majority of studies made changes to the underlying model. Most of the studies reported on one, two or three health circles; others summarised a number of health circles in different companies. About half of the studies were set in steel industry companies; others were set in the chemical industry, hospitals and a variety of different production companies, telecommunications companies and the service industry.

Participants included in the review
Studies of employees were included. Some studies included only members of the health circle; others included all or some of the employees in departments where health circles were conducted.

Outcomes assessed in the review
Studies that assessed measures of health and well-being were included. The review assessed satisfaction with health circles, implementation of improvement suggestions, improvement in working conditions, health outcomes and sickness absenteeism. Studies assessed outcomes using questionnaires, self-report and data from company health surveillance reports.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
Studies were assessed based on study design, as suggested by Wilson (see Other Publications of Related Interest). Only studies rated as level 3 or above were eligible. The authors did not state who performed the validity assessment.
Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction. The results from each review were extracted and tabulated.

Methods of synthesis
How were the studies combined?
The studies were grouped by outcome and a narrative synthesis was undertaken.

How were differences between studies investigated?
Potential causes of different results among the studies were not discussed.

Results of the review
Eleven studies that reported 81 health circles were included: 3 non-randomised controlled studies, one before-and-after study and 7 retrospective studies. The sample size ranged from 8 to 2,244.

Satisfaction with health circles.
Overall, the participants in health circles reported high satisfaction with the group composition, number of meetings, and the process of identifying problems at work and developing suggestions for improvement. However, one study reported dissatisfaction with information flows about the health circles, whilst a second study found that 40% of employees involved in the health circle did not approve of the approach.

Implementation of improvement suggestions.
Most companies implemented a considerable number of the improvements suggested by the health circle: 7 studies (reporting on 64 health circles) found that 45 to 86% of suggested improvements were implemented.

Improvement of working conditions.
All but one study found at least some improvement in working conditions.

Health outcomes (5 studies assessed this outcome using self-report measures, including 2 studies with control groups).
Three studies used some form of statistical analysis. Four of the 5 studies found positive changes in self-rated health.

Sickness absenteeism (7 studies, with the evaluation based on company or health insurance sickness absence data).
None of the studies used statistical tests. The only study with a control group found that sickness rates increased in all groups. One study found no change in the sickness rates, while 5 studies found a decrease in the sickness rates.

Cost information
One of the included studies found that sickness absence decreased by half (from 10% to 5%), resulting in an overall saving of about $1 million.

Authors' conclusions
There was weak evidence to suggest that health circles improve physical and psychosocial working conditions and workers' health, well-being and sickness absence. Further research is required.

CRD commentary
The review question was clear in terms of the study design and intervention. The inclusion criteria were not explicitly defined in terms of the participants or outcomes, although the outcomes assessed in the review were clear. The search
included attempts to locate unpublished studies, but it was not stated whether any language restrictions were applied; language bias may, therefore, have been introduced. The methods used to select the studies, assess validity and extract the data were not described, so it is not known whether any efforts were made to reduce reviewer errors and bias. The validity assessment was limited to study design.

Given the small number of diverse studies, a narrative synthesis was appropriate. However, the number of studies reporting specified outcomes was not consistently reported and the authors did not discuss potential reasons for different results among the studies. The studies were of a poor quality and few interventions were adequately evaluated. This supported the authors' conclusions that the evidence was weak and that further research is required. There did not appear to be sufficient evidence to draw conclusions about efficacy. The authors' conclusions that health circles were effective appeared over-optimistic given the paucity of the evidence base.

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

Research: The authors stated that there is a need for more studies that use, at least, a non-randomised controlled design.

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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.