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[Intervention Review]

Preventing occupational stress in healthcare workers

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ABSTRACT

Background

Healthcare workers can suffer from occupational stress as a result of lack of skills, organisational factors, and low social support at work. This may lead to distress, burnout and psychosomatic problems, and deterioration in quality of life and service provision.

Objectives

To evaluate the effectiveness of work- and person-directed interventions compared to no intervention or alternative interventions in preventing stress at work in healthcare workers.

Search methods

We searched the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, PsycINFO, CINAHL, NIOSHTIC-2 and Web of Science up to November 2013.

Selection criteria

Randomised controlled trials (RCTs) of interventions aimed at preventing psychological stress in healthcare workers. For organisational interventions, interrupted time-series and controlled before-and-after (CBA) studies were also eligible.

Data collection and analysis

Two review authors independently extracted data and assessed trial quality. We used Standardised Mean Differences (SMDs) where authors of trials used different scales to measure stress or burnout. We combined studies that were similar in meta-analyses. We used the GRADE system to rate the quality of the evidence.

Main results

In this update, we added 39 studies, making a total of 58 studies (54 RCTs and four CBA studies), with 7188 participants. We categorised interventions as cognitive-behavioural training (CBT) (n = 14), mental and physical relaxation (n = 21), combined CBT and relaxation (n = 6) and organisational interventions (n = 20). Follow-up was less than one month in 24 studies, one to six in 22 studies and more than six months in 12 studies. We categorised outcomes as stress, anxiety or general health.

There was low-quality evidence that CBT with or without relaxation was no more effective in reducing stress symptoms than no intervention at one month follow-up in six studies (SMD -0.27 (95% Confidence Interval (CI) -0.66 to 0.13; 332 participants). But at one to

six months follow-up in seven studies (SMD -0.38, 95% CI -0.59 to -0.16; 549 participants, 13% relative risk reduction), and at more than six months follow-up in two studies (SMD -1.04, 95% CI -1.37 to -0.70; 157 participants) CBT with or without relaxation reduced stress more than no intervention.

CBT interventions did not lead to a considerably greater effect than an alternative intervention, in three studies.

Physical relaxation (e.g. massage) was more effective in reducing stress than no intervention at one month follow-up in four studies (SMD -0.48, 95% CI -0.89 to -0.08; 97 participants) and at one to six months follow-up in six studies (SMD -0.47; 95% CI -0.70 to -0.24; 316 participants). Two studies did not find a considerable difference in stress between massage and taking extra breaks.

Mental relaxation (e.g. meditation) led to similar stress symptom levels as no intervention at one to six months follow-up in six studies (SMD -0.50, 95% CI -1.15 to 0.15; 205 participants) but to less stress in one study at more than six months follow-up. One study showed that mental relaxation reduced stress more effectively than attending a course on theory analysis and another that it was more effective than just relaxing in a chair.

Organisational interventions consisted of changes in working conditions, organising support, changing care, increasing communication skills and changing work schedules. Changing work schedules (from continuous to having weekend breaks and from a four-week to a two-week schedule) reduced stress with SMD -0.55 (95% CI -0.84 to -0.25; 2 trials, 180 participants). Other organisational interventions were not more effective than no intervention or an alternative intervention.

We graded the quality of the evidence for all but one comparison as low. For CBT this was due to the possibility of publication bias, and for the other comparisons to a lack of precision and risk of bias. Only for relaxation versus no intervention was the evidence of moderate quality.

Authors' conclusions

There is low-quality evidence that CBT and mental and physical relaxation reduce stress more than no intervention but not more than alternative interventions. There is also low-quality evidence that changing work schedules may lead to a reduction of stress. Other organisational interventions have no effect on stress levels. More randomised controlled trials are needed with at least 120 participants that compare the intervention to a placebo-like intervention. Organisational interventions need better focus on reduction of specific stressors.

PLAIN LANGUAGE SUMMARY

Preventing occupational stress in healthcare workers

Background

Healthcare workers suffer from work-related or occupational stress. Often this is because healthcare workers face high expectations and they may not have enough time, skills and social support at work. This can lead to severe distress, burnout or physical illness. In the end, healthcare workers may be unable to provide high quality healthcare services. Stress and burnout can also be costly because affected healthcare workers take sick leave and may even change jobs.

We evaluated how well different ways to prevent healthcare workers' stress or burnout work.

Study characteristics

We included 58 studies that included altogether 7188 participants. Fiftyfour of the included studies were randomised controlled studies and four were non-randomised studies. We categorised the interventions as either cognitive-behavioural training, mental and physical relaxation, or organisational changes.

Key findings and quality of the evidence

Cognitive-behavioural interventions

According to six studies, there was low-quality evidence that cognitive-behavioural training decreased stress with about 13% when compared to no intervention and when measured at follow-up periods ranging from less than a month up to two years. It is unclear how relevant this reduction is for a person with stress. The results were similar when cognitive-behavioural training was combined with relaxation. However, in three studies, stress levels were similar after a cognitive-behavioural training course compared to other training that was not focused on stress management but on the content of care.

Mental and physical relaxation interventions

In 17 studies there was low- to moderate-quality evidence that both mental and physical relaxation led to a reduction of 23% in stress levels compared to no intervention.

Organisational interventions

Organisational interventions were aimed at changing working conditions in 20 studies, improving support or mentoring in six studies, changing content of care in four studies, improving communication skills in one study and improving work schedules in two studies. Shorter or interrupted work schedules reduced stress levels in two studies but there was no clear benefit of any of the other organisational interventions.

Conclusions

We conclude that cognitive-behavioural training as well as mental and physical relaxation all reduce stress moderately. Changing work schedules can also reduce stress, but other organisational interventions have no clear effects. We need randomised studies with at least 120 participants and preferably a single component intervention. Organisational interventions need to be better focused on addressing specific factors that cause stress.