

## Effectiveness of interventions to reduce emergency department staff occupational stress and/or burnout

### Recommendations\*

- Individual-focused interventions including educational interventions and mindfulness-based interventions should be considered as a strategy for reducing occupational stress among emergency department staff. **(Grade A)**
- Organization-directed interventions such as implementing changes that propagate staff safety and wellness to alleviate emergency department staff stress could be considered if the organization has adequate resources and relevant stakeholder support. **(Grade B)**

*\*Please refer to: JBI's Grades of Recommendation*

### Information Source

This Best Practice Information Sheet is a summary of evidence derived from a systematic review published in 2020 in JBI Evidence Synthesis <sup>[1]</sup>

### Background

Occupational stress is defined as the emotional response resulting from misalignment of work-related expectations/ pressures and the employee's knowledge, capacity, and ability to cope.[1] Due to the nature of the emergency department (ED), health professionals are more likely to experience stress and burnout which can lead to poor performance, increased absenteeism and decreased productivity. These effects, in turn, can have a negative impact on the staff member's well-being, staff comradery and morale, patient safety and health organizational outcomes. Interventions to promote staff well-being include organization-directed strategies and individual-focused interventions. Organization-directed interventions include modification of workplace policies and procedures that reduce the stress generated by the job. Conversely, individual focused strategies such as cognitive behavior therapy, mindfulness and education promote the individual's tolerance, resilience, communication skills and/or coping abilities.

### Objectives

The purpose of this Best Practice Information Sheet is to present the best available evidence on effective interventions for improving ED workers' occupational stress and/or burnout.

### Types of intervention

The review considered studies evaluating the effectiveness of workplace interventions aimed to improve or alleviate occupational stress experienced in the ED.

The interventions were organization-directed strategies including changes in resources, working environment, work tasks, workload, and/or shift length or individual-focused interventions such as mindfulness-based strategies, cognitive-behavioral based interventions, pharmacological/herbal medications, lifestyle changes (diet/exercise) and educational programs.

### Quality of the research

The review included four randomized controlled trials, eight quasi- experimental studies, and two quasi-experimental components of mixed-methods design studies. All the studies were critically appraised by two independent reviewers using JBI standardized critical appraisal tools and all 14 were included irrespective of methodological quality. Most studies were reported to be of moderate-high quality. Only quantitative data were extracted from each of the included studies using a JBI standardized data extraction tool.

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## Findings

All studies were published between 2011 and 2019. Included studies were conducted in United States (n=4), Europe (n=4), Australia (n=2), Asia (n=2), Middle East (n=1), and Africa (n=1). Participants were ED nurses, ED physicians, allied health, non-clinical administrative staff or emergency medical technicians.

Ten of the 14 studies included in this review utilized individual-based interventions and the remaining four studies evaluated organization-based interventions. The outcomes reported included: stress, burnout, or a combination of both, depression, compassion fatigue and anxiety.

### Individual-focused interventions

Educational interventions (n=6) and mindfulness-based strategies (n=4) were evaluated by 10 individual-focused intervention studies. While interventions varied in terms of duration, mode and delivery, post hoc analysis of pre and post stress levels showed that education interventions were consistently associated with reduced stress levels as measured by the Maslach Burnout Inventory (MBI) and the Professional Quality of Life (ProQOL) scales. Educational interventions included interactive group seminars with multimedia resources such as handouts and DVDs (single session), weekly psychologist-led mental health promotion training for 12 weeks, twice monthly autogenic training with self-hypnosis for 16 weeks, twice weekly wellness education programs covering stress, diet and exercise, substance abuse, malpractice, and patient mortality, twice weekly wellness education programs covering conflict management and communication skills training.

Three out of the four studies on mindfulness-based strategies reported a statistically significant reduction in stress levels. Mindfulness training was delivered as repeated brief guided meditation sessions following a 12-hour shift. Weekly mindfulness workshops, strategies including '4-minute pause' in morning handover, or weekly, 30-minute drop-in sessions also reduced stress significantly. Two studies on mindfulness-based interventions were pooled in a fixed effects model meta-analysis. Both studies used Perceived Stress Scale for assessment of stress. Pooling of results did not demonstrate statistical significance between the mindfulness group and the control group (Standard mean difference -0.32; 95%CI (-0.84,0.20) heterogeneity:  $\chi^2 = 0.01$ ,  $p = 0.93$ ,  $I^2 = 0\%$ ).

### Organization-focused interventions

Only a limited number of organization-based intervention studies (n=4) were eligible for the review. The results were contradicting, ranging from no effect to non-significant improvements in stress level or increased burnout levels. Interventions such as implementing safety and wellness changes which involved employees in decision-making and improving communication with management staff were found to significantly improve stress levels. Altered working conditions including telemedicine to allow senior ED consultants to work from home on weekends significantly reduced emotional exhaustion. Personal accomplishment and depersonalization also improved but this was not statistically significant.

Team development activities that eliminate unnecessary processes and streamlined ED flow and team coordination in a 'Training within Industry project' significantly improved emotional exhaustion. In addition, personal accomplishment scores of emergency medical technicians increased significantly. Regular multi-disciplinary meetings that implemented solutions to address work stressors increased both emotional exhaustion and depressive symptoms, but this finding was not statistically significant.

## Conclusions

The evidence on individual-based interventions for ED staff members' occupational stress, while not strong, highlights that educational strategies and mindfulness-based interventions are most likely to be beneficial. Involvement of staff members in organizational changes that improve occupational safety and wellness also appear to be effective, as does involvement in team development activities. Multi-professional meetings may increase stress levels. Organization-dependent interventions need to be investigated further with additional high-quality studies to ascertain the effectiveness of these strategies.

## Implications for practice

Individual-focused interventions including both educational interventions and mindfulness-based interventions can potentially reduce stress and burnout among ED staff and should be considered for reducing ED staff occupational stress. Organization-directed interventions such as implementing changes that propagate staff safety and wellness where staff participate in decision making with the management have the potential to reduce ED staff stress, but it is important to recognize and remediate associated burnout when multi-professional team meetings are involved.

# EFFECTIVENESS OF INTERVENTIONS TO REDUCE EMERGENCY DEPARTMENT STAFF OCCUPATIONAL STRESS AND/OR BURNOUT

## POPULATION

Healthcare professionals working in the emergency department

## INTERVENTIONS

Any intervention designed to manage acute or chronic occupational stress or burnout

## OUTCOMES

Perceived or biological measures of occupational stress and burnout

## EFFECTIVE INTERVENTIONS

### INDIVIDUAL-FOCUSED



#### EDUCATION SESSIONS

- ▶ Interactive group seminars
- ▶ Handouts and DVDs
- ▶ Psychologist-led mental health promotion training
- ▶ Autogenic training with self-hypnosis
- ▶ Wellness education programs covering, stress, diet and exercise, substance abuse, malpractice, patient mortality, conflict management and communication skills training.

#### MINDFULNESS TRAINING

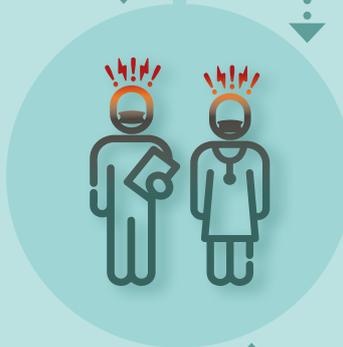
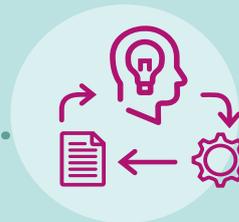
- ▶ Brief guided meditation
- ▶ Mindfulness workshops
- ▶ '4-minute pause' during morning handover
- ▶ 30-minute drop-in sessions



### ORGANIZATION-FOCUSED



- ▶ Implement local wellness champions to increase benefit and sustainability
- ▶ Involve employees in decision-making in safety and wellness changes
- ▶ Improve communication with management staff
- ▶ Alter working conditions (e.g. telemedicine, to allow senior ED consultants to work from home)
- ▶ Team activities that eliminate and streamline ED flow
- ▶ Team coordination in a 'Training within Industry project'



## RECOMMENDATIONS FOR PRACTICE

### INDIVIDUAL-FOCUSED

Individual-focused interventions including educational interventions and mindfulness-based interventions should be considered as a strategy for reducing occupational stress among emergency department staff.

(Grade A)

### ORGANIZATION-DIRECTED

Organization-directed interventions such as implementing changes that propagate staff safety and wellness to alleviate emergency department staff stress could be considered if the organization has adequate resources and relevant stakeholder support.

(Grade B)

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## References

1. Xu H, Kynoch K, Tuckett A, Eley R. Effectiveness of interventions to reduce emergency department staff occupational stress and/or burnout. JBI Evidence Synthesis. 2020;18(6):1156-88.

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This Best Practice Information Sheet was developed by JBI and derived from the findings of a single systematic review published in JBI Evidence Synthesis. Each Best Practice Information Sheet has undergone a two stage peer review by nominated experts in the field.

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