

Interventions reduce burnout among nurses and improve patients' safety: Systematic review

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Abstract

Background: There is conflicting data regarding the kinds, amounts, lengths, and methods of burnout therapies, as well as how clinical nurses rate their own burnout. The purpose of this study was to assess clinical nurses' burnout interventions.

Method: This study examines the benefits of burnout reduction strategies for clinical nurses through a comprehensive review. We followed the PRISMA guidelines' suggestions. In order to obtain results that appropriately represented the effects of burnout therapies, we selectively included research published between 2019 and 2024. A work written entirely in English. Search engines from the Cochrane Library, CINAHL, PubMed, and Scopus were used.

Result: Six studies were considered in this systematic review, of which two were interventional studies and four were randomized controlled trials. There were studies done in China, Turkey, Iran, Spain, and Saudi Arabia. A workshop on burnout prevention, stress-coping and cognitive behavioral therapy, emotional freedom strategies, emotional regulation training, and a mindfulness training program are some of the interventions that are used. Among the burnout metrics employed were Pines & Aronson, MBI, and ProQoL. There were 337 nurses in all in the interventional groups and 324 in the control groups.

Conclusion: Burnout was successfully decreased by a mindfulness training program, emotional freedom techniques, emotional regulation training, stress-coping and cognitive behavioral therapy, and a burnout prevention course.

Keywords: Burnout; Nurse; Interventions; Patient's safety

1. Introduction

Compared to other workers, health professionals experience higher levels of occupational stress or burnout (1). Inadequate stress-reduction techniques to handle the pressures of work-related life can have detrimental effects on an individual's physical and mental health in addition to their productivity at work (2).

Employees who care for elderly and geriatric patients in hospitals for extended periods of time are subjected to a variety of circumstances that may cause burnout syndrome (3). Low job satisfaction, a higher likelihood of missing work, and a higher desire to resign are all linked to burnout (4).

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Providing care for individuals suffering from dementia entails a great deal of occupational stress, which may lead to discontent among staff members and psychological fatigue (5). Burnout, a chronic psychological illness characterized by perceived job demands that exceed perceived resources in the work environment, is a contributing factor to stress (3).

The underlying theoretical framework posits that the primary sources of stress experienced by nursing home personnel are high levels of compassion fatigue and burnout, which are identified by the nature of their jobs (6). Stress among caregivers can be increased by a variety of factors, such as the type and intensity of difficult behaviors exhibited by dementia patients, the level of support provided by staff management, the nature of the work itself, and work overload.

Additionally, studies have demonstrated that compassion fatigue can have an impact on the professional caregiver in addition to the workplace, leading to higher turnover, more sick days, and worse productivity (7).

Over the past 20 years, there has been a notable surge in both scientific and public interest in mindfulness-based therapies (8). A method of experiencing daily life that centers attention and awareness on the present moment without passing judgment is known as mindfulness. The three main therapeutic tenets of detachment, acceptance, and compassion are all included in mindfulness (9).

Many metrics have been used to quantify burnout. Although it is frequently measured as three aspects based on the International Disease Classification, burnout can be measured as a single notion as well (10,11). Studies that employed burnout as a single concept should be included in the evaluation of burnout interventions in order to be inclusive. In light of this, our goal was to examine clinical nurse burnout therapies.

2. Methods

This study uses a systematic review to investigate the advantages of burnout reduction interventions among clinical nurses. We adhered to the recommendations of PRISMA guidelines. We chose to include studies that came out between 2019 and 2024 in order to get findings that accurately represented the burnout interventions effects. The following were the requirements for inclusion: 1. Licensed Practice Nurses or Registered nurses who were directly caring for patients in hospitals; 2. Any kind of intervention program designed to lessen burnout among nurses; 3. The comparison groups consisted of control group that got an alternative burnout intervention, or an inactive control group received standard care; 4. The outcome of interest was burnout. 5. An experiment or randomized controlled trial; 6. A publication that is written in English.

We used PubMed, CINAHL, Scopus, and the Cochrane Library search engines. Among the search phrases are; nurse; burnout, registered nurse, healthcare provider, healthcare worker, nursing staff, health care provider, health personnel, health care worker, health professional, burn-out, burnout, burn out, intervention, treatment, program, training, therapy, exercise, mindfulness, practice, meditation.

To handle the collected studies and eliminate the duplicates, Endnote 20.0 was utilized. After the research were retrieved, irrelevant studies were eliminated by going over the titles and abstracts. After that, a full-text review of the research was carried out. We worked individually during the process and got together once a week to talk about it and choose the studies.

3. Results

In this systematic review we included 6 studies (Fig 1), 4 were randomized controlled trials (12–15), and 2 were interventional studies (11,16). One study conducted in Saudi Arabia (12), one in Spain (16), two in Iran (13,15), Turkey (11), China (14). Interventions used include Mindfulness training program (14,16), Emotional freedom techniques (11), Emotional regulation training (15), stress-coping & cognitive behavioral therapy (13), and burnout prevention workshop (12). Burnout measures used included; ProQoL (15,16), MBI (12–14), and Pines & Aronson (11). Overall interventional groups included 337, while control groups include 324 nurses. The duration of intervention ranged from 20 minutes in Dincer et al. (11) study to 10 weeks in Bagheri et al. study (13). Most frequently, burnout was assessed twice: once prior to the intervention and once just after (Table 1).

Pérez et al.'s 2022 study reports that there were notable differences between the two groups for the Burnout and Compassion Fatigue subscales, with the experimental group (Mindfulness training program) showing a notable increase. Both of these findings on compassion fatigue persisted three months after the intervention ended. The

treatment was effective, as evidenced by Alenezi et al.'s 2019 results, which showed a noticeable decline one month after the intervention (burnout prevention workshop). Burnout scores had increased at six months, but they had not yet returned to baseline levels. An important decrease in stress, burnout, and anxiety was observed in the intervention group (Emotional freedom techniques) in the Dincer et al., 2021 study. The control group showed no statistically significant changes on these parameters (Table 2).

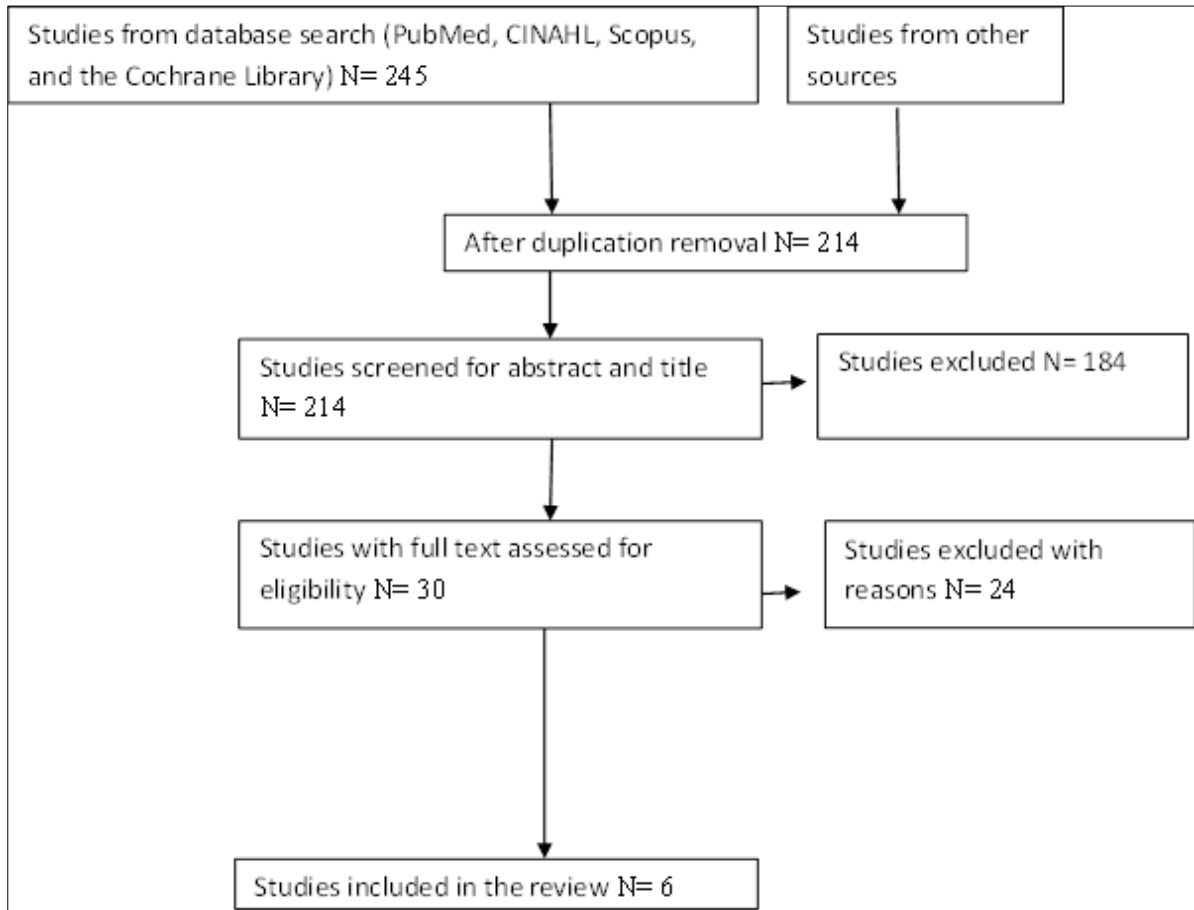


Figure 1 PRISMA consort chart of selection process

Table 1 Characteristics of the included studies

Citation	Study design	Groups	Country	Mean age of participants in year	Measures	Intervention	Duration of intervention
Pérez et al., 2022	RCT	Interventional group = 39, control group = 35	Spain	N/A	ProQoL	Mindfulness training program	3 months
Alenezi et al., 2019	Interventional	Interventional group = 154, control group = 142	Saudi Arabia	N/A	MBI (Maslach Burnout Inventory scale)	burnout prevention workshop Mode: face to face, group	2 days
Bagheri et al., 2019	Interventional	Interventional group = 30 control group = 30	Iran	33.2	MBI	stress-coping & cognitive behavioral therapy Mode: face to face, group	10 weeks
Dincer et al., 2021	RCT	Interventional group = 35 control group = 37	Turkey	Interventional group = 33.5 Comparison group = 33.4	Pines & Aronson (1988)	Emotional freedom techniques Mode: face to face, group Comparison: waitlist	20 minutes
Xie et al., 2020	RCT	Interventional group = 53 control group = 53	China	27.7	MBI	mindfulness Mode: face to face, group	8 weeks
Kharatzadeh et al., 2020	RCT	Interventional group = 26 control group = 27	Iran	Interventional group = 41.0 Comparison group = 39.2	ProQoL	Emotional regulation training	2 hours

Table 2 Main findings and conclusion

Citation	Main findings	Conclusion
Pérez et al., 2022	Significant variations were seen between the two groups for the subscales of Burnout and Compassion Fatigue, with a noteworthy enhancement in the experimental group. Three months following the intervention's conclusion, both of these findings on compassion fatigue held true. On the satisfaction subscale, however, there were no differences between the groups. For each of the three questionnaire subscales, the effects of time and the comparison between the two groups after adjusting for time were found to be statistically significant, with effect sizes varying from minor to large. With 10 - 18% more variance explained by the experimental condition, these data suggest that the condition was effective more.	Comparing the online mindfulness-based training group to a control group with comparable characteristics, the training successfully reduced burnout levels and compassion fatigue up to three months after the end of intervention.
Alenezi et al., 2019 (43)	Results show that the treatment worked, with a notable decrease observed one month following the intervention. At six months, burnout scores had risen, while not reaching baseline levels.	Although the burnout reduction program is clearly effective overall, mental health nurses would benefit from regular opportunities to apply some of the ideas.
Bagheri et al., 2019 (30)	Only the relationship between burnout and work experience was significantly inverse. Following the intervention, burnout declined dramatically. After a month, the intervention's efficacy persisted as well. The findings demonstrated the potential benefits of group cognitive-behavioral therapy and stress-coping techniques in lowering burnout. In health centers, this approach can be used to offer counseling services to nurses.	A noteworthy inverse correlation was observed between burnout and the demographic features of job experience. This suggests that the more experience nurses have at work, the lower their rate of burnout, most likely as a result of their increased flexibility and experience.
Dincer et al., 2021 (26)	Intervention group show, a significant decline in stress, burnout and anxiety. On these metrics, the control group did not exhibit any statistically significant changes.	Emotional Freedom Techniques was used in a quick, one-session online group intervention that was successful in lowering stress, burnout and anxiety.
Xie et al., 2020 (41)	The intervention had an impact on the nurses' emotional tiredness, de-personalization, mindfulness, and sense of personal achievement. Up to three months of intervention, the effect can still be there.	Among ICU nurses, mindfulness-based intervention has been shown to effectively raise mindfulness and lower experience avoidance, hence reducing burnout at work.
Kharatzadeh et al., 2020 (34)	When compared to the wait-list control group, the treatment group showed higher gains in burnout and compassion satisfaction. Comparing the results with controls, no discernible decrease in compassion fatigue was observed. When compared to the control group, the treatment group's cognitive coping techniques showed improvement, leading to more significant declines in stress, anxiety, and depression.	This study highlights the advantages of putting in place training programs for emotional regulation in order to enhance the psychological health and professional quality of life of critical care and intensive care nurses.

4. Discussion

Based on our systematic evaluation, the most commonly utilized intervention for nurse burnout was a mindfulness-based approach. Studies included have demonstrated the efficacy of mindfulness-based interventions in lowering nursing burnout. On the other hand, burnout is a condition of extreme physical, social and mental tiredness that could call for a number of remedies. Numerous therapies have been used as single or in combination, according to a comprehensive evaluation of burnout programs for health professionals(17). While programs that emphasize

mindfulness can help reduce burnout, their usefulness may lie in burnout control rather than mitigating conditions that lead to burnout (18).

Burnout can have many different causes, such as a shortage of personnel, long shift work, not having scheduling flexibility, and having to meet high psychological and work demands (19). In order to prevent reoccurring occurrences, nurses must be trained through specialized programs and receive systematic support to enhance work settings.

Studies which used MBI and ProQoL to quantify burnout as a singular concept revealed findings that were in favor of intervention. Similarly, burnout could be decreased, according to the findings of earlier systematic review of various burnout therapies offered to health professionals (20). We contended that a variety of burnout interventions improved a number of aspects, including coping mechanisms, emotional regulation abilities, and resilience, and helped to bridge the gap between burnout and wellbeing among health professionals. Similarly, a variety of strategies could be used separately or in tandem to lessen nursing burnout.

On the other hand, a recent meta-analysis research on therapies for primary healthcare workers burnout found that these interventions were effective in addressing all aspects of burnout (21). The profession nature in gaining accomplishment may account for the differences in the effect of intervention on reduced accomplishment. For nurses, professional success may be more directly linked to a workplace structure. One study measuring accomplishment, for example, discovered a positive correlation between it and workplace attributes like control, values, community, and fairness (22). This hypothesis is supported by a systematic review that looked at the long-term effects of burnout treatments on nurses and discovered that while improvements in emotional tiredness lasted a year (23), improvements in low accomplishment only lasted six months. We also clarified that because low accomplishment is dependent on the workplace, it is challenging to modify over time. The burnout intervention's focus on problem-solving techniques, such as problem-coping, stress reduction, and participant empowerment, which are beneficial for emotional exhaustion, may also be the reason it does not favor low accomplishment.

Pérez et al., 2022 discovered that while patient satisfaction stayed constant, variations in burnout and compassion fatigue were reasonably predicted by the intervention. Time also functioned as a modifying variable for the intervention effectiveness. The results of Pérez et al.'s 2022 study are consistent with those of previous research that used comparable therapies and carried out a long-term follow-up (24,25).

5. Conclusion

Up to three months following the conclusion of the session, burnout and compassion fatigue were successfully decreased by mindfulness-based training. A brief, one-session online group intervention that employed Emotional Freedom Techniques proved effective in reducing stress, burnout, and anxiety. It has been demonstrated that an effective mindfulness-based intervention can increase mindfulness and decrease experience avoidance in ICU nurses, hence lowering work-related burnout.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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