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Review article

Effectiveness of Mindfulness Intervention to Reduce Burnout in Intensive Care Nurses : A Systematic Review

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Abstract

Nurses need proper self-management to deal with emotions caused by burnout. One of the meditations that nurses can do is focus attention or mindfulness. Mindfulness is a form of self-regulation strategy that involves focusing attention, responding to thoughts, sensations, and emotions with an attitude of acceptance, without judgment, and being aware of current situations and events. This study aimed to examine a mindfulness intervention that can reduce burnout in intensive care nurses. Design study a systematic review, the sample used was intensive care nurses, variable are mindfulness intervention and burnout. Mindfulness-based interventions (yoga or meditation, music therapy, cognitive relaxation, breathing relaxation, stress management). Were searched using four databases published through February 2024. A total of 15 RCT and Quasi-Experimental were included in the final analysis. Mindfulness-based interventions (yoga or meditation, music therapy, cognitive relaxation, breathing relaxation, stress management). Effective mindfulness programs are generally carried out for 12-8 weeks with weekly meetings for 2 hours and intensive training between meetings. Overall, the modalities appeared to alleviate and reduce burnout ($p<0,001$). Mindfulness-based interventions appear to alleviate can reduce burnout in intensive care nurses. Future studies look at mindfulness-based interventions among nurses using more rigorous approaches and larger samples.

INTRODUCTION

Burnout is a major problem in the health worker employment sector [1]. Burnout is a prolonged response to chronic emotional and interpersonal stressors characterized by increased emotional exhaustion, a cynical attitude toward patients, and a tendency to evaluate oneself negatively, especially when in contact with patients. [2]. Burnout is a serious problem in the nursing profession that can affect their well-being and performance [3]. This is because nurses have the opportunity to have more contact with patients, are at greater risk of infection, and the physical and mental burden doubles. [4]. Burnout can occur over a longer or shorter period, depending on the situation experienced and the capacity to adapt to that situation [5].

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In fact, according to WHO, the world may lack 7.6 million nurses by 2030. As many as 35% of nurses report that they do not want to practice because of burnout [6]. The study found that working in a tense environment, ICU nurses suffer from more job-related stressors and a higher incidence of occupational burnout than nurses in general wards. Long-term occupational burnout severely affects nurses' physical and mental health, giving rise to conditions such as endocrine disorders, a decline in immunity, depression, and anxiety [7].

A nurse needs proper self-management to deal with emotions caused by burnout. Meditation needs to be done by nurses to increase moral emphasis, emotions, and interpersonal processes so that nurses again have a sense of empathy when serving patients. One of the meditations that nurses can do is focus attention or mindfulness. Mindfulness is a form of self-regulation strategy that involves focusing attention, responding to thoughts, sensations, and emotions with an attitude of acceptance, without judgment, and being aware of current situations and events. [8]. Previous researchers have carried out this mindfulness therapy, but the population is generally used by nurses. So researchers are interested in using a population of intensive care nurses because they often face critical patients and life-threatening situations. They have to face high physical and emotional stress in caring for critical patients, which can lead to excessive physical and emotional exhaustion, and intensive care nurses often care for patients with critical conditions who require intensive attention and close monitoring. This can create additional stress and increase the risk of burnout. This systematic review aims to determine the effectiveness of mindfulness interventions on burnout in nurses who work in intensive care.

METHODS

Initial scoping searches were conducted to identify similar and relevant systematic reviews that had already been conducted. Articles and journals were appropriate for systematic review *according to Preferred Reporting Items for Systematic Review and Meta Analyze (PRISMA).*

Selection Criteria

The inclusion criteria in this study were articles taken did not limit the year of publication until February 2024 using the *Quasi-Experimental/RCT* method. This research aims to find out which mindfulness-based interventions used to reduce burnout in intensive care nurse. The article search strategy was carried out using the PICOS *framework*. This can be seen in Table 1.

Literature Search and Screening

After carrying out the inclusion and exclusion criteria, the next step is a literature search. A literature search was carried does only published between 2019 and 2024 with four *databases*, namely *Scopus*, *JSTOR, WOS* and *Pubmed* writing the results of the article follow the protocol and rules with *Preferred Reporting Items for Systematic Review* (PRISMA). Search for articles or journals using keywords and *boolean operators* (AND, OR, NOT, and AND NOT) where this is used to expand or specify the search, making it easier to determine the articles or quantities you want to use. Keywords in *systematic review* adapted to *Medical Subject Heading* (MeSH) articles are identified by keywords (*"compassion fatigue" OR "psychological burnout" OR "secondary traumatic stress" OR "compassion dissatisfaction" OR "burnout syndrome" OR "occupational burnout" OR "compassion stress burnout" OR "turnover"*) AND (*"intensive care nurse*" OR "nurse ICU*" OR "intensive care"*) AND (*"mindfulness-based interventions*" OR "mindfulness*

interventions" OR "yoga" OR "meditation" OR "music therapy" OR "cognitive relaxation" OR "breathing relaxation" OR "stress management"*). Keywords in each database can be seen in Table 2

Table 1
PICOS *framework*

PICOS framework	Inclusion Criteria	Exclusion Criteria
Population	Intensive care nurse	
Intervention	Mindfulness-based interventions (yoga or meditation, music therapy, cognitive relaxation, breathing relaxation, stress management)	Laughter therapy, spiritual freedom technique (SEFT) training
Comparator	No comparison	
Outcomes	*Burnout* in intensive care nurses decreases so that it can improve nurse performance	
Study Design and publication type	*Quasi-Experimental /RCT*	*Non Experimental, Letter to editor, Commentaries, Qualitative studies, Abstract only, Case series, Case reports, Reviews, Discussion papers, Cross-sectional and cohort studies*
Publication Years	Only published between 2019 until 2024	
Language	English language	

Table 2
The adjusted search terms as per searched electronic databases

Database	Search Query	Results
PubMed	((((((((((((((("compassion fatigue") OR ("psychological burnout")) OR ("compassion dissatisfaction")) OR ("burnout syndrome")) OR ("compassion stress burnout")) OR ("turnover")) AND ("intensive care")) OR ("intensive care nurse*")) OR ("nurse ICU*")) AND ("mindfulness-based interventions*")) OR ("yoga")) OR ("music therapy")) OR ("breathing relaxation")) OR ("stress management")	**934**
WOS	"compassion fatigue" (All Fields) OR "psychological burnout" (All Fields) OR "secondary traumatic stress" (All Fields) OR "compassion dissatisfaction" (All Fields) OR "occupational burn out" (All Fields) OR "compassion stress burnout" (All Fields) OR turnover (All Fields) AND "intensive care nurse*" (All Fields) OR "nurse ICU*" (All Fields) AND "mindfulness-based interventions*" (All Fields)	287
Scopus	(TITLE-ABS-KEY ("compassion fatigue") OR TITLE-ABS-KEY ("psychological burnout") OR TITLE-ABS-KEY ("secondary traumatic stress") OR TITLE-ABS-KEY ("burnout syndrome") OR TITLE-ABS-KEY ("occupational burnout") OR TITLE-ABS-KEY ("compassion stress burnout") OR TITLE-ABS-KEY ("turnover") AND TITLE-ABS-KEY ("intensive care nurse*") OR TITLE-ABS-KEY ("nurse ICU*") OR TITLE-ABS-KEY ("intensive care") AND TITLE-ABS-KEY ("mindfulness-based interventions*") OR TITLE-ABS-KEY ("mindfulness interventions*") OR TITLE-ABS-KEY ("yoga") OR TITLE-ABS-KEY ("meditation") OR TITLE-ABS-KEY ("music therapy") OR TITLE-ABS-KEY ("breathing relaxation") OR TITLE-ABS-KEY ("stress management")) AND (LIMIT-TO (SUBJAREA , "NURS")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English"))	7
JSTOR	(((((((("compassion fatigue") OR ("secondary traumatic stress")) OR ("compassion dissatisfaction")) OR ("burn out syndrome")) AND ("intensive care nurse")) OR ("nurse ICU")) OR ("nurse ICU"))	74

Search results based on keywords and selections made, obtained 15 articles from 1302 articles that were found. Selection is carried out using PRISMA (Figure 1) according to PRISMA guidelines, the first step is carried out by searching for articles according to the database, after that the articles are selected where duplicate articles will be deleted, after that the abstracts are selected and excluded for those that do not meet the criteria so that the full text is obtained which is by inclusion and exclusion criteria for further evaluation.

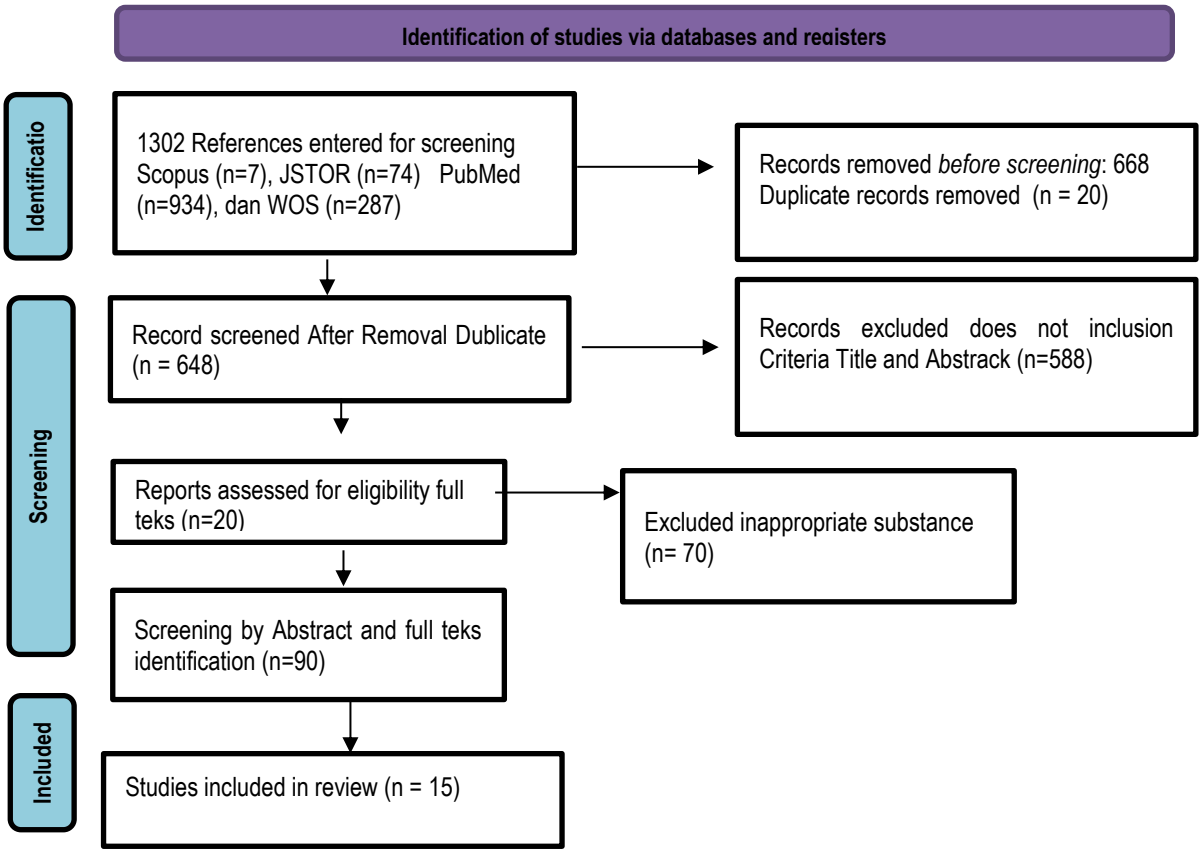

Figure 1
Literature screening flowchart

Data Extraction

To determine the bias of a study, it is carried out using *the Critical Appraisal Skills Programme* (CASP). Based on the assessment with JBI, the scores are then calculated and added up, to meet the requirement of 70% meeting the critical appraisal criteria with the cut-off point value agreed upon by the study researchers being included in the inclusion criteria. The results of the risk of bias assessment are shown in Table 3.

Table 3
Critical Appraisal Results

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Total score	Overall Quality of the study
Xiang-Zi & Jia-yuan, (2023)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90	Good
Gracia Gozalo (2019)	Yes	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	54	Fair
Xie (2020)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90	Good
Lu (2023)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90	Good
Mealer (2021)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	90	Good
Othman (2023)	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90	Good
Ozgundondu & Gok Metin, (2019)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90	Good
Urso (2022)	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	82	Good
Renholm, (2024)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90	Good
Schonfeld (2022)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90	Good
Faramarzi (2024)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90	Good
Hilcove (2021)	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	82	Good
Abbasalizadeh (2024)	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	82	Good
Bodini (2022)	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90	Good
Ghawadra (2020)	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	82	Good

RESULTS

Study Selection

A total of 1302 articles were identified from four databases simultaneously. The search identified a total of 1302 articles but the number of articles was reduced to 20 after removing duplicate results. Second, to identify eligible journals, we carefully read each title and abstract of the 1282 journals. We focused on the main criterion, namely the population collected consisted of nurses who experienced burnout. These articles focus on the effect of mindfulness therapy on burnout in nurses in the ICU. After that, 8 articles will be included in the next review stage, because they must be ensured that they meet all the necessary criteria.

Third, the remaining 20 articles were read and understood for further consideration for inclusion criteria. In detail, the journal must not be a review/report/protocol article, must exclusively refer to nurse burnout, and must report at least one result that influences the reduction of nurse burnout in the ICU. Research must also come from indexed and reputable journals.

After the third step, 9 articles were removed. The reason for exclusion is due to the research viewpoint. Because it does not match the desired criteria. Finally, the remaining 15 journals were deemed eligible for review and analysis. All of them focused on the effect of providing mindfulness interventions on reducing nurse burnout in the ICU

Study Characteristics

The trials in this study were published between 2019 and 2023. This research was conducted in hospitals with a sample of nurses working in the hospital's ICU room from China, Spain, Turkey, Iran, German, America, Italy, Malaysia, and Finland. Participants' ages ranged from 22 years to 40 years. Participants in the experimental group received various mindfulness intervention activities such as yoga meditation, and music therapy and the control group received lectures on education with the theme of burnout and mindfulness. The duration of the intervention ranged from 12 weeks to 2 months, with the length of the follow-up period varying from immediately post-intervention to 3 months after intervention (Table 4)

RoB in studies

All studies considered were considered to have low RoB. However, some studies were identified as having possible publication bias due to the timing of intervention and residual effects as modifications of the intended treatment (Table 3) (Risk of bias).

The study results showed that a mindfulness-based intervention tailored specifically for ICU nurses had a positive impact in reducing levels of death anxiety and burnout in nurses. This reduction in death anxiety and burnout can have a positive impact on the mental well-being and performance of ICU nurses in caring for critical patients. Mindfulness-based intervention programs can be an effective approach to improving mental well-being and reducing burnout in ICU nurses, which in turn can improve the quality of care provided to patients.

Table 4
Summary of included studies

No	Author, year/country	Study design	Participant characteristics		Intervention types		Duration of intervention	Follows-up length	Outcomes (measurement)
			Total	Mean Age	Experimental group	Control group			
1.	Gracia Gozalo (2019) China	RCT	66	29.72 (22-38 year)	The experimental treatment provided was a mindfulness-based program modified specifically for ICU nurses. The program includes various mindfulness techniques such as mindful sitting, breathing, walking, eating, body scan, yoga, and summarization	No intervention given	Over 8 weeks, with two sessions per week. Each session lasts approximately 45-50 minutes	Baseline and post-intervention	The burnout rate decreases with p<0,001
2.	Gracia Gozalo (2019) Barcelona, Spanyol	RCT	32	(≤35 year, 36-50 year, and ≥51 year)	Participants were allowed to take part in an 8-week mindfulness training program that included short, specifically guided practices. This program is supported by a WhatsApp group-based virtual community that provides support and daily reminders to participants. Get a mindfulness program that is based on the theory of mindfulness therapy, including MBSR, MBCT, ACT, and compassion and compassion meditation.	No intervention given	8 weeks	Baseline and post-intervention	This decrease was observed with a significant value of -3.78 points with a p-value = 0.012. The mindfulness training program intervention in this study succeeded in significantly reducing the level of emotional exhaustion (burnout) in participants.
3.	Xie (2020) China	RCT	106	27.7 (SD 7.7)	Get a mindfulness program that is based on the theory of mindfulness therapy, including MBSR, MBCT, ACT, and compassion and compassion meditation.	Receive intervention in the form of two educational sessions in the first week and the fourth week. These sessions provide training and	8 weeks	Before the intervention (baseline), after the intervention (post-intervention),	The results of the intervention showed significant differences between the treatment group (MBIB Group) and the control group (EB Group) in several

No	Author, year/country	Study design	Participant characteristics		Intervention types		Duration of intervention	Follows-up length	Outcomes (measurement)
			Total	Mean Age	Experimental group	Control group			
						information about job burnout, its impact on ICU nurses, as well as how to reduce job burnout through emotional management and friendly interactions with patients.		one month after the intervention, and three months after the intervention.	parameters measured. Thus, these results indicate that the mindfulness-based intervention provided to the MBIB group was effective in reducing burnout levels and increasing awareness and acceptance in ICU nurses compared to the EB control group.
4.	Lu (2023) China	RCT	70	27.27	Get mindfulness intervention	No intervention given	4 weeks, with a frequency of 2 times a week	Beseline and post-intervention	Mindfulness-based interventions can reduce symptoms of emotional exhaustion and improve subjective well-being as well as symptoms of anxiety and depression in ICU nurses.
5.	Mealer (2021) United States	RCT	106	33.00 (6.50)/32. 40 (7.40)	Received meditation	Assigned to a book club where the activity including read the book and have an open discussion about the book	8 weeks	Baseline and post-intervention	Anxiety (HADS) and depression (HADS)
6.	Othman (2023) Spanyol	A quasi-experimental study	60	25-29 year	Intervention a mindfulness	No intervention given	2 month	Baseline and post-intervention	Mindfulness-based interventions are effective in reducing burnout levels in nurses
7.	Ozgundondu (2019) Turkey	RCT	63	24.61 (2.61), 27.75 (4.75)	Progressive muscle relaxation (PMR) combined with music therapy	Education about mindfulness	20 minutes, twice a week for 12 weeks	Baseline and post-intervention	The combination of progressive muscle relaxation (PMR) with music therapy is

No	Author, year/country	Study design	Participant characteristics		Intervention types		Duration of intervention	Follows-up length	Outcomes (measurement)
			Total	Mean Age	Experimental group	Control group			
									effective in managing stress and fatigue, as well as supporting the use of coping strategies focused on problems and emotions among ICU nurses
8.	Urso (2022) United States	RCT	45	-	Mindfulness-Based Intervention (MBI) which includes yoga classes and mindfulness exercises.	No intervention given	8 weeks	The long-term impact of these interventions and how certain factors may influence the results	Burnout and stress levels can decrease with MBI intervention
9.	Renholm (2024) Finlandia	A quasi-experimental study	128	< 45	Mindfulness-Based Intervention (MBI) training	No intervention given	1 years	Baseline and post-intervention	Mindfulness therapy can have a positive effect in reducing stress and burnout as well as increasing awareness and well-being in emergency department and intermediate care unit employees.
10.	Schonfeld (2022) German	RCT	72	Not specifically mentioned	Digitally supported mindfulness, including apps and web-based workshops	No intervention given	4 weeks	Baseline and post-intervention	Effectiveness and efficacy of digitally supported mindfulness interventions in improving health and work outcomes among nurses
11.	Hilcove (2021) United States of America	RCT	80	≤ 42	Yoga	No intervention given	6 weeks	Baseline and post-intervention	Significant improvements in reduced stress and burnout, as well as

No	Author, year/country	Study design	Participant characteristics		Intervention types		Duration of intervention	Follows-up length	Outcomes (measurement)
			Total	Mean Age	Experimental group	Control group			
									improvements in sleep quality, vitality, calmness, and alertness compared to the control group.
12.	Faramarzi (2024) Iran	RCT	81	35.78	Yoga and aerobic	No intervention given	8 weeks	Complete the Maslach Burnout Inventory immediately after the intervention and one month after the intervention	Yoga and aerobic exercise interventions have a positive effect in reducing burnout levels among nurses
13.	Abbasalizadeh (2024) Iran	RCT	60	29.58	The training uses mHealth applications that include microlearning and virtual group discussions	No intervention given	5 month	Baseline and post-intervention	Training using mHealth applications based on micro-learning methods can effectively reduce stress and anxiety levels in nurses working in the ICU
14.	Bodini (2022 Italia	RCT	72	Not specifically mentioned	Mindful Compassionate Care Program (MCCP)	No intervention given	6 weeks	Baseline and post-intervention	The Mindful Compassion Care Program (MCCP) is effective in reducing the level of burnout and psychological stress in nurses working during the COVID-19 pandemic
15.	Ghawadra (2020 Malaysia	RCT	118	Not specifically mentioned	Mindfulness-Based Training (MBI)	No intervention given	8 weeks	Baseline and post-intervention	There was a significant effect over time on stress, anxiety, depression and mindful level (p<.05)

DISCUSSION

Mindfulness is a mind-body therapy that promotes non-judgmental awareness practices that can relieve psychological distress by separating emotional reactions and habitual behavior from unpleasant symptoms, thoughts, and emotions. [23] In the nursing context, there is evidence that mindfulness training programs can reduce burnout symptoms. Traditional mindfulness programs often rely on in-person group delivery through several hours per week of instruction and home practice. However, with such a large number of healthcare workers, a more accessible alternative approach to providing mindfulness therapy could be beneficial.

The results of the review, interventions that can be carried out to reduce burnout in nurses are mindfulness techniques such as mindful sitting, breathing, walking, eating, body scan, yoga, summarization, music, aerobic and progressive muscle relaxation (PMR). In theory mindfulness-based interventions (yoga or meditation, music therapy, cognitive relaxation, breathing relaxation, stress management). Mindfulness is a concept that involves being fully aware of current experiences without judging or reacting to them. The ability to focus on the present moment with acceptance and without judgment of thoughts, feelings, or sensations that arise. Mindfulness practices often involve meditation, breathing, and body awareness exercises to help individuals develop self-awareness, reduce stress, improve concentration, and improve overall well-being. Mindfulness has been shown to be beneficial in reducing burnout, stress, anxiety, and depression, as well as improving mental and emotional well-being [15].

This study found that mindfulness-based interventions were effective in reducing burnout in nurses in the ICU. Providing mindfulness therapy such as stress management, music, relaxation, yoga, and meditation effectively reduces burnout in ICU nurses. In this research, it was found that the countries where this mindfulness therapy has been provided are China, Spain, Turkey, Iran, Finlandia with a large number of studies (9 studies), involving 777 ICU nurses ranging in age from 22 years to 40 years.

This study found that the effects of mindfulness interventions on burnout require further investigation. The mindfulness intervention to reduce burnout applied in this research consisted of providing yoga, meditation, and music. Inconsistent results regarding its effectiveness in reducing burnout are related to differences in the type and administration of mindfulness interventions provided. Mindfulness-based yoga can have a positive impact on the stress levels and well-being of nurses and healthcare professionals. Through regular yoga practice, participants can experience improved sleep quality, reduced stress, and increased energy. [18]. This suggests a holistic approach to evaluating the impact of yoga interventions on participants' well-being.

One of the studies that tested the effectiveness of a specifically modified mindfulness-based program for ICU nurses was that the results showed that nurses who received mindfulness intervention experienced a decrease in anxiety and burnout in the post-test compared to nurses who did not receive the intervention. Previous research has also shown the positive effect of mindfulness on burnout in health workers. The mindfulness intervention in this study focused on breathing, walking, eating, and other daily activities to help nurses manage emotional awareness peacefully. This is expected to improve emotional regulation abilities and reduce negative emotional impacts, including emotional exhaustion and depersonalization. [9]

Previous studies show that mindfulness interventions can reduce emotional distress and burnout in ICU nurses. MBIs help individuals become more aware of their thoughts, feelings, and body sensations without judgment, thereby helping to manage emotions, reduce stress, and build resilience that prevents burnout. Additionally, MBIs can increase self-awareness, and self-compassion and reduce burnout, which in turn improves mental health by reducing levels of anxiety, stress, and depression. [13]

The reduced effectiveness of mindfulness interventions is caused by differences in the intensity and duration of the intervention. Effective mindfulness programs are generally carried out for 12-8 weeks with weekly meetings for 2 hours and intensive training between meetings. This duration has been proven and obtained from 7 studies that have been conducted, this duration is effective in reducing stress and burnout as well as increasing self-awareness and self-compassion. And the recommended sample size usually reaches a minimum of 30 participants to get significant results.[13]

The positive effects of a combined program of MBSR and MBCT can last for at least three months after the intervention is carried out [24]. Providing mindfulness therapy can assist nurses in developing awareness skills that can help nurses respond flexibly to stress in a demanding work environment, as well as help nurses manage symptoms of emotional exhaustion and burnout that they may experience. This intervention is designed to provide nurses with tools and strategies so they can better face work challenges and improve their mental well-being.

Mindfulness training has a positive impact on nurses in emergency departments and intermediate care units. Active participants in mindfulness training programs experience positive changes in the difficulty of situations, acceptance of thoughts and emotions, and quality of life. This training helps participants become more aware of their situations and behavior, as well as improve concentration, energy, attitudes, and better behavior towards patients and co-workers [16]. In addition, mindfulness therapy has an additional effect on patient satisfaction than interventions that only focus on protocols and guidelines [25]

CONCLUSION

This latest review of 15 RCT provides evidence that mindfulness therapy can reduce burnout in ICU nurses. Mindfulness can be applied to all groups of nurses or people who experience burnout, apart from being very easy to do, mindfulness training also does not cost a lot of money. Support for mental health among nurses must be considered in the organization and implementation of personal and professional development. Future research evaluates mindfulness-based interventions among working nurses with a more rigorous methodology and larger sample sizes.

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BIBLIOGRAPHY

[1] Sultana, A. Sharma, R. Hossain, M. Bhattacharya, S., & Purohit N. Burnout among healthcare providers during COVID-19: Challenges and evidence-based interventions. Indian Journal of Medical 2020:1–4.

[2] Maslach, C., Leiter, M. P., & Schaufeli W. Job Burnout. Anward Review of Psychology. 2001;52(1).:397–422.

[3] Palvimo T, Vauhkonen A, Hult M. The Associations among Destructive Leadership, Job Demands and Resources, and Burnout among Nurses: A Cross-Sectional Survey Study. Journal of Nursing Management 2023;2023. https://doi.org/https://doi.org/10.1155/2023/4289450.

[4] Guixia, L., & Hui Z. A Study on Burnout of Nurses in the Period of COVID-19. 2020;9(3):31–6.

[5] Landa, J. M. A., & Lopez-Zafra E. The impact of emotional intelligence on nursing: An overview. Psychology 2010;1(1):50–8.

[6] Hu D, Kong Y, Li W, Han Q, Zhang X, Zhu LX, et al. Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: A large-scale cross-sectional study. EClinicalMedicine 2020;24. https://doi.org/10.1016/j.eclinm.2020.100424.

[7] Xie C, Zeng Y, Lv Y, Li X, Xiao J, Hu X. Educational intervention versus mindfulness-based intervention for ICU nurses with occupational burnout: A parallel, controlled trial. Complement Ther Med 2020;52. https://doi.org/10.1016/j.ctim.2020.102485.

[8] Azzam HM, Na'imah T, Wulandari DA, Herdian H. Mindfulness dan Workplace Well-being Untuk Mengurangi Burnout pada Perawat. Psychocentrum Review 2023;5:97–107. https://doi.org/10.26539/pcr.521206.

[9] Xiang-Zi J, Jia-yuan Z. Mindfulness exercises reduce death anxiety and burnout in intensive care nurses. Death Stud 2023;47:600–5. https://doi.org/10.1080/07481187.2022.2113480.

[10] Gracia Gozalo RM, Ferrer Tarrés JM, Ayora Ayora A, Alonso Herrero M, Amutio Kareaga A, Ferrer Roca R. Application of a mindfulness program among healthcare professionals in an intensive care unit: Effect on burnout, empathy and self-compassion. Medicina Intensiva (English Edition) 2019;43:207–16. https://doi.org/10.1016/j.medine.2019.03.006.

[11] Lu F, Xu Y, Yu Y, Zhao R, Peng L, Liu B, et al. Long-term effects of a tailored mindfulness-based program for Chinese intensive care unit nurses: A randomized parallel-group trial. Nurse Educ Pract 2023;70:103640. https://doi.org/10.1016/j.nepr.2023.103640.

[12] Mealer M, Boeldt D, Cochran K, Hodapp R, Forster J, Conrad D, et al. A Mindfulness-Based Cognitive Therapy (MBCT) Intervention to Improve Resilience and Mitigate Symptoms of Burnout Syndrome in Critical Care Nurses: Results of a Randomized Trial. Open J Nurs 2021;11:653–67. https://doi.org/10.4236/ojn.2021.118055.

[13] Othman SY, Hassan NI, Mohamed AM. Effectiveness of mindfulness-based interventions on burnout and self-compassion among critical care nurses caring for patients with COVID-19: a quasi-experimental study. BMC Nurs 2023;22:1–14. https://doi.org/https://doi.org/10.1186/s12912-023-01466-8.

[14] Ozgundondu B, Gok Metin Z. Effects of progressive muscle relaxation combined with music on stress, fatigue, and coping styles among intensive care nurses. Intensive Crit Care Nurs 2019;54:54–63. https://doi.org/10.1016/j.iccn.2019.07.007.

[15] Urso C, Laserna A, Feng L, Agnite A, Jawe N, Magoun C, et al. Mindfulness as an Antidote to Burnout for Nursing and Support Staff in an Oncological Intensive Care Unit: A Pilot Study. Holist Nurs Pract 2022;36:E38–47. https://doi.org/10.1097/HNP.0000000000000544.

[16] Renholm M. The effects of mindfulness training for emergency department and intermediate care unit nurses 2024;76. https://doi.org/10.1016/j.apnr.2024.151770.

[17] Schonfeld S, Rathmer I, Michaelsen MM, Hoetger C, Onescheit M, Lange S, et al. Effects of a Mindfulness Intervention Comprising an App, Web-Based Workshops, and a Workbook on Perceived Stress Among Nurses and Nursing Trainees: Protocol for a Randomized Controlled Trial. JMIR Res Protoc 2022;11. https://doi.org/10.2196/37195.

[18] Hilcove K, Marceau C, Thekdi P, Larkey L, Brewer MA, Jones K. Holistic Nursing in Practice: Mindfulness-Based Yoga as an Intervention to Manage Stress and Burnout. J Holist Nurs 2021;39:29–42. https://doi.org/10.1177/0898010120921587.

[19] Faramarzi S, Dehghani A, Hojat M. Comparison of the Effect of Yoga and Aerobic Exercise on Nurses' Burnout: A Randomized Controlled Trial. Journal of Nursing and Midwifery Sciences 2024;11:1–8. https://doi.org/10.5812/jnms-142568.

[20] Abbasalizadeh M, Farsi Z, Sajadi SA, Atashi A, Fournier A. The effect of resilience training with mHealth application based on micro-learning method on the stress and anxiety of nurses working in intensive care units: a randomized controlled trial. BMC Med Educ 2024;24:1–11. https://doi.org/10.1186/s12909-024-05427-w.

[21] Bodini L, Bonetto C, Cheli S, Del Piccolo L, Rimondini M, Rossi A, et al. Effectiveness of a Mindful Compassion Care Program in reducing burnout and psychological distress amongst frontline hospital nurses during the COVID-19 pandemic: a study protocol for a randomized controlled trial. Trials 2022;23:1–11. https://doi.org/10.1186/s13063-022-06666-2.

[22] Ghawadra SF, Lim Abdullah K, Choo WY, Danaee M, Phang CK. The effect of mindfulness-based training on stress, anxiety,

depression and job satisfaction among ward nurses: A randomized control trial. J Nurs Manag 2020;28:1088–97. https://doi.org/10.1111/jonm.13049.

[23] Pratt EH, Hall L, Jennings C, Olsen MK, Jan A, Parish A, et al. Mobile Mindfulness for Psychological Distress and Burnout among Frontline COVID-19 Nurses: A Pilot Randomized Trial. Annals of the American Thoracic Society 2023;20:1475–82. https://doi.org/10.1513/AnnalsATS.202301-025OC.

[24] Pérez V, Menéndez-Crispín EJ, Sarabia-Cobo C, de Lorena P, Fernández-Rodríguez A, González-Vaca J. Mindfulness-Based Intervention for the Reduction of Compassion Fatigue and Burnout in Nurse Caregivers of Institutionalized Older Persons with Dementia: A Randomized Controlled Trial. International Journal of Environmental Research and Public Health 2022;19. https://doi.org/10.3390/ijerph191811441.

[25] Saban M, Dagan E, Drach-zahavy A. The Effects Of A Novel Mindfulness - Mindfulness And Patient Satisfaction In The Effects Of A Novel Mindfulness - Based. Journal of Emergency Nursing 2021;47:412–25. https://doi.org/10.1016/j.jen.2020.09.009.