# *Effectiveness of mindfulness-based interventions in reducing burnout and emotional exhaustion among nursing professionals*

**Vijaya Lakshmi Uhm[*1], Neha Thakur[2], Daljeet Kaur[3]**
*[*1]Nursing Lecturer, RK College of Nursing, Ballari, Karnataka ([*]Corresponding author)*
*[2]Assistant Professor, Mother Mary's Institute of Nursing Hoshiarpur, Punjab, India*
*[3]Associate Professor, Sri Guru Harkrishan Sahib College of Nursing Sohana, Mohali, Punjab, India*

***DOI: 10.5281/zenodo.24153972***

## Abstract:

**Background:** Nursing professionals work in demanding clinical environments that involve long working hours, heavy workloads, emotional responsibilities, staff shortages and continuous exposure to patients' suffering. These challenges can contribute to occupational stress, burnout and emotional exhaustion. Mindfulness-based interventions have received increasing attention as supportive approaches for improving psychological well-being and managing work-related stress.

**Aim:** To review the effectiveness of mindfulness-based interventions in reducing burnout and emotional exhaustion among nursing professionals and examine their potential role in improving resilience, emotional regulation and professional well-being.

**Methods:** This narrative review synthesises selected peer-reviewed studies, randomised controlled trials, systematic reviews and meta-analyses concerning mindfulness interventions among nursing professionals. The literature includes research on Mindfulness-Based Stress Reduction (MBSR), mindfulness meditation, mindful breathing and related programmes. Selected evidence published from 1981 to 2026 was considered, including foundational literature on burnout and mindfulness.

**Results:** Available research suggests that mindfulness-based interventions may improve stress management, emotional awareness, resilience and psychological well-being among nurses. Several studies have reported reductions in burnout and emotional exhaustion. However, findings are not completely consistent. Differences in intervention duration, sample size, outcome measurements and study quality influence the reported results.

**Conclusion:** Mindfulness-based interventions are promising supportive strategies for reducing occupational stress and improving emotional well-being among nursing professionals. Their effectiveness is likely to be greater when combined with organisational support, adequate staffing, supportive leadership and healthy workplace policies. Further high-quality studies are required to establish their long-term effectiveness.

## Keywords:

Mindfulness, Nursing Professionals, Occupational Burnout, Emotional Exhaustion, Stress Management, Mindfulness-Based Stress Reduction, Resilience, Psychological Well-being.

## 1. Introduction:

Nursing is one of the most demanding professions in the healthcare sector. Nurses provide continuous care to patients, administer medications, monitor clinical conditions, assist in medical procedures, communicate with families and coordinate with multidisciplinary healthcare teams. Their responsibilities require physical endurance, emotional stability, decision-making skills and effective communication. Although nursing provides opportunities to help individuals and communities, continuous exposure to workplace stressors can negatively affect nurses' mental health. Heavy workloads, night duties, staff shortages, emergency situations,

inadequate resources, interpersonal conflicts and patient suffering may gradually reduce professional satisfaction and emotional well-being.

Occupational burnout is an important concern in nursing because it develops through prolonged exposure to unmanaged workplace stress. Maslach and Jackson (1981) identified three major dimensions of burnout: emotional exhaustion, depersonalisation and reduced personal accomplishment. Maslach et al. (2001) further explained that burnout is a prolonged response to chronic emotional and interpersonal stressors at work.

The World Health Organization (2019) recognises burnout in ICD-11 as an occupational phenomenon associated with chronic workplace stress that has not been successfully managed. It includes energy depletion, increased mental distance from work and reduced professional efficacy.

Emotional exhaustion is particularly important among nurses because their work involves continuous emotional engagement with patients and families. Nurses may experience tiredness, reduced patience, difficulty concentrating and a feeling of being unable to provide the same level of emotional support as before.

Mindfulness-based interventions have emerged as supportive methods for managing psychological stress. These programmes encourage individuals to develop awareness of present experiences, thoughts, feelings and bodily sensations without judgement. Kabat-Zinn (2003) described mindfulness-based approaches as structured practices that can be incorporated into healthcare and psychological interventions.

Mindfulness may help nurses recognise stressful reactions, regulate emotions and respond more effectively to challenging clinical situations. Therefore, reviewing its effectiveness is important for nursing practice, nursing administration and healthcare workforce well-being.

## 2. Background of occupational burnout in nursing:

Occupational burnout is a condition of prolonged work-related psychological strain. It does not develop suddenly; rather, it may emerge gradually when workplace demands remain high and opportunities for recovery, support and control are inadequate. Nurses are particularly vulnerable because nursing requires sustained attention, responsibility for patient safety, emotional involvement and frequent adaptation to changing clinical situations.

**Meaning of burnout:** Burnout is characterised by three major dimensions:

**Emotional exhaustion:** This refers to a feeling of being emotionally and physically drained because of prolonged professional demands. Nurses may feel tired before beginning a shift and may have difficulty recovering after work.

**Depersonalisation:** This involves developing negative, detached or insensitive attitudes towards patients, families or colleagues. A nurse may begin to communicate less empathetically because of prolonged emotional strain.

**Reduced personal accomplishment:** This refers to feelings of reduced professional competence, low motivation and dissatisfaction with personal achievements. These dimensions are interrelated, although they do not necessarily develop at the same time or with the same intensity in every nurse (Maslach and Jackson, 1981).

**Meaning of emotional exhaustion:**

Emotional exhaustion is the experience of feeling emotionally depleted because of continuous demands. It is often regarded as a central dimension of occupational burnout.

In nursing, emotional exhaustion may occur when nurses repeatedly manage patients' pain, fear, grief and uncertainty without sufficient opportunities for rest or emotional recovery.

Common manifestations include:

1. Persistent mental and physical tiredness.
2. Reduced enthusiasm towards professional duties.
3. Irritability and emotional sensitivity.
4. Difficulty concentrating during clinical activities.
5. Reduced patience while communicating with patients.
6. Feeling overwhelmed by routine responsibilities.
7. Difficulty maintaining work-life balance.

Emotional exhaustion may affect the nurse's personal health, professional performance and quality of patient interaction. Early identification is important because prolonged difficulties may contribute to other psychological problems and reduced job satisfaction.

**Difference between stress and burnout:**

Stress and burnout are related but different concepts. Stress generally refers to the physical and psychological response to demands or pressure. It may be temporary and can decrease when the stressful situation is resolved.

Burnout is associated with prolonged and inadequately managed workplace stress. It is more likely to involve emotional exhaustion, negative attitudes towards work and reduced professional efficacy (Maslach et al., 2001). Mindfulness may help nurses manage stressful reactions, but preventing burnout also requires attention to the workplace conditions that generate chronic stress.

## 3. Factors Contributing to Burnout and Emotional Exhaustion among Nurses:

Several individual, professional and organisational factors may contribute to burnout.

**Heavy workload and staff shortages:**

Nurses working in understaffed hospitals may have to care for a large number of patients. Continuous responsibilities, documentation, medication administration and clinical monitoring can create physical and emotional pressure. When workload exceeds available resources, nurses may have insufficient time for rest, reflection and recovery.

**Long working hours and shift duties:**

Night shifts, rotating schedules and extended working hours may interfere with sleep and family life. Irregular working patterns can contribute to fatigue, reduced alertness and difficulty maintaining psychological balance.

**Emotional demands of patient care:**

Nurses frequently support patients experiencing pain, disability, serious illness and end-of-life conditions. They also communicate with distressed families and manage difficult clinical situations. Repeated exposure to these experiences may increase emotional strain, particularly when nurses lack adequate support.

**Workplace conflicts:**

Conflicts among nurses, doctors, supervisors and other healthcare professionals may reduce job satisfaction. Poor communication, inadequate recognition and limited participation in decision-making can contribute to workplace stress.

**Lack of organisational support:**

Insufficient managerial support, inadequate resources, limited professional development and unfair scheduling can increase occupational stress.

**Work-life imbalance:**

Nurses may experience difficulty managing personal responsibilities alongside professional duties. Limited time for family, recreation, sleep and self-care may reduce overall well-being.

**Exposure to emergencies and traumatic experiences:**

Working in intensive care units, emergency departments, oncology units and other high-pressure settings may involve repeated exposure to suffering, unexpected deaths and critical incidents. These experiences may contribute to emotional exhaustion and secondary traumatic stress.

## 4. Concept of Mindfulness:

Mindfulness is the practice of paying attention to present-moment experiences intentionally and with an attitude of openness and non-judgement. It involves awareness of thoughts, emotions, physical sensations and environmental experiences.

Kabat-Zinn (1982) described the use of mindfulness meditation in a structured stress-reduction programme, providing an important foundation for the development of Mindfulness-Based Stress Reduction. Mindfulness does not mean stopping thoughts or avoiding difficult emotions. Instead, it teaches individuals to observe their experiences without immediately reacting to them. For nursing professionals, mindfulness may involve becoming aware of tension during a busy shift, recognising emotional reactions after a difficult patient interaction and using breathing or grounding techniques before responding.

**Principles of mindfulness:**

**Present-moment awareness:** Paying attention to current experiences rather than becoming excessively focused on past events or future worries.

**Non-judgement:** Observing thoughts and emotions without immediately labelling them as good or bad.

**Acceptance:** Acknowledging present experiences without unnecessary resistance.

**Patience:** Allowing experiences to develop without expecting immediate results.

**Non-reactivity:** Learning to pause before responding to difficult thoughts or emotions.

**Self-compassion:** Responding to personal difficulties with understanding rather than excessive self-criticism.

These principles may be useful for nurses who regularly face emotional and professional challenges.

## 5. Types of Mindfulness-Based Interventions:

Different mindfulness programmes may be used to improve psychological well-being among nurses. Their structure, duration and intensity vary.

**Mindfulness-Based Stress Reduction (MBSR):**

MBSR is a structured programme developed by Jon Kabat-Zinn. It commonly includes mindfulness meditation, body scanning, mindful movement and daily home practice.

Traditional MBSR programmes generally involve weekly group sessions over eight weeks. Modified programmes may be designed to accommodate healthcare professionals' working schedules.

MBSR aims to improve awareness of stress responses and develop healthier ways of responding to difficult experiences.

**Mindfulness-Based Cognitive Therapy (MBCT):**

MBCT combines mindfulness practices with cognitive approaches. It helps participants recognise negative thinking patterns and understand how thoughts influence emotional experiences.

For nurses, these techniques may help identify excessive self-criticism, repetitive worrying and unhelpful responses to workplace challenges.

**Mindful breathing:**

Mindful breathing involves focusing attention on the natural process of inhalation and exhalation. When attention moves towards distracting thoughts, the individual gently brings it back to breathing.

This practice can be performed for a few minutes during suitable breaks, before beginning a shift or after a stressful event.

**Body scan meditation:**

Body scan meditation involves gradually directing attention towards different areas of the body. Participants observe sensations such as tension, discomfort and relaxation without attempting to judge them.

It may help nurses recognise physical signs of stress and develop awareness of bodily needs.

**Mindful walking:**

Mindful walking involves paying attention to bodily movement, breathing and contact between the feet and the ground. It can be practised in a quiet and safe environment.

**Mindful movement and yoga:**

Mindful movement combines gentle physical movements with focused attention and breathing. It may help participants become more aware of physical tension and improve relaxation.

**Digital mindfulness programmes:**

Online platforms, mobile applications and recorded meditation sessions can provide flexible access to mindfulness training. These approaches may be particularly useful for nurses working rotating shifts.

However, digital programmes should be evaluated for accessibility, privacy, quality of instruction and continued participation.

## 6. Mechanisms through Which Mindfulness May Reduce Burnout:

Mindfulness-based interventions may influence several psychological processes associated with occupational stress.

**Improvement in emotional regulation:**

Emotional regulation refers to the ability to recognise, understand and manage emotional responses. Mindfulness encourages individuals to observe emotions before reacting.

For example, a nurse who experiences frustration during a difficult clinical interaction may learn to recognise the emotion, pause and respond more calmly.

**Reduction in automatic stress reactions:**

Workplace situations may trigger immediate reactions such as anxiety, anger or frustration. Mindfulness encourages a pause between the stressful event and the response.

This may help nurses respond more thoughtfully rather than acting under the influence of intense emotions.

**Improved attention and concentration:**

Mindfulness practice involves repeatedly directing attention towards a selected object, such as breathing or bodily sensations. This may strengthen attentional awareness and help nurses recognise distractions.

It should not, however, replace clinical training, appropriate staffing or established patient-safety procedures.

**Development of self-awareness:**

Self-awareness helps nurses recognise early signs of stress, including irritability, fatigue, emotional withdrawal and difficulty concentrating.

Early recognition may encourage individuals to seek support or use appropriate coping strategies.

**Development of resilience:**

Resilience refers to the capacity to adapt and recover from difficult experiences. Mindfulness may support resilience by improving emotional awareness, acceptance and coping.

Lin et al. (2019) reported improvements in resilience following a modified mindfulness-based stress reduction programme among nurses.

**Improvement in self-compassion:**

Nurses may place high expectations on themselves and experience guilt when they cannot meet every professional demand.

Mindfulness-based practices may encourage self-compassion, helping nurses recognise personal limitations and respond to mistakes or difficult situations constructively.

**Possible reduction in physiological stress responses:**

Mindfulness practices may promote relaxation and reduce excessive psychological arousal. Slow, comfortable breathing and focused attention may help some individuals feel calmer.

However, the physiological mechanisms and their specific contribution to burnout reduction require further investigation in nursing populations.




*Figure. 1: Image Prompt — Mechanisms of Mindfulness in Reducing Burnout among Nurses*

## 7. Effectiveness of Mindfulness-Based Interventions in Reducing Burnout:

Research on mindfulness interventions among nursing professionals has increased over recent years. Studies have examined MBSR, brief mindfulness training, guided meditation and other related programmes.

Although many studies report beneficial psychological outcomes, the strength of evidence varies.

**Early research on mindfulness among nurses:**

Cohen-Katz et al. (2004) examined the implementation of MBSR in a hospital setting to support nurses' stress management and well-being.

In a related study, Cohen-Katz et al. (2005) reported that nurses participating in MBSR showed improvements in two of the three Maslach Burnout Inventory dimensions compared with wait-list controls. Some improvements were maintained at follow-up.

Cohen-Katz et al. (2005) also explored nurses' experiences of the programme. Participants described benefits such as improved relaxation, self-care and relationships. They also reported challenges, including restlessness and difficulty dealing with uncomfortable emotions during practice.

Mackenzie et al. (2006) evaluated a brief four-week mindfulness-based stress reduction intervention for nurses and nurse aides. The intervention group showed improvements in burnout symptoms, relaxation and life satisfaction compared with the wait-list group.

Pipe et al. (2009) investigated a mindfulness meditation programme for nurse leaders. The randomised study included 33 nurse leaders and reported improvements in several self-reported stress symptoms among participants receiving mindfulness training.

These early studies provided preliminary support for mindfulness as a workplace stress-management approach. However, their relatively small samples and differences in programme structure limited the generalisability of findings.

**Systematic review evidence:**

Guillaumie et al. (2017) conducted a mixed-methods systematic review of mindfulness interventions among nurses. Their findings suggested that mindfulness may improve psychological outcomes, including stress management and well-being. The authors also highlighted differences in study designs and intervention methods.

Lin et al. (2019) conducted a randomised controlled trial involving 110 nurses. Participants in the intervention group received a modified eight-week MBSR programme. The researchers reported reductions in stress and negative affect, along with improvements in positive affect and resilience. The study also examined job satisfaction, but did not establish that mindfulness directly reduced all dimensions of burnout.

Ghawadra et al. (2020) evaluated a four-week mindfulness-based training programme among ward nurses. The intervention included a two-hour workshop followed by guided online self-practice. The results showed improvements in outcomes including anxiety and job satisfaction. This study supports the potential psychological benefits of mindfulness, although it should not be interpreted as direct proof of reduced burnout because burnout was not its main outcome.

Suleiman-Martos et al. (2020) conducted a systematic review and meta-analysis of mindfulness training for burnout among nurses. Their review included 17 articles involving 632 nurses. The authors reported an overall favourable direction for burnout-related outcomes, including emotional exhaustion and depersonalisation. However, estimates were imprecise, and the evidence should be interpreted cautiously.

**Research involving nurse caregivers:**

Pérez et al. (2022) conducted a randomised controlled trial investigating a mindfulness-based intervention for nurse caregivers of institutionalised older adults with dementia. The study focused on compassion fatigue and burnout.

This research is important because nurses and caregivers working with individuals with dementia may experience repeated emotional demands, behavioural difficulties and prolonged caregiving responsibilities. The findings support further examination of mindfulness as a way to improve emotional well-being in specialised care environments.

**Meta-analysis evidence:**

Ramachandran et al. (2023) conducted a systematic review and meta-analysis examining mindfulness-based interventions for psychological well-being, burnout and post-traumatic stress disorder symptoms among working registered nurses. Their review provides broader evidence that mindfulness may be useful for improving psychological outcomes in nursing populations. However, differences in the interventions and measures used across studies remain important considerations.

Dou et al. (2025) published a systematic review and meta-analysis of randomised controlled trials involving mindfulness-based interventions among nurses. The review included 16 articles involving 1,384 participants. It reported improvements in burnout, resilience and sleep quality. The pooled estimate for burnout was favourable, although the authors noted moderate risk of bias, substantial heterogeneity and limitations in the overall certainty of evidence.

Wu et al. (2026) examined seven randomised controlled trials involving 578 nurses. Their meta-analysis reported a reduction in job burnout, with a standardised mean difference of −0.89. The authors also reported improvements in compassion fatigue and traumatic stress. However, heterogeneity was substantial for burnout, indicating that the size of the benefit varied across studies.

Lin et al. (2026) conducted another meta-analysis involving 11 studies and 1,194 nurses. The findings indicated improvement in resilience, mindfulness and job satisfaction. However, the pooled effect on emotional exhaustion and the core dimension of occupational burnout was modest and did not provide clear evidence of a substantial reduction.

These recent reviews should not be interpreted as completely independent evidence because they may include some of the same primary trials. Their findings collectively suggest potential benefits, while also demonstrating that the effect on burnout is not uniform.

## 8. Effects of Mindfulness on Emotional Exhaustion:

Emotional exhaustion is a major concern among nurses because continuous patient care requires emotional energy and interpersonal involvement.

Mindfulness may help address emotional exhaustion through several pathways.

**Improved emotional awareness:**

Nurses may become more aware of emotional changes such as frustration, sadness, anxiety and irritation. Recognising these feelings can help them respond before emotional strain becomes overwhelming.

**Improved coping with difficult situations:**

Mindfulness encourages nurses to approach difficult experiences with greater awareness. Instead of immediately reacting to stressful events, nurses may learn to pause, assess the situation and select an appropriate response.

**Better relaxation and recovery:**

Mindful breathing and meditation may encourage relaxation and provide an opportunity to recover psychologically after demanding clinical activities.

**Improved tolerance of emotional demands:**

Mindfulness may help nurses become more aware of their emotional limits while continuing to provide compassionate care. It does not remove the emotional challenges of nursing, but may support healthier responses to them.

**Improved psychological well-being:**

Some studies have reported benefits in stress, resilience, anxiety and job satisfaction. These outcomes may indirectly contribute to lower emotional exhaustion, although improvements in one outcome do not automatically establish improvement in all burnout dimensions.

**9. Practical Implementation of Mindfulness in Healthcare Settings:**

Mindfulness programmes should be designed according to the needs, responsibilities and work schedules of nursing professionals.

**Assessment before starting the programme:**

Before implementing an intervention, hospitals may assess the psychological well-being of nursing staff. This can help identify staff who experience higher levels of stress or burnout.

Assessment should be voluntary, confidential and conducted using appropriate instruments.

**Selection of an appropriate programme:**

Healthcare institutions may select structured MBSR, brief mindfulness training, guided meditation or digital programmes according to available resources.

The programme should be delivered by appropriately trained facilitators.

**Providing regular practice opportunities:**

Nurses should receive practical opportunities to practise mindfulness. These may include brief guided sessions, quiet spaces and flexible access to recorded exercises.

Practice sessions should be arranged without compromising patient care or essential clinical responsibilities.

**Encouraging individual practice:**

Nurses may be encouraged to practise mindful breathing, body awareness or short meditation exercises outside clinical duties.

Regular practice may help develop familiarity with mindfulness techniques.

**Monitoring outcomes:**

Hospitals should assess programme participation, acceptability and psychological outcomes. Follow-up assessment can help determine whether improvements are maintained.

**Supporting long-term practice:**

Mindfulness should not be limited to a single workshop. Refresher sessions, peer support and access to guided resources may help nurses maintain practice over time. Mohammed et al., (2026)

## 10. Role of Nurses in Managing Their Own Stress:

Nurses can take an active role in maintaining their psychological well-being.

**Self-awareness:** Nurses should recognise personal signs of stress, including tiredness, irritability, emotional withdrawal and reduced motivation.

**Mindful breathing:** Short breathing practices may help nurses regain attention and reduce feelings of immediate tension.

**Healthy sleep habits:** Maintaining regular sleep routines, where possible, can support physical and psychological recovery.

**Time management:** Organising priorities and seeking assistance when workloads become excessive may help reduce unnecessary pressure.

**Seeking support:** Nurses should communicate with supervisors, colleagues or mental health professionals when stress becomes difficult to manage.

**Maintaining personal relationships:** Family relationships, social interaction and recreational activities can provide emotional support outside work.
**Professional boundaries:** Nurses should recognise that they cannot control every patient outcome and should avoid excessive self-blame when clinical situations are beyond their control.

## 11. Role of Nurse Managers and Healthcare Institutions:

Although individual mindfulness practice may be beneficial, burnout cannot be addressed effectively without organisational involvement.
Nurse Managers have an important role in creating a healthy work environment.

**Organising mindfulness training:**
Nurse Managers may arrange structured mindfulness workshops, meditation sessions and stress-management programmes for staff.

**Providing supportive leadership:**
Supportive leadership includes listening to nursing staff, recognising their contributions, encouraging open communication and responding to workplace concerns.

**Improving staffing and workload distribution:**
Hospitals should review staffing levels and distribute responsibilities fairly. Mindfulness programmes should not be used as a substitute for adequate staffing or safe workloads.

**Promoting work-life balance:**
Fair shift scheduling, appropriate rest periods and support for personal responsibilities may reduce occupational stress.

**Establishing counselling and support services:**
Access to confidential counselling and mental health services can help nurses experiencing significant psychological difficulties.

**Encouraging a positive workplace culture:**
Respectful communication, teamwork, recognition and opportunities for professional development may improve job satisfaction and reduce workplace stress.

## 12. Measurement of Burnout and Mindfulness Outcomes:

Appropriate assessment tools are important for evaluating the effectiveness of mindfulness-based interventions.

**Maslach Burnout Inventory (MBI)**
The Maslach Burnout Inventory assesses three dimensions:

- Emotional exhaustion.
- Depersonalisation.
- Personal accomplishment.

It is one of the commonly used instruments in burnout research. Its original development was described by Maslach and Jackson (1981).

**Perceived Stress Scale (PSS):**
The Perceived Stress Scale measures how individuals perceive and evaluate stressful situations in their lives. It may be used to assess changes in perceived stress following mindfulness training.

**Five Facet Mindfulness Questionnaire (FFMQ):**
The FFMQ measures different dimensions of mindfulness, including observing experiences, describing experiences, acting with awareness, non-judging and non-reactivity.

**Depression Anxiety Stress Scales (DASS-21):**
The DASS-21 assesses symptoms related to depression, anxiety and stress. It may help researchers evaluate broader psychological changes following an intervention.

**Professional Quality of Life Scale (ProQOL):**
The ProQOL assesses compassion satisfaction, burnout and secondary traumatic stress. It may be particularly relevant for nurses working in emotionally demanding clinical environments.

**Assessment before and after intervention:**
A structured evaluation may include:

1. Baseline assessment before mindfulness training.
2. Assessment immediately after programme completion.
3. Follow-up assessment after three months.
4. Longer-term assessment where resources permit.

Using the same valid measurement tools at different time points can help researchers evaluate changes more consistently.

## 13. Benefits of Mindfulness-Based Interventions for Nursing Professionals:

Mindfulness-based interventions may provide several benefits:

**Reduced perceived stress:** Regular practice may help nurses respond more calmly to stressful situations.

**Improved emotional regulation:** Nurses may become better able to recognise and manage their emotional reactions.

**Improved resilience:** Mindfulness may help nurses recover from difficult experiences.

**Better self-awareness:** Nurses may recognise early signs of emotional exhaustion and seek support.

**Improved relaxation:** Breathing and meditation exercises may encourage a state of calmness.

**Improved job satisfaction:** Some studies have reported improvements in job satisfaction following mindfulness training.

**Support for compassionate care:** Greater emotional awareness may help nurses maintain respectful and patient-centred communication.

**Improved sleep-related outcomes:** Some research has reported improvements in sleep quality following mindfulness interventions, although results vary.

These benefits should be understood as potential outcomes rather than guaranteed effects in every nursing professional.

## 14. Challenges in Implementing Mindfulness Programmes:

Despite their potential benefits, mindfulness interventions may face several barriers in healthcare settings.

**Lack of time:**

Nurses working in busy clinical departments may find it difficult to attend regular mindfulness sessions.

**Staff shortages:**

Understaffing may reduce opportunities for participation because patient care responsibilities must remain the priority.

**Limited awareness:**

Some nursing professionals may not understand mindfulness or may have misconceptions about meditation practices.

**Lack of trained instructors:**

Structured programmes require appropriate guidance. Inadequately trained instructors may reduce the quality and consistency of training.

**Difficulty maintaining regular practice:**

Some nurses may initially participate but find it difficult to continue mindfulness exercises because of busy schedules or limited motivation.

**Organisational resistance:**

Hospitals may not prioritise staff well-being programmes because of financial constraints, workload pressures or limited administrative support.

**Individual differences:**

Mindfulness does not produce identical results in all participants. Personal preferences, cultural background, previous experiences and psychological needs may influence participation and response.

## 15. Limitations of the Available Evidence:

Although research supports the potential value of mindfulness, several limitations should be considered.

**Small sample sizes:** Some studies have involved relatively few nurses, limiting the generalisability of findings.

**Differences in intervention design:** Programmes vary in duration, frequency, teaching methods and home practice requirements.

**Variation in outcome measures:** Researchers use different instruments to assess burnout, emotional exhaustion, stress and resilience.

**Short follow-up periods:** Some studies assess participants only immediately after training, making it difficult to determine whether benefits continue over time.

**Risk of bias:** Participants generally know whether they are receiving mindfulness training. This makes blinding difficult and may influence self-reported outcomes.

**High heterogeneity:** Meta-analyses have found differences between included studies, which can reduce confidence in a single pooled estimate.

**Limited organisational evaluation:** Many interventions focus on individual coping rather than changes in staffing, management practices and working conditions.
**Limited evidence from some settings:** More research is needed in diverse healthcare systems, including resource-constrained hospitals and different nursing specialties.
These limitations mean that mindfulness should be considered a supportive approach rather than a complete solution to occupational burnout.

## 16. Recommendations:

Based on the reviewed literature, the following recommendations are suggested:

1. Hospitals should consider offering structured mindfulness-based programmes for nursing professionals.
2. MBSR and other suitable interventions should be adapted to nurses' shift patterns and clinical responsibilities.
3. Brief mindfulness exercises may be introduced during appropriate breaks.
4. Nurse Managers should encourage participation without making it compulsory.
5. Healthcare institutions should provide access to trained mindfulness facilitators.
6. Confidential counselling and psychological support should be available to nurses experiencing significant distress.
7. Hospitals should review staffing levels, workloads and scheduling practices to address organisational causes of burnout.
8. Nurses should be educated about early warning signs of emotional exhaustion.
9. Future studies should use larger samples, standardised interventions and longer follow-up periods.
10. Research should examine whether mindfulness provides additional benefits when combined with organisational interventions.

### 17. Implications for Nursing Practice and Nursing Education:

The findings of this review have implications for nursing practice, education and administration. In clinical practice, mindfulness may help nurses develop self-awareness, emotional regulation and healthier coping responses. These skills may support professional communication and emotional stability during demanding patient-care situations. In nursing education, mindfulness and stress-management techniques may be introduced as part of professional development. Nursing students and newly recruited nurses may benefit from learning how to recognise occupational stress and seek appropriate support. For nursing administration, the review highlights the importance of staff well-being programmes and supportive workplace policies. Hospitals should recognise that nurses' psychological health is connected to workforce retention, professional satisfaction and the delivery of safe, compassionate care. Mindfulness training should therefore be integrated into a broader programme of occupational health and workforce support.

## 18. Discussion:

The available literature indicates that mindfulness-based interventions may contribute to improved psychological well-being among nursing professionals. Early studies demonstrated the feasibility of using MBSR and brief meditation programmes in hospital environments. Subsequent randomised studies and systematic reviews have expanded the evidence base.
Several studies have reported improvements in stress, anxiety, resilience, relaxation and burnout-related outcomes. The findings of Dou et al. (2025) suggest that mindfulness interventions may improve burnout, resilience and sleep quality among nurses. Wu et al. (2026) also reported favourable pooled findings for job burnout and related psychological outcomes. However, the evidence is not entirely consistent. Lin et al. (2026) reported clearer improvements in resilience and job satisfaction than in the core dimensions of occupational burnout. This difference suggests that mindfulness may improve an individual's ability to cope with occupational stress without necessarily removing all the factors responsible for burnout. Another important consideration is that burnout is influenced by both individual and organisational conditions. A nurse may learn effective relaxation and coping skills but continue to experience excessive workloads, inadequate staffing and limited professional support. Therefore, mindfulness should be implemented as one component of a wider organisational strategy. Improving working conditions, promoting supportive leadership, providing counselling and ensuring adequate staffing are equally important. The overall interpretation is that mindfulness-based interventions are promising and may provide meaningful psychological benefits, but their long-term effectiveness in reducing emotional exhaustion requires further high-quality research.

## 19. Conclusion:

Burnout and emotional exhaustion are significant concerns among nursing professionals because of the physical, emotional and organisational demands of healthcare work. Prolonged occupational stress may affect nurses' psychological well-being, job satisfaction, professional relationships and ability to provide compassionate patient care. Mindfulness-based interventions, including MBSR, mindful breathing, body scan meditation and guided mindfulness training, may support stress management, emotional regulation, resilience and psychological well-being. Several studies have reported favourable effects on burnout-related outcomes, although the strength and consistency of the evidence vary. Mindfulness should not be viewed as a substitute for addressing workplace problems. Healthcare institutions must combine individual stress-management interventions with adequate staffing, supportive leadership, fair scheduling, counselling and a positive work environment. In conclusion, mindfulness-based interventions can be considered a useful supportive approach for promoting the mental health and professional well-being of nursing professionals. Further research using standardised programmes, larger samples and long-term follow-up is needed to establish their effectiveness more clearly.

## 20. References:

(1) Maslach C, Jackson SE. The measurement of experienced burnout. J Organ Behav. 1981;2(2):99-113. doi:10.1002/job.4030020205.
(2) Maslach C, Schaufeli WB, Leiter MP. Job burnout. Annu Rev Psychol. 2001;52:397-422. doi:10.1146/annurev.psych.52.1.397.
(3) World Health Organization. Burn-out an occupational phenomenon: International Classification of Diseases [Internet]. Geneva: WHO; 2019 May 28. Available from: https://www.who.int/news/item/28-05-2019-burn-out-an-occupational-phenomenon-international-classification-of-diseases
(4) Kabat-Zinn J. An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: theoretical considerations and preliminary results. Gen Hosp Psychiatry. 1982;4(1):33-47. doi:10.1016/0163-8343(82)90026-3.
(5) Kabat-Zinn J. Mindfulness-based interventions in context: past, present, and future. Clin Psychol Sci Pract. 2003;10(2):144-156. doi:10.1093/clipsy.bpg016.
(6) Cohen-Katz J, Wiley SD, Capuano T, Baker DM, Shapiro S. The effects of mindfulness-based stress reduction on nurse stress and burnout: a quantitative and qualitative study. Holist Nurs Pract. 2004;18(6):302-308. doi:10.1097/00004650-200411000-00006.
(7) Cohen-Katz J, Wiley SD, Capuano T, Baker DM, Kimmel S, Shapiro S. The effects of mindfulness-based stress reduction on nurse stress and burnout, Part II: a quantitative and qualitative study. Holist Nurs Pract. 2005;19(1):26-35. doi:10.1097/00004650-200501000-00008.
(8) Cohen-Katz J, Wiley S, Capuano T, Baker DM, Deitrick L, Shapiro S. The effects of mindfulness-based stress reduction on nurse stress and burnout: a qualitative and quantitative study, Part III. Holist Nurs Pract. 2005;19(2):78-86. doi:10.1097/00004650-200503000-00009.
(9) Mackenzie CS, Poulin PA, Seidman-Carlson R. A brief mindfulness-based stress reduction intervention for nurses and nurse aides. Appl Nurs Res. 2006;19(2):105-109. doi:10.1016/j.apnr.2005.08.002.
(10) Mohammed AS, Nadeem, Kumar M, Singh B, Chawla A. Role of herbal medicines in the treatment of depression: a comprehensive review. Scienxt J Pharm Sci. 2026;4(2): July–December. doi:10.5281/zenodo.22869446.
(11) Pipe TB, Bortz JJ, Dueck A, Pendergast D, Buchda V, Summers J. Nurse leader mindfulness meditation program for stress management: a randomized controlled trial. J Nurs Adm. 2009;39(3):130-137. doi:10.1097/NNA.0b013e31819894a0.
(12) Guillaumie L, Boiral O, Champagne J. A mixed-methods systematic review of the effects of mindfulness on nurses. J Adv Nurs. 2017;73(5):1017-1034. doi:10.1111/jan.13176.
(13) Lin L, He G, Yan J, Gu C, Xie J. The effects of a modified mindfulness-based stress reduction program for nurses: a randomized controlled trial. Workplace Health Saf. 2019;67(3):111-122. doi:10.1177/2165079918801633.
(14) Ghawadra SF, Abdullah KL, 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(5):1088-1097. doi:10.1111/jonm.13049.
(15) Suleiman-Martos N, Gomez-Urquiza JL, Aguayo-Estremera R, Cañadas-De La Fuente GA, De La Fuente-Solana EI, Albendín-García L. The effect of mindfulness training on burnout syndrome in nursing: a systematic review and meta-analysis. J Adv Nurs. 2020;76(5):1124-1140. doi:10.1111/jan.14318.

(16) 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. Int J Environ Res Public Health. 2022;19(18):11441. doi:10.3390/ijerph191811441.

(17) Ramachandran HJ, Bin Mahmud MS, Rajendran P, Jiang Y, Cheng L, Wang W. Effectiveness of mindfulness-based interventions on psychological well-being, burnout and post-traumatic stress disorder among nurses: a systematic review and meta-analysis. J Clin Nurs. 2023;32(11-12):2323-2338. doi:10.1111/jocn.16265.

(18) Dou J, Lian Y, Lin L, Asmuri SNB, Wang P, Durai RAR. Effectiveness of mindfulness-based interventions on burnout, resilience and sleep quality among nurses: a systematic review and meta-analysis of randomized controlled trials. BMC Nurs. 2025;24:739. doi:10.1186/s12912-025-03101-0.

(19) Wu C, Zhang L, Xu X. Mindfulness-based interventions for nurses: a meta-analysis of effects on compassion fatigue, job burnout, and traumatic stress. Int Nurs Rev. 2026;73(3). doi:10.1111/inr.70245.

(20) Lin YC, Wu CH, Tseng TA, Jimba M, Lin GM, Chang YC. The effectiveness of mindfulness-based interventions in enhancing resilience and mitigating occupational burnout among nurses: a meta-analysis of randomized controlled trials. Appl Nurs Res. 2026;91:152125. doi:10.1016/j.apnr.2026.152125.