Stress Management of Professional Health Care Givers

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Abstract

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Abstract

Occupational stress among healthcare professionals (HCPs) occurs through heavy workloads, meagre salaries, emotional demands, and scant opportunities for participation in the decision-making processes, which ultimately compromise their mental health, work gratification, and patient care quality. Thus, this thesis is a study on stress management strategies employed by HCPs.

The study employed a narrative literature review through a search of databases such as PubMed, CINAHL, Scopus, PsycINFO, and Google Scholar. 33 peer-reviewed articles published between 2015 and 2025 were selected for the study.

The results of the study showed that the main stressors of HCPs include high patient-to-nurse ratios, financial insecurity, psychological pressure from patient care, and exclusion from organizational decisions. Strategies for managing stress include organizational support, mindfulness-based interventions, yoga, digital tools, such as mobile applications and online CBT, psychological support, such as Stress First Aid, and group therapy.

These stress management interventions were found to have varying effect in reducing stress. Yoga and digital interventions were significant in reducing stress and improving well-being. Mindfulness and organizational approaches produced mixed or short-term results that were frequently limited due to sustainability issues. Barriers to implementation include insufficient organizational support, feasibility constraints (such as time and resource limitations), effectiveness of intervention limited to the short term, demographic differences among individuals, systemic challenges (staffing shortages), and low awareness among HCPs. This study emphasizes the need for tailored, evidence-based interventions reinforced by organisational policies to address both individual and systemic factors.

Keywords

Stress management, occupational stress, healthcare professionals, burnout, resilience.

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1. INTRODUCTION

Stress is the condition a human being confronts challenges or shows reactions to environmental impositions, giving rise to a state of physical, emotional, or mental discomfort (Pandey, 2020). Stress was initially in Selye's (1946) concept as a view of physiological response to adaptation demands that was to later reflect stress as that dynamic interaction between the individuals and their environments. Stress, when left untreated, besides affects the health of persons, becomes part of the malfunctions in organizations by adding to them productivity decrease and workplace conflict, among other things included in effects so produced.

The work of healthcare workers (HCP) is associated with high stress-like pressure conditions due to the very nature of the profession. Other stress contributors include too much workload, tight deadlines, and emotionally laden interpersonal situations (Nwobodo et al., 2023). Because even an error could mean life or death for a patient, jobs in health care are stressful jobs, thus making it difficult for this professional to work without making errors. The health consequences faced regularly by patients cause emotionally heavy consequences, resulting sometimes in burnout in HCPs and other stress-related diseases, generally of a severe kind.

Burnout with occupational stress stands as among the most serious outcomes in HCPs (Nwobodo et al., 2023). The typical symptoms of burnout include feeling drained out as the fatigue process continues, detachment from associates and delayed reporting on what an individual had planned and completed. Such issues cause difficulties for the HCPs; however, they also directly affect the quality of care such HCPs can provide to their patients. Research shows that the burnout syndrome exacerbates errors in medical procedures and undermines teamwork functionalities and fuels high staff turnover, thus constraining health services.

This thesis seeks to furnish evidence and arguments supporting different workplace stress management tactics aimed at counteracting the negative influences of occupational stress in health practitioners. Main fields of interest are the identification of the root causes of stress, exploration of interventions enhancing resilience and coping mechanisms, and evaluation of organizational practices to which we can connect

employee well-being more practically and trace out changes. The analysis will also discuss the situational stress effect on employees, for example, workload and health resources availability to them, thus setting up some systemic solutions to the problem.

This is how healthcare organizations get an opportunity to redesign the surrounding spaces not only to function as spaces for professional growth of HCPs but also as centers for care for personal well-being. This way, both the need for quality patient care and appropriate health care staff are addressed. The well-being of society is no longer an individualized matter but a systemic requirement that requires relatively less work to be done around the entire healthcare system: quality of care, patient safety, and even decisions within healthcare organizations.

The main aim of this thesis, which is the creation of actionable insights into effective stress management practices, will be achieved through the examination of current literature. By creating an environment that is supportive and resilient, healthcare organizations can mitigate the negative impacts of stress, and this will eventually lead to a healthier, more productive workforce dedicated to bringing excellent care to patients.

2. BACKGROUND INFORMATION AND THEORETICAL FRAMEWORK

2.1 Definitions of Stress and Stress Management

According to Selye (2009), stress is identified as the body's reaction to any change required. It is a mental or emotional type of suffering that may be caused by such challenging times. In the healthcare case, stress is the term that refers to this time of change. It is when people experience a gap between the two poles: demand and ability (Robbins and De Cenzo, 2008). Doctors, nurses, and other staff who commonly work in stressful environments, among others, are at even greater risk of developing the condition as they have long shifts, work on emotionally challenging cases, and the physical requirements of patient care (Howard, 2008).

Contrary to stress management, the practice is involved with bringing stress levels under control and thereby helping the individual to bear stressors with efficiency. These strategies refer to personal interventions, for example, practising mindfulness, and organizational measures like reduction of workload and improved communication channels (Chiappetta et al., 2018; BMJ Open, 2022).

2.2 Causes of Stress in Healthcare Professionals

Depending on the healthcare setting, stressors are related to the organization, the task, or the interpersonal relations (Sardiwalla et al., 2007). “Organizational Pains” are the stresses that arise from poor communication, role uncertainty, and competing authority. Task-related stressors include the fact that treating critical patients and dealing with death and suffering can become emotionally too much, and the stress caused by interpersonal conflicts either from within or outside the multidisciplinary team (Frontiers, 2022).

Therefore, the COVID-19 pandemic has become an even more aggravating factor of these stressors that resulted in elevated levels of burnout among healthcare workers all over the world. As per the report of the Medscape National Physician Burnout and Suicide Survey (2020), the burnout rate was estimated to be forty-three per cent

among healthcare professionals, with emotional exhaustion being a severe symptom (Murray et al., 2022).

2.3 Stress Management Strategies Among Healthcare Professionals

Stress management among healthcare workers is highly imperative as their work is physically and emotionally demanding. Individual and organizational intervention are necessary to effectively manage stress. Not only do these interventions help healthcare workers feel good and cope well, but they also improve how they carry out their work and the way patients are treated. One of the common ways of managing stress is through regular physical exercise. Physical exercise is effective in lessening stress and avoiding burnout as it lessens stress hormones like cortisol, improves mood, and keeps physical health in good condition. Heath et al. (2020) explain that exercise renders the healthcare workers more resistant, and Callahan et al. (2018) also add that individuals who exercise on a regular basis experience less burnout and are more resilient while coping with issues. Exercise is also a preventive measure, enabling medical staff to treat stress problems early before they become a significant problem (Heath et al., 2020).

Another useful method is through the use of Mindfulness-Based Stress Reduction (MBSR) programs. They are mindfulness training, meditation, and body awareness exercises that help medical staff to stay calm and better control their emotions. Various research has suggested MBSR to decrease the level of anxiety and depression within a healthcare setting (Heath et al., 2020; Callahan et al., 2018; Chiappetta et al., 2018). Kriakous et al. (2021) also concluded that anxiety and depression were decreased through MBSR, although evidence for the levels of stress is sometimes mixed. These exercises can be done individually or in groups and are useful in high-stress healthcare environments because they teach employees how to manage their emotional reactions and stay present. Heath et al. (2020) add that regular mindfulness exercises allow healthcare workers to become emotionally resilient and feel more capable, while reflective sessions allow them to make sense of their experiences and improve their reactions to stress.

Organizational level, supportive work environments that allow stress management among healthcare workers need to be developed. This involves openness in communication, mental health care availability, and proper staffing to deal with the workload. Callahan et al. (2018) highlight that mental well-being support policies help in decreasing job stress. Heath et al. (2020) also explain that flexibility in schedules and adjusting workloads enable employees to achieve a better work-life balance and feel less burnout. Work-life balance support in health care facilities motivates employees to work, and by taking care of the same, the patient care will last longer since it keeps employees engaged for longer (Callahan et al., 2018).

Teamworking also has a significant contribution as regards management of stress in a health care setting. Medical professionals often work alongside patients, and when their teams perform well, it reduces stress. Heath et al. (2020) explain that teamwork allows easier communication and reduces feelings of loneliness, which can create stress. Team-building exercises, better communication between departments, and training on handling disagreements can make teams more effective. If the workers feel that they are part of a stable team, they work under less stress, feel more content at work, and offer better care to patients (Heath et al., 2020).

Staff support groups, including Schwartz Rounds, also lower the stress levels of healthcare professionals. These are discussion forums where the staff sit together and resolve their emotional problems in the workplace. Schwartz Rounds offer a refuge where healthcare staff can speak out about how they feel and get linked to other individuals who understand the experience that they are going through. Callahan et al. (2018) explain that this will reduce the feeling of emotional distance and burnout. This will increase the level of compassion and create robust social community among the healthcare staff, thereby getting them supported more effectively. These sessions are especially useful in departments where the pressure is extremely acute, as they allow staff to release tension and feel part of a group. Overall, with a mix of physical exercise, mindfulness, team camaraderie, and workplace

changes, healthcare professionals can manage stress more effectively and stay healthy in body as well as mind.

2.4 Theoretical Frameworks on Stress

The transactional model of stress and coping by Lazarus and Folkman (1984) explains how people, including healthcare workers, understand and respond to stress in their daily lives. This theory says that stress happens when a person thinks that what is being asked of them is more than what they can handle with the resources they have (Biggs et al., 2017). For example, a nurse might feel stressed if they have too many patients to care for and not enough time, energy, or support to manage the workload. According to the model, people first look at the situation to decide if it is harmful, threatening, or challenging and this is called primary appraisal (Folkman et al., 1986). Then, they assess their ability to deal with the situation and this is known as secondary appraisal. If they believe their resources are not enough, stress occurs. How the person decides to cope depends on this appraisal process (Folkman et al., 1986). They may use problem-focused coping, which means they try to deal with the cause of the stress directly, such as asking for help or planning better. Or they may use emotion-focused coping, which means they try to reduce the emotional pain, such as by talking to someone or using relaxation techniques. Studies have shown that when healthcare workers feel they lack control or support, they are more likely to experience stress and burnout (Halbesleben, 2006; Maslach & Leiter, 2016). However, when they feel supported and believe they can manage their tasks, they cope better and remain more satisfied with their jobs (Schaufeli & Buunk, 2003). Therefore, this model helps healthcare managers to understand that reducing stress among staff requires both lowering demands and increasing support and resources.

3. PURPOSE, AIM, AND RESEARCH QUESTIONS

Purpose

The purpose of this thesis is to investigate the mental health and well-being of healthcare workers and to find out effective stress management strategies by identifying them. This is, however, linked to the identification of the underlying causes of stress in healthcare settings and producing evidence-based methods to reduce their effect. Through this process, the research aims to enhance the organizational knowledge and facilitate the inclusion of sustainable interventions in the health care system.

Aim

The overall aim of this study is to systematically review stress management strategies utilized by healthcare professionals, examining their effectiveness in reducing stress and improving well-being among various health worker groups. The study seeks to address the following research objectives:

1. To identify the primary sources of occupational stress among healthcare professionals.
2. To evaluate current stress management interventions utilized by health professionals.
3. To assess the effectiveness of different stress management strategies based on health worker role and setting.
4. To identify barriers to implementing stress management practices in healthcare environments.

Research Questions

1. What are the primary sources of occupational stress among healthcare professionals
2. What are the stress management interventions utilized by health professional?

3. What is the effectiveness of different stress management strategies utilized by health professional?
4. What are the barriers to implementing stress management practices in healthcare environments?

These questions are about finding out the shortcomings of the existing strategies and suggesting improvements that can be made to deal with a range of healthcare environments.

4. IMPLEMENTATION AND METHODOLOGY

4.1 Research Design

This study adopts a secondary literature review approach, which means that the study will be solely based on reviewing already done studies rather than collecting new data directly from people. Specifically, this study employs a narrative literature review to answer its research questions. A literature review is a good approach when the objective is to understand what is already known about a topic, in this case, stress management among healthcare professionals. This approach allows the researcher to collect, analyze, and classify data from numerous published studies and consolidate the major findings. It also allows one to identify patterns, gaps, or trends in research. This is a fitting approach since several studies have already been conducted on stress, burnout, and coping among healthcare workers.Consequently, a huge body of research is available to be studied, and the literature review method is the most appropriate. Additionally, with secondary review, various studies in different settings can be compared, improving the generalizability and comprehensiveness of results.

4.2 Data Sources and Search Strategy

To ensure that conclusions are based on high-quality and reliable information, the literature was searched across established and scholarly databases. The literature search was done through reputable and scholarly electronic databases, such as PubMed, CINAHL, Scopus, and PsycINFO. The search was conducted using predefined search words and Boolean operators to refine the results and exclude irrelevant studies. Additionally, filters were applied to ensure the inclusion of peer-reviewed journal articles published within the last 10 years (2015–2025), focusing on healthcare workers in both hospital and non-hospital settings. The key search terms included:

• ("stress management" OR " occupational stress" OR ”stress reduction techniques” OR "workplace stress") AND ("healthcare professionals" OR "health workers” OR

The database search results are presented in Table 1 below, including how many articles were found and how many were selected after screening:

Table 1: Database Search Summary

Database	**Search Terms**	**Articles Found**	**Articles Selected**
PubMed	("stress management" OR "stress reduction techniques") AND ("healthcare professionals" OR "health workers" OR hospital staff)	106	12
Scopus	("stress management" OR "stress reduction techniques") AND ("healthcare professionals" OR "health workers" OR hospital staff)	302	18
Cochrane Library	"Stress Management" AND "Health Workers"	28	2
PsycINFO	("stress management" OR "coping strategies" OR "burnout prevention") AND ("healthcare professionals" OR "health workers" OR "nurses" OR "doctors")	29	1
Total		465	33

This table clearly shows that out of a total of 465 articles initially identified across the four databases, only 33 were considered relevant after applying the inclusion and exclusion criteria. These selected articles represent a diverse mix of study types and provide a solid foundation for analyzing how healthcare professionals manage occupational stress.

4.3 Screening and Selection Criteria

Following the first database search, the articles went through a two-stage screening. During the first stage, the re-retrieved articles went through title and abstract screening. Those studies not directly associated with healthcare professionals or those dealing with patient stress or workplace stress outside the healthcare context were excluded. Duplicates as well as unstructured or unclear articles were also eliminated.

The second stage involved full-text screening, whereby the remaining articles were read in their entirety to decide if they succeeded the inclusion criteria. These were: publication periods from 2015 to 2025, peer-reviewed, healthcare professional-centered, English, and featuring empirical evidence of stress management interventions. Excluded in addition were studies as opinion, editorial, or theoretical papers which did not encompass practical implications. Only research that involved real interventions or outlining coping strategies used by healthcare workers in real settings was selected. This rigorous process ensured that the final 33 articles used for the review were particularly relevant to the purpose of the research and of sufficient academic caliber to enable meaningful analysis.

4.4 Data Extraction and Analysis

Following completion of the selection process, an organized data extraction procedure was employed to gather the key information from each article. This entailed creating a standard form for extracting information such as the name of the study, year of publication, country where the study was conducted, number and nature of the sample (e.g., nurses, doctors), design of the study (eg. quantitative, qualitative, or mixed methods), nature of stressors identified, and interventions or measures adopted to cope with stress. The main findings, conclusions, and recommendations of the studies were also extracted. The table showing the data extracted from selected articles is shown in Appendix 1.

All the selected articles would be coded and analysing using TCCM framework and interpretative synthesis (Paul & Rosado-Serrano, 2019). Supported by content analysis, thematic analysis and inductive narrative, followed by the discussion of the study findings in terms of main themes, theories, context, characteristics and methods covered in the final sample. By presenting the evidence in this way, the review was able to show which interventions seemed most effective and under what circumstances. The analysis also looked for gaps in the research, e.g., an omission to include non-hospital-based staff or lack of sufficient attention to cultural differences in dealing with stress.

5. RESULTS

The study aimed to investigate the mental health and well-being of healthcare workers and to find out effective stress management strategies adopted by them. This section presents the results obtained from the search process of relevant literature. The results are presented to address the 4 research questions RQ1: What are the primary sources of occupational stress among healthcare professionals? RQ2: What are the stress management interventions utilized by health professionals? RQ3: What is the effectiveness of different stress management strategies utilized by health professional? RQ4: What are the barriers to implementing stress management practices in healthcare environments?

5.1 RQ1: What are the primary sources of occupational stress among healthcare professionals?

Occupational stress is a significant concern for healthcare workers, brought about by several factors that impact their mental health, job satisfaction, and overall well-being. The literature covered herein presents key sources of stress, including excessive workload, low income, emotional demands, lack of participation in decision-making, and inaccurate information from external sources. These stressors are common in different healthcare settings and cadres and impact doctors, nurses, and community health workers equally.

5.1.1 Excessive Workload and Extended Working Hours

Excessive workload and extended working hours are one of the most prevalent causes of stress among healthcare professionals. Şanlıtürk (2021) found that 62% of intensive care nurses in Turkey experienced moderate occupational stress, to which high patient-to-nurse ratios and excessive working hours were major contributors. Likewise, Keković et al. (2022) also found that over half of the surveyed health workers (50.44%) cited work overload as their major cause of stress. This excessive workload is usually a result of a shortage of staff, higher patient admissions, and the

requirement to deliver round-the-clock care, particularly amidst health emergencies like the COVID-19 pandemic. Herraiz-Recuenco et al. (2022) also validate this finding that German healthcare workers felt enormous pressure from work demands that were psychologically costly and impacted their job performance.

5.1.2 Low Salary and Financial Pressure

Financial insecurity is another vital stressor for healthcare professionals. Keković et al. (2022) ranked "inadequate personal income" as the leading cause of occupational stress, with 68.14% of the sample identifying it as a major concern. This finding implies that although healthcare professionals are essential, financial insecurity remains a burden, and it affects their job satisfaction and motivation. Keković et al. (2022) revealed that when healthcare workers cannot meet their financial requirements, they may develop chronic stress, thereby inducing mental disorders such as anxiety and depression. In addition, financial stress might force workers to do overtime or take on more than a single job, again adding to their workload and exhaustion (Keković et al. 2022).

5.1.3 Emotional Demands and Psychological Pressure

Health care workers often undergo extreme emotional and psychological pres-sure due to the nature of their work. Providing care for critically ill patients, deal-ing with suffering and death, and satisfying patients' expectations are all reasons for high emotional demands. Herraiz-Recuenco et al. (2022) found emotional strain to be one of the notable stressors in healthcare professionals, leading to mental exhaustion and de-creased job performance. Nurses working in intensive care units, where the stakes are particularly high, tend to experience emotional distress, reports Şanlıtürk (2021). The pressure to ensure good patient outcomes combined with the fear of making mistakes renders the work environment stressful. In addition, the feeling of powerlessness when there is failed treatment can be psychological-ly draining for healthcare professionals (Şanlıtürk, 2021).

5.1.4 Low Participation and Decision-Making Power

Low levels of participation in decision-making in the workplace are another major stressor for healthcare professionals, particularly community health workers (CHWs). Aryal and D'mello (2020) confirmed that 40.5% of CHWs in Mangalore, Karnataka, were experiencing occupational stress, with under-participation and powerlessness being significant contributing factors. According to Aryal and D'mello (2020), healthcare workers feel unappreciated and undervalued when they are not involved in decision-making, and this frustrates and stresses them. Frontline personnel in the majority of healthcare institutions possess first-hand data on patient care and operational matters, but lack a voice through which to raise concerns or suggest changes.

Table 5.1 Summary of Result for Research Question 1 (Primary Sources of Stress)

Themes	**Main Findings**	**Authors**
1. Excessive Workload and Extended Working Hours	High patient-to-nurse ratios, staff shortages, and extended work hours cause significant stress.	Şanlıtürk (2021), Keković et al. (2022), Herraiz-Recuenco et al. (2022)
2. Low Salary and Financial Pressure	Inadequate income leads to chronic stress, financial insecurity, and the need for overtime work.	Keković et al. (2022)
3. Emotional Demands and Psychological Pressure	Dealing with critically ill patients, death, and high patient expectations causes mental exhaustion.	Herraiz-Recuenco et al. (2022), Şanlıtürk (2021)
4. Low Participation and Decision-Making Power	Lack of involvement in workplace decisions causes frustration and feelings of undervaluation.	Aryal and D'mello (2020)

5.2 RQ2: What are the stress management strategies utilized by health professionals?

The findings of the literature review identify prominent strategies including mindfulness-based interventions, organizational support, digital and mobile applications, psychological support, physical well-being initiatives, social support systems, and cognitive-based models.

5.2.1 Organizational and Structural Interventions

Rollins et al. (2021), in a psychiatric rehabilitation staff literature review, highlighted that organizational support is the foundation for stress alleviation and well-being among health professionals. The study concluded that administrative systems, leadership, and organizational policies have a central role to play in avoiding burnout and mental stress. The authors endorsed workplace-level change, including policies that put staff mental health first, offer flexible work conditions, and activities to promote employee voice. Rollins et al. (2021) claimed these organizational-level interventions, although not direct therapeutic interventions, set the stage for a culture conducive to stress prevention and recovery.

Likewise, Saparniene et al. (2023), with a cross-sectional study design, determined occupational stress prevention measures based on the viewpoint of health care employees. It was concluded that employee participation in decision-making, conducting annual review meetings, providing a safe work environment, and eradicating workplace bullying (mobbing) were significant measures to manage stress.

5.2.2 Mindfulness-Based Interventions

Errazuriz et al. (2022) evaluated the impact of Mindfulness-Based Stress Reduction (MBSR) on the psychological distress of health workers through a Randomized Controlled Trial. The result indicated that MBSR was able to decrease short-term stress,

but its implications were not long-lasting. This indicates that mindfulness interventions are effective, yet repetition and reinforcement could be very important for long-term effect. that multi-component, resilience-based programs are able to provide general support.

Likewise, Herraiz-Recuenco et al. (2022) noted that although peer support, relaxation, and mindfulness were frequently utilized by healthcare workers to deal with stress, their effectiveness differed across roles and workplace settings, with challenges like a lack of institutional support and time limitations hindering their effectiveness.

Catapano et al. (2023) also added strength to the advantages of mindfulness interventions in a systematic review, whereby it was identified that cognitive-behavioral therapy (CBT)-based mindfulness interventions had a significant decrease in burnout, stress, and anxiety, and relaxation methods like art therapy and Emotional Freedom Techniques (EFT) were effective in affecting stress levels.

5.2.3 Yoga and Physical Self-Care

Guerra et al. (2022) conducted an RCT in a dental care environment, assessing the impact of a yoga-based intervention. The findings showed that the introduction of yoga at work, without adding workload, brought about considerable enhancement in mental well-being. The intervention group showed a significant rise in their Mental Composite Score (MCS) to demonstrate that formal physical relaxation methods can bring about quantifiable enhancement in stress management.

Leão et al. (2017) performed an RCT on female healthcare professionals to determine the impact of a sensorially mediated self-care intervention based on touch and olfaction. The intervention had a beneficial impact on stress level, mental well-being, and self-esteem. This suggests the efficacy of sensory-based self-care interventions (e.g., aromatherapy, massage) in alleviating stress and enhancing emotional well-being among health professionals.

5.2.4 Digital and App-Based Interventions

Liu et al. (2024) examined the Impact of a Complex Interactive Multimodal Intervention (CIMI) in a non-randomized controlled trial. It was conducted among healthcare workers in China experiencing stress. CIMI significantly benefited sleep issues and psychological stress. As the intervention was mobile, it was readily accessible, demonstrating how digital interventions can offer flexible and scalable mental health care.

Demirel et al. (2024), in an experimental single-case study, tested the STAPP@Work mobile app with mental health professionals. The app proved effective in diminishing burnout and increasing coping self-efficacy, and consequently, technology-supported self-management interventions can play a role in stress reduction.

Watanabe et al. (2024) also utilized an RCT design to evaluate a smartphone-based internet cognitive behavior therapy (iCBT) program with Vietnamese and Thai nurses working during the COVID-19 pandemic. The intervention significantly reduced depression at 3 months, demonstrating that structured online CBT platforms are beneficial.

Analyzing 20 studies, with 17 included in the meta-analysis, Zhang et al. (2024) observed a large effect in reducing stress and anxiety and a small-to-medium effect in alleviating depression. Their subgroup analyses indicated that mindfulness approaches, online courses, computer use, group interventions, and professional guidance were particularly beneficial, while meta-regression suggested that intervention duration primarily influenced anxiety symptoms.

5.2.5 Psychological and Emotional Support Programs

McLean et al. (2023) utilized a mixed-methods approach to study the "Stress First Aid" (SFA) program in the Veterans Health Administration. Personnel reported that they learned more about stress and appreciated having a shared language to talk about emotional health. While the program generated a sense of community and

empowerment, it was noted that SFA could not solve big problems like understaffing or excessive work. The study stressed that organizational and individual support are necessary.

Baum et al. (2025) reviewed critiques of several psychological debriefing models and showed that post-incident traumatic debriefings in an organized fashion helped healthcare staff to cope, be more confident, and think clearly. Various models can be adapted based on what is available at each facility, but the final result is favorable when workers have safe places to relax and think.

Sun et al. (2025) studied the interconnection between coping strategies, social support, and perceived stress in nurses who were at the forefront of COVID-19. The study used path analysis and established that social support helped improve coping strategies and decrease perceived stress. Thus, having good interpersonal relationships and peer support is extremely important.

5.2.6 Group Therapy and Cognitive Coping Strategy Training

Jadidi et al. (2024) employed focus group discussion in an action research design to examine stress management among pre-hospital emergency personnel. Group therapy was seen to decrease job stress and enhance coping strategies. Participants benefited from shared experience and systematic skill acquisition sessions, emphasizing peer support and collective problem-solving.

Khazaei et al. (2024) carried out a study to analyze the content among Iranian emergency medical service staff. The study revealed key themes of mental preparation, supportive communication, adaptive behavior, and risk management as primary ways of coping with stress. This shows that during stressful emergency situations, mental preparedness and working as a team are key ways of coping.

Williams and Williams (2023) carried out a review study and suggested to apply to nurses a way of thinking to deal with daily stress. Through facilitating healthy coping

mechanisms and strengthening personal control, the approach aids in changing the way in which stress is dealt with and perceived. This help is very beneficial for front-line nurses and other individuals who are under daily emotional pressure.

Dossett et al. (2021) evaluated the Stress Management and Resiliency Training (SMART) program in a mixed-methods cohort study. The intervention resulted in statistically significant reduction in perceived stress and improvements in physical health, mental well-being, and job satisfaction. The incorporation of cognitive-behavioral principles, mindfulness, and positive psychology was the foundation of the program's success.

Sabry et al. (2023) surveyed and found that most of the healthcare workers were most interested in training programs on stress management and personal growth. They were also interested in educational awareness campaigns and mental health insurance coverage. These findings suggest that healthcare workers understand the value of organized learning and policy support to mitigate occupational stress.

Table 5.2 Summarized of the results for RQ2 (Stress Management Strategies)

Theme	**Main Findings**	**Authors**
1. Organizational and Structural Interventions	Organizational support, leadership, and workplace policies are crucial for stress management.	Rollins et al. (2021), Saparniene et al. (2023)
2. Mindfulness-Based Interventions	Mindfulness, peer support, and relaxation methods are widely used but vary in effectiveness.	Errazuriz et al. (2022), Herraiz-Recuenco et al. (2022), Catapano et al. (2023)
3. Yoga and Physical Self-Care	Workplace yoga enhances mental well-being without adding workload; sensory self-care interventions (e.g., aromatherapy, massage) effectively reduce stress and improve emotional well-being.	Guerra et al. (2022), Leão et al. (2017)

4. Digital and App-Based Interventions	Mobile and app-based interventions significantly reduce stress, anxiety, and depression; mindfulness-based digital programs and structured online CBT platforms are effective.	Liu et al. (2024), Demirel et al. (2024), Watanabe et al. (2024), Zhang et al. (2024)
5. Psychological and Emotional Support	Programs like Stress First Aid (SFA) and structured traumatic debriefings enhance coping, confidence, and emotional well-being; social support plays a key role in reducing perceived stress.	McLean et al. (2023), Baum et al. (2025), Sun et al. (2025)
6. Group Therapy and Cognitive Strategies	Group therapy enhances coping and reduces stress through shared experiences; cognitive coping strategies like adaptive behavior, mental preparedness, and supportive communication help frontline workers manage stress.	Jadidi et al. (2024), Khazaei et al. (2024), Williams & Williams (2023), Dossett et al. (2021), Sabry et al. (2023)

5.3 RQ3. What is the effectiveness of different stress management strategies utilized by health professionals?

5.3.1 Positive Effect

Several studies have determined that a variety of stress management practices can greatly enhance the well-being of healthcare professionals. For example, Guerra et al. (2022) determined that an in-workplace yoga program greatly enhanced the mental well-being of healthcare professionals by leading to a significant rise in the mental composite score (MCS) for both intervention and comparison to non-intervention groups. Dossett et al. (2021) found that the SMART Program was highly effective at decreasing perceived stress ($P < 0.001$) and improving overall mental health ($P = 0.001$), physical health ($P = 0.045$), and job satisfaction ($P = 0.047$). They found that psychological support interventions, including mindfulness-based stress reduction

(MBSR), were helpful. Zhang et al. (2024) pointed out that e-mental health resources improved healthcare workers' mental state and that digital health interventions play a crucial role in managing stress. Additionally, Leão et al. (2017) established that sense-based self-care practices like touch and smell were effective in promoting mental health and stress management. Similarly, Rinaldi et al. (2019) showed that the "Focusing" educational program had a significant decrease in stress levels in health professionals. The findings of this study show that physical and psychological strategies of stress management, specifically mindfulness and self-care, can greatly enhance the mental health and job satisfaction of health professionals.

5.3.2 Mixed Results

Several studies have had mixed results on the efficacy of stress management interventions for healthcare workers. For example, Errazuriz et al. (2022) found that MBSR decreased short-term mental distress among healthcare workers but that these effects wore off when re-assessed later, raising questions about how long these interventions last. McLean et al. (2023) reported that Stress First Aid (SFA) training taught people about stress reactions and made employees aware of their own stress but failed to cover the main burnout reasons. Wang et al. (2023) found that certain healthcare workers used stress management behaviors, but half of the sample did not practice stress management regularly. Groombridge et al. (2022) continued that emergency physicians employed a number of ways of reducing stress during resuscitation, but the efficacy of these interventions differed with individuals. Taylor et al. (2022) further determined that although yoga and group exercise were considered beneficial for occupational stress management, their efficacy depended on individual taste and mode of delivery. Furthermore, Saparniene et al. (2023) highlighted how work conditions, including being involved in decision-making and having secure workplaces, avert stress. They noted that merely focusing on individual solutions is inadequate. These different findings show that while some

stress management approaches can be helpful, their effectiveness in the long run is contingent on individual, firm, and general factors.

5.3.3 No Significant Effect

While there is more focus on how to manage stress, some studies have found no considerable effects of some interventions. Guerra et al. (2022), for instance, noted that while yoga enhanced mental well-being, it had minimal effect on physical health, positive emotions, or work stress issues like job demand and freedom of decision-making. Catapano et al. (2023) carried out a systematic review and did not establish substantial evidence that organizational-level interventions decrease burnout among healthcare professionals. This suggests that while individual-level programs, including mindfulness-based programs, have beneficial effects, more extensive organizational-level approaches might not yield observable stress reduction results. Aryal and D'Mello (2020) found that community health workers used several coping strategies, including self-distraction and humor, but these did not necessarily lead to less stress. Bahadori et al. (2019) in a different study reported that reducing working hours and increasing welfare facilities were suggested ways of managing stress, but they did not show significant decreases in job burnout. These results indicate that some stress management methods have their limits. They also highlight the need to utilize whole, established methods which are tailored to the particular needs of healthcare workers.

Table 5.3 Summarized of the results for RQ3 (Effectiveness of Stress Management Strategies)

Effectiveness Category	**Main Findings**	**Authors**
1. Positive Effect	Yoga significantly improves mental well-being; SMART program reduces stress and enhances mental and physical health; e-mental health resources are effective; mindfulness and self-care practices benefit healthcare professionals.	Guerra et al. (2022), Dossett et al. (2021), Zhang et al. (2024), Leão et al. (2017), Rinaldi et al. (2019)
2. Mixed Results	MBSR reduces stress short-term but lacks long-term impact; Stress First Aid (SFA) increases awareness but does not address burnout causes; effectiveness of stress management depends on personal, organizational, and contextual factors.	Errazuriz et al. (2022), McLean et al. (2023), Wang et al. (2023), Groombridge et al. (2022), Taylor et al. (2022), Saparniene et al. (2023)
3. No Significant Effect	Yoga has minimal impact on work stress factors; organizational interventions show limited effect on burnout; coping strategies like self-distraction and humor do not reduce stress; reducing work hours and increasing welfare facilities do not significantly lower burnout.	Guerra et al. (2022), Catapano et al. (2023), Aryal & D'Mello (2020), Bahadori et al. (2019)

5.4 RQ4. What are the barriers to implementing stress management practices in healthcare environments?

There were a number of themes that emerged the empirical evidence in the literature to explain the barriers to the adoption of stress management interventions in healthcare organizations. These themes are lack of organizational support, inaccessibility and feasibility problems, short-term effectiveness and sustainability, individual and demographic diversity, and systemic and structural constraints. Each of these themes is discussed below based on evidence from the research presented.

5.4.1. Lack of Organizational Support

One of the most prevalent obstacles identified in the literature is the absence of organizational support for managing stress. Rollins et al. (2021) note that organizational support is at the center of the effectiveness of any stress management or well-being intervention for healthcare professionals. Without managerial support, staff will be less inclined to engage with or derive benefit from interventions.

McLean et al. (2023) discovered that though the Stress First Aid (SFA) course normalized discussions of stress and made people feel they belonged, it failed to address systemic burnout factors such as workload and staffing. In the same vein, Saparniene et al. vein, Saparniene et al. (2023) observed that the prevention of stress by facilitating employees' participation in decision-making and ensuring safe work conditions is not sufficiently guaranteed in most cases, thus reducing its effectiveness.

These results are consistent with the perspective that unless organizations develop a supportive culture and invest in employees' mental health, stress management interventions are unlikely to have much impact. For instance, Guerra et al. (2022) demonstrated that whereas a yoga-based intervention can enhance mental health, organizational structures needed to be changed to allow for such an intervention without increased workload. In the absence of systemic buy-in, even successful strategies are difficult to maintain.

5.4.2. Feasibility and Inaccessibility of Interventions

Another relevant barrier is feasibility and availability of stress management interventions. Dossett et al. (2021) determined that while the SMART Program was feasible and resulted in positive effects on stress reduction and job satisfaction, it required time and coordination that might not be readily available in hectic healthcare settings.

Likewise, Liu et al.'s (2024) research indicated that while a complex interactive multimodal intervention (CIMI) was effective, its success depended on whether digital access existed and the participants were digitally literate.

In the same way, Demirel et al. (2024) demonstrated that STAPP@Work smartphone-based interventions decreased burnout and enhanced coping self-efficacy, yet the access to smartphones, the internet, and digital literacy were implicit assumptions. This implies real-world obstacles like time limitations, resource shortages, and digital divides can be discouragements to extensive rollouts of such interventions, particularly in low-resourced environments.

5.4.3. Short-Term Effectiveness and Sustainability Issues

A number of studies have reported the problem of fleeting effects of interventions for stress management. Errazuriz et al. (2022) reported that mindfulness-based stress reduction (MBSR) had beneficial short-term effects but these were not sustained at follow-up. This is a concern with regard to sustaining these interventions in the long term unless repeated several times.

In the same way, Watanabe et al. (2024) showed that although a CBT smartphone app was effective in lowering depression in COVID-19 hospital nurses, long-term maintenance and continuation of such programs are extremely questionable. Baum et al. (2025) also reported that psychological debriefing sessions enhanced self-confidence and coping, but it is very much a function of how often they are carried out and whether there are trained personnel available to carry them out. Sustainability and regular reinforcement are thus major challenges in sustaining the advantages of stress management interventions over the long term.

5.4. 4. Individual and Demographic Differences

Needs for and reactions to stress management are commonly compared along sociodemographic dimensions, which can be used as an argument against providing

standardized courses. Dudutienė et al. (2020) highlighted the need to take into account demographic variation—like age, sex, and professional role—in planning stress interventions. Failure to customize programs to a particular group can make them ineffective or irrelevant to certain healthcare professionals.

In the same vein, Khazaei et al. (2024) pointed out the heterogeneity of Iranian emergency personnel's coping styles and discussed the influence of individual differences, cultural identity, and work setting in the moderation of the effectiveness of stress intervention programs. The absence of interventions specially tailored can lead to poor compliance or inconsistent improvement, especially when interventions are insensitive to individuals' actual life experiences and inclinations.

5.4.5. Systemic and Structural Constraints

Healthcare environments are often characterized by heavy workload, staff shortages, and rigid administrative hierarchies, which limit the provision of even well-designed stress interventions. McLean et al. (2023) discovered that systemic issues such as excessive workload and lack of time posed significant barriers that stress first aid programs could not surmount. Similarly, Wang et al. (2023) discovered that half of the hospital staff members who worked night shifts participated in stress management activities, partly because of the kind of work schedule they had and a deficiency of focus on personal well-being within the corporate culture.

Sabry et al. (2023) confirmed that although most healthcare professionals were aware of the necessity for mental health sensitivity and stress management training, organizational policies like absence of insurance coverage or formal support systems prevented actual application. This concurs with Groombridge et al. (2022), who observed that emergency physicians tend to practice under extreme time pressures and emotional demands with no space for active stress management unless changes are effected at the system level.

5.4.6 Limited Awareness and Participation

The second barrier is the low level of awareness or lack of interest in stress management interventions on the part of healthcare professionals. Turkington et al. (2023) observed that not every mental health professional became mentally tough or used coping strategies, implying varying levels of motivation and awareness among individuals. Likewise, Sun et al. (2025) discovered that although both positive coping and social support were significant in decreasing stress among nurses, not all employees used or profited from these services to the same extent, primarily due to lack of knowledge or organizational promotion.

Williams and Williams (2023) further established that cognitive models of stress management only worked if staff were trained and motivated to apply them on a consistent basis. The inference of this is that healthcare professionals, unless regularly trained, motivated, and reminded, are unlikely to commit fully to stress reduction techniques, thereby reducing their effectiveness.

Table 5.4 Summarized of the results for RQ4 (Barriers to the Implementation of Stress Management Strategies

Barrier Category	**Main Findings**	**Authors**
1. Lack of Organizational Support	Stress management interventions are ineffective without managerial and institutional support; systemic burnout factors (e.g., workload, staffing) are often unaddressed.	Rollins et al. (2021), McLean et al. (2023), Saparniene et al. (2023), Guerra et al. (2022)
2. Feasibility and Inaccessibility	Time constraints, lack of resources, and digital literacy issues hinder accessibility; smartphone and digital-based interventions require infrastructure not always available.	Dossett et al. (2021), Liu et al. (2024), Demirel et al. (2024)

3. Short-Term Effectiveness & Sustainability	Many interventions show initial success but lack long-term sustainability; effectiveness diminishes without regular reinforcement and trained personnel.	Errazuriz et al. (2022), Watanabe et al. (2024), Baum et al. (2025)
4. Individual & Demographic Differences	Standardized interventions may not suit all healthcare workers; factors like age, sex, culture, and professional roles affect intervention effectiveness.	Dudutienė et al. (2020), Khazaei et al. (2024)
7.5 Systemic & Structural Constraints	Heavy workload, staff shortages, rigid hierarchies, and lack of policy support limit the implementation of stress management interventions.	McLean et al. (2023), Wang et al. (2023), Sabry et al. (2023), Groombridge et al. (2022)
7.6 Limited Awareness & Participation	Lack of awareness, motivation, and organizational promotion leads to low participation and inconsistent use of stress management techniques.	Turkington et al. (2023), Sun et al. (2025), Williams & Williams (2023)

6. DISCUSSION

The findings of this study underscore several critical sources of occupational stress among healthcare professionals, which have profound implications for their mental health, job satisfaction, and overall well-being. Excessive workload and extended working hours emerge as predominant stressors, with Şanlıtürk (2021) reporting that 62% of intensive care nurses in Turkey experienced moderate stress due to high patient-to-nurse ratios and prolonged shifts. This is further corroborated by Keković et al. (2022), who found that over half of surveyed health workers cited work overload as a major concern, a situation worsened by staff shortages and the demands of round-the-clock care, especially during health emergencies like the COVID-19 pandemic. Herraiz-Recuenco et al. (2022) reinforce this, highlighting the psychological toll on German healthcare workers, where excessive demands impaired job performance.

Financial insecurity adds another layer of stress, with Keković et al. (2022) identifying inadequate income as a leading cause, affecting 68.14% of their sample. This financial pressure not only reduces job motivation but also drives healthcare workers to take on additional jobs or overtime, exacerbating exhaustion and potentially leading to chronic stress and mental disorders such as anxiety and depression. Emotional demands, including dealing with critically ill patients, death, and high patient expectations, further compound the burden. Herraiz-Recuenco et al. (2022) and Şanlıtürk (2021) note that this emotional strain leads to mental exhaustion, particularly among intensive care nurses, where the fear of errors and powerlessness in failed treatments heightens psychological pressure. Additionally, limited participation in decision-making, as highlighted by Aryal and D'mello (2020), affects 40.5% of community health workers in Mangalore, fostering feelings of undervaluation and frustration due to their exclusion from operational input despite their frontline expertise.

Regarding stress management strategies, the study reveals a diverse range of approaches with varying degrees of success. Mindfulness-based interventions, such

as those evaluated by Errazuriz et al. (2022), show short-term reductions in psychological distress but lack long-term efficacy without repeated reinforcement. Yoga and physical self-care interventions, as demonstrated by Guerra et al. (2022) and Leão et al. (2017), significantly enhance mental well-being, with measurable improvements in mental composite scores and stress levels through sensory-based practices like aromatherapy. Digital and app-based interventions, including Liu et al.'s (2024) complex interactive multimodal intervention and Watanabe et al.'s (2024) smartphone-based CBT, offer scalable solutions, effectively reducing stress and depression, particularly during crises. However, their success depends heavily on digital literacy and infrastructure availability. Organizational support, as emphasized by Rollins et al. (2021), lays the foundation for stress alleviation through policies promoting flexible work conditions and staff voice, though its absence, as noted by Saparniene et al. (2023), undermines these efforts. Psychological support programs like Stress First Aid (McLean et al., 2023) and group therapy (Jadidi et al., 2024) foster coping and community but struggle to address systemic issues like understaffing.

The effectiveness of these strategies varies. Positive outcomes are evident with yoga (Guerra et al., 2022) and the SMART program (Dossett et al., 2021), which significantly reduce stress and improve health metrics. However, mixed results from Errazuriz et al. (2022) and McLean et al. (2023) suggest that short-term gains fade without sustained support, and individual preferences, as noted by Taylor et al. (2022), influence success. Some interventions, like organizational changes (Catapano et al., 2023) and coping strategies (Aryal and D'mello, 2020), show limited or no significant impact, indicating the complexity of addressing stress holistically.

Barriers to implementation are multifaceted. The lack of organizational support, as Rollins et al. (2021) and McLean et al. (2023) point out, leaves systemic issues like workload unaddressed, rendering interventions ineffective. Feasibility and inaccessibility, highlighted by Dossett et al. (2021) and Liu et al. (2024), pose challenges due to time constraints, resource shortages, and digital divides, particularly in low-resourced settings. Short-term effectiveness and sustainability issues, as seen with

MBSR (Errazuriz et al., 2022) and CBT apps (Watanabe et al., 2024), require regular reinforcement and trained personnel, which are often unavailable. Individual and demographic differences, noted by Dudutienė et al. (2020) and Khazaei et al. (2024), necessitate tailored approaches to account for age, sex, culture, and role, while systemic constraints like heavy workloads and rigid hierarchies, as described by Wang et al. (2023) and Sabry et al. (2023), limit scalability. Limited awareness and participation, as Turkington et al. (2023) and Sun et al. (2025) observe, further reduce engagement without consistent training and promotion.

Future research should prioritize developing customized interventions that address individual and cultural variability, ensuring robust organizational support to tackle systemic barriers like staffing shortages and workload. Longitudinal studies are needed to assess the sustainability of digital and mindfulness-based strategies, while policy-level changes should focus on financial security and decision-making empowerment. Integrating these findings into a comprehensive, adaptable framework could enhance support for healthcare professionals, addressing both immediate stressors and long-term well-being.

7. CONCLUSION

The purpose of this study was to examine how stress affects healthcare professionals, what coping strategies they use to deal with stress, how effective these strategies are, and what are the challenges in implementing such stress management techniques.

The findings reveal that occupational stress among health workers is caused by various factors. They include long working hours, emotional stress, poor remuneration, little involvement in decision-making, and sometimes poor information. In managing stress, health professionals have different approaches. Among the most prevalent strategies are use of mindfulness techniques, support from employers or coworkers, mobile or internet-based mental health resources, psychological therapy, exercise or other forms of physical activity, and talking to colleagues or friends or family.

When looking at whether the strategies work, the studies had variable success. Some methods, such as yoga, meditation, and cyber support groups, are effective and help reduce stress. Others merely are short-term fixes or don't address the root of the burnout. Some strategies, such as reducing work hours or using humor, were unsuccessful at reducing stress. The study also revealed a series of impediments to stress management practice adoption in healthcare facilities. These are lack of support from management, unavailability of useful programs, differences in needs and preferences of staff, and systemic problems within the healthcare system. Some stress management methods are also not sustainable in the long term, making it difficult to sustain their advantage.

Although there are many ways to manage stress, they are not effective for everyone. Health organizations need to offer effective support, increase access to helpful resources, and offer a working environment that works well for staff well-being. Findings of this research can be used to guide future policies and programs for reducing stress and improving the well-being and performance of health workers.

8. ETHICAL ISSUES, VALIDITY EVALUATION, AND CRITICAL QUALITY EVALUATION

This chapter outlines the ethical issues, validity testing, and critical quality assessment of the narrative literature review conducted for this thesis. It is open, reliable, and methodologically rigorous, according to scholarly standards.

8.1 Ethical Considerations

This narrative of literature review was carried out with care to follow all the ethical standards. The greatest part of every research is being sincere, honest, and respectful. In this research, articles were selected by employing reliable online sources like PubMed, Scopus, and Google Scholar. The search was guided using key words like "occupational stress," "stress management," and "healthcare professionals." Only English-language articles from the years 2015-2025 were used.

No article was chosen by personal preference. The same standards were applied to all articles to ensure fairness in choosing. Articles that failed to meet the given criteria were not chosen. Where required, someone else helped double-check decisions, which reduced personal bias. The review included studies from different countries and healthcare systems, though most were carried out in high-income settings. This was emphasized as a limitation. All borrowed content from other authors was appropriately cited to avoid plagiarism. The review was done to improve healthcare practitioners' health and enable better care of patients through advice based on information.

8.2 Validity Evaluation

To ensure the review outcomes were valid, the quality of each article was tested rigorously. This was through analyzing how each study was planned, whether there were many participants, what data they gathered, and how it was analyzed. Studies that had sound research plans and had clear outcomes were given considerable weight during the review.

Since this was a narrative review, studies that had different designs were incorporated. This involves that there were quantitative and qualitative studies, and they were described in a simple narrative synopsis. While none of the studies employed similar methodologies, an attempt was made to describe them simply and fairly. Some studies used data that was self-reported, which sometimes can be less reliable. These were stated, and superior studies with more objective results were highlighted. Generally, the aim was to provide an objective view and to make sure that the information given was accurate and useful to healthcare professionals and decision-makers.

8.3 Critical Quality Evaluation

To help in evaluating the quality of studies included in the review, quality screening was performed utilizing Joanna Briggs Institute (JBI) tools. The tools are commonly used in studies to screen whether studies meet good standards. Different tools were used depending on the type of study. For example, one checklist was used for experiment-based studies, and another for interview- or personal account-based studies.

Every study was examined and tagged with how much bias it would take for them to come from bad methodologies. The checklist response answer was tagged as "yes," "no," or "unclear." Based on that, each study was ended with a low, moderate, or high level of risk bias. An example of a study that did well in considering what they utilized in obtaining their information and had good findings was tagged low risk, for example. An absent or incomplete data study was classed as high or moderate risk. The quality scores indicated how much confidence in the results from each study to have. The highest quality studies supported strong methods like mindfulness, online resources, and social support. Less robust studies were covered but with lower confidence.

Finally, it is recommended that future studies must use larger samples of health care workers and must use more robust designs, such as well-designed experiments or

longitudinal studies. Further studies in low- and middle-income countries must also be conducted to balance the current findings.

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APPENDICES

Appendix 1: Summary of Selected Articles

Author(s) and Year	Title	Journal	Methodology	Main Finding
Rollins et al., (2021)	Introduction to the special section: A call to action to address psychiatric rehabilitation workers' well-being	Psychiatric Rehabilitation	Literature Review	Organizational support for employees in the health sector was central to managing stress and their well-being
Errazuriz & Figueroa (2020)	Evaluation of a training program for life skills education and financial literacy to community health workers in India: a quasi-experimental study.	European Psychiatry	RCT	MBSR had a statistically significant effect on psychological distress, perceived stress, job satisfaction and mindfulness skills, versus active control. However, the significance of these effects declines at month 6.
Errazuriz et al., (2022)	Effects of mindfulness-based stress reduction on psychological distress in health workers: A three-arm parallel randomized controlled trial	Journal of psychiatric research,	RCT	MBSR appears useful in reducing short-term psychological distress in healthcare workers, but these effects were not maintained at follow-up
Hersch et al, (2016)	Quality of Life and Stress Management in Healthcare Professionals of a Dental Care Setting at a Teaching Hospital in Rome: Results of a Randomized Controlled Clinical Trial	Applied nursing research	RCT	Using a web-based program holds tremendous promise for providing nurses with the tools they need to address nursing related stress.
Dossett et al., (2021)	Stress Management and Resiliency Training for Healthcare Professionals: A Mixed-Methods, Quality-Improvement, Cohort Study.	Journal of occupational and environmental medicine	Cohort Study	Delivering the SMART Program to healthcare professionals is feasible and may serve as a useful tool for reducing stress and increasing resilience. Participants experienced a significant reduction in perceived stress ($P < 0.001$) and significant improvements in global mental health ($P = 0.001$), physical health ($P = 0.045$), and job satisfaction ($P = 0.047$).
Saparniene et al., (2023)	Working environment of health care professionals - focus on occupational stress.	Annals of agricultural and environmental medicine	Cross-sectional study	The main stress prevention measures are involvement of employees in decision-making, annual interviews with authorities, education, assurance of a safe work environment, and elimination of manifestations of mobbing.
McLean et al., (2023)	Helping the Helpers: Adaptation and Evaluation of Stress First Aid for Healthcare Workers	Workplace health & safety	Mixed Method Study	A stress first aid program provided a shared language to discuss stress, normalized stress reactions, met a need for stress management tools,

	in the Veterans Health Administration During the COVID-19 Pandemic			and helped staff feel valued, empowered, connected with each other. Staff reported being more aware of their stress, but SFA was insufficient to address many of the systemic sources of burnout and stress.
Dudutienė et al., (2020)	Developing Stress Management Programs in a Public Primary Healthcare Institution: Should We Consider Health Workers' Sociodemographic Groups?.	Medicina (Kaunas, Lithuania	Cross-sectional Survey	It is crucial to consider different demographic groups and needs before developing and implementing stress management programs.
Rinaldi et al., (2019)	The educational intervention "Focusing" as a strategy to stress reduction among health care workers: a pilot study in an Italian teaching hospital.	Annali di igiene : medicina preventiva e di comunita,	Pilot Study	There was a significant reduction in perceived stress and qualitative results showed an improvement in reactivity to inner experience and a more attentive perception of internal and external experiences.
Leão et al., (2017)	Stress, self-esteem and well-being among female health professionals: A randomized clinical trial on the impact of a self-care intervention mediated by the senses	Plos One	RCT	Self-care activities involving sensory stimulation (especially the combination of touch and scent) can be an effective strategy for improving mental well-being, self-esteem, and stress regulation in healthcare professionals.
Liu et al., (2024)	The Effects of a Complex Interactive Multimodal Intervention on Personalized Stress Management Among Health Care Workers in China: Nonrandomized Controlled Study	Journal of medical Internet research	NRCT	The CIMI was an effective intervention for improving sleep disorders, as well as parts of the psychological stress measures in distressed HCWs. The findings provide objective evidence for developing a mobile stress management intervention that is adaptable and accessible to distressed HCWs
Demirel et al., (2024)	Assessing the Effectiveness of STAPP@Work, a Self-Management Mobile App, in Reducing Work Stress and Preventing Burnout: Single-Case Experimental Design Study	Journal of medical Internet research	Experimental Study	The use of an app-based stress management intervention has been shown to reduce burnout symptoms and enhance coping self-efficacy among mental health workers
Khazaei et al., (2024)	Exploring stress management strategies among emergency medical service providers in Iran: a qualitative content analysis	BMC emergency medicine,	Qualitative Study	Themes relating to stress management were mental preparation, risk management, collaborations in emergency response, supportive communication, adaptive behaviors, and maladaptive responses.
Sun et al., (2025)	Perceived Stress and Coping Strategies for	Western journal of nursing research,	Cross-sectional study	The results demonstrated relationships among perceived stress, social support, positive coping, and mental health among frontline nurses caring

	Frontline Nurses Caring for COVID-19 Patients: A Path Analysis.			for patients with COVID-19. Social support had a positive effect on positive coping strategies and a negative effect on perceived stress and mental health.
Baum et al., (2025)	Assessment of psychological debriefing models' components & effective implementation, and its impact on healthcare professionals stress management skills, mental wellbeing, and clinical performance	The American Journal of Surgery	Literature Review	Psychological debriefing sessions assisted attendees cope with stressful situations, improved self-confidence, and advocate for themselves. Different models of psychological debriefing can be implemented depending on the resources of each facility.
Zhang et al., (2024)	The effectiveness of e-mental health interventions on stress, anxiety, and depression among healthcare professionals: a systematic review and meta-analysis.	Systematic Review	Systematic review and meta-analysis	E-mental health interventions significantly improve the psychological health of healthcare *staff*.
Gao et al., (2024)	Enhancing the psychological well-being and sleep quality of healthcare providers with a multimodal psychological support program: a randomized controlled trial	Frontiers in Public Health,	RCT	The online multimodal psychological support program effectively enhanced the psychological well-being and sleep quality of new ICU staff demonstrating the potential of off line training in managing stress and improving health outcomes during crises.
Watanabe et al., (2024)	). Effectiveness of a smartphone-based stress management program for depression in hospital nurses during COVID-19 in Vietnam and Thailand: 2-arm parallel-group randomized controlled trial	Journal of Medical Internet Research	RCT	Smartphone-based iCBT program was effective in reducing depression at the 3-month follow-up among *hospital* nurses in Vietnam and Thailand during the COVID-19 pandemic.
Jadidi et al., (2024)	Evaluation of stress management effectiveness using the action research approach on the job stress of prehospital emergency staff.	International Journal of Africa Nursing Sciences,	FGD	Stress management group therapy affects the job stress of the staff. Prehospital emergency staff is recommended to take advantage of stress management skills training to improve their mental health.
Turkington et al., (2023)	A mixed-method exploration of mental toughness, perceived stress and quality of life in mental health workers.	Journal of Psychiatric and Mental Health Nursing,	Mixed Method Study	Qualitative analysis revealed sources of stress for health workers and a variety of stress management techniques to cope with workplace stress. The findings suggested that mental toughness develops in some but not all health workers due to the demands of their role.

Sabry et al., (2023)	Assessment of Work-Related Mental Health among Kasr-Alainy Staff Members: A Cross-Sectional Exploratory Study	The Egyptian Journal of Community Medicine,	Cross-Sectional Exploratory Study.	The majority (84% academic versus 77.9% clinical staff) suggested training on stress management and personal development as the most important item to relieve workplace stress. This was followed by mental health awareness campaigns (50% academic versus 17.4% clinical staff) and mental health insurance benefits and coverage (40% academic versus 24.4% clinical staff).
Williams & Williams (2023)	Using a cognitive framework with nurses to manage stress	Journal of Evaluation in Clinical Practice,	Review	The cognitive stress management framework can be beneficial in managing daily stresses, by increasing perceptions of personal control, and increasing use of positive-cognitive coping strategies.
Wang et al., (2023)	Work-related stress and stress management practice among Chinese hospital staff working night shifts: A mixed-methods study	International Journal of Stress Management	Mixed Method Study	Only half of the participants adopted stress management behaviors, and stress management attitudes and behaviors played a mediating role between stressors and stress outcomes. Promoting positive health beliefs around stress management, and emphasizing, in particular, the positive role of stress management in HCWs' personal lives, was critical to help HCWs build stress management behaviors.
Groombridge et al. (2022)	Emergency physicians' experience of stress during resuscitation and strategies for mitigating the effects of stress on performance	Emergency Medicine Journal,	Mixed Method Study	This study identifies the most common sources of stress during a resuscitation as well as the strategies that EPs use to mitigate the effects of stress on their performance. These findings may contribute to the development of tailored stress management training for critical care clinicians.
Taylor et al., (2022)	How junior doctors perceive personalised yoga and group exercise in the management of occupational and traumatic stressors	Postgraduate medical journal,	RCT	Doctors found both interventions useful for stress management adjunctive to other organisational programmes though for different and complementary reasons, possibly related to delivery mode. Personalised, trauma-informed yoga provided a confidential therapeutic alliance whereas group exercise offered social connection.
Bahadori et al., (2019)	Job stress and job burnout based on personality traits among emergency medical technicians.	Trauma Monthly,	Cross-sectional study	Reducing working hours, examining factors of dissatisfaction and stressors in the workplace, and improving welfare facilities can decrease job burnout among employees. Moreover, the heads and managers of pre-hospital emergency services should plan to provide continuous training in

				stress management skills at emergency bases in order to reduce job stress among employees
Isa (2019)	Strategies used to cope with stress by emergency and critical care nurses.	British Journal of Nursing,	Cross-sectional study	problem-solving and positive reappraisal were the predominant positive coping strategies identified. Those working in medical intensive care employed escape-avoidance behaviours more frequently. Married participants exhibited higher levels of confrontative coping behaviours.
Williams et al., (2018)	Do health promotion behaviors affect levels of job satisfaction and job stress for nurses in an acute care hospital?.	The Journal of Nursing Administration	Cross-sectional study	Lower job stress was significantly associated with HPB subscales: Spiritual growth, interpersonal relations, and stress management.

Appendix 2: JBI Critical Appraisal Checklist for Analytical Cross Sectional Studies

JBI CRITICAL APPRAISAL CHECKLIST FOR ANALYTICAL CROSS SECTIONAL STUDIES

Reviewer_____Date_____

Author_____Year_____ Record Number_____

	Yes	No	Unclear	Not applicable
1. Were the criteria for inclusion in the sample clearly defined?	☐	☐	☐	☐
2. Were the study subjects and the setting described in detail?	☐	☐	☐	☐
3. Was the exposure measured in a valid and reliable way?	☐	☐	☐	☐
4. Were objective, standard criteria used for measurement of the condition?	☐	☐	☐	☐
5. Were confounding factors identified?	☐	☐	☐	☐
6. Were strategies to deal with confounding factors stated?	☐	☐	☐	☐
7. Were the outcomes measured in a valid and reliable way?	☐	☐	☐	☐
8. Was appropriate statistical analysis used?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Appendix 3: JBI Critical Appraisal Checklist For Systematic Reviews and Research Synthesis

JBI CRITICAL APPRAISAL CHECKLIST FOR SYSTEMATIC REVIEWS AND RESEARCH SYNTHESES

Reviewer_____Date_____

Author_____Year_____ Record Number_____

		Yes	No	Unclear	Not applicable
1.	Is the review question clearly and explicitly stated?	☐	☐	☐	☐
2.	Were the inclusion criteria appropriate for the review question?	☐	☐	☐	☐
3.	Was the search strategy appropriate?	☐	☐	☐	☐
4.	Were the sources and resources used to search for studies adequate?	☐	☐	☐	☐
5.	Were the criteria for appraising studies appropriate?	☐	☐	☐	☐
6.	Was critical appraisal conducted by two or more reviewers independently?	☐	☐	☐	☐
7.	Were there methods to minimize errors in data extraction?	☐	☐	☐	☐
8.	Were the methods used to combine studies appropriate?	☐	☐	☐	☐
9.	Was the likelihood of publication bias assessed?	☐	☐	☐	☐
10.	Were recommendations for policy and/or practice supported by the reported data?	☐	☐	☐	☐
11.	Were the specific directives for new research appropriate?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Appendix 4: JBI Critical Appraisal Checklist for Qualitative Research

JBI CRITICAL APPRAISAL CHECKLIST FOR QUALITATIVE RESEARCH

Reviewer_____Date_____

Author_____Year_____ Record Number_____

		Yes	No	Unclear	Not applicable
1.	Is there congruity between the stated philosophical perspective and the research methodology?	☐	☐	☐	☐
2.	Is there congruity between the research methodology and the research question or objectives?	☐	☐	☐	☐
3.	Is there congruity between the research methodology and the methods used to collect data?	☐	☐	☐	☐
4.	Is there congruity between the research methodology and the representation and analysis of data?	☐	☐	☐	☐
5.	Is there congruity between the research methodology and the interpretation of results?	☐	☐	☐	☐
6.	Is there a statement locating the researcher culturally or theoretically?	☐	☐	☐	☐
7.	Is the influence of the researcher on the research, and vice- versa, addressed?	☐	☐	☐	☐
8.	Are participants, and their voices, adequately represented?	☐	☐	☐	☐
9.	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☐	☐	☐	☐
10.	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Appendix 5: JBI Critical Appraisal Checklist for Text and Opinion Paper

JBI CRITICAL APPRAISAL CHECKLIST FOR TEXT AND OPINION PAPERS

Reviewer_____Date_____

Author_____Year_____ Record Number_____

	Yes	No	Unclear	Not applicable
1. Is the source of the opinion clearly identified?	☐	☐	☐	☐
2. Does the source of opinion have standing in the field of expertise?	☐	☐	☐	☐
3. Are the interests of the relevant population the central focus of the opinion?	☐	☐	☐	☐
4. Is the stated position the result of an analytical process, and is there logic in the opinion expressed?	☐	☐	☐	☐
5. Is there reference to the extant literature?	☐	☐	☐	☐
6. Is any incongruence with the literature/sources logically defended?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Comments (Including reason for exclusion)

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_____

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Appendix 6: JBI Critical Appraisal Checklist for Quasi-Experimental Studies

JBI CRITICAL APPRAISAL CHECKLIST FOR QUASI-EXPERIMENTAL STUDIES

Reviewer_____Date_____

Author_____Year_____ Record Number_____

	Yes	No	Unclear	Not applicable
1. Is it clear in the study what is the 'cause' and what is the 'effect' (i.e. there is no confusion about which variable comes first)?	☐	☐	☐	☐
2. Were the participants included in any comparisons similar?	☐	☐	☐	☐
3. Were the participants included in any comparisons receiving similar treatment/care, other than the exposure or intervention of interest?	☐	☐	☐	☐
4. Was there a control group?	☐	☐	☐	☐
5. Were there multiple measurements of the outcome both pre and post the intervention/exposure?	☐	☐	☐	☐
6. Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analyzed?	☐	☐	☐	☐
7. Were the outcomes of participants included in any comparisons measured in the same way?	☐	☐	☐	☐
8. Were outcomes measured in a reliable way?	☐	☐	☐	☐
9. Was appropriate statistical analysis used?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Appendix 7: JBI Critical Appraisal Checklist for Randomized Controlled Trials

JBI CRITICAL APPRAISAL CHECKLIST FOR RANDOMIZED CONTROLLED TRIALS

Reviewer _____ Date _____

Author _____ Year _____ Record Number _____

		Yes	No	Unclear	NA
1.	Was true randomization used for assignment of participants to treatment groups?	☐	☐	☐	☐
2.	Was allocation to treatment groups concealed?	☐	☐	☐	☐
3.	Were treatment groups similar at the baseline?	☐	☐	☐	☐
4.	Were participants blind to treatment assignment?	☐	☐	☐	☐
5.	Were those delivering treatment blind to treatment assignment?	☐	☐	☐	☐
6.	Were outcomes assessors blind to treatment assignment?	☐	☐	☐	☐
7.	Were treatment groups treated identically other than the intervention of interest?	☐	☐	☐	☐
8.	Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analyzed?	☐	☐	☐	☐
9.	Were participants analyzed in the groups to which they were randomized?	☐	☐	☐	☐
10.	Were outcomes measured in the same way for treatment groups?	☐	☐	☐	☐
11.	Were outcomes measured in a reliable way?	☐	☐	☐	☐
12.	Was appropriate statistical analysis used?	☐	☐	☐	☐
13.	Was the trial design appropriate, and any deviations from the standard RCT design (individual randomization, parallel groups) accounted for in the conduct and analysis of the trial?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Appendix 8: Evaluation and Study Quality (Based on JBI Critical Appraisal Checklists)

Author(s) and Year	JBI Checklist Used	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Sum
Rollins et al., (2021)	Text and Opinion	Y	Y	Y	Y	Y	N	NA	NA	NA	NA	NA	NA	5/6
Guerra et al., (2022)	RCT	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	11/12
Errazuriz et al., (2022)	RCT	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	10/12
Dossett et al., (2021)	Quasi-Experimental	Y	Y	Y	N	Y	Y	Y	Y	Y	NA	NA	NA	7/9
Saparniene et al., (2023)	Analytical Cross-Sectional	Y	Y	Y	N	Y	Y	Y	Y	NA	NA	NA	NA	7/8
McLean et al., (2023)	Quasi-Experimental	Y	Y	Y	N	Y	Y	Y	Y	Y	NA	NA	NA	7/9
Dudutienė et al., (2020)	Analytical Cross-Sectional	Y	Y	Y	Y	N	N	Y	Y	NA	NA	NA	NA	6/8
Rinaldi et al., (2019)	Quasi-Experimental	Y	Y	Y	N	Y	Y	Y	Y	Y	NA	NA	NA	7/9
Leão et al., (2017)	RCT	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	10/12
Liu et al., (2024)	Quasi-Experimental	Y	Y	Y	N	Y	N	Y	Y	Y	NA	NA	NA	7/9
Demirel et al., (2024)	Quasi-Experimental	Y	Y	Y	N	Y	N	Y	Y	Y	NA	NA	NA	7/9
Khazaei et al., (2024)	Qualitative	Y	Y	Y	Y	Y	U	N	Y	Y	Y	NA	NA	8/10
Sun et al., (2025)	Analytical Cross-Sectional	Y	Y	Y	Y	N	N	Y	Y	NA	NA	NA	NA	6/8
Baum et al., (2025)	Text and Opinion	Y	Y	Y	Y	Y	N	NA	NA	NA	NA	NA	NA	5/6
Zhang et al., (2024)	Systematic Review	Y	Y	Y	Y	Y	N	Y	NA	N	NA	NA	NA	9/11
Gao et al., (2024)	RCT	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	10/12
Watanabe et al., (2024)	RCT	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	10/12
Jadidi et al., (2024)	Qualitative	Y	Y	Y	Y	Y	U	Y	Y	Y	Y	NA	NA	9/10

Turkington et al., (2023)	Qualitative	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	8/10
Sabry et al., (2023)	Analytical Cross-Sectional	Y	Y	Y	Y	N	Y	Y	Y	NA	NA	NA	NA	7/8
Williams & Williams (2023)	Text and Opinion	Y	Y	Y	Y	N	Y	NA	NA	NA	NA	NA	NA	5/6
Wang et al., (2023)	Qualitative	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	8/10
Groombridge et al. (2022)	Qualitative	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	8/10
Taylor et al., (2022)	RCT	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	10/12
Bahadori et al., (2019)	Analytical Cross-Sectional	Y	Y	Y	Y	Y	N	Y	Y	NA	NA	NA	NA	7/8
Isa (2019)	Analytical Cross-Sectional	Y	Y	Y	Y	Y	N	Y	Y	NA	NA	NA	NA	7/8
Williams et al., (2018)	Analytical Cross-Sectional	Y	Y	Y	Y	Y	N	Y	Y	NA	NA	NA	NA	7/8
Herraiz-Recuenco et al., (2022)	Analytical Cross-Sectional	Y	Y	Y	Y	Y	N	Y	Y	NA	NA	NA	NA	7/8
Catapano et al., (2023)	Systematic Review	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	NA	8/11
Aryal & D'mello (2020)	Analytical Cross-Sectional	Y	Y	Y	Y	N	N	Y	Y	NA	NA	NA	NA	6/8

Key
Y = Yes
N = No
U = Unclear
NA = Not Applicable
RCT – Randomized Controlled Trial