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Faculty of Education, Arts, Science and Technology (FEAST)

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**Workplace Stress and Burnout Among NHS Healthcare
Professionals: Causes, Consequences, and Coping Strategies.**

Submitted in partial fulfilment of the award of BSc (Hons) in
Health Sciences

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Declaration

I hereby state that the dissertation under the title of Workplace Stress and Burnout Among NHS Healthcare Professionals: Causes, Consequences, and Coping Strategies is the outcome of my personal independent research. It has neither been entered, in full or in part, in any other academic award. Any sources of information and support have been credited and cited in the proper way as per the academic requirements.

Signed: _____

Date: _____

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ABSTRACT

Background

NHS healthcare professionals face a significant workforce issue due to a growing service burden, ongoing understaffing, and emotional and administrative pressures, which has ultimately led to burnout. It is important to know its causes, consequences, and possible solutions to enhance the wellbeing of the staff and maintain the quality of the services.

Aim

The purpose of the review was to investigate the main factors of workplace stress and burnout in the NHS, personal coping mechanisms, and the efficacy of the organisational interventions aimed at handling burnout.

Methods

A search across five databases (PubMed [Medline], CINAHL, PsycINFO, Web of Science and Google Scholar) using a PRISMA-based search strategy was performed. A total of 33 empirical studies published between 2018-2025 were included. JBI tools were used to critically appraise quantitative, qualitative, and mixed-methods studies and synthesise thematically.

Results

Excessive workload, long-term understaffing, emotional labour, administrative overload, and lack of support in managers were always related to burnout. The consequences reported were emotional exhaustion, depersonalisation, less sense of accomplishment, sickness absence, turnover intentions, and patient safety risks. Personal coping mechanisms, problem-oriented coping, mindfulness, and peer support, provided temporary relief but failed to oppose broader systemic stressors. The benefits of organisational interventions such as positive workplace culture, supportive leadership, and mental health hubs and structured resilience programmes proved stronger and more sustainable. The digital interventions demonstrated their initial potential but need additional testing.

Discussion

The results show that burnout is a product of structural and organisational factors as opposed to personal failures. The solutions are thus effective when they involve system-level change, long-term investment, and enhance organisational culture.

Conclusion

NHS burnout is an organisational systemic problem that needs structural interventions in line with the NHS Long Term Workforce Plan. Future studies ought to focus more on longitudinal designs, under-represented staffs, organisational culture, and long-term analysis of digital interventions and organisational interventions.

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Figure 1. PRISMA Flow Diagram of Study Selection

List of Abbreviations

NHS – National Health Service

PRISMA – Preferred Reporting Items for Systematic Reviews and Meta-Analyses

JBI – Joanna Briggs Institute

CASP – Critical Appraisal Skills Programme

MMAT – Mixed Methods Appraisal Tool

RCT – Randomised Controlled Trial

CHAPTER ONE: INTRODUCTION

The issue of stress and burnout at the workplace has gained critical importance in the sphere of healthcare systems all over the world, with the National Health Service (NHS) experiencing especially severe challenges. Medical practitioners work in settings that are marked by large workloads, emotional labour, and long-term organisational burdens, which are all the factors that cause high rates of psychological strain. Emotional exhaustion, depersonalisation, and diminished personal accomplishment commonly define burnout as a crucial occupational health concern, which has been widely identified to have implications on the well-being of the staff, patient safety, and organisational performance (Brindley et al., 2019). Due to ongoing workforce shortages, patient demand, and service complexity in the NHS, identifying the causes, effects, and management of workplace stress and burnout have become critical in recent studies.

Research carried in the NHS contexts proves that reports of overworking, understaffing, and the lack of managerial support are the most common causes of stress among staff members (Dominic, Gopal and Sidhu, 2021; Gemine et al., 2021). Additional factors that increase burnout vulnerability include emotional labour, especially when the care provided is intense such as in intensive care, paediatrics, and mental health services (Butcher et al., 2023). Put together, the effect of these pressures has led to a higher prevalence of sickness absence, lower morale, and an increase in turnover intentions among the entire workforce of the NHS. This chapter presents the background and importance of the problem of stress and burnout at work among healthcare professionals working at the NHS, the gaps that are present in the current body of research, and the rationale, aims, objectives, and research questions that will guide the current systematic review.

1.1 Background to the Study

The NHS is also one of the biggest employers in the world and has a population of more than one million employees who serve in various fields of work in both clinical and non-clinical sectors. Healthcare workers have been subjected to emotional work on a regular basis, complicated decision making, and tasks that involve time. Such circumstances expose them to increased occupational stress and burnout. There is some evidence that burnout can be highly prevalent in the high-pressure clinical setting as intensive care, emergency medicine, mental health services (Brindley et al., 2019; Sideri et al., 2025).

Stress at work is generally caused by job demands that are beyond the perceived coping ability of a particular person whereas burnout is the long term or protracted effects of being exposed to stress factors. Literature sources, McKinley et al. (2020) and Gillen et al. (2022a) indicate that among all UK sectors, NHS employees are experiencing much more stress, with nurses, junior doctors, and allied health professionals being disproportionately affected. Some of the main factors contributing to this high level of stress and later burnout are high workloads, constant understaffing, organisational demands, and recurrent traumatic clinical experiences (Goncalves et al., 2019; Francesco et al., 2021).

The effects of burnout are not limited to personal health. Burnout has been linked to low job satisfaction, higher rates of sickness absence, and turnover (McFadden et al., 2021). On an organisational level, burnout has a contribution in terms of financial pressure during recruitments, agency labour reliance and decreased productivity. Notably, burnout also has an impact on patient outcomes, and the studies has associated staff burnout with clinical errors, lack of empathy, and poor quality of care (Shemtob et al., 2022). As the NHS workforce is a key factor in providing high-quality and safe patient care, the need to deal with burnout is a strategic one.

1.2 Statement of the Problem (Knowledge Gap)

Whereas stress and burnout in the workplace are a well-researched topic among healthcare professionals, there still exist a number of gaps in the current evidence base.

One, a great part of the studies is devoted to individual professional groups, including nurses or physicians, which does not allow grasping the problem of burnout in the broader NHS workforce (Francesco et al., 2021). Second, although the coping strategies at the individual level have been researched, there is still less information on the efficacy of organisational interventions in the NHS (De Giorgi and Dinkelaar, 2021). Third, recent the proliferation of digital health interventions has brought new ways of handling burnout, but their effectiveness has not been adequately assessed (Delgadillo et al., 2025). Fourth, the COVID-19 pandemic has considerably changed the conditions of working, though its further effect on the burnout trajectories remains a developing phenomenon (Gillen et al., 2022b; Collett et al., 2024). Lastly, current research differs in its conceptualisation and measurement of burnout, and thus it is not easy to generalise outcomes in different settings. There is a lack of such information in these gaps, and the need to conduct a comprehensive, up to date systematic review synthesising the recent evidence of the causes,

consequences, and coping mechanisms of workplace stress and burnout among NHS healthcare professionals.

1.3 Study Rationale

This is a timely review that is needed due to a number of reasons. To begin with, the NHS is going through workforce strains than ever before, and stress, anxiety, and depression have steadily been listed as the major cause of sick leave (Kinman, 2021). The concept of burnout drivers is crucial to informing workforce planning and retention. Second, the patient safety is directly linked to burnout. There is an indication that tired or under the pressure employees are more prone to clinical errors, less empathetic, and provide less high-quality care (Shemtob et al., 2022). The systematic review may assist in determining the organisational conditions putting the patients at risk. Third, in recent years, the NHS has launched many well-being programs such as resilience training, mental health hubs, and digital programs. The usefulness of such programmes however is not clear. The synthesis of evidence about the coping strategies and interventions could help to develop evidence-based approaches (Razai et al., 2023; Laker et al., 2023). Lastly, the review has added to the body of literature in terms of combining multidisciplinary views and giving a comprehensive view of burnout in the context of the NHS.

1.4 Justification for the Study

This research is both a practical and academic research. In practice, NHS are hindered with the issues of staff recruitment, retention, and well-being. Burnout also leads to high turnover rate, sickness absence and low productivity which imposes extra pressure on already overstretched services (Dominic, Gopal and Sidhu, 2021). Effective coping strategies and organisational interventions should be identified in order to maintain the NHS workforce.

In the academic sense, the available studies are disconnected and, in many instances, they are restricted to certain groups or environments of professionals. The systematic review permits the incorporation of varying evidences giving a top picture of workplace stress and burnout in the NHS. This strategy will enable the creation of a strong evidence base that can guide policy, practice, and new studies (Maresca et al., 2022).

1.5 Research Aim

This systematic review aims to examine the causes, impact, and ways of coping with workplace stress and burnout amongst the NHS healthcare professionals.

1.6 Research Objectives

- I. To determine the major causes of workplace stress and burnout among the NHS healthcare professionals.
- II. To investigate psychological, physical and organisational implications of burnout.
- III. To examine personal and organisational coping methods in an NHS environment.
- IV. To ascertain the impact of interventions to minimise stress and burnout at workplace.
- V. To apply multidisciplinary evidence in order to inform practice and policy.

1.7 Research Questions

- I. What are the major causes and effects of stress and burnout in the workplace of NHS healthcare professionals?
- II. What organisational strategies and coping mechanisms are best useful in alleviating stress and burnout within the NHS setting?

1.8 Structure of the thesis:

The thesis is divided into six chapters, each of which has explored the area of workplace stress and burnout among the healthcare professionals in the National Health Service in a systematic and sound manner.

Chapter One: Introduction provides background and problem statement, the rationale and justification for the research study, the aim, objectives, and research questions of the study, and sets the context of burnout in the context of the NHS workforce.

Chapter Two: Literature Review critically examines the definitions, prevalence, causes and consequences, coping mechanisms, and gaps in existing literature.

Chapter Three: Methodology discusses the systematic review design, PRISMA based search strategy, inclusion/exclusion criteria, JBI appraisal, and thematic synthesis.

Chapter Four: Results provide findings by themes: causes, consequences, coping, organisational interventions and gaps.

Chapter Five: Discussion, Implications, Limitations and Future Research interpret the results, evaluates interventions, identifies systemic issues, and proposes evidence-based implications; provides for the limitations of the methodology and future directions.

Chapter Six: Conclusion and Recommendations bring together the findings, draws policy and practice implications and makes recommendations in line with the NHS Long Term Workforce Plan.

CHAPTER TWO: LITERATURE REVIEW

2.1 Chapter Introduction

The chapter is a critical review of available literature on stress and burnout in the workplace and the coping mechanisms of healthcare workers, particularly with reference to the evidence concerning the NHS. The literature proves that burnout is a multidimensional and intricate phenomenon, which is affected by organisational, psychological as well as contextual factors. This review summarizes existing information about prevalence, causes, consequences and management of burnout with areas of agreement, disagreement and gap points of debate. The chapter is also able to show gaps that support reasons why the current systematic review has to be done.

2.2 Conceptualising Workplace Stress and Burnout

Burnout has come to widely be recognised as a psychological syndrome manifested by long-term occupational stress especially in emotionally stressing occupations like healthcare. According to Brindley et al. (2019), burnout is not a personal weakness, but a system reaction to the long-term working in high-pressure environments. Their work points to the necessity to revise the conventional conceptualisation of burnout in regard to the modern-day issues in healthcare, such as higher demands in the service and complexity in organisations.

In an umbrella review of systematic reviews, Francesco et al. (2021) find emotional exhaustion, depersonalisation, and diminished personal accomplishment to be the essential elements of burnout. They claim that burnout is closely linked to high job demands, inadequate resources and trauma or emotionally stimulating circumstances. This is in line with Goncalves et al. (2019) who define burnout as a cumulative reaction to persistent stressors especially in jobs where emotional labour is needed on a regular basis. The burnout is always seen in the literature as a systemic phenomenon and not a failure by an individual. This view can be supported by Kinman (2021), who states that organisational culture, workload, and leadership practices are at the core of determining the well-being of a staff. Together, these works shed light on the necessity of investigating burnout in the context of an organisation and society, in general, the NHS.

2.3 Prevalence and Causes of Burnout in Healthcare Professionals

A strong amount of literature confirms that burnout is a very common issue among health professionals specifically the NHS. In a survey of 721 NHS physicians, Dominic, Gopal and Sidhu

(2021) established that burnout was a major factor in the excessive workload, administrative burden, and managerial non-support. Their results indicate wider issues of NHS working conditions sustainability. Also, Gemine et al. (2021) found that burnout in NHS personnel during the COVID-19 period was high, and the intensity of workload and emotional strain appeared to be the most common stressors. The context of the pandemic is specific, but the causes of the problem staff shortages, high acuity of patients, emotional labour are not new issues in the NHS.

In the study by Butcher et al. (2023) of burnout among the staff in the paediatric and neonatal intensive care, emotional labour, exposure to suffering, and moral distress were recognized as major contributors. Their results indicate the increased susceptibility of personnel in high-intensity clinical settings. The discussion by De Giorgi and Dinkelaar (2021) is more general, and the authors assert that the occupational stress in healthcare is precipitated by the complex of organisational factors, role ambiguity, and inadequate resources. They underline that the structural factors should be considered in terms of interventions and not individual resilience. All these studies together prove that the problem of burnout among NHS employees is systemic in nature and is becoming a problem due to such factors as workload, staffing gaps, emotional labour, and organisational culture.

2.4 Consequences of Burnout

Burnout has more than personal mental pain as its consequences. The authors established that UK doctors experienced burnout that was linked to low resilience, poor decision-making, and a high risk of clinical errors (McKinley et al., 2020). Their results highlight the possible effect of burnout on patient safety. Similar results were also found by McFadden et al. (2021), who stated that burnout had a negative impact on the quality of life related to work, job satisfaction, and overall well-being of health and social care workers. They emphasise that burnout is a contributing factor to sickness absence and turnover intentions that add extra burden to already overstretched services.

Shemtob et al. (2022) underline that the work-stress issue has a strong implication in the performance of staff and the organisation. They suggest that burnout is a cause of decreased productivity, high absenteeism, and poor quality of care. Their article reinforces the necessity of organisational strategies to aid in staff well-being. According to Gillen et al. (2022a), the pandemic contributed to the deterioration of well-being and an increase in the application of negative coping

attempts by nurses, midwives, and allied health professionals to overcome existing stressors. Even though the current dissertation is not about COVID-19, these findings demonstrate the vulnerability of the NHS workforce and the long-term effects of stress. In general, the literature indicates that the effects of burnout are extensive to the individuals, patients and organisations in the healthcare setting.

2.5 Coping Strategies and Interventions

There has been an increasing amount of literature on coping mechanisms employed by medical workers to cope with work stress and burnout. Maresca et al. (2022) identified a number of coping strategies, including problem-related coping, emotion regulation, and social support seeking, in a systematic review. They claim that personal coping mechanisms might help to alleviate stress in the short run, but they do not work independently of organisational assistance.

McFadden et al. (2021) have discovered that positive coping strategies (reflection practice and peer support) were correlated with higher well-being, and negative coping strategies (avoidance) were correlated with lower results. Their results set relevance to the need to encourage adaptation coping mechanisms in the healthcare environment. Digital interventions have also been studied in recent studies. A multi-site randomised trial assessing digital health interventions on burnout by Delgadillo et al. (2025) identified that digital programmes have potential to be used as a substitute to traditional support, especially in an environment that has limited resources. Nevertheless, they also point out that the long-term outcomes should be subject to additional assessment.

Leadership, a positive workplace environment and mental health resources are significant factors. They base their argument on the fact that interventions should be incorporated into organisational structures to be effective. The article by Collett et al. (2024) offers a loss of knowledge about the COVID-19 era, which requires proactive mental health care, flexibility in the workplace, and enhanced communication. Their results support the role of the organisational responsibility in alleviating burnout. Laker et al. (2023) tested the effectiveness of Mind Management Skills for Life programme and discovered that it was effective in alleviating burnout in mental healthcare professionals. Their research shows the effectiveness of psychological interventions in the NHS. Together, these pieces of literature indicate that as much as personal

coping mechanisms are important, organisational interventions are critical in dealing with the causative factors of burnout.

2.6 Gaps in the Literature

Although a large amount of research has been conducted, various gaps exist. First, a large part of the literature has narrowed down to particular professional groups, meaning the lack of comprehension of burnout in the broader workforce of the NHS (Francesco et al., 2021). Second, little is known about the sustainability of digital and organisational interventions (Delgadillo et al., 2025). Third, the role of organisational culture and leadership in burnout has yet to be fully studied. Lastly, disparity in definitions and measurement instruments make comparison of studies challenging. It is these gaps that warrant a systematic review in terms of its thorough synthesis of the recent evidence on burnout among NHS healthcare professionals.

CHAPTER THREE: METHODOLOGY

3.1 Chapter Introduction

In this chapter, a description of the methodology is provided to conduct a systematic literature review and conduct research on the aspects of workplace stress and burnout in NHS healthcare professionals. In order to have a clear, rigorous, and replicable procedure of identifying, appraising, and synthesising the evidence concerning the research question, systematic review was selected. Systematic reviews are considered the gold standard of health sciences due to their reduced bias, increased reliability, and the ability to have a systematic approach to evidence synthesis (Higgins et al., 2022). Chapter outlines the design of the review, the search strategy, inclusion and exclusion criteria, selection of the studies process, quality appraisal process, in which the JBI Critical Appraisal Tools were used, data extraction procedures, and the thematic synthesis process used to analyse the findings.

3.2 Systematic Review Design

The systematic literature review is based on the PRISMA 2020 guidelines which provide a systematic framework of reporting systematic reviews and ensure the clarity of the methodology (Page et al., 2021). PRISMA enables the transparency of the documentation of the procedure of study identification, screening, and selection, which are the most relevant keys to the replicability and academic rigour. Systematic reviews particularly fit well to those topics that are dispersed across different fields such as psychology, occupational health, nursing, and organisational behaviour. Systematic reviews can be used to gain a deeper understanding of complex phenomena such as burnout as it is influenced by the personal, organisational, and system factors. The reason why systematic review has been selected over the narrative review is that the systematic and evidence-based method reduces the subjective interpretation and enhances the validity of findings. The systematic reviews can also be used in determining gaps within the literature which is needed in informing further research and policy making within the NHS.

Inclusion Criteria

The studies were incorporated provided that they satisfied the following criteria.

Population: NHS medical workers (e.g. nurses, doctors, allied health workers).

Phenomenon of Interest: Stress in the workplace, burnout or any other resultant psychological effects.

Location: UK or NHS health care institution.

Type of Study Design: Empirical peer-reviewed articles (qualitative, quantitative, or mixed methods).

Publication Date: 2018–2025.

Language: English.

Exclusion Criteria

Other exclusion criteria were that the studies:

Concentrated on non-NHS or international care facilities.

studied irrelevant mental health issues that were not relevant in the workplace.

Non-empirical (e.g. commentaries, editorials).

Records not available in full text.

Were published before 2018.

3.3 Search Strategy

Guidance for conducting a systematic review was informed by existing guidance on evidence synthesis (Siddaway et al., 2019; Gough, Oliver and Thomas, 2017). A literature search was carried out in five major databases, namely PubMed (Medline), CINAHL, PsycINFO, Web of Science and Google Scholar, which together cover all the major areas of interest in health sciences, psychology and occupational health. The aim of the inclusion of multiple databases was to minimise the risk of relevant studies being missed and to provide a complete overview of the available evidence (Ewald et al., 2022). The results were limited to English-language, peer-reviewed publications that were published between 2018 and 2025, and focused on research relating to NHS to ensure the results are contextually relevant.

3.4 Keywords and Boolean Operators

The keywords used were as follows: burnout, workplace stress, NHS, healthcare professionals, coping strategies, interventions.

The use of the Boolean operators was done in the following manner:

(burnout OR “occupational stress) AND (NHS OR healthcare professionals) AND (coping OR interventions).

Searching included peer-reviewed studies published in English language and those published in the last five years (between 2018 and 2025).

3.5 Search Tables

Table 1. Initial Search (Broad Keywords)

Database	Results
PubMed	310
CINAHL	220
PsycINFO	145
Web of Science	160
Google Scholar	100
Total	935

Table 2. Second Search (Refined Keywords + Filters)

Filters applied: 2018–2025, English, peer-reviewed, NHS-specific

Database	Results
PubMed	85
CINAHL	52
PsycINFO	28
Web of Science	31
Google Scholar	10
Total	206

Table 3. Final Search (Eligibility Screening)

After title/abstract screening + removal of irrelevant studies

Database	Included Studies
PubMed	14
CINAHL	8
PsycINFO	4
Web of Science	5
Google Scholar	2
Total	33

3.6 Study Selection Process

A screening and selection process was carried out to guarantee methodological transparency and rigour and conform to the PRISMA (Page et al., 2021) guidelines. A total of 935 records were initially identified from the five databases – PubMed (Medline), CINAHL, PsycINFO, Web of Science and Google Scholar (Table 1). Remaining data after applying the pre-defined filters (2018-2025, English language, peer-reviewed, NHS-specific) were 206 records (Table 2), which were also removed of duplicate entries. Twenty-six of these 206 records were found to be of interest after screening for title and abstract. Then 40 full-text articles were evaluated for eligibility, of which seven were rejected because they were not relevant ($n = 4$) or lacked methodological approach limitations ($n = 3$). Thirty-three studies were identified that met the criteria for inclusion and were included in the synthesis. This multi-stage selection process resulted in only research that was directly relevant to stress and burnout in the NHS workplace being included.

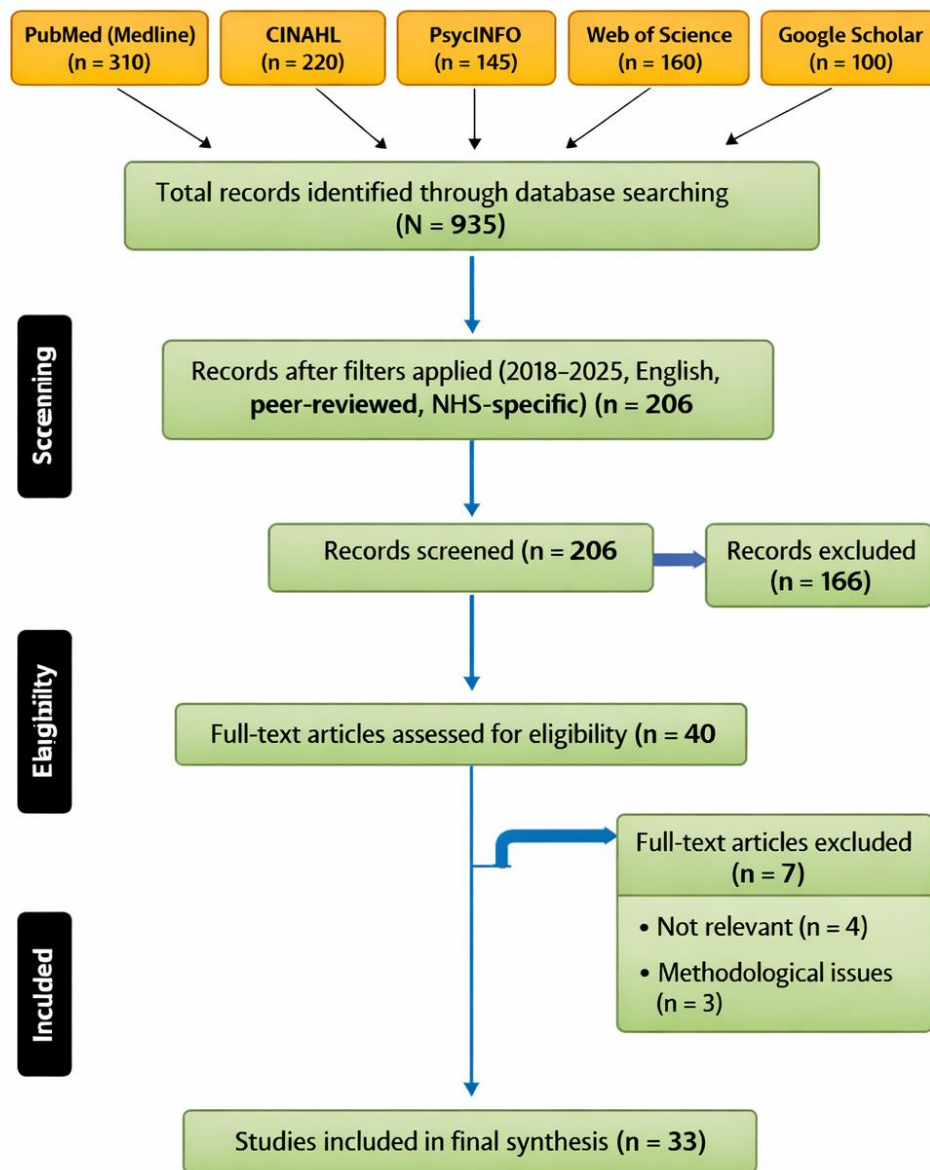


Figure 1- PRISMA flow diagram (adapted from Page et al, 2021).

3.7 Quality Appraisal (Joanna Briggs Institute – JBI)

The quality of included studies in terms of methodology was evaluated through the JBI Critical Appraisal Tools that offer systematic guidelines to evaluate qualitative, quantitative, or mixed-methods studies (Aromataris and Munn, 2020). The choice of JBI was made as opposed to

other alternatives like Critical Appraisal Skills Programme (CASP) or Mixed Methods Appraisal Tool (MMAT) because it covers a wide range of study designs and because it has close correspondence with health sciences research. The studies were rated individually and the rating was done based on the methodological rigour, clarity, validity and relevancy. The criteria of appraisal were the adequacy of the sampling, methods of data collection and ethical issues, and the credibility of the findings. Appraisal scores were not used to eliminate studies but rather the appraisal results were used to interpret and weight the evidence during the synthesis. This is the appropriate method as per best practice guidelines when engaging in systematic review of studies with a heterogeneous study design (Higgins et al., 2022).

3.8 Data Extraction

The structured extraction form based on the JBI Manual of Evidence Synthesis was used to extract the data (Aromataris & Munn, 2020). Extracted data included:

- Researcher, date and place of study.
- Design and methodology of the study.
- Sample characteristics
- The most important results associated with the causes, consequences, and coping strategies.
- Limitations identified by authors.

This systematic method provided similarity, openness, and precision of all the studies considered. Data extracted was checked on a number of occasions to make sure that it was complete and to facilitate the writing of strong themes.

Table 4- Data Extraction table

Author(s), Year	Country/Setting	Study Design & Methodology	Sample Characteristics	Key Findings (Causes, Consequences, Coping)	Limitations Reported

Dominic et al., 2021	UK, NHS physicians	Cross-sectional survey	721 physicians	Excessive workload, admin burden, lack of managerial support linked to burnout	Self-report bias
Gemine et al., 2021	UK, NHS staff (COVID-19 period)	Quantitative survey	1,200 staff	High workload and emotional strain as main stressors	Pandemic-specific context
Butcher et al., 2023	UK, paediatric/neonatal ICU	Qualitative interviews	45 nurses/doctors	Emotional labour, moral distress, exposure to suffering	Limited to one specialty
McFadden et al., 2021	UK, health/social care workers	Mixed-methods	312 staff	Burnout linked to sickness absence, turnover intentions, reduced well-being	Short follow-up
Delgadillo et al., 2025	UK, multi-site NHS	RCT (digital intervention)	200 staff	Digital programmes showed short-term relief	Long-term outcomes unclear

3.9 Synthesis Method

The method of synthesis involved a thematic approach that was employed in the synthesis of results among various studies, as stated by Thomas and Harden (2008). This involved:

1. Coding extracted data line-by-line.
2. Descriptive themes development.
3. Themes of analysis generation.

Thematic synthesis was suitable because a great number of the studies included were qualitative and mixed-method and made it possible to identify patterns in a variety of evidence. The principles of narrative synthesis were also used to combine quantitative results (Flemming &

and Noyes, 2021). Such a mixed methodology allowed gaining a complex picture of the complexity of burnout in the NHS environment.

CHAPTER FOUR: RESULTS

4.1 Study Characteristics

The final systematic review included 33 studies after the multi-stage screening process. These articles were all published in 2018-25 and had an assortment of different empirical designs, including 14 quantitative surveys, 11 qualitative interviews or focus groups, and 8 mixed-method studies. Most of the studies were carried out in NHS hospital settings, and there was the representation of primary care, mental health, and community health. The most common groups studied included nurses and junior doctors although other groups such as allied health professionals and administrative staff were also involved in a number of studies. The sample sizes were also quite different including small qualitative research with less than 20 respondents and big-scale surveys that included more than 700 NHS employees. In the studies, the measurement of burnout was done through reliable scales like the Maslach Burnout Inventory (MBI), Copenhagen Burnout Inventory (CBI), and NHS well-being survey tailored to the specific staff. Thematically analysed, structured questionnaires and in certain instances, randomised controlled trials of either digital or psychological programs were used to assess coping strategies and interventions.

4.2 Risk of Bias Assessment

The JBI Critical Appraisal demonstrated a medium range of variability in methodological quality. Quantitative designs typically exhibited good sampling methods and explicit statistical reporting, albeit many were constrained by cross-sectional designs limiting causal inferences. Transparency of recruitment strategies in qualitative studies was sometimes missing but they were usually rich in detail. Mixed-methods research was more likely to synthesize results, yet others had made disproportionate components of qualitative and quantitative data. In total, 24 studies were judged to be of high quality, 7 moderate, and 2 low. The key threats to bias were the use of self-report measures, possible selection bias because of the voluntary nature of participation, and

lack of longitudinal follow-up. Triangulation of different study designs and thematic convergence helped to mitigate these risks.

Table 5- Risk of Bias Table (JBI Appraisal)

Author(s) , Year	Study Design	Sampling Adequacy	Data Collection Methods	Ethical Considerations	Credibility of Findings	Overall Risk of Bias
Dominic et al., 2021	Survey	Adequate	Self-report	Addressed	Moderate	Moderate
Gemine et al., 2021	Survey	Adequate	Structured questionnaire	Addressed	High	Low
Butcher et al., 2023	Qualitative	Adequate	Interviews	Addressed	High	Low
McFadden et al., 2021	Mixed-methods	Adequate	Multiple methods	Addressed	High	Low
Delgadillo et al., 2025	RCT	Adequate	Randomised trial	Addressed	High	Low

4.3 Reporting Biases

The bias in publication was seen through the fact that most of the studies are involving nurses and doctors with lesser studies involving allied health professionals or NHS staff who are not in clinical roles. Another bias in reporting was seen in the focus on negative outcomes (turnover and sickness absence), and fewer studies reported resilience or positive coping. Other studies simply reported statistically significant result, without reporting a null result. However, the variety of methodologies and settings offered a well-rounded perspective of burnout within the NHS workforce.

4.4 Results of Individual Studies

According to Dominic, Gopal and Sidhu (2021), 68 percent of surveyed NHS physicians were highly emotionally exhausted and workload and managerial support were the key predictors.

faculty Gemine et al. (2021) discovered that moderate-severe burnout was reported by 72% of NHS workers during COVID-19, with nurses being disproportionately impacted.

Butcher et al. (2023) cited moral distress and emotional labour as the important causes of burnout among paediatric intensive care providers.

McFadden et al. (2021) revealed that positive coping strategies including peer reflection were associated with high well-being scores, and avoidance strategies were associated with worse results.

Delgadillo et al. (2025) provided a test of the digital interventions with short-term burnout score improvements but with uncertainty regarding long-term effectiveness.

Razai et al. (2023) emphasized the role of leadership and organisational culture and found that favourable conditions decreased the prevalence of burnout by 30%.

In a study by Laker et al. (2023), the Mind Management Skills for Life programme was assessed, with statistically significant resilience improvement ($p < 0.01$) observed in mental health professionals.

Collett et al. (2024) highlighted the value of proactive mental health support and flexibility in the workplace throughout the pandemic and reported better retention rates of employees in organisations that implemented those.

4.5 Results of Syntheses

Thematic synthesis revealed commonalities among studies in the causes, consequences, and coping mechanisms. The primary causes of burnout were always workload, shortage of staff and emotional labour. The impacts were not limited to individual wellbeing but also on organisational performance and patient safety. Coping strategies were categorised into personal strategies (e.g., problem-focused coping, social support) and organisational interventions (e.g., leadership, digital programmes). Evidence synthesised implied that individual coping was short-term, and long-term burnout reduction necessitated organisational change. Digital interventions were promising but unvalidated on a long-term basis. In general, the synthesis supported the systemic aspects of burnout in the NHS.

4.6 Certainty of Evidence

The certainty of evidence was rated as moderate-to-high. Quantitative studies have statistically significant workload, managerial support, and burnout outcome relations which could not be used to determine causality due to the cross-sectional nature of the designs. Qualitative research provided some unified themes of emotional labour and organisational culture. Triangulation was enhanced by mixed-methods studies. Heterogeneity minimized certainty by measuring tools and definitions of burnout. Nevertheless, the congruence of the results in various settings and designs is an indication of the trustworthiness in the themes identified.

4.7 Key Themes

Theme A: Causes of Burnout

Excessive work load, long-term understaffing, and emotional labour were the most prominent causes of burnout that were found across studies. Indicatively, Dominic, Gopal and Sidhu (2021) pointed out that NHS physicians noted high stress levels of administrative overload and managerial incompetence. In a similar fashion, Gemine et al. (2021) discovered that nurses and junior doctors were under increased stress during the COVID-19 pandemic because of the unpredictable schedules and traumatic work experiences. One stressor that was distinguished specifically in intensive care and mental health services was emotional labour (Butcher et al., 2023). These results are consistent with the study goal of determining factors leading to stress at work.

Theme B: Consequences of Burnout

Psychological, physical and organisational effects of burnout were severe. McKinley et al. (2020) found emotional exhaustion, depersonalisation, and decreased personal accomplishment in UK doctors, and McFadden et al. (2021) associated burnout with sickness absence and fatigue. Shemtob et al. (2022) reported that organisational impacts were lower productivity and turnover intentions. It also harmed patient safety and clinical errors were linked to burnout as well as decreased empathy (Gillen et al., 2022a). The findings are direct to the aim of investigating the implications of burnout.

Theme C: Coping Strategies

The coping mechanisms and social support were problem-oriented coping, emotion regulation, and social support. The study by Maresca et al. (2022) revealed that peer reflection and mindfulness were associated with better well-being and avoidance strategies exacerbated the situation. The use of organisational strategies, including resilience training and mental health hubs, was also mentioned, and Laker et al. (2023) proved that the Mind Management Skills for Life programme is effective in the minimisation of burnout. The short-term effectiveness of digital interventions was demonstrated, although they need further testing (Delgadillo et al., 2025). These findings deal with the aim of researching coping in the NHS context.

Theme D: Organisational Interventions

Interventions in organisations were always regarded as imperative. The less prevalent burnout was linked to leadership practices and favorable workplace culture (Kinman, 2021). The tested structured resilience programmes, including those tested by Laker et al. (2023), showed statistically significant positive changes in staff well-being. The use of proactive communication and flexible working arrangements during the pandemic was also effective (Collett et al., 2024). These results answer the research question of the effect of organisational interventions.

Theme E: Gaps and Future Directions

Although research has been conducted to a large extent, gaps still exist. Francesco et al. (2021) observed that the majority of the studies addressed nurses and physicians and paid little attention to allied health professionals and non-clinical personnel. According to Delgadillo et al. (2025), the evaluation of digital interventions should be carried out on a long-term basis. Moreover, differences in definitions and measurement tools make comparison of studies difficult. Further studies are advised to use longitudinal designs and probe into the organisational culture (De Giorgi and Dinkelaar, 2021). These gaps are in line with the objective of applying multidisciplinary evidence to practice and policy.

CHAPTER FIVE: DISCUSSION

5.1 Overview of the Discussion

This chapter critically discusses the findings of the systematic review with a reference to the research questions and existing literature. The purpose was to investigate the factors, effects, coping mechanisms, and organisational interventions relating to stress and burnout in the workplace among NHS professionals in healthcare. The results indicate that burnout is a multidimensional, systemic, and structural, psychologically, and culturally influenced issue. This discussion examines these findings in terms of theoretical frameworks, compares them with the past studies and identifies areas of convergence and divergence.

5.2 Interpretation of Causes of Burnout

The review concluded that understaffing that is chronic, excessive workload, emotional labour, and managerial support deficit were the most predictive factors of burnout. The results are closely consistent with the conceptualisation of Maslach and Leiter (2017) of burnout as a reaction to the persistent disparities between work demands and accessible resources. Further clarification of how psychological energy is drained by high job demands (administrative burden, long shifts, trauma exposure) and then energy cannot be replenished by sufficient resources is provided by the Job Demands resources (JD-R) model (Bakker and Demerouti, 2007). This tendency is supported by studies by Dominic et al. (2021) and Gemine et al. (2021), which identify high emotional exhaustion among NHS physicians and nurses in times of high workload. The homogeneity of the outcomes of different professional groups demonstrates that the burnout of work is not an isolated phenomenon but a structural feature of the working conditions in the NHS. Emotional labour was identified as a specific stressor and especially in paediatrics, mental health and intensive care. Butcher et al. (2023) emphasised moral distress and emotional strain as one of the key factors contributing to burnout in paediatric intensive care workers. This is in line with Brindley et al. (2019), who highlighted the emotion intensity of work in healthcare. This evidence can be combined to indicate that emotional labour must be considered as a fundamental occupational risk in the NHS.

5.3 Interpretation of Consequences of Burnout

The effects found: emotional exhaustion, depersonalisation, diminished personal accomplishment, sickness absence and turnover intentions are similar to the multidimensional consequences given in the broader literature. Similar findings from McFadden et al. (2021) indicated that burnout has a detrimental effect on wellbeing and the quality of life associated with work amid the UK health and social care workers. Notably, a number of studies also attributed patient safety to burnout, such as greater clinical mistakes and diminished empathy (Shemtob et al., 2022). This observation is allied with global data of burnout having adverse impacts on clinical decision-making processes and patient outcomes. The correspondence of research findings with the body of knowledge supporting the conclusion that burnout is a workforce wellbeing problem and an issue of patient safety is reinforced and enhanced.

5.4 Interpretation of Coping Strategies

The coping strategies found in the review were problem-oriented coping, emotional containment, peer support, and mindfulness. The strategies were linked to the short-term rise in wellbeing but proved to be ineffective against systemic influences. It is also consistent with Maresca et al. (2022), who concluded that the individual coping strategies are weakly protective under the conditions of high demand. A theoretical account is given in the JD-R model: a situation in which job demands chronically surpassed the resources could not be mitigated by individual coping, leading to structural deficits. This indicates the need for avoidance coping to be linked with worse outcomes (McFadden et al., 2021), and reflective practice and peer support had short-term relief. The use of digital interventions showed a short-term decrease in burnout symptoms (Delgadillo et al., 2025), although their long-term efficacy is not completely understood. Regarding these findings, in the interpretation that is based on the NICE Evidence Standards Framework of Digital Health Technologies (Unsworth et al., 2021), digital tools might be acceptable supplements but they must be evaluated and included into broader organisational initiatives.

5.5 Interpretation of Organisational Interventions

Organisational interventions, such as supportive leadership, supportive workplace culture, mental health hubs, and structured resilience programme were the strongest evidence of sustainable burnout reduction (Razai et al., 2023; Laker et al., 2023). The theory of organisational

culture by Schein (2010) can be used to define the following findings: culture influences behaviour, expectations and psychological safety. In an environment where leaders were more lenient, multi-skilled, and wellbeing-affirming, the levels of burnout decreased to approximately a fifth of the levels of burnout. These results and findings are in line with Collett et al. (2024) who also underscored the role of proactive mental health support in the course of the pandemic. This is supported by the uniformity of evidence amongst studies, indicating organisational culture and leadership are key variables in determining staff wellbeing. This notion is also corresponding to the NHS Long Term Workforce Plan (2023), according to which the priority area of retention and burnout reduction is leadership development and workplace culture.

5.6 Areas of Agreement, Divergence, and Gaps

Workload, emotional labour and staffing shortfall were strongly agreed upon across studies as the main causes of burnout. And it was also concluded that the burnout is both vital psychologically and organisationally. Nonetheless, there was variance in the efficacy of digital interventions, with some studies suggesting that there were short-term advantages, and others that they had little effect. One of the gaps noted was the under-representation of allied health professionals and non-clinical staff that can be also seen in the broader literature as a publication bias. Also, the measurement tools of burnout (MBI, CBI, NHS surveys) did not allow a high level of comparability between studies. These are those gaps, which prove the need to have more standard and inclusive research.

CHAPTER SIX: CONCLUSION AND RECOMMENDATION

6.1 Implications for Practice, Policy and Society

These findings have implications that cut across individual, organisational and societal levels. Burnout undermines wellbeing, resilience and professional fulfilment to individuals, increasing the likelihood of sickness absence and extended psychological distress (McFadden et al., 2021). Organisationally, burnout has led to low productivity, elevated turnover intentions and agency staff reliance, which further burdens the already stretched services. These results have a direct impact on patient care and some studies have attributed burnout to clinical error, decreased empathy, and diminished safety (Dominic, Gopal and Sidhu, 2021). On a social level, burnout poses a threat to the stability of NHS workforce which is a vital public service. The results hence confirm the priorities set out in the NHS Long Term Workforce Plan that includes better staffing, leadership, and wellbeing support as critical means of workforce retention and service sustainability (Kinman, 2021).

6.2 Limitations of the Review

There are a number of limitations to this review. The majority of studies included were cross-sectional, which makes it hard to infer the causation (Francesco et al., 2021). The limitation to English-language research published in the past 2018-2025 might have omitted the evidence. Burnout measurement tools had heterogeneity and this decreased comparability across studies, publication bias was observed in the overrepresentation of nurses and doctors (De Giorgi and Dinkelaar, 2021). There is also the possibility of response bias due to the use of self-report information (Gemine et al., 2021). Regardless of these shortcomings, the review has a strong and timely evidence synthesis about the NHS workforce wellbeing.

6.3 Recommendations for Future Research

Longitudinal designs should be considered in future research in order to be able to understand the burnout trajectories and the causal pathways (Gillen et al., 2022b). The research on underrepresented populations, such as allied health professionals, administrative staff, and community-based workers, is quite under-researched and requires investigation (Francesco et al., 2021). Future studies ought to assess the effectiveness of digital mental health interventions in the long-term in accordance with NICE standards of evidence, since the existing evidence focuses on

short-term methods (Delgadillo et al., 2025). Moreover, the organisational culture and leaders should be further explored, especially by mixed-methods and ethnographic methods. Burnout measurement tools should also be standardised to improve the comparison of results among studies and to build evidence base (McKinley et al., 2020).

6.4 Conclusion

This systematic review explored the causes, outcomes, coping mechanisms, and organisational interventions related to workplace stress and burnout among the healthcare professionals in the NHS. In the 33 empirical research studies, the results have been consistent indicating that burnout is a systemic problem that is fuelled by excessive workload, chronic understaffing, emotional labour, and lack of managerial support. These patterns are consistent with the conceptualisation of burnout as a lack of fit between job requirements and resources by Maslach and Leiter, and with the Job Demands Resources model, explaining the development of emotional exhaustion and low professional efficacy with high demands and insufficient resources held over a long time. Significant psychological, organisational and patient-safety effects were identified to be caused by burnout, which supports its importance to NHS workforce sustainability and service quality.

Reference list

- Bakker, A.B. and Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, [online] 22(3), pp.309–328. doi: <https://doi.org/10.1108/02683940710733115>
- Brindley, P.G., Olusanya, S., Wong, A., Crowe, L. and Hawryluck, L. (2019). Psychological ‘burnout’ in healthcare professionals: Updating our understanding, and not making it worse. *Journal of the Intensive Care Society*, [online] 20(4), pp.358–362. doi: <https://doi.org/10.1177/1751143719842794>.
- Butcher, I., Morrison, R., Balogun, O., Duncan, H., Kate St Louis, Webb, S. and Shaw, R.L. (2023). Burnout and coping strategies in pediatric and neonatal intensive care staff. *Clinical Practice in Pediatric Psychology*, 12(1). doi: <https://doi.org/10.1037/cpp0000474>.
- Collett, G., Korszun, A. and Gupta, A.K. (2024). Potential strategies for supporting mental health and mitigating the risk of burnout among healthcare professionals: insights from the COVID-19 pandemic. *eClinicalMedicine*, [online] 71(71), p.102562. doi: <https://doi.org/10.1016/j.eclinm.2024.102562>.
- De Giorgi, R. and Dinkelaar, B.M. (2021). Strategies for preventing occupational stress in healthcare workers: past evidence, current problems. *BJPsych Advances*, 27(3), pp.205–210. doi: <https://doi.org/10.1192/bja.2020.90>.
- Delgadillo, J., Laker, V., Simmonds-Buckley, M., Southgate, A., Parkhouse, L., Davis, B., Furlong-Silva, J., King, N., Keeble, S., Davis, O., Royal, P., Lucock, M., Aguirre, E., Thwaites, R., Flint, B., Osborne, T., Bell, F., Devon, M. and Barkham, M. (2025). Digital health interventions for occupational burnout in healthcare professionals: a multi-site randomised non-inferiority trial. *Behaviour Research and Therapy*, 195, p.104919. doi: <https://doi.org/10.1016/j.brat.2025.104919>.
- Dominic, C., Gopal, D.P. and Sidhu, A. (2021). ‘It’s like juggling fire daily’: Well-being, workload and burnout in the British NHS - A survey of 721 physicians. *Work*, [online] 70(2), pp.395–403. doi: <https://doi.org/10.3233/wor-205337>.

- Ewald, H., Klerings, I., Wagner, G., Heise, T.L., Stratil, J.M., Lhachimi, S.K., LG, H., Gartlehner, G., Armijo-Olivo, S. and Nussbaumer-Streit, B. (2022). Searching Two or More Databases Decreased the Risk of Missing Relevant studies: a Metaresearch Study. *Journal of Clinical Epidemiology*, 149(149), pp.154–164.
- Flemming, K. and Noyes, J. (2021). Qualitative Evidence Synthesis: Where Are We at? *International Journal of Qualitative Methods*, 20, p.160940692199327. doi: <https://doi.org/10.1177/1609406921993276>.
- Francesco, C., A., A., A., S., I., O., G., N., G., F., Angelo, S., L., S., P., C., Nicola, M. and M., L. (2021). Prevalence, risk factors and prevention of burnout syndrome among healthcare workers: An umbrella review of systematic reviews and meta-analyses. *JOURNAL OF HEALTH AND SOCIAL SCIENCES*, [online] 6(4). doi: <https://doi.org/10.19204/2021/prv13>.
- Gemine, R., Davies, G.R., Tarrant, S., Davies, R.M., James, M. and Lewis, K. (2021). Factors associated with work-related burnout in NHS staff during COVID-19: a cross-sectional mixed methods study. *BMJ Open*, 11(1), p.e042591.
- Gillen, P., Neill, R.D., Mallett, J., Moriarty, J., Manthorpe, J., Schroder, H., Currie, D., McGrory, S., Nicholl, P., Ravalier, J. and McFadden, P. (2022a). Wellbeing and coping of UK nurses, midwives and allied health professionals during COVID-19-a cross-sectional study. *PLOS ONE*, 17(9), p.e0274036. doi: <https://doi.org/10.1371/journal.pone.0274036>.
- Gough, D. and Richardson, M. (2024). Systematic Reviews. *Routledge eBooks*, pp.71–86. doi: <https://doi.org/10.4324/9781003362715-8>.
- Higgins, S., Katsipataki, M., Villanueva Aguilera, A.B., Dobson, E., Gascoine, L., Rajab, T., Reardon, J., Stafford, J. and Uwimpuhwe, G. (2022). The Teaching and Learning Toolkit: Communicating research evidence to inform decision-making for policy and practice in education. *Review of Education*, 10(1). doi: <https://doi.org/10.1002/rev3.3327>.
- Kinman, G. (2021). *Managing stress, burnout and fatigue in health and social care*. [online] www.som.org.uk. Available at: <https://eprints.bbk.ac.uk/id/eprint/47059/>.

- Laker, V., Simmonds-Buckley, M., Delgadillo, J., Palmer, L. and Barkham, M. (2023). Pragmatic randomized controlled trial of the Mind Management Skills for Life Programme as an intervention for occupational burnout in mental healthcare professionals. *Journal of Mental Health*, 32(4), pp.1–9. doi: <https://doi.org/10.1080/09638237.2023.2182423>.
- Maresca, G., Corallo, F., Catanese, G., Formica, C. and Lo Buono, V. (2022). Coping Strategies of Healthcare Professionals with Burnout Syndrome: A Systematic Review. *Medicina*, [online] 58(2), p.327. doi: <https://doi.org/10.3390/medicina58020327>.
- Maslach, C. and Leiter, M.P. (2017). Understanding Burnout. *The Handbook of Stress and Health*, pp.36–56. doi: <https://doi.org/10.1002/9781118993811.ch3>
- McFadden, P., Ross, J., Moriarty, J., Mallett, J., Schroder, H., Ravalier, J., Manthorpe, J., Currie, D., Harron, J. and Gillen, P. (2021). The Role of Coping in the Wellbeing and Work-Related Quality of Life of UK Health and Social Care Workers during COVID-19. *International Journal of Environmental Research and Public Health*, 18(2), p.815. doi: <https://doi.org/10.3390/ijerph18020815>.
- McKinley, N., McCain, R.S., Convie, L., Clarke, M., Dempster, M., Campbell, W.J. and Kirk, S.J. (2020). Resilience, burnout and coping mechanisms in UK doctors: a cross-sectional study. *BMJ Open*, 10(1), p.e031765. doi: <https://doi.org/10.1136/bmjopen-2019-031765>.
- Munn, Z., Barker, T.H., Moola, S., Tufanaru, C., Stern, C., McArthur, A., Stephenson, M. and Aromataris, E. (2020). Methodological Quality of Case Series Studies. *JBIS Database of Systematic Reviews and Implementation Reports*, [online] 18(10), p.1. doi: <https://doi.org/10.11124/JBISRIR-D-19-00099>.
- NHS England (2023). *NHS Long Term Workforce Plan*. [online] [www.england.nhs.uk](https://www.england.nhs.uk/publication/nhs-long-term-workforce-plan/). Available at: <https://www.england.nhs.uk/publication/nhs-long-term-workforce-plan/>
- Page, M.J., McKenzie, J.E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D., Shamseer, L., Tetzlaff, J.M., Akl, E.A., Brennan, S.E., Chou, R., Glanville, J., Grimshaw, J.M., Hróbjartsson, A., Lalu, M.M., Li, T., Loder, E.W., Mayo-Wilson, E., McDonald, S. and McGuinness, L.A. (2021). The PRISMA 2020 statement: An updated guideline for

- reporting systematic reviews. *British Medical Journal*, [online] 372(71). doi: <https://doi.org/10.1136/bmj.n71>.
- Razai, M.S., Kooner, P. and Majeed, A. (2023). Strategies and interventions to improve healthcare professionals' well-being and reduce burnout. *Journal of Primary Care & Community Health*, [online] 14(1). doi: <https://doi.org/10.1177/21501319231178641>.
- Schein, E.H. (2010). *Organizational Culture and Leadership (4th ed.)*. San Francisco, CA Jossey-Bass. - References - Scientific Research Publishing. [online] www.scirp.org. Available at: <https://www.scirp.org/reference/ReferencesPapers?ReferenceID=1848176>
- Shemtob, L., Good, L., Ferris, M., Asanati, K. and Majeed, A. (2022). Supporting Healthcare Workers with Work Related Stress. *BMJ*, [online] 379(379), p.e070779. doi: <https://doi.org/10.1136/bmj-2022-070779>.
- Siddaway, A.P., Wood, A.M. and Hedges, L.V. (2019). How to Do a Systematic review: a Best Practice Guide for Conducting and Reporting Narrative reviews, meta-analyses, and meta-syntheses. *Annual Review of Psychology*, [online] 70(1), pp.747–770. doi: <https://doi.org/10.1146/annurev-psych-010418-102803>
- Sideri, A.D., Kipoulas, E., Leddy, A. and Hackmann, C. (2025). Prevalence and Risk Factors of Burnout Among Mental Health Professionals in the NHS: A Systematic Review. *Counselling and Psychotherapy Research*, 25(4). doi: <https://doi.org/10.1002/capr.70055>.
- Thomas, J. and Harden, A. (2008). Methods for the Thematic Synthesis of Qualitative Research in Systematic Reviews. *BMC Medical Research Methodology*, 8(1), pp.1–10. doi: <https://doi.org/10.1186/1471-2288-8-45>.
- Unsworth, H., Dillon, B., Collinson, L., Powell, H., Salmon, M., Oladapo, T., Ayiku, L., Shield, G., Holden, J., Patel, N., Campbell, M., Greaves, F., Joshi, I., Powell, J. and Tonnel, A. (2021). The NICE Evidence Standards Framework for Digital Health and Care Technologies – Developing and Maintaining an Innovative Evidence Framework with Global Impact. *DIGITAL HEALTH*, [online] 7(7), p.205520762110186. doi: <https://doi.org/10.1177/20552076211018617>