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**The impact of COVID-19-related workplace stress on
burnout among NHS frontline healthcare workers in UK between
2020 and 2023**

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1 Introduction

1.1 Overview

COVID-19, which emerged at the end of 2019 and rapidly swept the globe during 2020-2023, is a major recent public health crisis. Health systems around the world were significantly tested; however, the United Kingdom's National Health Service (NHS) was particularly affected by the large number of infections, pre-pandemic staffing challenges and capacity issues. Frontline NHS healthcare workers - those who are directly involved in patient care (doctors, nurses, paramedics, allied health professionals) - were under considerable pressure, working in sustained and intense conditions. This placed them at risk of levels of workplace stress not previously experienced, which have been associated with burnout and other negative psychological health outcomes (Couper et al., 2022; Greenberg et al., 2020).

Stress in health care is not uncommon however, the magnitude, severity, and duration of stress during the COVID-19 pandemic were unprecedented. Healthcare workers had to cope with higher patient volumes, rapidly evolving treatment guidelines and longer working hours with minimal breaks. The risk of exposure to infection combined with an initial lack of personal protective equipment (PPE) increased concerns for personal health and family safety (Shanafelt et al., 2020). These challenges were compounded by emotional distress, including exposure to high patient morbidity and mortality, a need to make complex ethical decisions, and deliver end-of-life care in constrained circumstances. Thus, COVID-19 presented a "perfect storm" of stressors that may have exacerbated the risk of burnout in healthcare workers.

Burnout is a psychological syndrome that comprises feelings of emotional exhaustion, depersonalization and reduced personal achievement (Maslach and Leiter, 2016). In health care, burnout has serious consequences for individual employee health, organizational productivity and patient care. Studies show that burnout leads to higher rates of medical errors, lower quality patient outcomes, sickness absence and staff attrition (West et al., 2018). These implications are especially problematic for the NHS, given the system's dependence on a robust workforce to provide quality patient care. Throughout the pandemic, there have been reports of fatigue, mental illness and

quitting the profession, suggesting a need to consider burnout as a key workforce challenge

The link between COVID-19-related workplace stress and burnout is complex. It involves psychological, organizational and societal factors. At the individual level, individual coping strategies, resilience and pre-existing mental health issues contribute to the experience of stress and its impact. Organizational factors, such as leadership styles, communication, resource allocation and culture play a major role in staff wellbeing (Maben and Bridges, 2020). Macro-level factors such as health policies, funding and workforce planning, also contribute to the larger environment that stresses and burns-out staff. This is crucial to inform interventions and policies to reduce burnout.

The pandemic presented unique challenges for the health workforce, and many initiatives were implemented to support their mental health. This included counselling, positive wellbeing initiatives and policies to enhance working conditions (NHS England, 2021). These measures offered some support, but their effectiveness has been mixed, with research indicating that organizational factors, such as staffing and work pressures, continued to hamper their effectiveness (David et al., 2021). As such, we need to better understand the role of stress in the workplace and how this led to burnout during the COVID-19 pandemic and how best to support staff in future pandemics.

1.2 Aim and Objectives

The main aim of this study is to analyze the role of COVID-19-related stress at the workplace during the year 2020-2023 in contributing to burnout among the NHS frontline healthcare workers in UK, and its effects on staff wellness policy, and workforce sustainability within the UK healthcare system. The objectives of the study are as below.

- Identify and analyze the primary reasons behind stress that NHS frontline healthcare workers experienced at the workplace during the COVID-19 pandemic (2020-2022).

- Consider the correlation between stressors associated with the pandemic and emotional exhaustion, anxiety, and burnout levels.
- Assess the impact of the government support schemes and NHS wellness programs that were implemented during the pandemic.
- Recommend ways to improve task allocation, mental health support mechanisms, and resilience measures of medical staff in the occurrence of future outbreaks of population health.

1.3 Scope of the Study

This study examines the experiences of frontline healthcare workers in the NHS, including those who have directly cared for patients during the pandemic. This research uses a secondary qualitative method, examining peer-reviewed articles, government and institutional reports and publications of 2020 and 2023. This focus allows us to examine the short- and long-term effects of the pandemic on occupational stress and burnout. The focus is on the UK, which has relevance to the UK's National Health Service (NHS) policies and systems.

The research further investigates other elements of workplace stress, such as emotional, psychological and organizational stressors. It examines mediating factors, such as mental health and staff wellness initiatives, and policy responses implemented during the pandemic (David et al., 2021).

1.4 Significance of the Research

This study is important for a number of reasons. First, it adds to the emerging research on the lasting mental health consequences of COVID-19 on healthcare professionals. Initial research has tended to be focused on short-term psychological impacts, but it is important to consider longer-term effects, such as burnout and attrition (Vyas et al., 2024).

Second, the study has lessons for the impact on organizations. An evaluation of the effectiveness of the NHS strategies, and the UK government's response, can provide insights for future workforce management in crisis situations. Research suggests that psychological interventions and influences promoting organizational resilience can mitigate the effects of occupational stress (West et al., 2020).

Third, the study has implications for health care management and policy. Increasing burnout prevention is critical for staff health, retention and care. This study can contribute to strategies to improve staff retention and performance via stressors and protective factors.

1.5 Limitations

This study has limitations. This is a secondary study and therefore relies on the quality of the literature used, which could have biases, gaps and variations in quality of research design and implementation. Primary data has not been collected for this study, so it is not able to report in real time or with personal accounts of NHS staff. Also, the ever-changing pandemic situation may mean some studies lack the longer-term view.

Sample variability (timing, tests and definition of burnout) across studies is another potential source of bias. This could affect the comparability and generalizability of the results to the whole of the NHS. But systematic analysis of the themes can help draw key lessons.

Overall, the COVID-19 pandemic has impacted the mental health of frontline health care workers in the NHS. The unprecedented work-related stress during this period has played a key role in the development of burnout, with far-reaching consequences for individuals, organizations and the health sector. Understanding the link between the pandemic stressors and burnout through this study will help shed light on the challenges faced by the workforce and mitigate burnout during future pandemics or disasters.

2 Research Background

2.1 Overview

The COVID-19 pandemic has had a profound impact on the working conditions of healthcare institutions globally, including the UK National Health Service (NHS). The literature between 2020 and 2024 demonstrates that frontline staff in healthcare was disproportionately impacted by stress, leading to increased burnout, distress and staff turnover (Couper et al., 2022; Vyas et al., 2024). This review builds on previous work in line with the research aims and critically explores (1) key stressors of the pandemic, (2) the link between stress and burnout, (3) the impact of interventions and practices, and (4) strategies for future resilience and preparedness.

2.2 Key Workplace Stressors during COVID-19

2.2.1 Workload Intensification and Staffing Shortages

A key source of stress for NHS frontline workers was the significant increase in workload. The overwhelming influx of COVID-19 cases alongside existing staffing shortages put severe demands on health services. Couper et al. (2022) reported that UK nurses and midwives felt an increased workload, longer shifts and insufficient breaks, resulting in physical and mental fatigue.

Additionally, Vindrola-Padros et al. (2020) noted that staffing redeployment across services resulted in a loss of their usual working pattern and unfamiliarity with the new clinical context. This unpreparedness heightened anxiety and lowered self-confidence in care practices. Likewise, Billings et al. (2021) noted that staff absenteeism from illness and self-isolation further compounded staffing deficiencies, resulting in further workload and stress.

In addition, a study has suggested the pandemic's sustained understaffing contributed to a feeling of being overwhelmed and this resulted in emotional exhaustion, part of burnout (Morgantini et al., 2020). That this indicates the impact of workload pressures was not a temporary one, but increased over time, magnifying their impact on psychological health.

2.2.2 Risk of Infection and Fear for Personal Safety

The second factor was the concern about contracting COVID-19 and transmitting it to families. This was particularly evident in the early weeks of the pandemic when there was a lack of clarity on the virus, and a shortage of personal protective equipment (PPE) (Greenberg et al., 2020).

In a systematic review, Kisely et al. (2020) found health-care workers exposed to infectious outbreaks were at greater risk of mental health problems, such as anxiety and post-traumatic stress disorder. In the UK, Williamson et al. (2020) coined the term "moral injury" when healthcare workers reported feelings of guilt and distress when having to make complex decisions in situations where resources were severely stretched.

Similarly, Shanafelt et al. (2020) highlighted that personal safety concerns also related to organizational trust. Healthcare workers' stress was heightened when they felt that their organization was not adequately protecting them or communicating decisions. This underscores the relationship between personal and organizational concerns in contributing to stress.

2.2.3 Emotional and Psychological Burden

There is extensive literature on the psychological impact of the pandemic on healthcare workers. They were often faced with high death rates, suffering and moral dilemmas, which added to their stress. Lai et al. (2020) reported high rates of depression, anxiety and insomnia among health care workers during the pandemic.

In the UK, Rattray et al. (2024) found critical care nurses were emotionally exhausted from caring for patients at the end of life. Likewise, Fernandez et al (2020) found that healthcare workers had to provide emotional support to patients without the presence of family, adding to their emotional stress.

Barello et al. (2020) also found that extended exposure to these emotionally charged experiences resulted in depersonalization (where healthcare workers detached themselves from their work). This may be a counter-defense mechanism in the short term, but ultimately leads to burn out.

2.2.4 Organizational and Systemic Challenges

Beyond personal stressors, workplace factors contributed to stress. Frequent changes in protocols, unclear communication and guidance, contributed to confusion and uncertainty (Vindrola-Padros et al., 2020).

Maben and Bridges (2020) found failure to acknowledge efforts and lack of leadership and support was stressful. Health-care workers felt they were not supported, or listened to, leading to low morale and job satisfaction.

In addition, systemic issues such as insufficient resources and infrastructure were also stressful. The King's Fund (2020) found that problems with the NHS, including under-funding and shortage of staff were worsened by the pandemic. These conclusions imply that stress associated with COVID-19 should not be considered in isolation, but as part of the challenges of the health care system.

2.3 Relationship between Workplace Stress and Burnout

2.3.1 Conceptual Framework of Burnout

Burnout is a multifaceted concept that involves emotional exhaustion, depersonalization and a low sense of personal accomplishment (Maslach and Leiter 2016). During the COVID-19 pandemic, emotional exhaustion stood out as a major element among health care workers (Barello et al., 2020).

Burnout can be framed using the Job Demands-Resources (JD-R) model. This theory proposes that burnout occurs when there are high job demands (e.g., workload, emotional demands) and low job resources (e.g., support, staffing) (Demerouti et al., 2001). Researchers have commonly used this model to understand the link between stressors and burnout in the context of COVID-19.

2.3.2 Empirical Evidence of Burnout during COVID-19

Many studies have reported higher rates of burnout among health workers. Morgantini et al. (2020) found more than half of the world's health care workers reported burnout symptoms. In the UK, Couper et al. (2022) reported high levels of emotional exhaustion and distress among NHS workers.

Greene et al. (2021) showed that frontline workers were more likely to report burnout than non-frontline workers, suggesting frontline workers were directly exposed to

COVID-19 stressors. De Kock et al. (2021) also found significant correlations between workload, lack of PPE availability and burnout.

This is consistent with Vyas et al. (2024), who found that chronic exposure to stress significantly contributed to the risk of mental health issues and burnout in NHS staff.

2.3.3 Mechanisms Linking Stress to Burnout

Stress and burnout is not a direct relationship. Over time, stress without recovery results in emotional exhaustion, a component of burnout (West et al., 2018).

Another key factor that plays a role in the relationship between stress and burnout is moral injury. Williamson et al. (2020) reported that nurses who experienced moral conflicts were more likely to experience burnout and distress.

Further, inadequate organizational support and working conditions compound the effects of stress. The JD-R model proposes that boosting job resources such as support and autonomy can buffer the impact of job demands (Demerouti et al., 2001).

2.3.4 Impact on Workforce and Patient Outcomes

Burnout affects health care workers and patients. It leads to absenteeism, lower job satisfaction and turnover intentions (Søvold et al., 2021). In the NHS, retention of staff is a particular concern, with staff considering leaving their careers as a result of burnout.

Moreover, burnout has negative consequences on patient safety, leading to more errors and substandard care (West et al., 2018). This underscores the need for burnout to be tackled at an organizational level as well as individually.

2.4 Effectiveness of Support Mechanisms

2.4.1 Formal Mental Health Interventions

A range of psychological initiatives were put in place by the NHS and UK government during the pandemic, such as counselling and helplines (NHS England, 2021). David et al. (2021) reported that these services offered immediate psychological support and relieved distress among health care workers.

But the services were not widely taken up. Billings et al. (2021) found that stigma, time constraints and fear of breaches of confidentiality held back many health workers from seeking support.

2.4.2 Organizational Support and Leadership

Organizational and leadership support has been shown to play a key role in reducing stress and burnout. Greenberg et al. (2020) highlighted the need for effective communication, support and resourcing. On the flipside, poor management and support led to increased burnout (Maben and Bridges, 2020). This implies that organizational culture is important for employee wellbeing.

2.4.3 Informal Support and Team Dynamics

Organizational factors like peer support and teamwork were key sources of de-stressing. Walton et al. (2020) noted that teams with strong cohesion offered emotional support and increased resilience. Blake et al. (2020) also noted online interventions that focused on peer support and wellbeing were effective at reducing psychological distress.

2.4.4 Limitations of Existing Interventions

While there were many interventions implemented during the COVID-19 pandemic to support frontline staff working in the National Health Service (NHS), the research identifies key limitations that have undermined the effectiveness of these interventions. The first is that many of these interventions were reactive rather than proactive, responding to the crisis rather than being planned strategically to support the workforce over the long term. Consequently, many interventions primarily targeted short-term mental health responses (such as support lines, counselling and wellbeing apps) rather than addressing these underlying concerns, such as heavy workload, low staffing levels and systemic issues (Søvold et al., 2021).

A further issue is accessibility and utilization of formal support services. Although mental health services were offered, research suggests many health care workers did not access them. Time, workload and shift rotations made it hard for staff to access these services (Billings et al., 2021). There was also a perceived stigma of mental health, with some staff fearing they may be seen as weak and/or fear career

consequences if they seek help (David et al., 2021). This suggests we need more than just to offer services - we need to change the culture and structure.

There is a lack of organizational integration too. The interventions were not linked with the rest of the health-care system. This limited their sustainability and effectiveness. For example, there were wellbeing programs without the accompanying workload or staffing changes to reduce stress (Greenberg et al., 2020). As a result, pressures remained on the healthcare workforce, regardless of support.

And there were variations in the way it was implemented and the quality of care throughout the NHS. Differences in leadership, resources and organizational culture resulted in not all healthcare workers receiving equitable support. Maben and Bridges (2020) state that both supportive management and clear communication had a strong impact on the effectiveness of interventions, while ineffective management undermined their value. This led to mixed staff experiences and outcomes.

Lastly, current interventions tended to focus on individual resilience, while neglecting systemic problems. While building resilience and psychological support can help staff cope with stress, it does not address system issues like insufficient staffing, resources and workloads. This individualizes the problem, reducing the effectiveness of interventions.

2.5 Strategies for Resilience and Future Preparedness

2.5.1 Building Individual Resilience

Programs that build resilience, such as mindfulness and stress management training have been found to lessen burnout (Heath et al., 2020). De Kock et al. (2021) reported increased coping skills in health care workers.

2.5.2 Organizational and Policy-Level Strategies

Changing working conditions, increasing staff numbers and providing resources will alleviate stress. The King's Fund (2020) highlighted the importance of investing in staff wellbeing. At the government level, WHO (2020) suggests embedding mental health into health systems and enhancing pandemic preparedness.

2.6 Conclusion

Our review of the literature reveals COVID-19 workplace stress has taken a toll on burnout in NHS frontline healthcare workers. COVID-19 has generated a high-pressure environment in which the lengthy pre-existing problems in the English NHS - such as staffing shortages and high workload - have been exacerbated by the need to respond to a pandemic. This led to extended exposure to a range of stressors, which contributed to burnout.

One notable trend identified in the literature is that the stressors experienced in the workplace during the pandemic were complex and interlinked. Key workplace stressors were higher workload, staffing shortages, fear of infection and emotional strain caring for patients, as well as organizational stressors including lack of communication and support. These stressors were not isolated, but had a compounding effect. For example, staffing levels led to increased workload, which in turn led to fatigue and emotional burnout. This illustrates the complexity of stress experienced by the NHS workforce and the need for multifaceted strategies to manage it.

There is strong support for the link between work stress and burnout from both theory and research. The Job Demands-Resources (JD-R) model describes how excessive job demands and lack of resources result in burnout. In the context of the pandemic, the high job demands and low levels of support placed on the health professions were a recipe for emotional exhaustion, depersonalization and decreased professional accomplishment. Moreover, the idea of moral injury - or distress from moral dilemmas or experiences - also helps to explain how the pandemic has resulted in increased distress and burnout among health-care professionals.

Burnout has significant impacts. At the personal level, it is linked to psychological problems, including anxiety, depression and trauma. At the organizational level, the consequences of burnout include increased sick leave, decreased productivity and higher intentions to leave, exacerbating staffing shortages. At the system level, it can adversely affect patient outcomes through a higher incidence of medication errors and decreased quality of care. These insights highlight that burnout cannot be viewed solely through an individual lens, but also through the lens of the health-care system.

The evidence also assesses the impact of support interventions during the pandemic. While formal support structure, such as counselling and staff well-being programs, were helpful, they were often not effective due to issues such as stigma, time and accessibility. In contrast, informal support such as peer and team support were beneficial for stress. But programs were "reactive" and, generally, short-term rather than long-term and did not focus on underlying issues such as workload and staffing levels.

One important take-out is the lack of longer-term strategies to address burnout. The focus tends to be on the response to the pandemic itself, rather than longer-term approaches and strategies for managing a "burnt-out" workforce. This is an area of need for future research and policy.

Further, organization culture and management affects employees. Good leadership, communication and reward practices are associated with stress and poor leadership with burnout. This indicates the importance of improved leadership and workplace culture for stress management.

So, the research shows the need for a holistic approach to avoiding burnout that includes personal, organizational and policy change. The pandemic has revealed important vulnerabilities of organizations, suggesting the need for ongoing investment and priority to worker wellbeing to improve the NHS's competitiveness for future threats.

3 Methods

3.1 Overview

This chapter outlines the methodology that underpins the current study on the impact of COVID-19 related work stress on burnout among the NHS frontline healthcare workers in the United Kingdom (UK) during the period 2020 to 2023. It describes the research design, the way in which data was collected and the sources of data that were selected, the method used to analyse the data and the ethical issues that guided the research. As this is a secondary study, all methodological decisions have been taken with the need to ensure rigour, transparency and that the decisions are taken in line with the study's aims and objectives.

3.2 Research Design

This study is a qualitative secondary research. Secondary research is a systematic collection and analysis of existing data and published literature, it is not the creation of primary data (Bryman, 2016). This method is suitable for the current research as there is already a large body of peer reviewed literature available on the mental health and burnout of front line workers in the NHS during COVID-19. By re-analysing and synthesising this body of literature, a comprehensive and critical understanding of the phenomenon can be achieved, with the avoidance of any ethical or logistical issues linked to primary data collection during and/or after a major public health crisis.

The qualitative approach is used because the focus of the research is on understanding the nature, complexity and contextual factors of the workplace stress and burnout phenomenon of healthcare personnel, not just its prevalence as a standalone phenomenon. Lived experiences, processes and social and organizational factors are important to research objectives and are excellently suited to exploring through qualitative inquiry (Creswell and Creswell, 2017). The qualitative secondary design aligns with the design used in other studies which also explored the wellbeing of the healthcare workforce during COVID-19 (Billings et al., 2021; Rattray et al., 2024).

3.3 Research Philosophy

The study is based on a philosophical perspective in interpretivism. The view of interpretivism is that social reality is built by the experience-based meanings and interpretations given by individuals and groups (Saunders et al., 2003). Considering that burnout, stress and psychological wellbeing are subjective phenomena,

influenced by the individual's perception, work environment and organizational culture, it is appropriate for the present study. An interpretivist approach enables the description of the complexity of the lived experiences of healthcare workers as described in the literature, without attempting to reduce them to measurable, objective variables.

Inductive approach is used, that is, themes and discoveries develop out of the data and not from a prior theoretical framework. The Job Demands-Resources (JD-R) model (Demerouti et al., 2001) is employed as a sensiptual lens to structure and interpret the thematic findings, as this has proven helpful in burnout research in the healthcare dotising concemain.

3.4 Data Collection Strategy

3.4.1 Sources of Data

This study has used a variety of secondary resources such as peer-reviewed journal articles, systematic reviews, government policy documents, NHS publications, and reports from authoritative bodies, including The King's Fund and the World Health Organization. The authors of the sources were based on an intentional emphasis on sources published from 2019 to 2024, reflecting the most recent scholarship on the subject. Although the focus is on the time period 2020-2023, sources that span up to 2024 were included if they contained retrospective analysis or longitudinal findings that were relevant to the research questions.

3.4.2 Search Strategy

Google Scholar, PubMed and the online library portals of the university were used to search the literature systematically. Search terms were created to represent the main constructs of this study: 'NHS frontline workers', 'COVID-19 burnout', 'healthcare worker stress UK', 'pandemic occupational stress', 'NHS workforce wellbeing', 'moral injury COVID-19', and 'mental health interventions healthcare workers'. Boolean operator AND, OR, were utilized to limit search results. Snowball sampling in secondary research (Bryman, 2016) was also undertaken to find other relevant sources, as well as reference lists of identified papers.

3.5 Method of Analysis: Thematic Analysis

Thematic analysis was used as the main method of analysis. Thematic analysis is a frequent method in qualitative analysis used to detect, analyse and report patterns (themes) in data (Braun and Clarke, 2006). Thematic analysis, in the context of secondary research, means reading and coding the information contained in selected resources, identifying common themes throughout the literature, and grouping these into meaningful themes that align with the research questions (Thomas and Harden, 2008).

The six phases used by Braun and Clarke (2006) for the qualitative analysis of data were followed: familiarisation with the data, initial coding, searching for themes, reviewing themes, defining and naming themes, and report production. This is a structured process that increases the transparency and replicability of the analytical process. The analysis yielded four key themes: (1) COVID-19 related key stressors in the workplace; (2) the connection between stress and burnout; (3) the effectiveness of support in the workplace; and (4) strategies for building resilience and future preparedness. These are discussed in further detail in Chapter 2 and 4 of this dissertation.

3.6 Ethical Considerations

This research is based on secondary data that is publicly accessible and published, and, as such, does not require formal ethical approval. But, several ethical rules have been followed along the way. The presentation of work has been ensured to be based on accurate referencing and complete acknowledgement of all sources following UWTSL Harvard Referencing guidelines. Plagiarism has been kept to a minimum by producing a piece of analysis and synthesis instead of copying sources. Sources have been chosen objectively, without selectively including information that would support a preconceived opinion, in keeping with the requirements for intellectual honesty (Saunders et al., 2003).

Confidentiality is not applicable in the context of this study as no personal data has been collected. But care has been taken with the discussion of issues around mental health and distress at work, ensuring that the findings are delivered with sensitivity and without sensationalism.

3.7 Limitations of the Methodology

The secondary qualitative research design used here has certain limitations. The study relies on the existing literature for its basis, and any bias, weaknesses or publication bias found in the literature used for the original studies may be incorporated into this review. It is not possible to capture the actual, first hand accounts of NHS workers, and the dimensions of experience that were not reported in the published literature. Further, the diversity of the study designs, samples, and burnout measurement instruments used in the studies included in the review make direct comparisons between studies difficult and makes it difficult to make generalisations to the wider NHS workforce. The limitations are recognised and addressed by careful triangulation of sources and evidence in critical appraisal during the analysis.

3.8 Summary

In summary, it is justified to use a qualitative secondary research design that is based on an interpretivist philosophy. It is possible to apply a strict and transparent methodological approach to the research aims and objectives through the systematic search strategy, to the theme and the thematic analysis. The ethical principles followed provide for the integrity of the study, and the recognized limitations set the context for the scope and applicability of the findings presented in subsequent chapters.

4 Results & Discussion

4.1 Introduction

This chapter provides the findings of the secondary qualitative thematic analysis which was conducted to answer the question of this study; what role has COVID-19 related workplace stress played in contributing to burnout among the frontline healthcare workers in the National Health Service (NHS) in the United Kingdom (UK) between 2020 and 2023, and how can this be considered for staff wellness policy and workforce sustainability. This study, as was the case in the secondary, did not recruit any primary participants. Rather, peer-reviewed journal articles, reports from the NHS and government reports, and publications from the WHO were analyzed with the help of the reflexive thematic analysis framework developed by Braun & Clarke (2019) and mostly from the past six years. It was deemed suitable because it does not view themes as 'discoverable' entities awaiting identification by the researcher but rather as being actively constructed through the sustained engagement with data, and it was able to deal more comfortably with the data used in this study (a document-based data set) than more rigid, code-reliability based methods of thematic analysis (Braun & Clarke, 2019).

Academic sources (such as Google Scholar, PubMed) and government and NHS publications (such as WHO) were searched for evidence related to the stress, mental health, burnout or support experiences of frontline healthcare staff during the COVID-19 pandemic or shortly after, and were published in peer-reviewed journals, with a preference for UK based evidence published primarily between 2020 and 2026. The sources used to inform the analysis are summarized in *Table 4.1* below with regard to their range and focus. After data familiarization, coding, initial theme generation, theme review, theme definition and write-up, four interconnected themes were created from the data: (1) occupational and organizational stressors during COVID-19; (2) psychological and emotional outcomes, such as burnout and moral injury; (3) organizational and government responses to support; and (4) implications for workforce sustainability and retention. These themes and their sub-themes are summarized in *Table 4.2*. Below are examples provided of each theme drawn from the literature, and it is discussed in relation to the study's objectives and the current theoretical and policy debates. In section 4.6 an integrated discussion is presented, which connects the four themes.

Table 4.1: Overview of key sources informing the thematic analysis

Author(s) & Year	Design / Source Type	Focus
(Couper, et al., 2022)	Longitudinal survey (n=23,462)	UK nursing/midwifery wellbeing, first wave
(Rattray, et al., 2024)	Mixed-methods study	Occupational stress in critical care and redeployed nurses
(David , et al., 2020)	Narrative review	COVID-19 support programs for healthcare workers
(Vyas , et al., 2024)	Review/analysis	Mental health consequences for NHS staff
(Rudolph, et al., 2020)	Mixed-methods evaluation	COVID-Well wellbeing centers, NHS hospital trusts
(Rhead, et al., 2024)	Cross-sectional survey (N=4,622)	Ethnic inequalities in NHS staff workplace experience
(Guy , et al., 2022)	Local survey	Moral injury in essential workers, County Durham & Darlington
(Williamson, et al., 2023)	Cross-sectional survey (N=12,965)	Moral injury and wellbeing, UK healthcare staff
(Coimbra , et al., 2023)	Meta-analysis	Moral injury and mental health in healthcare workers
(Lloyd & Briggs, 2024)	Qualitative sociological study	NHS frontline experience of the pandemic
(Mareva, et al., 2024)	Cross-sectional study (n=97)	CAMHS staff burnout and wellbeing

Author(s) & Year	Design / Source Type	Focus
(Smith & Pietrogrande, 2025)	Service evaluation	Burnout intervention, CAMHS; cites NHS Staff Survey 2023
(Weyman, et al., 2026)	National survey	Redeployment, staff wellbeing and retention
(Weyman, et al., 2026)	Paired-comparison study	Framing effects in NHS staff retention decisions
(NHS England, 2023)	Government/policy document	NHS Long Term Workforce Plan

Table 4.2: Summary of themes and sub-themes

Theme	Sub-themes
1. Occupational and organizational stressors	Staffing shortages and redeployment; inadequate PPE and infection risk; workload intensification; unequal exposure to risk
2. Psychological and emotional consequences	Emotional exhaustion and burnout; anxiety, depression and PTSD; moral distress and moral injury
3. Organizational and governmental support responses	Wellbeing centers and psychological first aid; implementation challenges and evidence gaps; staff perceptions of support adequacy
4. Workforce sustainability and retention	Burnout and intention to leave; redeployment, absenteeism and long-term retention; policy response (NHS Long Term Workforce Plan)

4.2 Theme One: Occupational and Organizational Stressors During the Pandemic

The first theme that arose in the data focuses on occupational and organizational stressors that arose for NHS frontline staff during the pandemic period. The following four sub-themes emerged within this theme: staffing shortages and redeployment, insufficient personal protective equipment (PPE) and infection risk, workload intensification and inequal exposure to risk between staff groups.

4.2.1 Staffing shortages and redeployment

One recurring sub-theme was the impact of staff shortages and redeployment of NHS staff to new settings and locations. Rattray et al (2024) outlined the unique occupational stress factors of critical care and redeployed nurses in comparison to those who continued to work in their standard clinical teams, including new work environments, changing protocols, and the lack of team continuity. A more recent survey in the UK backs this up; Weyman, et al. (2026) reported that those redeployed had significantly higher burnout scores, higher levels of sickness presenteeism and more concern about the stability of their working conditions than colleagues who were not redeployed, and lower levels of confidence that working conditions would improve in the near future. The authors noted that while redeployment was an operational necessity for addressing surges in patient demand, it was one of the greatest and comparatively under-addressed sources of stress on staff wellbeing and capacity to remain in the workforce, as much existing pandemic workforce policy was concerned with the logistical aspects rather than the psychological impact of redeployment. The findings are also consistent with the longitudinal study carried out by Couper et al. (2022) of the UK nursing and midwifery workforce that correlated low staffing levels and longer working hours with higher levels of emotional exhaustion during the first wave of the pandemic.

4.2.2 Lack of protective equipment and risk of infection

A second sub-theme related to the anxiety created by inadequate or intermittent provision of PPE. Lloyd et al. (2023) described crisis of overwhelming intensive care capacity and repeated shortages of PPE, as well as the often-changing guidance for infection control, as defining and destabilizing aspects of the first two waves of the COVID-19 pandemic in the UK, with several of their respondents in the NHS stating

that they were confused and frightened by protective equipment protocols that change without warning or explanation. This worry was not limited to a specific professional group or area, and evidence from large-scale surveys reviewed by Rhead et al. (2024) shows that unaffordable PPE continued to be a regular aspect of work well into 2021, and failure to purchase PPE was linked with a twofold higher risk of depression and anxiety symptoms among those affected by it within the NHS. The fear of transmitting the virus to a family member was not limited to direct patient contact, but was also a concern for staff members, featuring a family dimension to stress that is not included in workplace-based models.

4.2.3 Workload intensification and extended working hours

In addition to staffing and equipment issues, the literature was consistently associated with an increase of workload as a proximal cause of stress. Routine activities were cancelled or postponed, increased patient numbers, and restructuring of services around COVID-19 care combined to add up and reduce recovery time between shifts. This aligns with the finding in Chapter Two that the increase in patient numbers, the increase in hours and the increase in risk of infection all contributed to increasing occupational stress levels among NHS staff during the review period (Couper, et al., 2022). In the sociological analysis of NHS accounts of the pandemic (Lloyd & Briggs, 2024), the authors found that pandemic-related changes in clinical protocols and unfamiliar roles and responsibilities for the staff, as well as a constant influx of extremely ill patients, were all sources of sustained pressure, while a public discourse of gratitude for the NHS, including the weekly “clap for carers”, felt incongruous to some of the patient-facing workers.

4.2.4 Unequal Exposure to Risk

There was also a smaller sub-theme that was of ethical significance, due to the increased risk to certain staff to the pandemic. The results of the analysis by Rhead et al. (2024) on the NHS CHECK Inequalities Survey which included 4,622 staff from 18 NHS trusts across England, are shown in *Figure 4.1*. These experiences in the workplace were associated with negative physical and mental health outcomes: Unavailability of PPE was linked to an approximate twofold increase in depression and anxiety, and harassment or discrimination was linked to an approximate threefold increase in depression and anxiety. The same analysis showed that staff who knew

about, and participated in, redeployment decisions had relative improvements in health outcomes, indicating that in addition to resourcing, procedural fairness was a factor in the perceived level of stress associated with redeployment and risk exposure. This means the above stressors were not equally distributed within the workforce and any discussion of pandemic burnout should be mindful of structural inequality as a factor affecting the NHS workforce, and not assume that it is a single unit.

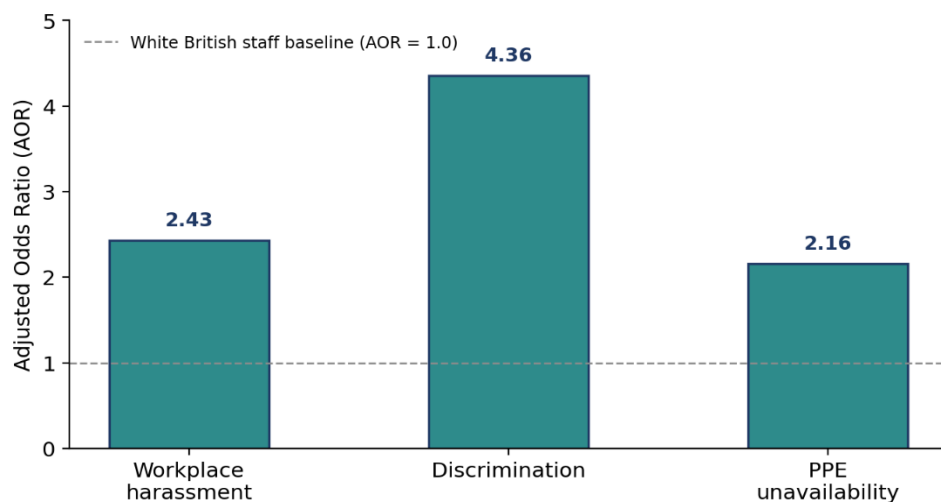


Figure 4.1: Adjusted odds ratios for negative workplace experiences among Black/Mixed-Other ethnic staff relative to White British staff

Source: (Rhead, et al., 2024)

Regarding the first study aim, this theme identified that the stressors that NHS frontline staff faced over the period 2020–23 were not a single issue of infection risk, but were complex, multi-layered issues related to workforce deployment practices, resourcing failures, and workload design and structural inequalities.

4.3 Theme 2: Psychological and Emotional Consequences

The second theme reflects the variety of the psychological and emotional responses reported in the literature in response to the stressors mentioned above. Three sub-themes were developed: emotional exhaustion and clinical burnout, anxiety, depression and post-traumatic stress, and moral distress and moral injury.

4.3.1 Emotional exhaustion and burnout

The reviewed literature was consistently focused on the feeling of emotional exhaustion, which is a key reaction to prolonged pandemic-related stress, in line with Maslach's classic conceptualization of burnout as consisting of emotional exhaustion, depersonalization and diminished personal accomplishment. Vyas , et al. (2024) found that the cumulative impact that the pandemic had on NHS staff resulted in measurable effects for staff mental health, which extended beyond the acute phase of the pandemic. This is in line with the longitudinal study of the UK nursing and midwifery workforce by Couper et al. (2022) which identified a significant increase in emotional exhaustion during the first wave of the pandemic, and a strong correlation between emotional exhaustion and staffing levels and working hours; sufficient availability of appropriate PPE, access to wellbeing support, and less exposure to moral dilemmas were all correlated with positive staff wellbeing outcomes elsewhere in the literature. The link between the organizational stressors identified in Theme One and measurable psychological outcomes is important, because it shows that both strands of evidence are connected, and not just two separate fields of evidence.

Newer UK data, however, indicates that NHS workers' burnout did not come to an end after the acute phase of the pandemic. In a sample of staff in one Child and Adolescent Mental Health Service (CAMHS) in England that were surveyed in spring 2023, Mareva et al. (2024) found that more than one-third had moderate to high scores on the work-related burnout scale, and approximately a quarter had scores on wellbeing consistent with mild to severe depressive symptoms, which the authors reported was higher than the UK general population and broadly similar to the average for all NHS staff. In a similar finding, Smith and Pietrogrande (2025) noted that the NHS Staff Survey (2023) identified about a third of respondents said they were feeling burnt out and were thinking of leaving their organization, which is included with the CAMHS specific findings in *Table 4.3*. The CAMHS evidence is specific to a particular service area, but it shows that the impact of Covid-19 on staff's wellbeing has been a long-term issue beyond the pandemic, which has justified this study's focus on the 2020 to 2023 period as a long-term rather than just an acute challenge.

Table 4.3: Selected burnout and psychological wellbeing indicators

Indicator	Reported Level	Source
NHS Staff Survey 2023- experiencing burnout & considering leaving	~33%	(Smith & Pietrogrande, 2025)
CAMHS staff - moderate/high work-related burnout	~35%	(Mareva, et al., 2024)
CAMHS staff -moderate/high personal burnout	39%	(Mareva, et al., 2024)
CAMHS staff - wellbeing indicative of mild/clinical depression	~25%	(Mareva, et al., 2024)
Hospital healthcare workers -clinically significant anxiety (post-first-wave cohort)	~33%	UK cohort evidence cited in (Vyas , et al., 2024)
Hospital healthcare workers -clinically significant depression (post-first-wave cohort)	~30%	UK cohort evidence cited in (Vyas , et al., 2024)

4.3.2 Kindness Towards Oneself and Others

In line with the classic definition of burnout as a triad of emotional exhaustion, depersonalization and diminished personal accomplishment, the literature reviewed consistently highlighted emotional exhaustion as a core reaction to prolonged stress from the pandemic. Vyas et al. (2024) found that the cumulative burden on NHS staff during the pandemic had an impact on staff mental health that was not limited to the acute phase of the pandemic crisis. This aligns with the longitudinal UK cohort of nursing and midwifery staff members by Couper et al. (2022), who found an increasing rate of emotional exhaustion during the first wave of the pandemic, and this was strongly related to staffing, working hours, and other staff wellbeing measures including the availability of adequate PPE, access to wellbeing support, and reduced exposure to moral dilemmas, which were linked in other studies. This is significant as

this finding connects the organizational stressors identified in Theme One directly to measurable psychological outcomes, as opposed to occupational stress and consequences as separate strands of evidence.

Recent UK data indicates that NHS workers did not necessarily overcome burnout after the acute phase of the pandemic was over. The prevalence of moderate or high levels of work-related burnout symptoms was over a third of staff, and around a quarter of the staff working in one Child and Adolescent Mental Health Service (CAMHS) in England surveyed in spring 2023 had scores indicative of mild-to-severe depressive symptoms, which the authors said was higher than pre-Covid levels of the general UK population and broadly comparable to wider NHS averages. The NHS Staff Survey 2023 was also quoted by Smith and Pietrogrande (2025) which revealed that around a third of all respondents reported suffering from burnout and were thinking about leaving their organization, a statistic which was also included in *Table 4.3* alongside the CAMHS specific findings. The CAMHS evidence focuses on a single service area but shows that COVID-19 related burnout has continued to impact certain groups of staff well beyond the acute phase of the pandemic, highlighting the importance of the timeframe for this study (2020-23) as a protracted phenomenon.

4.3.3 Anxiety, Depression and Post-Traumatic Stress

Overall, the findings from the cohort studies cited above were consistent with the literature, with many studies reporting increased levels of anxiety, depressive symptoms and PTSD among frontline workers, including those who worked directly with COVID-19 patients. Frequent mention was made of staff women and staff who work in a nursing role being at high risk of these outcomes, which is a pattern that needs to be taken into account in future workforce mental health strategy given the gendered make-up of the nursing workforce in the NHS. Finally, reviewed evidence shows that a previous mental health problem was a strong predictor of severe mental health symptoms during the pandemic, which further suggests that the pandemic-related mental health burden was likely to have compounded or interacted with the vulnerabilities of staff, rather than occurred independently of them.

4.3.4 Moral Distress and Moral Injury

One sub-theme that was particularly abundantly present in the dataset related to moral distress and moral injury, which goes beyond traditional concepts of occupational stress. The literature describes moral injury as the psychological pain resulting from witnessing an experience or situation that contradicts one's fundamental moral values, such as being unable to offer the quality of end-of-life care that a patient desires, or having to choose between competing demands and provide less care than required for many patients in an overwhelming caseload. Moral distress, on the other hand, is usually defined as a more immediate and potentially remediable response, i.e., when staff feel unable to change an action they believe is ethically incorrect, unresolved moral distress can build up to become a moral injury in the longer term.

A survey of essential workers in County Durham and Darlington, including NHS workers, showed that they were primarily concerned about what they felt others were doing wrong rather than themselves, which the authors suggested may make it more difficult for the workers to be open and honest about their experiences, and concerns about limited family visiting, patients being 'written off' and lack of resources for care arose prominently in worker descriptions. The studies reviewed here add to the growing empirical evidence that exposure to potentially morally injurious events is related to poorer psychological wellbeing, with Williamson et al. (2023) finding that moral injury was linked to worse mental health among UK healthcare workers broadly, and Coimbra et al. (2024) showing that greater moral injury was moderately associated with mental health symptoms including post-traumatic stress, anxiety, depression and burnout among healthcare workers across the international community during the pandemic.

This body of evidence highlights that, beyond the issues of workload and resources, the psychological impact of the pandemic on NHS staff cannot be comprehensively addressed by providing extra rest breaks or psychological support as a whole; by eroding staff's ability to practice in a way that reflects their professional and ethical beliefs, a different pathway to burnout exists and these are not necessarily addressed by additional rest breaks or general psychological support.

Combined, this theme shows a clear and supported in the literature relationship between pandemic-related occupational stressors and negative psychological

consequences, including generalized emotional exhaustion and anxiety, as well as the more specific concept of moral injury.

4.4 Theme Three: Organizational and Governmental Support Responses

The third theme relates to the diversity of supports put into place by NHS organizations and the Government in the pandemic, and how effective staff felt these were in supporting people.

4.4.1 Wellbeing centers and psychological first aid

One of the most widely reported interventions was the creation of "wellbeing centers"- also known as "wobble rooms"- which were set up in NHS hospital trusts from the beginning of the pandemic. Within weeks of opening, Blake et al. (2020) found very high use of the facilities at two hospital sites, where over two and a half thousand people attended in one week, which represented a high resourcing cost in terms of the number of trained volunteers working as "wellbeing buddies" to maintain the service. A subsequent qualitative assessment of the same initiative revealed that the high-quality rest space and access to peer-to-peer psychological first aid were appreciated by visitors, as was the process of making it more accessible by eliminating practical barriers for staff to take breaks during shifts and having management support. This suggests that the effectiveness of such interventions was not just about the interventions, rather it was about the organizational culture and permissioning associated with implementing them, and reflects the redeployment results from Theme One, which highlighted that the implementation is as important as the intervention.

4.4.2 Implementation challenges and evidence gaps

Although there has been a surge in the number of staff support programs, the literature shows that it is difficult to find a consistency between implementation and effectiveness evaluations. Although WHO has long since recommended provision of psychosocial support during pandemics, there was little prior research or program planning into the nature of such support in the UK setting and services were often created and implemented under significant time constraints, according to a study protocol which examined implementation of staff wellbeing programs across NHS trusts in a large academic health partnership in London. David et al (2021) also described the support landscape during the pandemic as disjointed, with interventions

being rapidly and not always sufficiently evidence-based, and a risk of resources being devoted to interventions that may not have the greatest impact on staff needs identified by the staff themselves.

The King's Fund (2025) have suggested that the most valued organizational responses that focus on staff wellbeing and compassionate leadership go beyond stand-alone facilities for staff wellbeing to include structural elements such as rest facilities, as well as relational and leadership components, and that this approach should not be regarded as an alternative to focusing on productivity and quality of care.

4.4.3 Staff perceptions of support adequacy

Another sub-theme was related to the perceptions of staff that formal support met their needs. Results from reflexive thematic analysis (RTA) of NHS staff experiences highlighted specific areas of weakness in the provision for non-clinical staff, who make up a significant proportion, close to half, of the NHS workforce but are under-represented in wellbeing research and in the design of wellbeing interventions in comparison to clinical staff groups. This indicates that, despite the good intentions, support responses have not been evenly shared around the entire spectrum of all the roles within the frontline of the NHS, echoing the issues of inequity discussed in Theme One.

In relation to the third study objective, this theme proposes that, although government and NHS interventions to promote wellness during the pandemic were large in scope and valued by many staff, they were not entirely successful – effective when they were made available; and when they were actively encouraged by management; but not always effective when interventions were not widely available; not always well evaluated; and not always widely available across staff.

4.5 Theme Four: Implications for Workforce Sustainability and Retention

The fourth and final theme focuses on the longer-term work consequences of stressors and support gaps identified in the above themes, directly informing the fourth study objective relating to recommendations for future resilience.

4.5.1 Burnout and intentions to leave

Recent UK data shows that burnout has continued to affect a significant percentage of the NHS workforce outside of the acute phase of the pandemic, with the NHS Staff Survey 2023 revealing that around a third of those involved in the survey experienced burnout and were thinking about leaving their organization (Smith & Pietrogrande, 2025). The ratings of the relative importance of factors influencing staff retention also differed between various job families in staff within the NHS (Weyman, et al., 2026), and that what was rated for importance did not always explain what staff said would need to change to keep them in their jobs. This implies that retention strategies that are generic and one-size-fits-all are not likely to be effective, and that understanding and addressing retention intention related to burnout should be different for each group of professionals.

4.5.2 Redeployment, absenteeism and long-term retention

The redeployment related strain found in Theme One seems to persist in longer-term retention risk. Redeployed NHS workers experienced significantly higher levels of sickness presenteeism (66% vs. 54%), were nearly twice as likely to have applied for a position outside the NHS in the previous six months (22% vs. 12%) and were less likely to feel confident that their working life conditions would improve (22% vs. 38%), which was associated with an increased risk of leaving the workforce; these comparisons are outlined in *Figure 4.2*. The situation is exacerbated by ongoing high rates of vacancies in the NHS workforce; workforce planning data released alongside the NHS Long Term Workforce Plan found that NHS workforce vacancies across England were at over 112,000 in March 2023 (8.0% vacancy rate), with only 26.4% of those surveyed saying staff levels were adequate for them to do their job properly, an 11.9% point fall on the previous year, and signifying that unresolved staffing pressure is driving the sustainability of NHS staff, beyond the pandemic alone (NHS England, 2023).

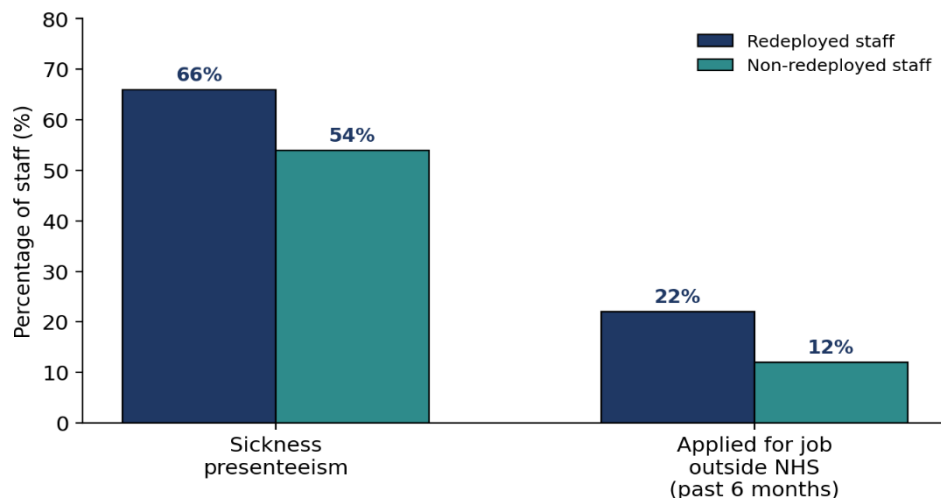


Figure 4.2: Sickness presenteeism and external job applications, redeployed vs non-redeployed NHS staff

Source: (Weyman, et al., 2026)

4.5.3 Policy response: the NHS Long Term Workforce Plan

The NHS Long Term Workforce Plan was published by NHS England on 30th June 2023 in response to these pressures to the workforce, and to ensure it remains relevant to current and future changes NHS England has included two-yearly reviews with a fifteen-year time horizon that are organized around three domains: train, retain and reform. The plan pledges to recruit more than 450,000 health professionals over five years, and to reduce the rate of staff leaving by one year by 7.4% to 8.2%; pension and flexible working reforms are also planned to help experienced staff stay in the NHS for longer, which could retain up to 130,000 more (NHS England, 2023). The gap between workforce supply and the increasing demand, largely due to an ageing population, could be 260,000 to 360,000 full time equivalents by 2036/37 without intervention.

There have been, however, concerns expressed about the extent to which this plan meets the needs arising from this analysis to address the underlying factors behind poor retention. The King's Fund (2023) has noted that many of the actions in the plan will not have an immediate impact on the urgency of the pressures on the workforce in the short-term, many will not be measurable for several years and earlier planning by NHS has been criticized for not accounting for staff wellbeing, culture and

compassionate leadership in relation to training targets (The Kings Fund, 2025). Although structural and financial reforms are needed, they have a low likelihood of being effective in improving retention unless they are accompanied by a long-term, parallel emphasis on the working conditions and psychological support needs highlighted in this chapter.

This theme illustrates that the effects of pandemic-induced burnout are not only felt during the acute period of the pandemic but continue as a long-term challenge for workforce sustainability, and that national policy responses are large in scope and scope, but are debated with respect to their sufficiency to address the specific contributing drivers of pandemic-induced burnout identified in this chapter.

4.6 Integrated Discussion

When read together, the four themes that have been developed in this chapter paint a picture of a series of associations leading from a situation of acute occupational stressors to psychological and moral harm, with the situation of inconsistent organizational support and the risk of workforce attrition as the downstream effects. This profile is similar to the job demands-resources theories of occupational stress which propose that when job demands (such as inadequate staffing, increasing workload, infection risk, and moral conflicts) are higher than job resources (such as sufficient staffing, protective equipment, psychosocial support, and professional recognition), exhaustion and, over time, disengagement and intention to leave are predicted. The special merit of the moral injury literature reviewed in Theme Two is that this model may be helpful, but may downplay the ethical aspect of working in healthcare during a pandemic, with some of the most enduring distress experienced by staff not just due to workload, but due to feelings of being unable to provide care in ways that align with their values.

Along with this, the analysis points to a crucial short-term crisis response/long-term workforce policy tension. There was a high level of appreciation for interventions like wellbeing centers and psychological first aid and they show that quick, relatively low-cost organizational responses, can have a meaningful impact on staff wellbeing during acute crises. These were not, however, consistently embedded, evaluated or extended across all staff groups, including non-clinical staff, as evidenced in Theme Three, and workforce sustainability data in Theme Four shows that the risk of staff

burn out has not abated since the emergency phase of the pandemic. While this is important and useful, it is not alone enough to be a solution to a systemic issue of workforce sustainability; it needs to be complemented by structural investment on longer time horizons, as envisioned and planned in the NHS Long Term Workforce Plan, if not yet fully realized in practice.

The equity dimension discussed in Theme One also needs to be incorporated in this discussion. *Figure 4.1* shows that there were a higher proportion of ethnic minority staff reporting exposures to PPE shortages, to harassment/discrimination, and to both at the same time. This finding indicates that a model of NHS workforce resilience in the future needs to be explicit about how different types of staff are exposed to different occupational stressors and different types of support, rather than modelling the workforce as being equally exposed to risk from the pandemic. This is linked to the finding that informing staff about and engaging them in redeployment decisions led to better health outcomes, not just the provision of physical and psychological resources; there is a role for procedural fairness in influencing the extent to which the demands of redeployment are sustainable.

Lastly, the professional diversity noted in Theme Four, especially by Weyman et al. (2026) that the relative significance of retention factors varies between doctors, nurses, allied health professionals, paramedics and nursing support staff, calls into question the possibility of generalizing about "the NHS workforce" for research or policy purposes. A single package of wellbeing interventions, or retention incentives, irrespective of their level of resourcing, is unlikely to respond to different combinations of demands and resources experienced by various professional groups, this is an important consideration that directly guides the recommendations outlined in Chapter Five.

In general, this chapter has met the aims and objectives of the study by identifying the main stressors to which NHS frontline staff have been exposed related to COVID-19 during the study period (2020–2023), as well as the links that have been demonstrated in the literature between these stressors and burnout, and an evaluation of the perceived sufficiency of the support measures that have been implemented during this study period. The recommendations as well as overall conclusions of the study are presented below in Chapter Five.

5 Conclusion & Recommendations

5.1 Introduction

This last chapter brings together the results of the results found in each of the chapters in the dissertation in order to suggest a set of practical recommendations that take into account the fourth study objective, and finally a general conclusion to the dissertation is presented. The recommendations are listed in three categories (organizational, national policy, individual and professional development) to mirror the multi-layered nature of the stressors and support gaps that were identified in the thematic analysis.

5.2 Recommendations

5.2.1 Organizational-level recommendations

Staff wellbeing provision, including dedicated staff rest spaces and peer delivered psychological first aid (PFA) as modelled in the COVID-Well initiative evaluated by (Blake, et al., 2025) should be extended and formally embedded as part of the NHS trust's occupational health provision and not be a provision that is only used during a crisis, and should be made visible through managerial endorsement, enabling staff to access these facilities without stigma or operational penalty. Trusts should also look at redeployment practices as well as ensuring that wherever possible staff redeployed to an unfamiliar clinical area will undergo structured orientation, with peer support, and the provision of clear information about why they are being redeployed, and how long they might be expected to remain, as there is clear evidence that redeployment is associated with sickness presenteeism and burnout. Formal recognition of moral distress and moral injury in a staff support framework, e.g. access to clinical ethics support services and structured debriefing after ethically challenging experiences of care, with a view beyond the 'management of stress' provided by relaxation-focused staff interventions. It is important that trusts do not have a one-size-fits-all approach and that wellbeing and retention discussions are tailored to the concerns of doctors, nurses, allied health professionals, paramedics and nursing support staff.

5.2.2 National Policy Recommendations

The change to a long-term workforce plan, which focuses on retaining staff, and the measures in the plan to support staff wellbeing through safe staffing levels, career flexibility and cultural reform, should be monitored at a national level to ensure that the measures are funded and have the capacity to be delivered locally. Finally, further

research should be funded by the government and NHS England to systematically review and compare the evidence on wellbeing interventions during the pandemic, as the evidence examined here suggests that many programs were launched quickly without an evidence base, and there may be a risk that continued funding of these interventions is based on interventions with uncertain effectiveness (NHS England, 2023). For the same reasons as outlined above, there is a need to specifically include equity monitoring in workforce wellbeing policy, to ensure that future responses to emergencies do not further exacerbate structural inequalities in protection and support.

5.2.3 Individualized and Professional Development Recommendations.

In practice, at the individual level, NHS employers should ensure that employees have access to ongoing, voluntary, proportionate and appropriate training and psychological support in the area of Resilience, and take note the risk, highlighted in the literature reviewed, that an over-reliance on individual efforts to build Resilience can place a responsibility on staff for systemic issues. This type of training should therefore be seen as supplementary to, and not in lieu of, the organizational and policy-level change recommended above and should be designed in collaboration with members of staff and not imposed from above.

5.3 Limitations of the Study

This study is a secondary, literature-based study that has limitations to be evaluated when analyzing the results of this study. First, the analysis relies upon academic search engine results and published research and reports that have been done previously, which can be subject to publication bias as it is easier to publish studies showing significant psychological impact than those showing less impact, and to be found through academic search engines. Secondly, since no primary data was gathered, the voices of NHS front line workers in this study will necessarily be mediated through the interpretative choices of the original researchers; this may fail to accurately reflect the voices of under-represented groups of NHS workers such as non-clinical, support and ancillary staff. Third, many of the studies identified in the literature are conducted in acute hospital and critical care environments, which may lead to the themes identified in the literature not fully representing experiences of staff working in primary care, community and mental health services. Lastly, the rapidly

changing nature of NHS workforce policy means that some of the more recent developments (such as the current implementation of the NHS Long Term Workforce Plan) might continue to evolve beyond the scope of this review, and subsequent evaluation may come to different answers as to their effectiveness (NHS England, 2023).

Another limitation is definitional differences in the literature that informed this study: The definition of burnout, moral distress and moral injury varied across the literature, and a direct comparison of prevalence rates (summarized in *Table 4.3*) across studies should be interpreted as indicative of the broader pattern, not as a direct comparison.

5.4 Conclusion

The aim of this dissertation was to examine how COVID-19 related workplace stress contributes to the development of burnout among healthcare front-line workers in the National Health Service (NHS) in the United Kingdom (UK) during the period from 2020 to 2023, and to consider implications for staff wellness policy and the sustainability of the NHS workforce. The study used a secondary qualitative thematic analysis of peer-reviewed and institutional literature to identify a set of interrelated occupational stressors, staffing shortages and redeployment, lack of protective equipment, workload pressures and inequity of risk exposure, that contribute to psychological and moral harm for staff, from emotional exhaustion to moral injury. Although the NHS organizations and government introduced a variety of support measures during this time, the evidence suggests this was not fully implemented or evaluated and has not been enough to mitigate the longer-term risk of staff attrition as a result of burnout, as evidenced in more recent workforce data. The recommendations outlined in this chapter, from the organizational, national, and individual levels, indicate that building the resilience of the NHS workforce for the future will need to be an ongoing structural initiative not just one focused on wellbeing support in the short term. This study provides a synthesized, literature-based overview of the link between a pandemic-related stress and burnout in the NHS workforce in order to meet its aim and four objectives, and suggests a foundation for future staff wellness policy development based on the evidence.

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