



THE IMPACT OF COVID-19 ON THE PSYCHOSOCIAL AND MENTAL HEALTH NEEDS OF NHS AND SOCIAL CARE STAFF

FINAL REPORT ON LITERATURE PUBLISHED BETWEEN 2021 AND 2022

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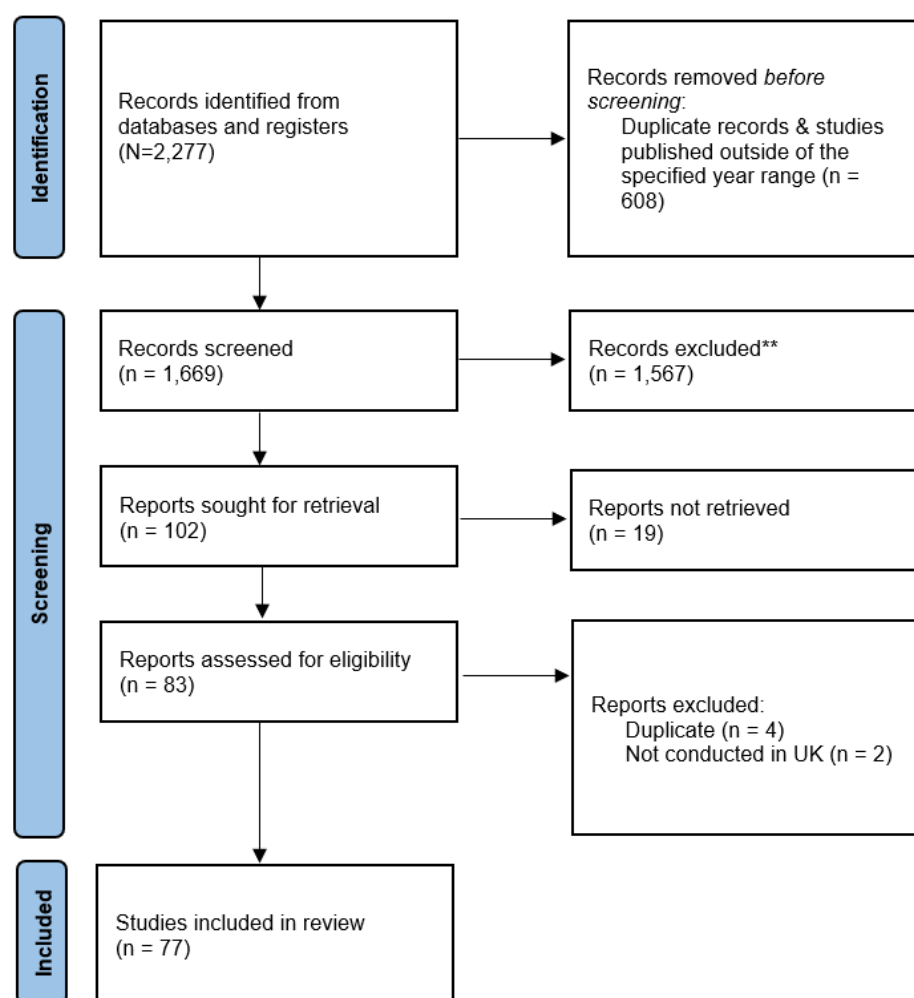
INTRODUCTION

1. In late 2021, Dr Evangelos Ntontis and Professor Richard Williams were asked to conduct a review and assessment of literature published between January 2021 and January 2022 regarding the effects of the COVID-19 pandemic on the psychosocial and mental health needs of NHS and social care staff. The intention of this review is to direct the attention of NHS England to new information that has emerged in the literature during the pandemic about effective care for staff of the NHS and of the social care system.
2. For the purposes of this report, Dr Ntontis and Professor Williams collaborated with Ms Katarzyna Luzynska and Dr Abigail Wright. Ms Luzynska supported the project as a research assistant, whereas Dr Wright provided her experience and expertise in conducting literature reviews. The project was led by Dr Ntontis.
3. The team followed a systematic review methodology to generate the results reported here. Further details regarding the steps followed are described in the Method section.
4. We identified papers based on both qualitative (e.g., interviews, focus groups) and quantitative (e.g., surveys) methods from our search of the literature. All papers considered were published in scientific journals following a peer-review process and provided either qualitative or quantitative empirical evidence (i.e., the research teams which wrote each paper collected and analysed new empirical data). We intentionally excluded from this report opinion pieces, editorials, and grey literature. Papers that were not related to the impact of COVID-19 on NHS healthcare and social care staff were also excluded.
5. In this final document, we report our assessment of and key findings emerging from qualitative and quantitative research papers that we identified as of higher quality. As we explain in greater detail below, we used the [quality appraisal checklist for qualitative studies](#) to assess the quality of the qualitative papers, and the [quality appraisal checklist for quantitative studies](#). Both were developed by the National Institute for Health and Care Excellence (NICE).
6. This report is structured as follows. First, we provide a description of the methodological steps we followed to compile the final set of papers that are surveyed in this report. Second, we describe the quality assessment criteria that we used to assess the robustness of the studies identified through the literature search process. Third, we provide an overview of the qualitative and quantitative empirical papers that we identified as of higher quality. We conclude with an overview of the implications that the authors identify in terms of policy and practice.

METHOD

7. We conducted a systematic review of the literature. Our review was registered in and approved by PROSPERO (<https://www.crd.york.ac.uk/prospero/>), the international prospective register of systematic reviews.
8. We searched two major scientific databases in the social, psychological, and health sciences, OVID and EMBASE. Our search terms included variations of certain keywords such as: 'COVID-19'; 'wellbeing'; 'distress'; 'psychological'; 'psychosocial'; 'mental health'; 'staff'; 'doctor'; 'allied health'; 'nurse'; 'NHS'; 'social care'; 'consultant'; 'medical staff'; 'United Kingdom'. The search only included articles published in English that referred to the United Kingdom published between January 2021 and January 2022. The keywords used as search terms in the databases were tailored appropriately for each database.
9. The literature search returned 2,277 studies. Of these, 437 were duplicate records and 188 studies were published outside the pre-specified year range (there was some overlap among those two categories). We screened the titles and abstracts of the remaining 1,669 papers and excluded those that were not relevant to the aims of this report. This led us to remove 1,567 papers. We then sought to retrieve the remaining 102 papers, of which we were able to obtain 83. Upon closer inspection, 2 further studies were excluded as they were not conducted in the UK and 4 further duplicate studies were identified (3 duplicates and 1 published report summarising results presented in another paper in our list) and were subsequently removed. Our search strategy appears in Figure 1 below.
10. Our final data set comprised 77 papers; 27 qualitative, 35 quantitative, 10 with mixed methods, (a combination of qualitative and quantitative), 1 review, and 4 papers classified neither as empirical studies nor summaries (which we classified as 'other').
11. We used the guidelines created by NICE to assess the quality of both the qualitative and quantitative studies. NICE suggests a range of criteria on which to assess research studies, such as the appropriateness and reliability of the methodology, clarity of aims, objectives and descriptions of source population, sample representativeness, rigour of study design, reliability of outcomes measures, bias assessment, transparency of the data collection process and the role of the researchers, reflection on the study context, rigour and coherence of the analysis, and consideration of ethical matters arising.

Figure 1. PRISMA flow diagram of search strategy



12. All papers were assessed by two team members (KL and EN). Regarding the qualitative papers, we did not identify any with limitations significant enough to prevent their inclusion in the report. However, many quantitative papers did not meet the quality appraisal criteria set by NICE. Some papers, for example, did not use validated instruments to measure outcome variables, some did not report which measures they used, some used non-standardized measures, and some papers extracted and used only specific items (rather than the scales as a whole) from various scales without justification. Some papers were not clear regarding their strategy for recruiting participants, others had very small UK samples (especially in the case of multinational samples), and, in some cases, there were problems with how groups of participants were handled in the design and analysis phases. Finally, some papers did not report statistical values, or the statistical techniques used to analyse the data appropriately.

Thirty three papers that did not meet the quality criteria were excluded from the analysis. The final set of papers considered in the analysis comprised 44 papers.

13. First, we report an overview of the results from the quantitative papers, followed by a synthesis of the qualitative research findings. The papers that we include in this report are those that we assessed as of higher quality based on the NICE guidelines.

SYNTHESIS OF QUANTITATIVE FINDINGS

The Sample of Papers Reviewed

14. The quantitative studies were conducted across a range of healthcare settings, roles, and levels of seniority of staff and examined experiences and perceptions of doctors (in training as well as consultants), nurses, mental healthcare workers, midwives, allied healthcare professionals, social care workers, general practitioners, and dentists among others. The set of 17 quantitative papers we have selected is presented in Table 1. We note that despite also looking for papers about social care workers, we found 4 papers only that included workers in this category, which are marked with an asterisk in Table 1 below.

Table 1: The 17 higher quality quantitative papers reviewed in this report

First author	Year	Title
De Kock et al.*	2022	The mental health of NHS staff during the COVID-19 pandemic: two-wave Scottish cohort study https://doi.org/10.1192/bjo.2021.1079
Debski et al.	2021	Mental Health Outcomes Among British Healthcare Workers—Lessons From the First Wave of the Covid-19 Pandemic https://doi.org/10.1097/JOM.0000000000002279
Denning et al.	2021	Determinants of burnout and other aspects of psychological well-being in healthcare workers during the Covid-19 pandemic: A multinational cross-sectional study https://doi.org/10.1371/journal.pone.0238666
Ferry et al.	2021	Predictors of UK healthcare worker burnout during the COVID-19 pandemic https://doi.org/10.1093/qjmed/hcab065
Freeman et al.	2021	Prediction of emotional exhaustion over the course of the COVID-19 pandemic in primary care dental staff: an intensive longitudinal study https://doi.org/10.1136/bmjopen-2021-054827
Gemine et al.	2021	Factors associated with work-related burnout in NHS staff during COVID-19: a cross-sectional mixed methods study https://doi.org/10.1136/bmjopen-2020-042591
Gilleen et al.	2021	Impact of the COVID-19 pandemic on the mental health and well-being of UK healthcare workers https://doi.org/10.1192/bjo.2021.42
Greene et al.*	2021	Predictors and rates of PTSD, depression and anxiety in UK frontline health and social care workers during COVID-19 https://doi.org/10.1080/20008198.2021.1882781
Houdmont et al.	2022	Burnout Among Surgeons in the UK During the COVID-19 Pandemic: A Cohort Study https://doi.org/10.1007/s00268-021-06351-6
Jordan et al.*	2021	COVID-19 Staff Wellbeing Survey: longitudinal survey of psychological well-being among health and social care staff in Northern Ireland during the COVID-19 pandemic

			https://doi.org/10.1192/bjo.2021.988
McFadden et al.*	2021	The Role of Coping in the Wellbeing and Work-Related Quality of Life of UK Health and Social Care Workers during COVID-19	https://doi.org/10.3390/ijerph18020815
Norkiene et al.	2021	'Should I Stay, or Should I Go?' Psychological Distress Predicts Career Change Ideation among Intensive Care Staff in Lithuania and the UK Amid COVID-19 Pandemic	https://doi.org/10.3390/ijerph18052660
Petrella et al.	2021	Healthcare staff well-being and use of support services during COVID-19: a UK perspective	https://doi.org/10.1136/gpsych-2020-100458
Quintana-Domeque et al.	2021	Anxiety and depression among medical doctors in Catalonia, Italy, and the UK during the COVID-19 pandemic	https://doi.org/10.1371/journal.pone.0259213
Roberts et al.	2021	Levels of resilience, anxiety and depression in nurses working in respiratory clinical areas during the COVID pandemic	https://doi.org/10.1016/j.rmed.2020.106219
Roberts et al.	2021	Psychological distress and trauma in doctors providing frontline care during the COVID-19 pandemic in the United Kingdom and Ireland: a prospective longitudinal survey cohort study	http://dx.doi.org/10.1136/bmjopen-2021-049680
Zhou et al.	2021	Cross-sectional study exploring the association between stressors and burnout in junior doctors during the COVID-19 pandemic in the United Kingdom	https://doi.org/10.1002/1348-9585.12311

15. Most surveys adopted a cross-sectional design, measuring the aforementioned factors at a single time point. Only 3 of the 17 papers adopted a truly longitudinal design (De Kock et al., 2022; Freeman et al., 2021; Roberts et al., 2021), whereas two more papers used a repeated cross-sectional design (Quintana-Domeque et al., 2021; Jordan et al., 2021).
16. In terms of their more specific research focus, 13 of the 17 papers measured elements of depression, PTSD, anxiety, and wellbeing, whereas 6 focused on burnout and its predictors. Next, we summarise their authors' findings.

Burnout

17. Regarding burnout, Denning et al. (2021) show that predictors of burnout include **having patient-facing roles** (e.g., doctors, nurses) **being redeployed, not feeling safe at workplace**, and **having a history of depression and anxiety**. In their survey of UK healthcare workers, Ferry et al. (2021) also found that participants with moderate to severe burnout scores were **younger, more likely to have pre-existing problems**, twice as likely to have been **redeployed** from their usual role or **worked in areas dedicated to COVID-19 patients**. They were also almost 4 times more likely to have previous depression. Similarly, Norkiene et al., (2021) found that 40% of their sample of intensive care workers were considering leaving the profession and change their careers, which

was predicted by higher levels of **depression, stress**, anxiety due to a lack of PPE, and lower psychological wellbeing scores. Exploring burnout in junior doctors, Zhou et al. (2021) found that burnout was predicted by multiple stressors including **fatigue, increased workloads, feelings of isolation, uncertainty about information regarding COVID-19, not feeling valued, and carrying out unproductive tasks**. Exploring burnout among surgeons in the UK, Houdmont et al. (2022) found that burnout was predicted by the **perceived impact of COVID-19 on one's work** and **worrying about oneself and family members and friends contracting COVID-19**. Finally, exploring burnout in staff working across primary and secondary care, Gemine et al. (2021) showed that burnout was predicted by **having COVID-19-related roles, not being able to rest and recover during breaks, and having concerns over PPE**. Freeman et al. (2021) finally showed that burnout was predicted by staff facing **high demands** due to having to deliver high levels of services while **being traumatised by exposure to COVID-19**.

Distress and Symptoms of Common Mental Health Disorders Reported in the Papers Reviewed in This Report

18. Virtually all quantitative papers identified reported probable symptoms of anxiety, PTSD, depression. For example, De Kock et al., (2022) assessed depression, anxiety, and mental wellbeing at NHS staff at a health board in Scotland. Results showed high levels of self-reported anxiety and depression symptoms, and low levels of wellbeing, with anxiety symptoms rising from 20.1% to 27.2% over 1.5 month. Similar results come from Quintana-Domeque et al. (2021), Roberts, N.J et al., (2021), Gilleen et al., (2021), Ferry et al., (2021), Debski et al., (2021), Jordan et al., (2021), Denning et al., (2021), all of whom identified high levels of self-reported symptoms of anxiety, depression, PTSD and distress in their respective surveys.
19. In a prospective longitudinal survey cohort study, T. Roberts et al, (2021) showed that prevalence of psychosocial distress peaked during the acceleration phase of the pandemic and started declining during the deceleration phase of the first wave.
20. Risk factors for higher reported frequencies of distress and of symptoms of PTSD, anxiety, depression, and other common mental disorders include: **being exposed to and feeling vulnerable because of COVID-19** (De Kock et al., 2022; Quintana-Domeque et al., 2021; Denning et al., 2021; Gilleen et al., 2021), **being disrupted by COVID** (De Kock et al., 2022), **being female** (Quintana-Domeque et al., 2021; Denning et al., 2021; Gilleen et al., 2021; Debski et al., 2021), **being younger** (Quintana-Domeque et al., 2021; Roberts, N.J et al., 2021; Debski et al., 2021), **having existing (mental) health issues** (Quintana-Domeque et al., 2021; Roberts, T. et al., 2021; Debski et al., 2021); **feeling worried about personal and family safety** (Roberts, T. et al., 2021; Ferry et al., 2021; Debski et al., 2021; Greene et al., 2021), **belonging to a minority group** (Roberts, T. et al., 2021), **lacking access to adequate PPE** (Gilleen et al., 2021; Ferry et al., 2021; Greene

et al., 2021), **having high workloads** (Gilleen et al., 2021), **lacking support in workplaces** (Gilleen et al., 2021), **being exposed to patient mortality** (Ferry et al., 2021), having **low perceived effectiveness of organisational communication** (Jordan et al., 2021), and **not feeling able to talk to one’s manager and feeling stigmatized at work** (Greene et al., 2021; Ferry et al., 2021).

21. Overall, findings from the quantitative papers assessed as of higher quality give us a very clear picture of the distressing situations that large numbers of healthcare workers have been experiencing throughout the course of the pandemic.
22. Levels of distress reported were very high. Crucially, most predictors of distress originate from systemic and structural problems such as lack of preparedness, lack of PPE, lack of workplace support, lack of workplace communication, or workplace stigma. Other factors such as being female or belonging to a minority group are aspects of wider social inequalities that unfortunately also become reflected in one’s workplace. These structural and systemic factors subsequently gave rise to adverse psychosocial outcomes such as proliferation of worry, distress, and, potentially, mental ill health.

SYNTHESIS OF QUALITATIVE FINDINGS

23. The qualitative studies we reviewed were conducted across a range of healthcare settings, roles, and levels of seniority of healthcare staff. Researchers, for example, focused on doctors, minority group members, frontline staff, mental healthcare workers, social care workers, paramedics, as well as workers in urgent dental care, kidney care, in-house psychological support services, and critical care. Only three papers, that are marked with * in Table 2 focused on social care workers.
24. Most studies focused on the lived experiences, perceptions, challenges, and difficulties of staff in the context of the response to the COVID-19 pandemic. Some studies, though, were more specific regarding their aims. For example, Martin and Hatzidimitriadou (2021) focused on how to best optimise the capacities of the healthcare system. Other researchers examined experiences in relation to personal protective equipment (PPE) (Hoernke et al., 2021), moral injuries stemming from a sense of betrayal (French et al., 2022), workers’ specific needs for support (Billings et al., 2021; Kerins et al., 2021), issues with redeployment (Walker et al., 2021) and emotional strain (Newman et al., 2021). The set of 27 qualitative papers is presented in Table 2.

Table 2: The 27 qualitative papers reviewed in this report

First author	Year	Title
Al-Ghunaim et al.	2021	Psychological and occupational impact of the COVID-19 pandemic on UK surgeons: a qualitative investigation http://dx.doi.org/10.1136/bmjopen-2020-045699
Aughterson et al. *	2021	Psychosocial impact on frontline health and social care professionals in the UK during the COVID-19 pandemic: a qualitative interview study

		http://dx.doi.org/10.1136/bmjopen-2020-047353
Baldwin et al.	2021	Qualitative study of UK health professionals' experiences of working at the point of care during the COVID-19 pandemic http://dx.doi.org/10.1136/bmjopen-2021-054377
Billings et al. *	2021	What support do frontline workers want? A qualitative study of health and social care workers' experiences and views of psychosocial support during the COVID-19 pandemic https://doi.org/10.1371/journal.pone.0256454
Billings et al.*	2021	Experiences of mental health professionals supporting front-line health and social care workers during COVID-19: qualitative study https://doi.org/10.1192/bjo.2021.29
Blake et al.	2021	COVID-Well Study: Qualitative Evaluation of Supported Wellbeing Centres and Psychological First Aid for Healthcare Workers during the COVID-19 Pandemic https://doi.org/10.3390/ijerph18073626
Daniels et al.	2021	The COVID-19 Clinician Cohort (CoCCo) Study: Empirically Grounded Recommendations for Forward-Facing Psychological Care of Frontline Doctors https://doi.org/10.3390/ijerph18189675
French et al.	2022	"If I Die, They Do Not Care": U.K. National Health Service Staff Experiences of Betrayal-Based Moral Injury During COVID-19 http://dx.doi.org/10.1037/tra0001134
Grailey et al.	2021	Lived experiences of healthcare workers on the front line during the COVID-19 pandemic: a qualitative interview study http://dx.doi.org/10.1136/bmjopen-2021-053680
Harris et al.	2021	"It's Been Ugly": A Large-Scale Qualitative Study into the Difficulties Frontline Doctors Faced across Two Waves of the COVID-19 Pandemic https://doi.org/10.3390/ijerph182413067
Hoernke et al.	2021	Frontline healthcare workers' experiences with personal protective equipment during the COVID-19 pandemic in the UK: a rapid qualitative appraisal http://dx.doi.org/10.1136/bmjopen-2020-046199
Jesuthasan et al.	2021	'We weren't checked in on, nobody spoke to us': an exploratory qualitative analysis of two focus groups on the concerns of ethnic minority NHS staff during COVID-19 http://dx.doi.org/10.1136/bmjopen-2021-053396
Kanavaki et al.	2021	Kidney Care during COVID-19 in the UK: Perspectives of Healthcare Professionals on Impacts on Care Quality and Staff Well-Being https://doi.org/10.3390/ijerph19010188
Kerins et al.	2021	Exploring the impact of the COVID-19 pandemic on doctors' core workplace needs: a qualitative study of internal medicine trainees in Scotland http://dx.doi.org/10.1136/bmjopen-2021-053506
Kinsella et al.	2022	"We shouldn't waste a good crisis": the lived experience of working on the frontline through the first surge (and beyond) of COVID-19 in the UK and Ireland https://doi.org/10.1080/08870446.2021.1928668
Liberati et al.	2021	A qualitative study of experiences of NHS mental healthcare workers during the Covid-19 pandemic https://doi.org/10.1186/s12888-021-03261-8
Martin et al.	2021	Optimising health system capacity: A case study of community care staff's role transition in response to the coronavirus pandemic https://doi.org/10.1111/hsc.13653
McGlinchey et al.	2021	'Understanding the lived experiences of healthcare professionals during the COVID-19 pandemic: an interpretative phenomenological analysis https://doi.org/10.1080/20008198.2021.1904700
Montgomery et al.	2021	Critical care work during COVID-19: a qualitative study of staff experiences in the UK http://dx.doi.org/10.1136/bmjopen-2020-048124
Newman et al.	2021	Experiences and emotional strain of NHS frontline workers during the peak of the COVID-19 pandemic https://doi.org/10.1177/00207640211006153

Olabi et al.	2022	NHS frontline staff experiences of an in-house psychological support service during the COVID-19 pandemic https://doi.org/10.1080/13548506.2021.1954674
Plessas et al.	2021	Frontline experiences and perceptions of Urgent Dental Care centre staff in England during the COVID-19 pandemic: a qualitative study https://doi.org/10.1038/s41415-021-3375-3
Rees et al.	2021	Paramedic experiences of providing care in Wales (UK) during the 2020 COVID-19 pandemic (PECC-19): a qualitative study using evolved grounded theory http://dx.doi.org/10.1136/bmjopen-2021-048677
Saleem et al.	2021	Experiences of frontline Pakistani emigrant physicians combating COVID-19 in the United Kingdom: a qualitative phenomenological analysis https://doi.org/10.1186/s12913-021-06308-4
Sandhu et al.	2021	COVID-19 – the impact on wellbeing of the dental team in a secondary care urgent dental hub https://doi.org/10.1038/s41415-021-3317-0
Spiers et al.	2021	What challenges did junior doctors face while working during the COVID-19 pandemic? A qualitative study http://dx.doi.org/10.1136/bmjopen-2021-056122
Walker et al.	2021	Redeployment during the first wave of the COVID-19 pandemic: implications for a clinical research workforce https://doi.org/10.12968/bjon.2021.30.12.734

25. Researchers used a range of data collection methods including semi-structured interviews (e.g., Plessas et al., 2021), narrative inquiries (e.g., Martin & Hatzidimitriadou, 2021), online focus groups (e.g., Jesuthasan et al., 2021), open-ended questions as parts of larger surveys (e.g., Harris et al., 2021), and audio-recordings of professional workshops (e.g., Kerins et al., 2021).
26. Due to the large number of qualitative studies, we offer a thematic synthesis and overview of their core findings rather than providing a description of each paper. Qualitative results fall under 3 core themes, namely: a. emergence of psychosocial distress; b. systemic problems; and c. processes and factors relating to psychosocial resilience.

Negative Psychosocial Consequences: Distress, Anxiety, Confusion and Reduced Wellbeing

27. Stress, anxiety, and reduced wellbeing featured prominently in the accounts of healthcare staff (e.g., Baldwin et al., 2021; Blake et al., 2021). There were multiple pathways that led to this negative psychosocial response.
28. Some staff members reported that they experienced and observed increased levels of anxiety and mental exhaustion (e.g., Harris et al., 2021; Kanavaki et al., 2022). More specifically, staff members' experiences of distress were affected by their concerns in relation to danger, exposing themselves and close family members to the virus, or due to deaths of patients and of close colleagues (e.g., Blake et al., 2021; Kinsella et al., 2022; McGlinchey et al., 2021; Montgomery et al., 2021; Newman et al., 2021; Rees et al., 2021; Spiers et al., 2021;).

29. Exposure to death and suffering also led to feelings of helplessness which, in turn, generated distress (e.g., Grailey et al., 2021; Liberati et al., 2021; Spiers et al., 2021). Similarly, healthcare workers from minority groups reported experiencing emotional distress and anxiety due to direct or indirect exposure to people close to them dying (e.g., Jesuthanan et al., 2021).
30. Uncertainty, and emotional demands in decision-making processes were other reasons for feeling overwhelmed and distressed (e.g., Baldwin et al., 2021; Billings et al., 2021; Grailey et al., 2021; Kerins et al., 2021; Newman et al., 2021; Plessas et al., 2021; Sandhu et al., 2021; Spiers et al., 2021).
31. On some occasions, staff members had to self-isolate after testing positive for the virus. Demands to self-isolate and their inability to work while colleagues were struggling sometimes led to negative emotional fluctuations (e.g., Liberati et al., 2021; Olabi et al., 2022).
32. As indicated earlier, there is convergent evidence across the qualitative papers that healthcare workers experienced distress and this was to some extent led by the novelty and threat of the virus, increasing numbers of deaths, and the uncertainty and worry that most people including participants in the aforementioned papers. However, widespread were also reports regarding *systemic issues* at participants' workplace environments, which were experienced as particularly distressing. These are secondary stressors.

Systemic Problems: High Workloads, Lack of Recognition, Inefficient Leadership, Problems with PPE, Rapidly Changing Guidelines, Lack of Communication, Moral Distress and Low Morale

33. One of the most common distressing experiences of staff members was that of increasing workloads. Many healthcare workers reported increased higher workloads (e.g., Al-Ghunaim et al., 2021; Aughterson et al., 2021; Kerins et al., 2021; Spiers et al., 2021; Walker et al., 2021). Participants reported additional responsibilities (Billings et al., 2021) while at the same time being underpaid (Plessas et al., 2021) and some felt overstretched, but at the same time, under resourced (Harris et al., 2021), which had a negative impact on their perceptions of their working environments (Grailey et al., 2019).
34. The negative impact of increased workloads was compounded by perceptions of staff shortages which further impacted upon healthcare staff (Spiers et al., 2021). There were reports of patients' demands outstripping capacity (e.g., Plessas et al., 2021), general perceptions of the healthcare system as overwhelmed and as staff facing extraordinary demands (Baldwin et al., 2021; Harris et al., 2021;), and senior staff were stressed to manage to maintain adequate staffing (Montgomery et al., 2021).

35. Most papers reported that staff members experienced problems regarding personal protective equipment (PPE) on top of shortages and feeling overloaded. There were many reports of staff reported a lack of PPE or worries about shortages (e.g., Al-Ghunaim et al., 2021; Baldwin et al., 2021; Hoernke et al., 2021; McGlinchey et al., 2021; Newman et al., 2021; Plessas et al., 2021). Staff felt exposed and unprotected (Harris et al., 2021), reported not receiving adequate information on how to use PPE and felt that it was allocated according to hierarchy rather than needs (Jesuthasan et al., 2021; Sandhu et al., 2021). Apart from its availability, staff expressed concerns regarding using PPE such as feeling exhausted, overheating, or suffocating from prolonged use, as well as PPE interfering with their breaks (Al-Ghunaim et al., 2021; Aughterson et al., 2021; Grailey et al., 2021; Plessas et al., 2021; Sandhu et al., 2021). PPE also caused communication difficulties with both patients and fellow staff members (e.g., Grailey et al., 2021; Harris et al., 2021; Hoernke et al., 2021; Montgomery et al., 2021; Plessas et al., 2021).
36. Some studies report the general concern of staff regarding uncertainty, lack of communication, and a rapidly changing environment with parallel lack of appropriate support (Billings et al., 2021; Harris et al., 2021; Newman et al., 2021; Spiers et al., 2021). Staff reported a lack of preparedness due to fragmented guidance and communications (Plessas et al., 2021). Guidance, policy, and protocols were changing rapidly which caused confusion and uncertainty (Grailey et al., 2021; Kerins et al., 2021; Sandhu et al., 2021). There was also constant change in work structure, roles, and procedures (Al-Ghunaim et al., 2021; Montgomery et al., 2021) as well as lack of clarity about new roles and expectations (Walker et al., 2021), which added to staff uncertainty and distress and made them feel ill-prepared to carry out their allocated tasks. Due to constant changes, some staff said that they felt that they could not trust their leaders (Aughterson et al., 2021) and did not know which sources were credible and could be trusted (Kerins et al., 2021). Slow decision-making from higher up (Harris et al., 2021) and the lack of information (Liberati et al., 2021) also led staff to question their own decision-making, resulting in perceived inability to perform their duties appropriately (Al-Ghunaim et al., 2021). Thus, it was common to request additional information, communication, and leadership (Baldwin et al., 2021).
37. These problems led healthcare staff to report experiences of distress regarding their ability to care for patients in an appropriate and professional manner (Kanavaki et al., 2021; Montgomery et al., 2021), leading to anxiety and a sense of loss of control. Virtual consultations worried some staff as there was inconsistency in providing appropriate services, confidential spaces were hard to come by, and staff found it hard to recognise symptoms and form relationships with their patients (Aughterson et al., 2021; Billings et al., 2021; Liberati et al., 2021; Plessas et al., 2021). Perceptions were reported of inhumane care towards patients (Harris et al., 2021) as well as moral injury and vicarious traumatisation due to the moral dilemmas and difficult decision-making that staff faced

(Billings et al., 2021; Grailey et al., 2021; Harris et al., 2021). Staff also reported not having received adequate training regarding end-of-life communication with patients' family members (Aughterson et al., 2021; Montgomery et al., 2021).

38. Staff also experienced significant problems in terms of teamwork and in sustaining their teams' morale at high levels. Instances were reported of low morale (Kanavaki et al., 2021), changing and worsening team dynamics (Grailey et al., 2021; Harris et al., 2021; Kerins et al., 2021) and increasingly negative relationships with colleagues and patients (Spiers et al., 2021). Participants reported difficulties in communications and a need for further organisational support (Kanavaki et al., 2021).
39. Together, these factors led staff members to feel undervalued, and their efforts as not recognised (Newman et al., 2021; Plessas et al., 2021). Staff did not feel listened to, and reported feeling being treated simply as numbers and not appreciated (Baldwin et al., 2021). These feelings emerged from a lack of support (Plessas et al., 2021), from lacking a voice and having no control over resources, autonomy or collective decision making (Grailey et al., 2021; Kerins et al., 2021; Martin & Hatzidimitriadou, 2021) and from resources being withdrawn (Kerins et al., 2021). Staff felt ignored by managers (Aughterson et al., 2021), as well as unprotected and unsupported by the government, NHS Trusts, and senior leaders (Harris et al., 2021; Walker et al., 2021). There was a sense of abandonment, betrayal, dishonesty, and lack of accountability that fractured some staff's relationship with the NHS (French et al., 2022).

Experiences and Relationships that Were Perceived as Supportive: Teams, Practical Support and Feeling Valued

40. The third and final theme that we identified in the qualitative papers relates to support mechanisms and factors that contributed to staff wellbeing.
41. The first factor was associated with increased camaraderie and improved relationships between staff members. Many participants across various healthcare disciplines (e.g., nurses, paramedics) reported an increased sense of camaraderie and sense of togetherness (e.g., Baldwin et al., 2021; Billings et al., 2021; McGlinchey et al., 2021; Plessas et al., 2021; Rees et al., 2021; Spiers et al., 2021). This new sense of camaraderie emerged due to staff uniting for a common cause and it improved relationships with colleagues (Aughterson et al., 2021). Also, there were reports of hierarchies flattening and with barriers between more junior and more senior staff or between staff in different roles (e.g., nurses and consultants) breaking down (e.g., Grailey et al., 2021).
42. The second factor was associated with the availability of support. Staff appreciated and found useful support coming from their peers and teams, seniors or managers (e.g., Daniels et al., 2021; McGlinchey et al., 2021). Emotional and practical check-ins from managers were also perceived as helpful (Aughterson et al., 2021), and so was proper

communication and demonstration of leadership (Baldwin et al., 2021). Olabi et al. (2022) also found that some frontline staff found psychosocial support useful when it was guided by staff's needs. Support of this nature helped staff to remain at work and motivated them to support other staff in return. However, practical support was crucial. Staff valued support in the form of free meals, free parking, and areas to rest and recover (Billings et al., 2021; Spiers et al., 2021). Having appropriate team compositions well as strategies and procedures to organise and optimise the availability of workforce and the provision of care strategies were also seen as essential (Plessas et al., 2021). Also useful were consistent teams, longer rotations, and reduced red tape. Staff suggested that they would like to have access to adequate clothing, PPE, and facilities for changing, showering, and resting (Spiers et al., 2021).

43. An important matter that helped staff during the pandemic was feeling appreciated and receiving gratitude from communities, patients, and organisations (Jesuthanan et al., 2021; McGlinchey et al., 2021; Rees et al., 2021). Removing resources that had become available during the pandemic (e.g., meals, parking spaces) made staff feel unappreciated and not cared for.

TERMINOLOGY, INSTRUMENTS AND DEFINITIONS

44. As in our other work, we found that one of the challenges in comparing the papers that our search produced lay in the variety of terms that researchers used to describe what we think are similar matters and, vice versa, the variable ways in which similar terms are used. Overall, a wide range of instruments were used to measure participants' experiences and potential symptoms. Thus, two key lessons for the future are those of the importance of agreeing definitions of the terminology used when studying people's experiences of major incidents. Similarly, it is important to try to achieve complementarity of the instruments used in surveying people at risk.
45. In particular, based on this review and our other work, we commend including the following instruments:
 - GHQ-12
 - Maslach Burnout Inventory
 - PCL-5
 - Warwick Edinburgh Mental Wellbeing Scale (full version)
 - WSAS

Distress

46. One term that requires greater clarity is 'distress'. We note that there are at least three broad approaches to defining it and they are reflected in the papers we have reviewed. First, the literature refers to distress being comprised of symptoms of anxiety,

depression, insomnia, or post-traumatic stress disorder that fail to reach cut-off scores on, usually self-completed measures (Naldi et al., 2021). This implies that distress might be considered by some to reflect sub-syndromal symptoms of common mental disorders. The second common use of the term distress is to describe the experiences that people may have from a range of descriptors that have been drawn together into lists that are often used in public-facing information sheets to inform people exposed to untoward events about the experiences they may have (Williams, Kemp & Alexander, 2014). A third approach to defining distress is based on recording the experiences of people who say that they have been or are subjectively distressed. As we indicate, we have found evidence of all three approaches across the papers we have reviewed.

47. People are likely to feel stressed in emergencies and incidents. Their experiences are described as distress when they are accompanied by emotions, thoughts, and physical sensations that are upsetting or which affect their relationships. Distress is not a diagnosis but may accompany a disorder. Recent research shows that common experiences that people describe as distress include feeling very upset; fear; anxiety; fear of recurrence of the event; vigilance at social gatherings and in public places; avoiding uncomfortable feelings; and social withdrawal. The main differences between distress and the symptoms of common mental health problems lie in the severity and duration of these experiences, and the trajectory of people's recovery. Until recently, the literature has tended to underestimate the number of people who take a longer time to recover from distress (Williams et al., 2022).
48. We advise researchers to agree which of these or other approaches they wish to use before they start work and to offer clear definitions in the reports they write in order to make easier the task of comparing the findings from different studies.

RECOMMENDATIONS FOR CHANGES IN POLICY AND PRACTICE

49. Many of the authors of the papers described herein make suggestions and recommendations in relation to how policies and practices should change to prevent negative outcomes and facilitate the wellbeing of and care for healthcare and care staff.
50. One core recommendation concerns the availability of resources. The healthcare system should have adequate staff, a range of resources such as PPE, time, and areas where staff can rest and have breaks, as well as food and drink products (Baldwin et al., 2021; Blake et al., 2021; Harris et al., 2021; Gilleen et al., 2021; Kanavaki et al., 2021; McGlinchey et al., 2021; Roberts, T. et al., 2021). Managers should also aim to reduce the workload of staff members (Freeman et al., 2021).
51. The authors also make the case for appropriate leadership all the way from senior colleagues to Trust Boards and to government. Consistent and supportive leadership is necessary to build trust, recognise the challenges and moral distress and injury that staff

members face, support them and make them feel valued, and more generally to build a culture of safety (Baldwin et al., 2021; Billings et al., 2021; Denning et al., 2021; French et al., 2022; Spiers et al., 2021; Plessas et al., 2021, Quintana-Domeque et al.,2021).

52. The authors also lay emphasis upon the importance of providing support and ensuring its availability. This includes ways for staff to be heard and provide feedback as well as providing them with adequate information and training to deal with new tasks and roles (Aughterson et al., 2021; Baldwin et al., 2021; Billings et al., 2021; Harris et al., 2021; Jesuthanan et al., 2021; Jordan et al., 2021; McGlinchey et al., 2021; Olabi et al., 2022; Rees et al., 2021; Roberts, N.J. et al., 2021).
53. Some authors raise the important point that any changes must aim beyond personal resilience to tackle the organisational, systemic, and structural factors that have negative impacts on the wellbeing of healthcare staff (Billings et al., 2021; Montgomery et al., 2021; Rees et al., 2021; Spiers et al., 2021; De Kock et al., 2022).

SUMMARY

54. Our aim in writing this report is to present an overview of findings from empirical qualitative and quantitative papers published between January 2021 and January 2022 in relation to the impact of COVID-19 on the psychosocial and mental health needs of healthcare and social care staff.
55. Our sample consisted of 44 selected papers all of which we considered to be of sufficient quality. Our selection was made using a systematic review approach; we arrived our selection after going through several stages of screening, assessing, and extracting papers published in the chosen period that we found in two databases.
56. We take this opportunity to say that we found few scientific papers that met our criteria that report studies of social care workers during the pandemic. We examined seven such reports of scientific enquiries of social care workers out of the 44 papers that we reviewed in detail. While, it is possible, indeed probable, that we failed to find more papers of reasonable quality, we think that it may well be the case that there remains a paucity of research in this field.
57. The themes arising from both qualitative and quantitative papers, which offer us both large samples for appropriate quantitative analyses in conjunction with in-depth explorations of staff members' lived experiences, corroborate previous findings, and show that healthcare and care workers have and continue to experience the COVID-19 pandemic as particularly challenging.
58. We conclude that staff have and are experiencing high levels of fatigue, distress and burnout that is consistently associated with both exposure to infectious disease as well

as due to systemic, organisational, and structural problems that arise from what we call secondary stressors (Williams et al., 2021) including inequality, staff shortages, lack of communication, lack of practical and emotional social support, rapidly changing guidelines, lack of recognition and of a sense of being valued, lack of PPE, lack of training, and inability to carry out one's tasks properly, moral distress and moral injury, and ineffective leadership. These factors not only become stressors in and by themselves, but they also exacerbate the effects of the primary stressor, the SARS-CoV-2 virus that is continuing to cause the COVID-19 pandemic.

59. Furthermore, it appears to us, after our exercising the privilege of reading all these papers, that the recommendations that stem from them describe good practice in ordinary times as well as during a hugely demoving event such as this pandemic. Thus, any changes must tackle the roots of the problem and manage structural and systemic reform. In this way, we could improve the ways in which services function in the longer-term. As it stands, staff vulnerability seems to us to originate in systemic factors. Interventions that focus on increasing the personal resilience of individual staff members are not likely to be effective. The vast majority of stressors identified by the studies cited in this report shows us that those factors are modifiable and thus targeted interventions could ameliorate the distress and burnout that healthcare staff are currently facing.
60. Recommendations made by us and by the research teams of the studies reported in this paper are in line with advice put forward by the NHS itself regarding workforce health and wellbeing: <https://www.england.nhs.uk/publication/nhs-health-and-wellbeing-framework/>
61. The results of this report are in line with our findings in our Report to NHS England submitted in June 2021 and with our subsequent Interim report submitted in April 2022.

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