BMJ Open

Implementing complex interventions to mitigate burnout among qualified healthcare professionals: a realist review protocol

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To cite: Figueiredo S, Koch U, Oliveira E, *et al*. Implementing complex interventions to mitigate burnout among qualified healthcare professionals: a realist review protocol. *BMJ Open* 2023;**13**:e067577. doi:10.1136/bmjopen-2022-067577

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (http://dx.doi.org/10.1136/bmjopen-2022-067577).

Received 18 August 2022
Accepted 16 January 2023

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ABSTRACT

Introduction Reported burnout rates among qualified healthcare professionals (QHP) are alarming. Systematic reviews evaluating the effectiveness of burnout interventions for QHP exist; however, findings are contradictory. In addition, to date, there is no indication of how these interventions work and what specific intervention elements mitigate burnout. This review aims to explain how burnout interventions work and the contextual factors that mediate the intended outcomes. Our ultimate goal is to formulate actionable recommendations to guide the implementation of complex burnout interventions for QHP working in the hospital setting.

Methods and analysis In light of the heterogeneity and complexity of the interventions designed to address burnout, we will conduct a realist review using Pawson's five iterative stages to explore and explain how burnout interventions work, for whom, and in what circumstances. We will search PubMed, CINAHL, Scopus, PsycINFO and Web of Science from inception to December 2022. Grey literature sources will also be considered. The results will be reported according to the Realist and Meta-Narrative Evidence Syntheses—Evolving Standards quality and publication standards

Ethics and dissemination Findings will be disseminated in a peer-reviewed journal, conference presentations and through the development of infographics and relevant educational material to be shared with stakeholders and key institutions. This study is a secondary data analysis; thus, a formal ethics review is not applicable.

PROSPERO registration number CRD42021293154.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This realist review will be the first to synthesise evidence and formulate actionable recommendations for the implementation of complex burnout interventions for qualified healthcare professionals working in a hospital setting.
⇒ This review will include a diverse array of academic and grey literature sources in three different languages.
⇒ The programme theory development and refinement will include stakeholder involvement (professionals that develop and deliver burnout interventions for healthcare workers).
⇒ Findings of this review will be limited to hospital setting.

BACKGROUND

The WHO defines burnout as an occupational syndrome resulting from chronic workplace stress that has not been successfully managed.[1] It encompasses emotional exhaustion, cynicism and a sense of ineffectiveness.[1] Emotional exhaustion is a state of feeling emotionally depleted and fatigued. Initially described as depersonalisation, cynicism is a state of irritability and includes negative attitudes towards others. Inefficacy, described initially as a reduced personal accomplishment, is a state of low morale affecting productivity and the ability to cope.[2]

First described in the scientific literature in 1974 by Freudenberger, followed by Maslach in 1981,[2] the prevalence of this syndrome has since reached 'epidemic' levels in the USA.[3] Previous to the COVID-19 pandemic, nearly 50% of physicians reported living with burnout.[3] Similar prevalence rates were also observed among nurses and physician assistants.[3] The COVID-19 pandemic imposed significant challenges to the healthcare system, and in turn, burnout prevalence among qualified healthcare professionals (QHP) has skyrocketed globally.[4–8]

As a multidimensional syndrome, the clinical manifestation of burnout spirals down to a cascade of adverse outcomes affecting QHP, patients and healthcare systems. QHP—anyone who, by their education, training and credentials, is permitted by law to evaluate and care for patients, such as physicians, nurse practitioners, nursing care professionals and the allied health professionals (occupational therapists, physical therapists, social workers, among others)[9]—experience a myriad of physical and emotional symptoms, such

as fatigue, pain and disengagement.[3] As a result, their empathy levels—a crucial component of person-centred care—are likely to be affected.[3] This leads to patients who receive suboptimal care and are more prone to rate their hospital experience and satisfaction as poor.[3] Healthcare institutions report increased errors, decreased quality of care and high employee turnover rates.[3 10 11]

Burnout management includes a plethora of interventions and can target either the organisation or the individual.[11 12] Organisational-tailored strategies include fostering systems of support, a culture that enhances well-being, engaged leadership and highly functioning interprofessional teams.[13] Individual-tailored strategies include, but are not limited to, timely response to the emotional challenges faced by the QHP and other forms of psychological support, such as the promotion of self-care.[13]

Systematic reviews and meta-analyses published in the last decade about interventions to mitigate burnout yielded contradictory results. Both individual and organisational-tailored interventions appear to be effective.[11 14–19] However, while some authors suggested that both intervention types led to small burnout improvements[11 14] others proposed that organisational-tailored interventions are more effective than individual-tailored interventions,[15 17] whereas another group of studies found combined interventions to be the most effective strategy.[16 18] One systematic review suggested that the effectiveness of different kinds of organisational-tailored interventions varied.[19] For instance, strategies promoting teamwork were effective in reducing burnout. On the other hand, interventions focused on schedule modifications showed little to no effect.[19] Of interest, Awa *et al*, suggested that regardless of the type of intervention, effects are likely short-lived.[16] In addition, interventions varied greatly in regard to content, duration, intensity and length of follow-up, making identification and comparison of their active ingredients difficult.[15 20]

These reviews shed some light on whether interventions are effective; however, they do not give us any indication of how these interventions work and what specific elements drive burnout reduction. Furthermore, none focused on the mix of healthcare professionals working in the hospital setting. Instead, to control for heterogeneity, many studies either focused on physicians'[11 15 17 19–23] or nurses' burnout.[18 24–26] Considering that in a healthcare environment, such interventions are delivered to all employees regardless of their professional background, having a representative sample that includes nurse practitioners, physician assistants and allied healthcare professionals is crucial to understanding the actual effect of burnout interventions.

As a result, actionable recommendations for the management and prevention of burnout among QHP are lacking.[15] We are unable to understand—or unpack—burnout interventions because we are most likely tackling this issue using a methodology that is not aligned with the problem. Systematic reviews and meta-analysis methodologies follow a reductionist approach in which there is a linear association between an isolated intervention and an intended outcome, also expressed as a simple cause and effect relationship.[27] Burnout, however, is a complex syndrome requiring a bundled intervention strategy.[25] Likewise, according to Wiederhold *et al*,[21] a successful burnout intervention should consider various causes and incorporate various therapeutic tools.

Pawson advocates that a realist review—rooted in a critical realist epistemology—is the methodology best suited to evaluate complex interventions. Instead of evaluating effectiveness, a realist review aims to explain the interaction among contextual factors (ie, barriers and facilitators of the intervention mechanism of interest), mechanism (ie, the process through which interventions work) and the outcome (ie, the desired change). In addition, a realist review incorporates a broader range of sources than systematic reviews and meta-analyses, as well as stakeholder input.[28 29]

A preliminary search of PROSPERO, MEDLINE and the Cochrane Database of Systematic Reviews identified one realist review on this topic.[30] Eligible participants, however, were those acting in critical care. In addition, this realist review excluded grey literature sources as well as single studies, commentary articles and clinical overviews. As suggested by Pawson *et al*, 'realist review is much more likely to make use of grey literature rather than relying solely on articles in academic journals'.[28] In addition, two realist review protocols related to the Care Under Pressure Project were identified.[31 32] While one focuses on organisational interventions to improve physicians' mental ill-health,[31] the other focuses on understanding the incidence of mental ill-health among nurses, midwives and paramedics.[32]

The uniqueness of our study resides in its specific scope and study population. Our study focuses on any intervention to mitigate burnout among qualified healthcare workers working in a hospital environment, which may include physicians, nurses, nurse practitioners, physician assistants, physical therapists, occupational therapists, social workers and child care specialists. The Care Under Pressure studies, in contrast, focus on organisational interventions to improve the mental health of select professional groups (namely doctors, nurses, midwives and paramedics). Also, mental health is a broader construct encompassing a wide range of clinical manifestations, such as depression, anxiety and stress.[33]

Therefore, to date, a comprehensive realist review of burnout interventions for QHP is lacking. Given the syndrome's high prevalence across varied healthcare professions and the heterogeneity and complexity of the interventions designed to address burnout, further research is needed to explain what works, for whom, and in what circumstances. This study aims to address this gap.

Research question

The overarching research question is 'what is it about complex burnout interventions that works for whom in

what circumstances?' More specifically, this broad question can be broken down as follows:

1. What are the causal pathways through which burnout interventions for QHP lead to their intended outcomes?
2. In what contexts are burnout interventions for QHP likely effective? In what contexts are such interventions likely ineffective?
3. Are there differences in interventions' relative effectiveness across different professions?

Aim

This novel realist review aims to understand how burnout interventions work (question 1) in different hospital units for a diverse group of qualified healthcare professionals (questions 2,3). We will also aim to explore aspects of unintended consequences and report on contexts capable of producing ineffective outcomes. The results of this review will be used to formulate a combination of scenarios and pathways of how strategies may work—or fail—in specific contexts. Understanding the interaction among multiple elements (ie, context, intervention mechanism and outcome) is essential for the tailoring and implementation of similar programmes at a local level. Thus, our ultimate aim is to produce recommendations for implementing complex interventions in the hospital environment to mitigate QHP burnout.

METHODS

The research question will be answered through a realist review using Pawson's five iterative stages. Realist review is a theory-guided approach to understanding 'the complexities of an intervention and generating causal explanations about what works, for whom, in what circumstances and why'.[28] Such methodology explores the relationship and interaction of the context (C) in which the intervention is delivered, the intervention mechanism (M) that leads to change and the outcomes (O) produced by the intervention. By understanding the various CMO configurations within complex burnout interventions, we will be able to answer the proposed questions. This protocol was registered with PROSPERO (CRD42021293154) and will follow the Realist and Meta-Narrative Evidence Syntheses—Evolving Standards (RAMESES) quality and publication standards.

Figure 1 summarises the five stages of this review and highlights stakeholder engagement.

Stage 1: Defining the scope and identifying potential theories

First, researchers (SF and UK) and stakeholders representing hospital staff with expertise in developing burnout interventions for healthcare workers (EO and KE-D) will frame the problem and will provide definitions for the context, mechanism and outcomes (CMO) related to burnout interventions for qualified healthcare professionals. EO and KE-D are hospital chaplains whose work focuses on developing and providing strategies to mitigate burnout among healthcare workers. In the past, they developed a strategy titled Comfort Corner—an emotional support strategy offered to hospital units. Comfort Corner is a 90 min weekly session, in which staff has access to colouring, aromatherapy, snacks, hot beverages and informal support. In 2021, Comfort Corner received 12 432 visits. The chaplains also created a communication channel that delivers videos and podcasts to promote hospital healthcare workers' spiritual and psychosocial well-being. In addition, KE-D has a managerial and leadership position within the hospital.

Second, SF will locate existing theories and explanations for how burnout interventions targeted at healthcare professionals might work. After mapping the theories, the team of researchers and stakeholders will develop an initial programme theory and will agree on which programme theories to inspect further.

Stage 2: Search strategy

Formal search

The search strategy, developed with a librarian for the literature published from inception to December 2022, aims to locate published and unpublished sources. Terms related to the population, the concept and the context were combined to develop a complete search strategy for PubMed. After this preliminary search, we will develop a full search strategy for CINAHL, Scopus, PsycINFO and Web of Science (see online supplemental appendix). We anticipate that the search strategy will need further testing and modification during the searching phase. As a secondary but equally important strategy, we will use snowball sampling, where the reference list of all included sources will be screened for additional studies. Clinicaltrials.gov will be searched for any ongoing and/or unpublished results, while websites of American hospitals will be searched for grey literature. During this stage, inclusion criteria might be reviewed in light of emerging data.

Additional search

We will conduct additional searches if further data is needed to support the development of the programme theory. The project team will discuss and define inclusion and exclusion criteria for any additional searching undertaken.

Stage 3: Study selection and data extraction

Study selection

Results from the search will be uploaded in EndNote X9 (Clarivate Analytics, Pennsylvania, USA). Study selection will follow a three-step process: removal of duplicates, title and abstract screening and full-text screening. Following a pilot test until an agreement is reached, titles and abstracts will then be screened by two reviewers (SF and UK). SF, as the primary reviewer, will screen the full set of studies, while UK, as the secondary reviewer, will screen a random selection of 10% of the citations for quality assurance. Discrepancies will be solved through

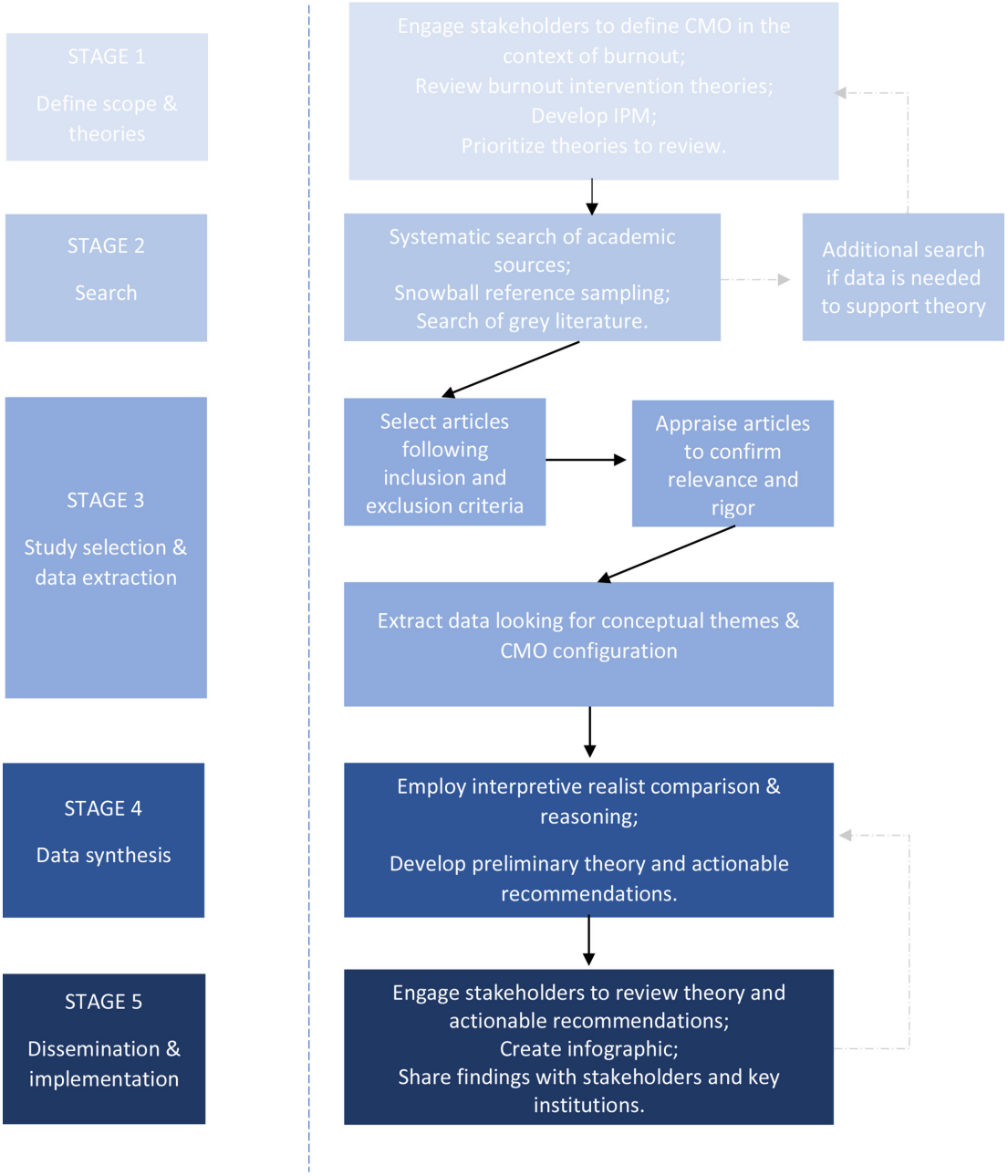

Figure 1 Overview of the methodology. CMO, context, mechanism and outcomes; IPM, initial programme theory.

group research or by a third reviewer (EO). The review intends to source quantitative, qualitative and mixed methods evidence.

Inclusion criteria

- Participants or targeted audience includes any healthcare profession (physicians, nurses, nurse practitioners, physician assistants, physical therapists, occupational therapists, social workers, etc) from any discipline (oncology, neuro, ortho, surgery, critical care) working in a hospital setting.
- Intervention targets hospital healthcare workers. This proposal and the main study are being developed in partnership with the Children's National Hospital of Washington, District of Columbia. Findings will immediately inform how services and resources are delivered to their healthcare workers' population.
- Experimental and quasiexperimental study designs, including randomised controlled trials, nonrandomised controlled trials, pre–post studies and interrupted time-series studies. In order to have a broad understanding of causal mechanisms, all types of observational studies will be considered for inclusion; however, it is unlikely that such study designs will be selected, given the research question. This review will also include case series, individual case reports and descriptive cross-sectional studies for inclusion. Qualitative studies and systematic reviews from inception to December 2022 will be included.

- Published or unpublished findings that fit the purpose and are relevant to explaining the mechanism by which burnout interventions for healthcare professionals work or fail.
- Published or unpublished findings from any country written in English, French or Portuguese, given the language skills of at least two authors.

Exclusion criteria

- Articles addressing research questions related to COVID-19. Critical realist epistemology posits that a programme's outcome results from the interaction between the intervention mechanism and the contextual factors. In light of COVID-19, QHP stress levels were higher than before the pandemic. In addition, institutions likely managed this health crisis differently, with available resources and information. Thus, we anticipate that the context observed during the COVID-19 pandemic is somehow unique and, therefore, should be analysed separately. Otherwise, biases might be introduced into the analysis.

Relevance and rigour

Although we developed a preliminary set of inclusion and exclusion criteria, studies will be selected if they contain relevant information to explain the theory of change underlying burnout management and prevention for QHP.

Data extraction

SF will extract the data using NVivo, a data management system for qualitative analysis. Relevant sections of texts relating to one or more parts of the programme theory will be coded in NVivo first by conceptual 'themes,' and then, as the review progresses, these will be developed into CMO configurations. Additional data regarding specific details about the participants, context, mechanisms and outcomes, and key findings relevant to the review questions will be extracted from selected papers using a spreadsheet developed by the reviewers as the data extraction tool. The extraction tool will be modified and revised as necessary while extracting data from each included source. Modifications will be detailed in the review. Any disagreements between the reviewers will be resolved through discussion or with an additional reviewer (EO). If appropriate, authors of papers will be contacted to request missing or additional data.

Stage 4: Data synthesis

As this review aims to explore and explain the mechanisms by which current complex interventions lead to burnout mitigation and the context supporting this relationship (ie, for whom and in what circumstances it works), an interpretive realist comparison will be used to understand and explain the causal mechanism supporting burnout mitigation. The comparison between successful and failed interventions allows the identification of the context supporting this relationship. We will display outcome chains from the included papers for the theories identified in stage 1. To aid in the data synthesis process, we may use different strategies, namely: (1) juxtaposition; (2) reconciliation between sources; (3) adjudication between sources; (4) consolidation of different sources. Interpretive reasoning will be documented in a research logbook. The results of this review will be used to develop a combination of pathways of how different strategies may work in which contexts, articulating different processes and outcomes in a complex setting.

Stage 5: Dissemination and implementation

Stakeholder engagement

In an iterative process, SF and hospital staff stakeholders with experience in developing and delivering self-care strategies for healthcare professionals (EO and KE-D) will refine the theory presented in stage 4. From this final model, we will propose actionable recommendations to tailor and implement burnout interventions for healthcare professionals working in a hospital environment.

To release information widely, we will use RAMESES guidelines to organise the findings of this review, which in turn, will be published in a peer-reviewed journal. Additional dissemination strategy includes (1) development of an infographic or another relevant educational material to be used for sharing the recommendations with critical stakeholders from the home institutions and (2) conference presentations.

Patient and public involvement

Hospital staff with expertise in developing and delivering burnout interventions for healthcare workers of hospital settings provided extensive feedback during the protocol development and will participate in different phases of the main study, as illustrated in figure 1. Patients were not involved in the development of this protocol and will not be involved in the main study. A cross-sectional survey is being conducted in parallel to ascertain the perception and needs of hospital staff attending burnout interventions.

ETHICS AND DISSEMINATION

A formal ethics review and approval is not required, for this is a secondary data analysis study. Findings will be disseminated in a peer-reviewed journal, through conference presentations and through the development of infographics and relevant educational material to be shared with stakeholders and key institutions. Furthermore, the findings will inform the delivery of current burnout interventions at the collaborating healthcare institution.

Acknowledgements The authors thank the librarian Thomas Harrod and Stacy Brody for his extensive support in developing and tailoring the search strategy of this review.

Contributors SF conceptualised the study and wrote the manuscript. UK, EO and KE-D provided feedback and reviewed the manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request. The data that support the findings of this study are available from the corresponding author, SF, upon reasonable request.

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