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BMJ Open Emergency department workforces' experiences and perceptions of well-being from an international perspective: a scoping review

Lucy Swancott ¹, Natalie Armstrong,¹ Damian Roland,^{1,2} Helen L Walters,¹ Kate Kirk¹

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¹Population Health Sciences, University of Leicester, Leicester, UK

²Emergency Department, Paediatric Emergency Medicine Leicester Academic (PEMLA) Group, Leicester, UK

Correspondence to

Lucy Swancott;
ls551@leicester.ac.uk

ABSTRACT

Objectives To identify and present the available evidence regarding workforce well-being in the emergency department.

Design Scoping review.

Setting The emergency department (ED).

Data sources CINAHL, MEDLINE, APA PsycINFO and Web of Science were searched with no publication time parameters. The reference lists of articles selected for full-text review were also screened for additional papers.

Eligibility criteria for study selection All peer-reviewed, empirical papers were included if: (1) participants included staff-based full-time in the ED, (2) ED workforce well-being was a key component of the research, (3) English language was available and (4) the main focus was not burnout or other mental illness-related variables.

Results The search identified 6109 papers and 34 papers were included in the review. Most papers used a quantitative or mixed methods survey design, with very limited evidence using in-depth qualitative methods to explore ED workforce well-being. Interventions accounted for 41% of reviewed studies. Findings highlighted pressing issues with ED workforce well-being, contributed to by a range of interpersonal, organisational and individual challenges (eg, high workloads, lack of support). However, the limited evidence base, tenuous conceptualisations and links to well-being in existing literature mean that the findings were neither consistent nor conclusive.

Conclusions This scoping review highlights the need for more high-quality research to be conducted, particularly using qualitative methods and the development of a working definition of ED workforce well-being.

Well-being is a complex, multidimensional concept with no universally accepted definition or theoretical approach, although most definitions agree that there are some core elements that are encompassed: the psychological (eg, emotions), physical (eg, sleep) and social (eg, relationships) facets (eg, 1). Well-being is commonly discussed within two key components; feeling good and functioning well.² This can include aspects such as an individual experiencing positive emotions,

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ To our knowledge, this is the first review to map the existing evidence on emergency department workforce well-being.
- ⇒ The review highlighted important gaps in the understanding and conceptualisation of well-being in the emergency department workforce.
- ⇒ The review included research from healthcare systems internationally, allowing for a broader understanding of the international context, however, this limits the depth of analysis reported on specific healthcare systems (eg, UK).
- ⇒ This review did not include grey literature.
- ⇒ This review does not include studies with a primary focus on mental illness in this population.

autonomy over one's life, a sense of meaning and purpose and positive relationships with others, as well as feeling physically healthy.³ The study of well-being in research has grown exponentially in recent years, following its initial recognition in international policy in the late 1990s (eg, 4) and its wider prevalence in the 2010s following the broader inclusion of well-being measures in public surveys to inform policy changes (eg, 5).

These policy changes coincided with increased recognition of the importance of well-being within the workplace and subsequent reviews of this literature (eg, 6), with early research on specific populations such as healthcare professionals becoming more frequently discussed in the mid-2000s.⁷ Following this, the negative effects of low levels of well-being in the healthcare workforce have become a prominent topic in research and practice, with several studies exploring this across a range of healthcare sectors (eg, allied health, nursing⁸). This reflected the worsening context of healthcare systems, following ever-increasing demands for services, chronic underfunding and,

more recently, the COVID-19 pandemic (eg, 9). Across this expanding literature, findings have concluded that there are significantly high levels of stress, mental illness and burnout across the healthcare profession, internationally.^{10 11} This was reflected in a UK, large-scale survey of National Health Service healthcare staff which found that 46.5% of the workforce had felt unwell at some point in the last year due to work-related stress, with the prevalence steadily increasing for four consecutive years.¹² Although this is an issue across all healthcare departments, it is particularly evident in the emergency department workforce (eg, 13).

The emergency department (ED) is a feature of healthcare systems across the world, providing emergency care to patients with acute, potentially serious or life-threatening illness or injury and increasingly patients whose health needs cannot be met by other providers.¹⁴ The ED differs considerably from other departments within healthcare systems due to the unpredictability of the volume and severity of admissions, the time criticality of cases and the wide range of medical problems that require urgent treatment, leading to a particularly high-pressure environment for the workforce (eg, 15). This is mirrored in research as this workforce has been found to experience higher levels of stress and burnout in comparison to other healthcare workforces.^{13 16} The difference has been linked to many different factors such as higher levels of violence towards staff, a lack of autonomy, time pressures, increased exposure to emotional labour and a lack of resources (eg, social, physical, psychological).^{16–18} When added to other issues linked to working in the ED (eg, unsociable working hours, lack of career progression), this leads to high rates of staff turnover which proceeds to have a cyclic effect of adding pressure to existing staff workloads.^{19 20} This is significant as high levels of burnout and staff turnover can have a negative impact on patient care and, ultimately, patient safety, for example, through the increased use of safety workarounds.^{21 22}

As documented above, previous research focusing on the ED workforce has mostly explored factors contributing to high levels of burnout and other negative consequences of poor well-being rather than maintaining and enhancing well-being itself. This is evident in the multiple existing reviews studying burnout and its antecedents in this population.^{16 23 24} One of the key reasons why burnout is discussed in the literature more commonly than well-being is because it has an operationalised definition, unlike well-being.²⁵ However, there is a clear argument for increasing understanding of well-being within the ED workforce because despite burnout being described as one of the key barriers to good levels of well-being, it has become clear that ‘wellbeing is more than the absence of burnout’ (26 p.2).

Therefore, there needs to be a more comprehensive understanding of how well-being should be defined in this distinctive population, and a detailed map of previous well-being findings in this field. This scoping review aimed to identify and present the available evidence regarding

ED workforce well-being, including existing definitions of well-being in this field and methodology used to explore this, as well as key findings. This provides a detailed overview of the evidence base and highlights gaps in current literature and understanding which can subsequently be used to inform future research in this area. A preliminary search of PROSPERO, MEDLINE, the Cochrane Database of Systematic Reviews and JBI Evidence Synthesis was conducted and no current or in-progress scoping reviews or systematic reviews on the topic were identified. An existing review of ED provider mental well-being was conducted in 2017, however, this focused specifically on its association with psychosocial work factors in quantitative study designs.²⁷ Moreover, the evidence base has expanded significantly during the subsequent years.

METHOD

The scoping review was conducted using the Joanna Briggs Institute methodology for scoping reviews²⁸ and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) extension for Scoping Reviews.²⁹

Identifying the research questions

The research questions are as follows:

1. What definitions, if any, exist of ED workforce well-being in the literature?
2. Which staff populations within the ED setting are included in previous literature?
3. What is known from the literature about ED workforce experiences and perceptions of well-being?
4. Which methodological approaches have been used to explore ED workforce well-being previously?

EDs included any facility specialising in emergency medicine. As there is no widely agreed, operationalised definition of well-being, all studies where ‘wellbeing’ or ‘wellness’ was a key component in the research were considered (eg, research aims, findings) wherever this included at least one of two core facets of well-being: psychological and social.¹ This did not include studies that focused on other primary outcomes such as burnout or mental illness only as: (1) previous reviews have covered this (eg, 23); and (2) although related, these are separate concepts to well-being (eg, 1).

Identifying relevant studies—search strategy

The scoping review considered quantitative, qualitative and mixed methods study designs and systematic and integrative reviews. Included studies were empirical research and reviews thereof, in the English language due to the availability of resources. There were no date restrictions.

The search strategy aimed to identify published primary studies and reviews. An initial limited search of MEDLINE (Ovid) and APA PsycINFO (EBSCO) was undertaken to identify articles on the topic. The text words contained in the titles and abstracts of relevant articles, and the index terms used to describe the articles were used to develop

Table 1 Summary of inclusion and exclusion criteria

Inclusion criteria	
Location	International.
Organisational setting	Emergency departments.
Population	ED workforce (clinical, managerial, non-clinical) such as emergency doctors, nurses and healthcare assistants.
Outcome/focus	Well-being or wellness.
Study design	Quantitative, qualitative, mixed methods, integrated and systematic reviews.
Exclusion criteria	
Population	Staff who are based in other healthcare departments but are sometimes requested in EDs (eg, surgical staff) and emergency services personnel (eg, paramedics) who deliver patients to the ED, as neither of these groups are based full-time in ED.
Outcome	Burnout, mental illness or other negative consequences of poor well-being (if main focus).
ED, emergency department.	

a full search strategy for CINAHL (EBSCO), MEDLINE (Ovid), APA PsycINFO (EBSCO) and Web of Science Core Collection (Clarivate) (see online supplemental appendix 1). The search strategy, including all identified keywords, was adapted to included information sources when necessary. The reference lists of articles selected for full-text review were screened for additional papers. There was no quality assessment of the included studies as this is not in line with scoping review guidance.³⁰

Study selection

This review considered studies that explored well-being in the ED workforce. The included studies were based on the inclusion and exclusion criteria outlined in table 1.

Duplicates were removed from the identified records and a pilot test of 25 studies was conducted to ensure that reviewers agreed on studies that met the inclusion criteria. All titles and abstracts were then screened for assessment against the inclusion criteria for the review with 10% reviewed by the second reviewer to ensure consistency.³¹ The full texts of selected citations were assessed in detail against the inclusion criteria by two independent reviewers. Reasons for exclusion of full-text papers that did not meet the inclusion criteria were recorded and reported in a PRISMA flow diagram (see figure 1). Any disagreements that arose between the reviewers at each stage of the selection process were resolved through discussion with a third reviewer.

Charting the data

Data was extracted from included papers using a data extraction tool developed by the review team. The

information extracted by the reviewer was verified and discussed with the other reviewers to confirm that all relevant study details were documented. Any disagreements regarding data extraction were addressed through consultation within the review team. The university's library services and study authors were contacted to request missing or additional data, where required.

Data summary and synthesis of results

Overall, 6109 papers were screened and 5981 were excluded based on the title and abstract not being relevant to the research questions, resulting in 128 papers. A further 94 were excluded based on full texts for a number of reasons: incorrect outcome/lack of well-being focus; incorrect publication type; incorrect population; background article; and no access. Figure 1 shows how papers were selected on a flow diagram. 34 papers were used in the review; their characteristics are documented in online supplemental table 1.

Research designs

The paper designs consisted of 12 quantitative, 9 qualitative, 9 mixed methods and 2 literature reviews. Two mixed methods studies were published as two separate corresponding parts^{32–35} which are synthesised separately in the section below.

Geographical locations

The studies were conducted in a range of countries, with the highest amount from the USA (n=10). A smaller number were conducted in Canada (n=4), Australia (n=5), UK (n=4), the Netherlands (n=3) and New Zealand (n=2). One study was conducted in each of Sweden, Spain, Brazil, Turkey and Singapore. The one systematic review included was international.

Time and context of data collection and publication

Studies were published between 1993 and 2022. A very small number of studies were conducted from the 1990s to the early 2010s, followed by a steady yet substantial increase in the mid-2010s onwards. This peaked during the COVID-19 pandemic, where a relatively large number of studies collected data regarding ED workforce well-being. Specifically, 11 out of 34 studies were conducted during the pandemic.

Job roles

The most common staff group included were nurses across

all study designs, closely followed by doctors in quantitative and mixed methods designs. The least common staff groups involved were allied health and non-clinical groups (online supplemental table 1) table 2. Summary of participant job roles in different reviewed study designs.

Participant sex

Studies of all methodologies, on average, included a higher proportion of female participants (65.6%) compared with males (34.4%).

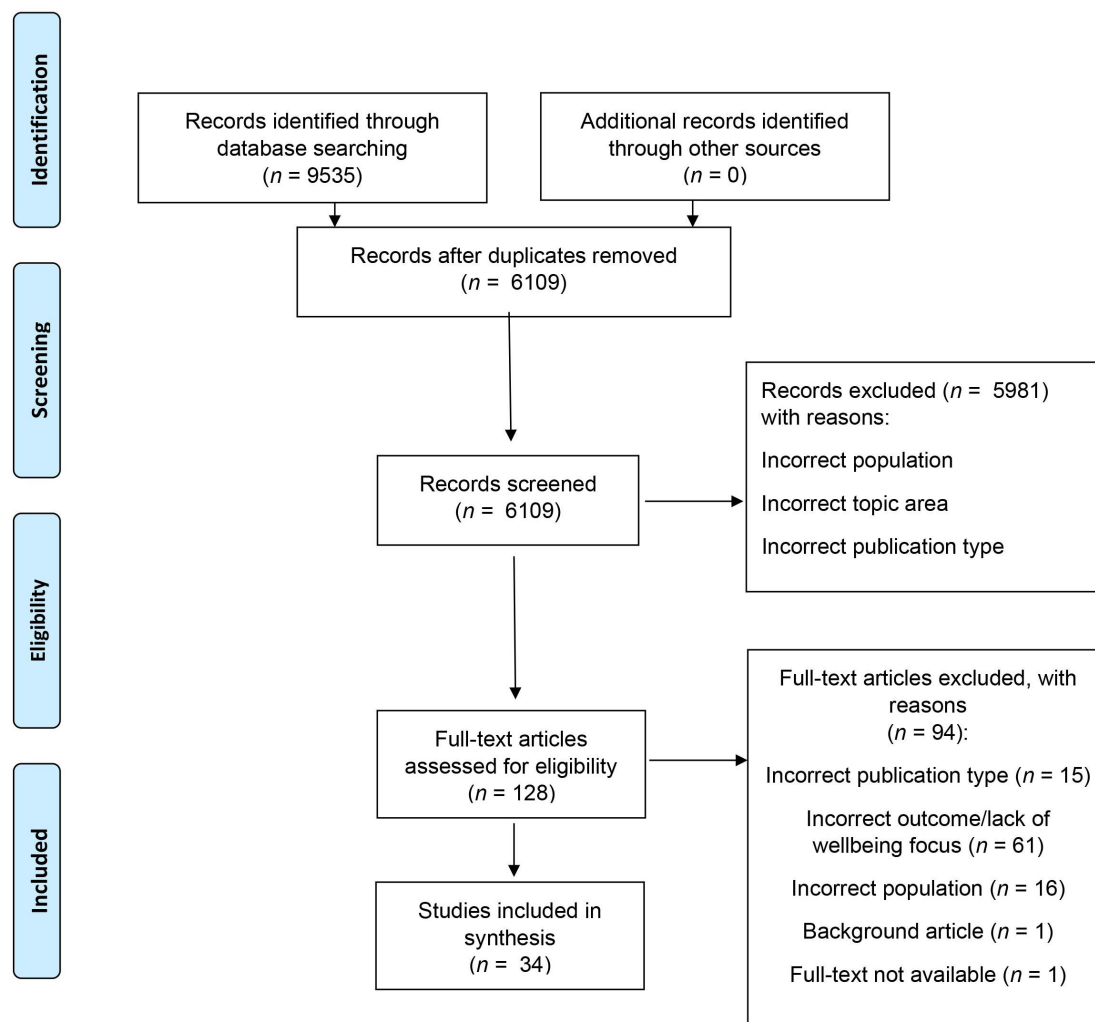


Figure 1 Preferred Reporting Items for Systematic Reviews and Meta-Analyses flow diagram.

Intervention studies versus non-intervention studies

There were 14 studies that explored well-being interventions (41%), while the other 20 studies (59%) either measured levels of well-being or similar variables or explored experiences of working in the ED, with some references to well-being.

Types of intervention

Well-being interventions can be categorised into the following: individual, team/group or organisational/system-level. Individual-level interventions focus on improving individual coping resources and abilities (eg, resilience training, mindfulness), while team/group-level interventions centre around team dynamics and interactions (eg, fostering colleague support) and system-level interventions consider changes to the workplace conditions, environment and processes at the organisation as a whole (eg, changing a flexible working policy) (eg, 36). Most of the reviewed intervention studies (n=14) focused on individual-level interventions (71.5%), with much lower incidences of team-level interventions (14.25%) and organisational-level interventions (14.25%; see figure 2).

Interventions

There was a wide range of interventions conducted, with mindfulness as the most common (n=4). The interventions used within other studies can be seen in figure 3.

Table 2 Summary of participant job roles in different reviewed study designs

Participant job roles (mean %) in different study designs			
	Quantitative	Mixed methods	Qualitative
Nurse	46	39	56
Doctor	41	35	21
APP/ANP	4	7	0
Consultant	4	6	17.5
Allied health	1	4	1
Non-clinical	4	9	4.5

ANP, advanced nurse practitioner; APP, advanced practice provider.

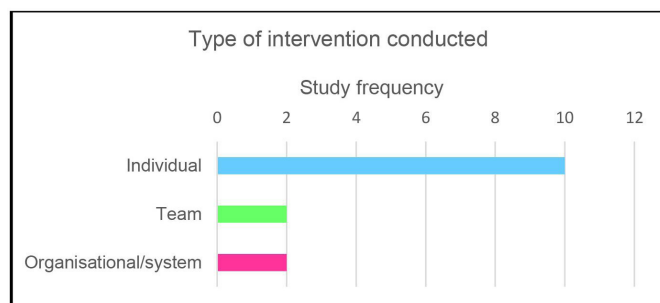


Figure 2 Bar chart showing the proportion of studies focusing on individual-level, team and organisational-level interventions.

Definitions and theories of well-being

For the following section, all two-part mixed methods studies^{32–35} will be considered as a whole, as they were based on the same underpinning theory or definition.

Most studies did not discuss an underpinning well-being definition or theory (78%). Within the studies that did discuss this (22%), there was little consensus among them; many different definitions and theories were used throughout. Some of these definitions and/or theories were developed in and used for the healthcare sector (n=3) while others were not (n=4).

Well-being definitions and frameworks within healthcare

The well-being definitions and theories routed in healthcare included: the WHO definition of health,⁴ improving joy in work framework³⁷ and the Stanford Model of Professional Fulfilment (SMPF) framework.³⁸

The WHO definition of health is as follows: ‘a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’ (39, p.1).

The ‘improving joy in work’ framework by the Institute for Healthcare Improvement³⁷ considers how to restore joy in work, through asking healthcare staff ‘what matters to you?’. The aim is that this allows healthcare leaders to understand enablers and barriers to joy in work, and

subsequently implement useful strategies to improve joy in work.³⁷

Finally, Bohman *et al*³⁸ developed the SMPF well-being framework for doctors with three domains: culture of wellness; efficiency of practice; and personal resilience. This framework combines two organisational-level factors (culture of wellness, efficiency of practice) with an individual-level factor (personal resilience) which all interact to encourage improvements in well-being.³⁸ Culture of wellness refers to ‘a set of normative values, attitudes, and behaviours that promote self-care, personal and professional growth, and compassion for colleagues, patients, and self’ (38, p.2). Efficiency of practice refers to ‘the value-added clinical work accomplished divided by time and energy spent’ (38, p.2). Finally, personal resilience refers to ‘the set of individual skills, behaviours, and attitudes that contribute to personal, emotional, and social wellbeing – including the prevention of burnout’ (38, p.3).

Notably, the papers that used definitions and/or theories to underpin their research tended to use more than one.^{26 40} Anderson *et al*²⁶ stated the WHO definition of health and implemented both the ‘improving joy in work’ framework and SMPF framework to underpin parts of the qualitative survey in their study. Kumar *et al*⁴⁰ discussed how the SMPF framework underpinned the factors used to measure well-being, while the ‘improving joy at work’ framework was used to develop the qualitative survey.

Well-being definitions and frameworks outside of healthcare

The remaining definitions used to underpin the reviewed papers were not rooted in healthcare literature. The job demands-control model⁴¹ was used as a framework for a quantitative survey study⁴² while the job demands-resources model⁴³ was used in both of de Wijn *et al*’s quantitative studies.^{44 45} Both models were developed within the field of occupational psychology.

The job demands-control model suggests that an employee’s level of control over their work environment

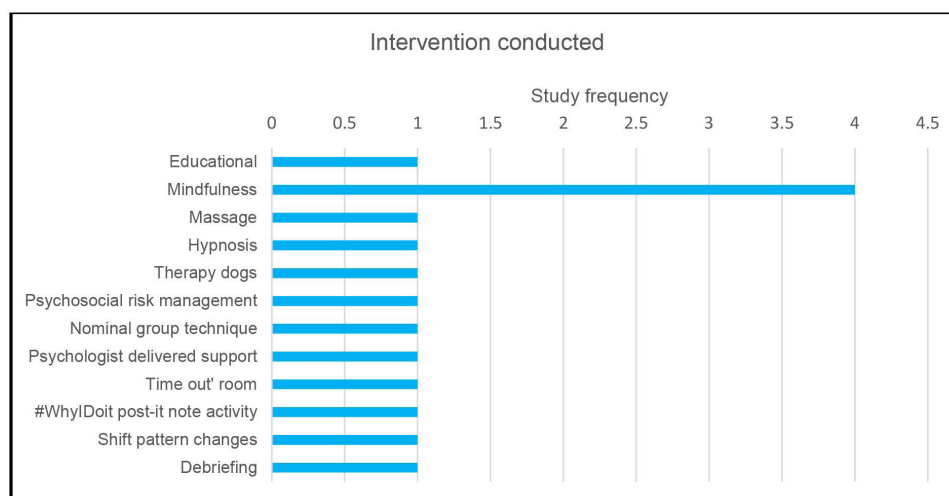


Figure 3 Bar chart showing the range of interventions conducted within review studies.

and tasks can help to buffer the negative effects of high job demands, which can improve well-being and lower levels of stress.⁴¹ The job demands-resources model is an extension of this, which differs by suggesting that control is one of many resources that help individuals to cope with the job demands (eg, completing tasks within a critical time period) and thus, have higher levels of well-being.⁴³

Comparatively, one reviewed study defined well-being using Massé *et al*'s (1998) conceptualisation which suggests that well-being is one part of mental health that exists on two dimensions: distress and well-being.⁴⁶ The well-being dimension includes: 'self-esteem, balance, social engagement, sociability, control over self/events, happiness' which is measured quantitatively using the Psychological Well-Being Manifestation Scale (46 p.325, 47).

Theoretical underpinnings in interventions

Out of the 14 interventions reviewed, only two studies were underpinned by a well-being definition or theory.^{44 48} Arnold *et al*⁴⁸ defined well-being using a blog definition to which there is no clearly stated evidential support but instead, appeared to be developed through experience as a medic.⁴⁹ de Wijn and van der Doef⁴⁴ used the widely known and evidence-based job demands-resources model to support their intervention.⁴³

Synthesis of findings

Quantitative approaches to ED workforce well-being research

Quantitative and mixed methods approaches currently dominate the ED workforce well-being literature and have provided some initial insights into ED workforce well-being.

Quantitative measures

There were few quantitative or mixed methods studies that explicitly measured levels of well-being in the ED workforce using a validated measure (online supplemental table 2). Instead, some used proxy well-being measures such as job satisfaction, work engagement and mental health to infer levels of well-being.^{42 45} Studies focusing on job satisfaction scores mainly showed positive findings; participants in a range of job roles reported relatively high levels of job satisfaction in the Netherlands, New Zealand and the UK,^{40 45 50} while another, much earlier study reported more moderate job satisfaction levels in the UK.⁵¹ One study also measured work engagement levels, finding that 61.4% of nurses reported high or very high engagement.⁴⁵ However, another study measured levels of mental health, finding that 29.9% of the doctors and nurses in their sample had poor mental health in Spain.⁴²

Somewhat surprisingly, half of the studies using explicit well-being measures found that baseline levels of well-being were 'moderate'; Hesselink *et al*⁵² measured ED workforce well-being in the Netherlands before, during and after the first COVID-19 wave, finding that although the peak of the wave did lower levels of well-being, at its lowest it was above the threshold of poor well-being

categorised by the WHO Well-Being Index (WHO-5). Similarly, another reviewed study conducting an evaluation of a mindfulness intervention in an Australian ED found that at baseline, the sample had 'moderate' levels of well-being according to the Warwick-Edinburgh Mental Well-being Scale.³⁴ Despite this, two studies reported relatively low or modest levels of well-being in populations of doctors and nurses.^{46 53} Thus, based on the reviewed quantitative studies, there is little consensus on levels of well-being across different ED sites and countries.

Other studies also included burnout scales as indicators of well-being (online supplemental table 3). The most common measure used was the Maslach Burnout Inventory (MBI) which measures burnout through three subconstructs: emotional exhaustion (EE), depersonalisation and personal accomplishment.⁵⁴ There was more consistency across the findings of these studies, with most reporting high levels of burnout among their sample of ED staff.^{34 45 55} However, Escribà-Agüir and Pérez-Hoyos⁴² found more modest burnout scores, with between 63.5% and 81% of nurses and doctors reported low to moderate EE which suggests lower levels of burnout in this sample.

A smaller number of studies used alternative measures of burnout; some were validated measures (n=3) and others were self-designed tools (n=2). Validated measures presented a similar picture to studies using the MBI; the Professional Quality of Life measure used in Cantu and Thomas⁵⁶'s study reported 55.9% of the sample experienced moderate burnout, despite no participants experiencing 'abnormal' burnout levels. Similarly, a study using the Copenhagen Burnout Inventory reported that 42.1% of the sample experienced personal burnout and 35% experienced work-related burnout⁴⁰ which is indicative of high levels of burnout among the ED workforce. Self-designed instruments reported similar findings of relatively high levels of burnout among ED staff.^{32 57} Despite this, one study using the Professional Fulfilment Index to measure burnout reported relatively low scores indicating low levels of burnout in this sample of doctors and advanced practice providers.⁵⁸

Qualitative study synthesis

The reviewed qualitative research focused on participant experiences by generally either reporting key enablers and barriers to well-being and related concepts^{26 40 59 60} or describing current challenges/stressors and positives of the working environment.^{61–65} The findings can be understood within three interconnected themes based on the socio-ecological model of mental health and well-being:⁶⁶ individual, group/interpersonal and organisational systems. This model suggests that these systems interact with each other and allow us to understand how different factors can influence well-being.

Interpersonal system

The findings showed that interpersonal factors were of major importance to ED workforce well-being: teamwork, support, communication and leadership were often cited

as important.^{26 40 59 61 62 65} Some studies described positive relationships with their team and/or leadership which could help to mitigate against other workplace issues (eg, high workloads),^{51 61 65} while others highlighted this as a key problem in their workplace, specifically discussing the lack of support, teamwork and/or leadership in their ED.^{26 40 62} This difference was evenly split among the reviewed studies.

Organisational system

As expected, many studies highlighted the negative impact of major organisational challenges on their experience of working in the ED. The most common challenges discussed were high workloads and the lack of resources (eg, staffing), pertaining to overall systemic pressures.^{26 40 59 61–63 65} These systemic pressures were reported to have a negative impact on the delivery of high-quality patient-centred care.^{26 40 65} This is significant as staff considered the ability to deliver high-quality patient-centred care as an important aspect of ED workforce well-being which made the job rewarding.^{26 40 51 59 65}

Finally, some studies highlighted the importance of professional development opportunities within ED across a variety of staff roles (eg, early career nurses, doctors, consultants).^{26 59 63 65} This appeared to have a positive impact on ED workforce experiences; however, one study suggested that the opportunity for professional development may be hindered by the ongoing systemic pressures.²⁶

Individual system

Individual factors were often reported by the reviewed studies as important aspects of ED workforce well-being. Professional growth was commonly discussed through the positive impact of dealing with interesting or complex clinical cases or being able to use skills competently in the ED environment through increased confidence.^{51 59 61 65} One study also discussed the positive impact related to identification with their professional role and feeling motivated.⁵⁹ Despite being individual gains, these factors are highly interconnected with interpersonal and organisational systems which allow for the support and resources to be able to experience professional growth.^{67 68} This is likely the reason that some studies reported issues in this area such as a diminishing sense of achievement and dissatisfaction at work⁶³ or the negative psychological impact of working in the ED.⁶⁵

To summarise, the experiences of the ED workforce are shaped by the individual, interpersonal and organisational systems that they work within; these systems present different interacting issues which can help to understand the ED workforce well-being.

COVID-19 qualitative studies

Four studies collected qualitative data during the COVID-19 pandemic to understand the experiences of the ED workforce during this time.^{33 52 60 64} These studies have been synthesised separately as they describe the

experiences of a unique period of time. As expected, most discussed the negative influence of specific COVID-19 stressors on their well-being: the lack of personal protective equipment (PPE); changing COVID-19 protocols on care and PPE; and increased moral distress were consistently discussed. Notably, studies reported the pervasiveness of collegiality and teamwork during this time which provided important social support.^{33 60} Leadership was discussed in both positive and negative ways; one study in the US discussed staff experiences of poor leadership which was described as unsupportive, distant and caring more about outputs than their team.³³ Another emphasised the protective nature of the supportive leadership experienced by participants, who felt that leaders genuinely cared about their well-being.⁶⁰

Interventions

As previously discussed, the most common intervention included in this review was mindfulness.^{34 35 55 69} The interventions that collected quantitative data mostly showed significant positive results for levels of well-being, psychological distress and burnout.^{34 55 69} The only exception to this was a study that showed no change in burnout scores following their mindfulness intervention.⁵⁵ Qualitative findings somewhat supported the positive impact of mindfulness on the ED workforce but also drew attention to the potential drawbacks of this type of intervention. One study reported that although 80% of participants found the programme acceptable, only 50% perceived it as valuable.⁵⁵ Meanwhile, Xu *et al*³⁵ received mixed feedback on a mindfulness smartphone application with some participants reporting benefits of taking part (eg, better stress management) while others reported drawbacks such as a lack of motivation and time.

Other notable interventions which reported positive findings included: a video debriefing programme to support well-being⁷⁰; tactile massage and hypnosis⁷¹; and Pups Assisting Wellness for Staff. In contrast, de Wijn and van der Doef⁴⁴ found less positive findings in their PRIMA intervention (psychosocial risk management approach) which decreased levels of work engagement and showed no change in burnout levels. Despite this, they also reported that in EDs where employees were more involved in the process, more positive changes in job factors and well-being were seen. The remaining reviewed interventions received little to no evaluation.

DISCUSSION

This scoping review has presented a summary of the available academic research relating to ED workforce well-being. The findings conclude that there is a limited evidence base exploring ED workforce well-being internationally, with existing studies predominantly using quantitative and mixed methods survey approaches. There is a clear lack of qualitative evidence using more in-depth methods (eg, interviews) and exclusively focusing on well-being. The results of the quantitative studies presented

mixed findings regarding ED workforce levels of well-being, which was unsurprising considering the lack of appropriate measures available to understand this (eg, 42 52). There are validated tools to measure physician well-being available (eg, 72), however many of the included studies used samples with several different job roles which would not meet the criteria to use the tools (eg, Physician Wellness Inventory). Despite this, other validated measures such as job satisfaction generally revealed positive findings while work engagement was a more mixed array of results. Meanwhile, studies that measured burnout tended to find high levels of this relatively consistently. Qualitative findings from multiple countries (eg, USA, UK, New Zealand) told a more coherent story relating to well-being experiences which highlighted several key issues: the importance of interpersonal factors (eg, teamwork) and the negative consequences of the lack of support from teams and leaders; the negative impact of organisational pressures (eg, workload) and chronic resourcing issues; and the challenges surrounding high-quality patient care and professional development opportunities. The findings also demonstrated how these are not stand-alone issues, but instead an intertwining network of factors that work together to shape ED workforce well-being. In comparison, the wider range of quantitative findings indicated a convoluted understanding of well-being in this population, which was highlighted by the lack of existing well-being definitions and theories used within the reviewed studies and the inconsistency among findings. Finally, the well-being-related interventions reviewed showed predominantly positive results with small effect sizes, while qualitative evaluation provided a mixture of positive comments about their use while also highlighting significant issues with time and motivation. However, a substantial number of interventions were not evaluated.

Strengths

This is the first review of its kind to map the existing evidence base regarding ED workforce well-being. Similar reviews have been undertaken with different healthcare staff populations such as intensive care nursing⁷³ and general healthcare staff populations,⁸ however, this scoping review moves towards developing a better understanding of workforce well-being in a specific, healthcare environment which is unique in nature and currently under-researched (eg, 15). The review also used a systematic approach to conduct the literature search which allowed for a comprehensive overview of the available academic literature with limited selection bias.⁷⁴

Limitations

A key limitation of the review was the difficulty in defining well-being and subsequently identifying papers. A broad conceptualisation was used in line with the findings of a relatively recent scoping review which highlighted three core areas representing well-being: physical, psychological and social.¹ Although this allowed for a wide reach of

studies discussing well-being and a range of search terms were included to capture this, it is possible that some papers were missed that used different conceptualisations or phrases for well-being, or overlapped considerably with poor mental health outcomes which were excluded from this review. Moreover, using this search method which included all papers where well-being was a key component (eg, aims, findings) led to papers included that described the overarching theme of their research as well-being, but subsequently tended to focus on specific associated factors to well-being such as stress and coping, rather than well-being itself (eg, 62). Furthermore, most interview-based studies lacked an explicit well-being focus, with most discussing general experiences of working in the ED, which led to some discussion of well-being (eg, 65). However, this relatively broad search strategy was necessary due to the limited nature of the evidence base and the need to understand what is already known about ED workforce well-being, whether or not it was the original aim of the study.

Another limitation is that a significant proportion of reviewed studies were conducted during the COVID-19 pandemic and predominantly discussed the specific barriers to ED workforce well-being during this time (eg, personal protective equipment). This was expected due to the policy changes during this time (additional well-being funding and resources (eg, 75)) and widely publicised challenges faced by ED staff, which shed light on these well-being issues and prompted more data collection focusing on ED workforce well-being in response to the pandemic. However, it is unlikely that these data accurately reflect the current ED environment and its well-being challenges which are different from the COVID-19-specific challenges faced at that time.

Finally, in line with Levac *et al*'s⁷⁶ recommendations, it should be noted that the search strategy used has some limitations to its scope. Index terms were not used in the databases searched, while database limiters were used to refine the search, due to time and resource limits (see online supplemental appendix 1).

Implications and future directions for research

The review findings have clear implications for policymakers relating to the ED and wider healthcare systems. The 14 interventions reviewed showed limited use of evidence-based well-being frameworks or definitions underpinning their methodology and application, leading to mixed, short-term results regarding their effectiveness. Many also lacked evaluation which is important for understanding the value of the interventions for ED workforce well-being. Moreover, despite the implementation of mostly individual-based interventions (eg, mindfulness), well-being remains a pressing issue for the ED workforce which needs to be understood better to eventually implement more effective interventions. One-way of improving this is by attempting to address the different socio-ecological levels related to well-being such as the relationships, community and organisational

levels outlined in Michaels *et al*⁶⁶ Mental Health and Well-being Ecological Model, which the reviewed studies often referred to as challenges to their well-being (eg, social support, workload (eg, 40)). However, to reach this point, a better understanding of ED staff experiences of well-being from a wider perspective (eg, the inclusion of more staff groups) is needed to ensure that future interventions are more effective than those currently being used.

The review findings have highlighted significant gaps in existing research on ED workforce well-being which future research should look to address. First, the limited well-being definitions and theoretical frameworks used in existing studies are not based on, and do not provide, a clear understanding of workforce well-being within the ED. The development of a working definition would enable more consistency across this research area and a basis for future research to build on which is tailored to the well-being needs of the ED workforce. Second, due to the small evidence base available, there is limited population diversity within existing research with a bias towards nursing professionals currently. Thus, it would be useful to understand the experiences of workplace well-being across the ED workforce, as the dynamic, interdisciplinary nature of the ED environment means that these experiences are likely to show similarities. Finally, there is a very limited qualitative evidence base focusing on more in-depth methods such as interviews and focus groups which is likely to benefit the research area by providing further insight into this population's experiences of well-being. Beyond ED workforce well-being, it is also imperative that further reviews are undertaken which draw together the bodies of literature focusing on mental illness in this population which will provide a wider picture of the key issues facing the ED workforce at present.

Conclusion

There is currently a limited evidence base exploring ED workforce well-being. This is particularly evident when considering in-depth qualitative research methods, the range of staff populations and appropriate definitions of well-being in this setting. This scoping review highlights the need for more high-quality research to be conducted and the development of a working definition of ED workforce well-being which could be used as the basis for intervention design.

X Lucy Swancott @lucyswancott, Natalie Armstrong @DrNatArmstrong, Damian Roland @damian_roland, Helen L Walters @psychology_geek and Kate Kirk @KateLKirk

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ORCID iD

Lucy Swancott <http://orcid.org/0000-0002-8586-3192>

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