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RESEARCH ARTICLE

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Challenges to well-being in critical care

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Abstract

Background: Paediatric critical care (PCC) is a high-pressure working environment. Staff experience high levels of burnout, symptoms of post-traumatic stress, and moral distress.

Aim: To understand challenges to workplace well-being in PCC to help inform the development of staff interventions to improve and maintain well-being.

Study Design: The Enhanced Critical Incident Technique (ECIT) was used. ECIT encompasses semi-structured interviews and thematic analysis. We identified 'critical incidents', challenges to well-being, categorized them in a meaningful way, and identified factors which helped and hindered in those moments. Fifty-three nurses and doctors from a large UK quaternary PCC unit were consented to take part.

Results: Themes generated are: *Context of working in PCC*, which examined staff's experiences of working in PCC generally and during COVID-19; *Patient care and moral distress* explored significant challenges to well-being faced by staff caring for increasingly complex and chronically ill patients; *Teamwork and leadership* demonstrated the importance of team-belonging and clear leadership; *Changing workforce* explored the impact of staffing shortages and the ageing workforce on well-being; and *Satisfying basic human needs*, which identified absences in basic requirements of food and rest.

Conclusions: Staff's experiential accounts demonstrated a clear need for psychologically informed environments to enable the sharing of vulnerabilities, foster support, and maintain workplace well-being. Themes resonated with the self-determination theory and Maslow's hierarchy of needs, which outline requirements for fulfilment (self-actualization).

Relevance to Clinical Practice: Well-being interventions must be informed by psychological theory and evidence. Recommendations are flexible rostering, advanced communication training, psychologically-informed support, supervision/mentoring training, adequate accommodation and hot food. Investment is required to develop successful interventions to improve workplace well-being.

KEYWORDS
critical care, health personnel, paediatrics, qualitative research, well-being

1 | INTRODUCTION AND BACKGROUND

Paediatric critical care (PCC) is a high-pressure working environment. It demands urgent clinical decision-making with increasingly complex and unstable patients. Alongside complex clinical decision-making,[1] PCC staff must communicate clearly with parents and involve them in treatment decisions. Hence, PCC staff are expected to comfort patients' parents through their trauma while being exposed to and affected by that trauma themselves.[2]

PCC staff experience high levels of burnout, symptoms of post-traumatic stress, and moral distress.[3–5] Burnout refers to work-related stress which manifests as emotional exhaustion, depersonalisation, and diminished sense of personal accomplishment.[6] Rates are higher among paediatric intensivists than general paediatricians[7]; burnt-out staff are likely to experience fatigue, headaches, irritability, emotional instability, and compassion fatigue.[8] Burnout has been associated with increased staff absenteeism, which has financial consequences both for individuals and employers needing to backfill for staff off sick.[9]

Compassion fatigue is indicated by forgetfulness, decreased attention span, physical illness, apathy and anger.[10] It has been related to vicarious or secondary traumatic stress (i.e., trauma experienced in response to someone else's trauma) and post-traumatic stress.[10–12] Work-related secondary trauma has since been included in the clinical definition of post-traumatic stress, indicating its severity.[13,14]

Moral distress relates to one's moral code-being unable to do what one knows is right due to circumstances outside their control.[15] Moral distress has been closely correlated with reasons for leaving nursing.[16,17] The link between moral distress and the crises currently being experienced in health care are unmistakable (West, cited in[18]). In the UK, there is a critical shortage of nurses with over 46 000 vacancies and reductions in people entering the profession.[19] The picture is similar in the US with a significant nursing shortage resulting in an increased workload for critical care staff.[20] This workforce shortage increases individuals' workload and exacerbates existing problems with shiftwork impacting on mental health, cognitive performance, fatigue, and safety.[21–24] Furthermore, tolerance for shift work declines in staff aged over 50, impacting on sleep quality, fatigue, family and social relationships, physical and mental health.[25]

Since before the COVID-19 pandemic, the UK National Health Service (NHS) staff survey (2019)[26] had reported worryingly high levels of work-related stress: 40.6% reported feeling unwell due to work-related stress in 2019 up from 36.8% in 2016. The UK Government Health and Social Care Committee (HSC) recognized an overreliance on individual staff going beyond their contractual agreements to deliver services, threatening their well-being.[18] Excessive workload and burnout are the most significant predictors of staff stress and intention to quit and are highly associated with patient satisfaction and medical errors (West, cited in[18,27]).

Despite this, there is very little work investigating successful coping strategies or interventions designed to improve workplace well-being.[28] This is a grave problem requiring urgent attention.[18,19,29]

What is known about the topic

- Paediatric critical care (PCC) is a high-pressure working environment.
- Staff levels of burnout, symptoms of post-traumatic stress, and moral distress are higher in this population than in health care professionals more generally.
- PCC staff must communicate compassionately with parents at significantly distressing moments in their lives.
- Some staff are affected by patients' and parents' trauma themselves.

What this paper adds

- Previously unknown details of the nature of experiences that challenges PCC staff well-being have been identified.
- Challenges to well-being are related to changes in the workforce, including staff shortages, and the paradox of an ageing workforce set against high proportions of newly qualified nursing staff.
- Challenges to well-being include unmet physiological needs such as adequate food and rest breaks.
- Recent years have seen a shift toward increasing complexity of patients in PCC, which brings significant challenges around societal expectations of treatment and treatment decisions with parents.
- This work emphasizes the significance of psychological safety within the context of strong leadership and peer support.
- Findings are supported by the psychological theory of self-determination, which defines the prerequisites of well-being as: autonomy, belonging and competence.
- The themes and the wishlist recommendations offer priority research areas for developing staff well-being interventions to reduce stress and burnout in PCC.

Indeed, recent research with interdisciplinary health care professionals, parents and families found that parties identified PCC staff well-being as a key priority.[9]

We know very little about the nature of typical challenges to everyday workplace well-being and to date, interventions to address well-being have been perceived as inaccessible or insufficient.[30]

1.1 | Research questions

What everyday challenges to their workplace well-being do PCC staff face? What helps and hinders those challenges?

2 | DESIGN AND METHODS

2.1 | Design

We used an exploratory design informed by the Enhanced Critical Incident Technique (ECIT) using Flanagan's five steps (see Table 1). The ECIT method was adapted by Butterfield et al.[32] to be used in a range of settings including but not limited to the health sector. Central to ECIT method is exploring what helps or hinders an individual in a particular situation. It is exploratory by nature and so in this study the question that drove the study was 'Reflecting on your experience in PCC to date can you recall a time when your well-being was challenged? In this situation what helped or hindered your well-being?'

2.2 | Sample and setting

The study was conducted in a large (31 beds, approximately 250 staff) quaternary PCC unit and transport service in the UK. The hospital provides level three critical care including specialist treatments to patients requiring respiratory, cardiac, gastroenterology care. It is the designated paediatric major trauma, extracorporeal organ support centre in the region catering for 35 specialties.*

Purposive sampling was used to ensure representation of disciplines and time working on PCC. The study information was circulated via email, staff groups on social media, and by word of mouth on the unit. Staff currently working in or who had recently (within 2 years) worked in PCC at the study site were eligible.

2.3 | Data collection tools and methods

Data were collected through online interviews conducted April to May 2021 by independent researchers. Interviews were recorded and transcribed verbatim. Transcripts were shared with participants. Interviews used a semi-structured topic guide (see Table 2).

2.4 | Data analysis

Transcripts were analysed using thematic analysis.[33] Steps described by Braun & Clarke[33] were followed. Interviews were transcribed verbatim and analysed using inductive thematic analysis.[33] The six steps described by Braun & Clarke[33] were undertaken to categorize the challenges to well-being experienced by staff. Participants were given the choice with whom their anonymized transcript would be shared to enable them to opt-out of having a fellow clinician see it. Those who chose this option were analysed by non-clinical team members (IB, RS). The remaining transcripts were analysed by clinical and non-clinical team members (IB, RM, SW). Initial analysis generated independent themes. All authors then met to agree the final set of themes presented. All participants were given the choice; they could opt for the clinical study authors (RM, SW) plus non-clinical study authors (IB, RS) to look at the anonymised transcripts or they could opt for only the non-clinical study authors to see their transcripts. HD engaged in discussions on the final main themes that were developed. After each interview, participants were sent their transcript and could omit and/or amend information if they so wished.

TABLE 1 The enhanced critical incident technique in five steps (adapted from[31]).

Step	Description	Specific steps for this study
1	To identify and establish the overall aim of the study	Identification of challenges to PCC staff well-being to inform interventions to improve it
2	To develop a plan to gather critical events in line with the aim of the study	Gather lived experience examples of critical[a] (or significant) events which challenge staff well-being
3	To collect data	Carry out semi-structured interviews with staff
4	To analyse the data and develop a set of categories and subcategories	Use thematic analysis to identify similarities and differences in the experiences that challenge staff well-being and to develop those experiences into meaningful categories
5	To interpret and report the data	Use thematic analysis to present a set of themes which represent staff challenges to well-being and to explain those findings with reference to psychological theory

[a]'Critical events' does not refer to critical clinical events, but is wider than that, encompassing any significant event which challenged staff well-being.

2.5 | Ethical and institutional approvals

The study was approved by the Health Research Authority (20/HRA/3817) and Aston University Research Ethics Committee (UREC280719). Permission was granted by the hospital's Research and Development department. Informed consent was provided.

2.6 | Reflexivity

Being reflexive was especially important because the research team brought a range of experience: a Health Psychologist and postdoctoral

*The PCC unit in this study caters for 35 specialties, including respiratory, cardiac, liver, general surgery, ear nose and throat (ENT), spinal, orthopaedics, metabolic, endocrine, neurology and neurosurgery. As the designated trauma centre in the region, it has access to all the radiological, surgical, and acute care specialities needed to provide care for a child who has undergone trauma. It is commissioned to provide Extra Corporeal Membranous Oxygenation (ECMO) for respiratory and heart problems.

psychology researcher independent from and with no experience of working in PCC, two Advanced Nurse Practitioners and a Consultant Intensivist based in PCC with over 50 years' combined experience. Throughout its development and delivery, the project was collaborative. Researchers reflected on their preconceptions related to well-being throughout.

3 | RESULTS

In total, 53 staff took part (43 women, 10 men, aged between 21 and 61). Experience on PCC ranged from 18 months to 25 years (see Figure 1).

Participants identified 70 challenges to their well-being which were clustered into thematic categories (see Table 3).

3.1 | Context of working in PCC

Data were collected during the COVID-19 pandemic.[†] Although restrictions had been lifted, memories of working during UK lockdowns were prescient and some practice changes remained. Nevertheless, issues raised by PCC staff pre-existed the pandemic.

There was a sense of gratitude among PCC participants during the pandemic; one said, they felt 'incredibly lucky' (P34 doctor), to be 'able to help [and that their] role was really important' (P12 doctor). For some international staff, timing was poor: 'we just literally got there, then we went into lockdown the next day' (P23 nurse), which made them feel 'homesick' (P15 nurse), being away from their family and not knowing anyone.

Generally, staff described PCC as being 'really busy, poorly staffed … and hard to switch off from' (P22 nurse). Staff were aware of the context of a 'national nursing shortage' (P10 nurse) and its impact on their ability to manage workload. One nurse described a work-life which made it impossible to consider their own well-being:

> '*It's probably just how chaotic we are sometimes and how intense the unit is and the high acuity of the patients … We have to put these people and families first, that we push ourselves back and we don't think about wellbeing … I don't know how it could be done differently*.' (P25 nurse)

TABLE 2 ECIT semi-structured interview topic guide (adapted from[32]).

Topic	Open-ended question
Well-being	What does well-being mean to you? On a scale of 1–10, how would you rate your well-being now?
Challenge to well-being	Can you give me a specific example of when your well-being was challenged? There are no limits to how many examples you provide or when they happened
Hindering factors	Thinking about that specific event, can you identify what it was about it that challenged your well-being?
Helpful factors	Thinking about that specific event, can you identify what was helpful to your well-being at that time?
Wish list	In an ideal world, what would you like to see happen in your workplace to improve your well-being?

There were pressures felt around increasing busyness, bed shortages, and frustrations with systems which impede staff's ability to focus on clinical work.

> '*Nowhere is quiet…the unit is like a zoo*' (P3 doctor)

> '*The bits that I hate are the constant bed crisis, and the management bureaucracy. If you could just do the clinical and know that you were always going to have the resources that you need to do the best of your ability, it would be an absolute dream*.' (P31 doctor)

One participant described feeling well-equipped to deal with clinical stresses, but like P31, not with the addition of administrative tasks:

> '*I think we've been quite good … with training us how to deal with clinical stress. I am not good at dealing with any admin stress because I don't have a bloody clue how it works … I need a break but I also need to phone someone to find out how my pass can open up the drug room … so that stuff does affect you*.' (P50 doctor)

Some staff perceived that as well as PCC staff managing their own caseload, they were expected to help and be flexible when other areas of the hospital were experiencing pressures. This was experienced as frustrating:

> '*[There is] very much the feeling that PCC, we just have to absorb everything … but we are the ones who have to pick up the pieces at 2 or 3 in the morning when there's another sick child who needs a bed, and the people who make the decisions about staffing and prioritisation are never there. We're the ones who are there … and you make it work because you're a team, … by putting huge pressure on an already very tense system, and you make it work through*

[†]Between March and June 2020 in the UK, a national lockdown was introduced during which people were only permitted to leave their household for very limited purposes:

- Shopping for basic necessities, for example food and medicine, which must be as infrequent as possible
- One form of exercise a day, for example a run, walk, or cycle – alone or with members of your household
- Any medical need, including to donate blood, avoid injury or illness, escape risk of harm, or to provide care or to help a vulnerable person
- Travelling for work purposes, but only where you cannot work from home

UK government guidance during lockdown is available here: https://www.gov.uk/government/publications/full-guidance-on-staying-at-home-and-away-from-others/full-guidance-on-staying-at-home-and-away-from-others#stopping-public-gatherings.

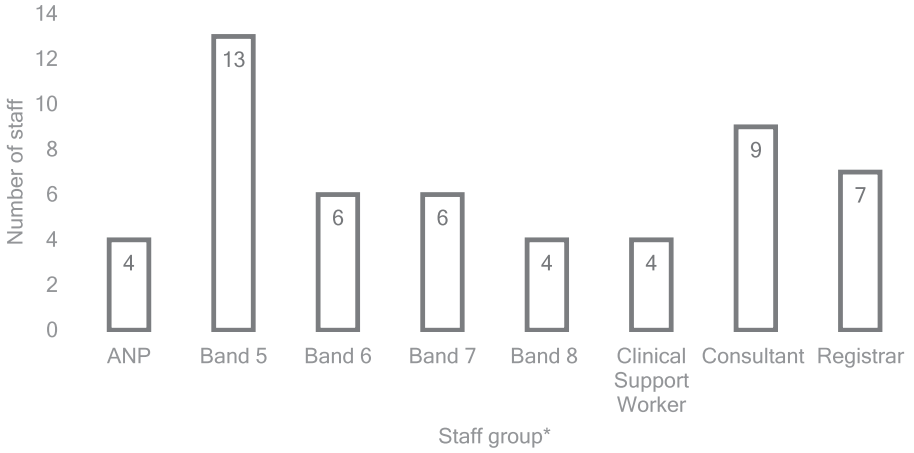

FIGURE 1 Participants by staff group. *Advanced Nurse Practitioners (ANPs), Bands 5–8 and Clinical Support Workers are categorized as 'nurses' and consultants and registrars are categorized as 'doctors' in the findings section to maintain anonymity among smaller groups of staff.

TABLE 3 Thematic categories of challenges to staff well-being and their wish list recommendations.

Themes	Subthemes	Description	Wish list recommendation
1. Context of working in PCC	a. Working during the COVID-19 pandemic b. The pressures of PCC	Experiences of working during the COVID-19 pandemic were described. The atmosphere in PCC was described, its uniqueness in comparison to the wider hospital.	Make staffing decisions informed by current workloads. Introduce flex in the system to ensure appropriate skill mix. Self-rostering to help with flexible working.
2. Patient care and moral distress	a. Unexpected medical outcomes b. Increased complexity of care c. Moral distress	Increasing complexity of patients, unexpected patient deaths, and changes in societal perceptions of medical care were discussed.	Psychologically informed peer support, debriefs, and psycho-educational support. Provision of one-to-one psychological support, including psychotherapy, counselling, clinical supervision. Provide clear links to existing support. All staff be encouraged to attend patient mortality & morbidity meetings. Staff notes relaying positive patient stories once discharged from PCC.
3. Teamwork and leadership	a. Teamwork b. Leadership c. Relations between PCC staff and their employer	Teamwork and good management were identified as significant. This helped develop a psychologically safe working environment in PCC.	Training for senior staff on professional boundaries in supervision, mental health first aid training, suicide awareness training.
4. Changing workforce	a. Ageing workforce b. Shift work c. International staff	The national shortage of nurses added burden to an over-stretched workforce. Night shifts challenge the ageing workforce.	Pilot rostering methods to enable sequential reduction of night shifts for staff over age 45. Opening the conversation about menopause and the available support.
5. Satisfying basic human needs	a. Facilities for restful breaks b. Food and drink c. Car parking	Staff identified problems with facilities for breaks and on-call staff, food availability and parking provision.	Ensure 24-h provision of hot food, better provision of comfortable break spaces and on-call quarters. IT support through 24-h working day. Set-up links with city council to provide safe, long-term, subsidized parking

> *the flexibility and adaptability of the nursing team, and by asking them to do things which are not really the correct thing to do, but it's the least-worst option.*' (P31 doctor)

Clearly, PCC staff feel that management staffing decisions are not informed by reality. This stretches PCC, removes any possible flexibility, and makes staff feel under-valued.

3.2 | Patient care and moral distress

An added pressure to staff well-being is the recent change in PCC patients. There are increasing numbers who have 'long term chronic complex' conditions (P31 doctor), which alongside significant advancements in medical technology, make it incredibly challenging for staff to feel good about the care they are providing. Keeping

patients alive does not always equate to the best quality care for the patient and their family:

> '*We have a real shift in societal expectations, so it's a move towards if a child dies it's somebody's fault, as opposed to sometimes children die. [If] we are not in agreement with … stopping treatment, that can be quite distressing because … when you know a child isn't going to survive, and you are carrying out invasive, painful treatments on them, then that's a real source of moral distress. Because our first priority has to be the child, and the second priority is the family. We always try to work with families, and sometimes it can be really hard to reconcile that the family is asking you to do something that you think is wrong*.' (P31 doctor)

Another staff member agreed, describing complicated scenarios where competing interests come into play, which can lead to traumatic experiences for all:

> '*So they're stuck on a ventilator, they haven't gone home, they haven't lived, they haven't had experiences and they never will… I'm the one at the end of the day giving them the sedation, the painkillers, the things that are keeping them alive, [it] ain't comfortable… if I thought about it all the time, you'd be depressed*' (P48 nurse)

Such critical, highly contentious and emotive situations demand resilient systems and thriving staff. Exposure to increasingly complex patients coupled with needing to communicate compassionately with parents about life and death decisions requires highly advanced skills. Executing those skills in an already stretched system becomes incredibly difficult.

An additional layer to the challenges staff in PCC experience is working with 'kids of my child's age' (P26 doctor):

> '*When a young [patient] unfortunately passed away … that was the same age as my [child] … I felt helpless and very sad which I hadn't really expected*.' (P10 nurse)

This is something for which staff could have been prepared by acknowledging its likelihood and encouraging staff with close familial connections to children to reflect on it.

Another layer is the 'unpredictability and unexpected (patient deaths which have) absolutely stunned (staff) into silence' (P14 nurse). This requires psychologically safe spaces for staff to react emotionally and identify mechanisms which will help them recover and embed their growing emotional intelligence into their practice.

3.3 | Teamwork and leadership

Central to creating that psychologically safe space and building resilience are teamwork and leadership. In our sample, there was clear recognition of 'strong leadership over the years' (P33 doctor):

> '*[PCC] is a place that gives you real psychological safety because you feel you can say what you think, and you won't be judged*' (P17 nurse)

Mostly, staff felt their colleagues were approachable and there was a healthy culture of help-seeking:

> '*All of the staff are always asking how are we doing? Especially the education team managers, they're always asking me how am I doing, my colleagues as well, so that's brilliant for me*.' (P15 nurse)

This sense that there is 'always somebody around that you can speak to … if you're feeling a particular type of way' (P36 nurse) and that 'I can ask them questions if I feel that I don't know anything or if I feel stressed about the situation, a patient, I have lots of people I can talk to' (P35 doctor) makes staff feel at home in the unit. For those who do not feel comfortable speaking with colleagues in person, there are well-being pages on social media which offer a different outlet. Indeed, teamwork and peer support were highlighted by staff as central to success:

> '*The teamwork is the thing that really keeps it all going because … when you're working as a team, it's a phenomenal feeling*.' (P8 nurse)

> '*knowing that our peer group is actually really, really supportive of each other*.' (P17 nurse)

When the team gels and staff feel psychologically safe to express their vulnerabilities and feelings with each other, a real sense of work satisfaction is achievable.

3.4 | Changing workforce

The increase of newly-qualified staff and changes in workforce have revealed further challenges to staff well-being:

> '*We have an incredibly junior workforce on the unit and certainly that can be stressful because … you don't actually know a lot of the people you work with. So that's quite stressful. I do think we drop junior nurses in at the deep end a bit, some of them swim, but some of them sink … I mean some of them are 22 and I would have still been at university then*.' (P13 doctor)

This extract emphasizes the young age at which newly-qualified nurses enter the profession which can mean they have limited experience of stressors and undeveloped coping strategies. It also means it is difficult to become familiar with staff skillsets, to get to know them, a requirement of a functional and successful team.

On the other hand, some staff expressed concerns about their ability to continue with shiftwork, especially nightshifts, as they aged.

> 'I start to feel more how it's affecting my mental health, it's affecting my mood, the tiredness… it's very frustrat [ing]… even struggle to be a normal person at home because you're just fatigued… you get low moods… your tolerance… your mood is not good… I feel like I get angry more easily … your bucket… fills up more quickly when you're tired.' (P5 doctor)

For women, the effects of ageing were compounded by perimenopause: 'hormonal shifts make it a hundred times worse' (P17 nurse). Symptoms of menopause are not limited to fatigue, but also 'brain fog', lost confidence, and sometimes lack of awareness of hormone replacement therapy, which could reverse symptoms.

Not feeling able to manage or recover from nightshifts as one ages has implications for individuals, the system and patients. Staff may take 'longer to process and come up with what should be a more reflex decision' (P33 doctor) even though they are fully aware that 'this is really important, we have to be awake' (P27 doctor). In PCC, decision-making is critical and requires fully functional, resilient staff. It is clear current structural workforce challenges translate into no flex in the system making it impossible to create a more manageable workload. This is compounded by the absence of a plan for rostering which considers the requirements of an ageing workforce to ensure staff are psychologically healthy.

3.5 | Satisfying basic human needs

Challenges to well-being also involved safety, nourishment, and comfort. For nightshifts or on-call staff, accommodation was described as 'pretty pathetic … a dodgy bed, there's tap water that comes out cloudy and looks like you might catch something from it' (P13 doctor). Staff even reported a lack of availability of food whilst working nights:

> 'They could stock the vending machine more regularly… we all need that sugar to get us through those 13 h' (P21 nurse)

More generally, there was a reported lack of 'protected breaks in a nice room where we can switch off totally with no interruptions' (P32 nurse). A central concern among staff was their safety walking to and from parking areas. This is partly a product of being at a city-centre site but was raised as an issue which could be solved with the right partnerships and investment.

> 'Recently my car was broken into at the carpark. It was all smashed up. And that was rubbish. And I'd just done 3 nightshifts, and I'd finished Mother's Day morning, and I'd bought a plant for my mum and it was on the passenger seat, and I got back to this carpark and it was just thrown onto the floor. My car had been smashed up, and that was… and I look back now and I think, gosh. It still [annoys] me now.' (P51 nurse)

There was clear exasperation among staff about how these basic requirements could have been overlooked and impatience for something to be done about them.[‡] Limitations in buildings and space around hospitals is not unique to this site, but it has clear significance in relation to staff well-being and feeling valued by their employer.

3.6 | Wishlist recommendations

Staff identified several wishlist items. Some were identified as 'quick fixes' which have been reported back to the unit; others require buy-in from management or government intervention to initiate and sustain long-lasting change and as such are beyond the scope of this project. Nevertheless, they identify clear recommendations from their lived experience, which could contribute to improved PCC staff well-being (see Table 3).

4 | DISCUSSION

This paper has described the first in-depth experiential exploration of challenges to PCC staff workplace well-being. Identifying aspects which helped and hindered those challenges using the ECIT is a novel methodology that will inform future interventions to improve well-being.

Participants reported that while they were used to the high-pressured context of PCC, the situation had become more challenging due to workforce shortages, bed shortages, and persistent problems with bureaucratic or technical systems which created unnecessary pressures. Staff shortages did not simply leave the unit under-staffed but without the right skill mix which is an internationally observed problem that is likely to threaten the quality-of-care staff are able to provide.[34]

The increasing complexity and chronicity of PCC patients, set against challenges of an overloaded workforce, were described by participants as key determinants of moral distress. Moral distress features significantly among reasons to leave the profession[26,35] and it increased during and following the COVID-19 pandemic.[36,37] Participants identified the psychologically safe space within the unit and team as crucial in managing moral distress, legitimizing it, and enabling sharing of experiences to foster a supportive culture which acknowledges 'it's okay to not be okay'.[§] This demonstrates that staff felt their workplace fulfilled the criteria of a psychologically informed environment where honest communication is possible.[38]

Given 40% of PCC staff experience burnout, moral distress and/or symptoms of post-traumatic stress, there is clearly a well-defined need for psychological support.[4,39] It is not sufficient to provide psychological therapy for those at crisis point, but to create a trauma-informed workplace.[38,40] Kazak's[41] model of psychological

[‡]Some changes to 24-h food provision and comfort of staff spaces have already been made following the study.
[§]See for example: https://iokn2bok.org/.

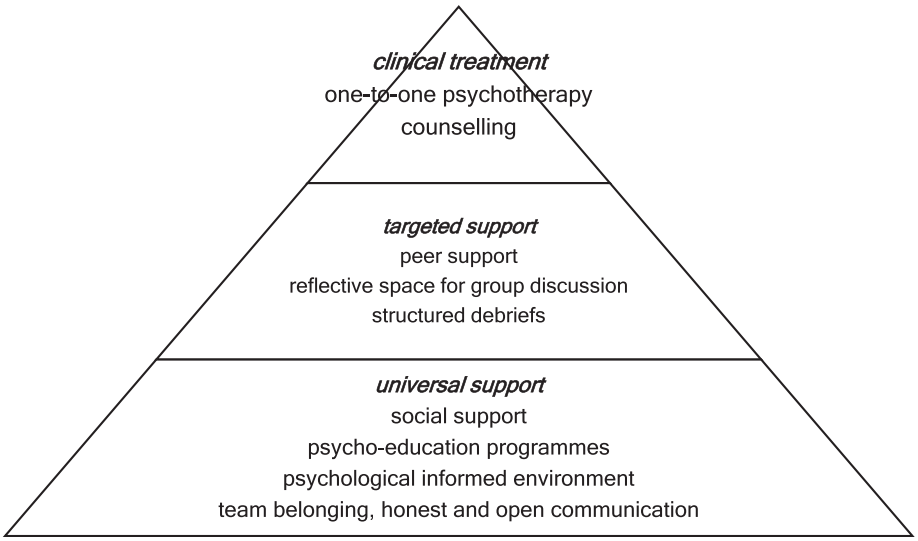

FIGURE 2 Model of psychological support (adapted from[41]).

support for children and families in PCC can be adapted to form a model of psychological support for PCC staff.[38,42,43]

The model (see Figure 2) has *universal support* at the base of the pyramid, indicating staff require foundational support, that psychologically safe space, a team culture which nurtures its staff, a sense of belonging, and honest, open communication, especially when things are challenging or mistakes are made.[30,44] This could include regular reflective sessions, but also social support activities. The middle layer is *targeted support*, provided to staff at timepoints or in response to identified scenarios, which have challenged their well-being, for example, peer support, structured debriefs or drop-in sessions with a psychologist.[45–48] At the top is *clinical treatment*, for example, specialized psychotherapy or counselling, for those with persistent or high-risk symptoms of burnout, moral distress or post-traumatic stress.

Getting psychological support right requires specialist staff, psychologists, who are familiar with the unique challenges of PCC. While senior colleagues can provide mentorship, comfort, and wisdom, providing psychological support for significant mental health difficulties requires high-level psychological training. Moreover, those providing support need the structured support required in psychological practice, for example, clinical supervision, to look after their own mental health.[43]

Participants raised several points relating to the ageing workforce. We know shiftwork can impact on cognitive function, sleep, and mental health and it gets worse with age.[21,22,25] Furthermore, the UK NHS workforce is mirroring the general population with 46% aged 45 or over,[49] a pattern replicated globally.[50] Rostering has long been a challenge within health care. Our participants' assertion that self-rostering would increase their autonomy and subsequently their work-life balance and job satisfaction is supported.[51,52] Self-rostering is not without its challenges, and its appropriateness to a PCC context would require careful investigation, but its potential benefits should not be overlooked.

Staff reported a lack of physical facilities. They reported having no quiet space to eat or take a break; there was inadequate accommodation for on-call staff; hot food wasn't available 24 h; and parking facilities were experienced as unsafe. These are basic *physiological needs*, which sit at the bottom of Maslow's[53] hierarchy of needs (see Figure 3). This means they are the foundation on which to build community and psychological support. This is an issue that could be mistakenly conceived of as minor, but it made staff feel undervalued.

In line with Maslow's identification of *love and belonging*, and *esteem*, the self-determination theory tells us that to thrive at work, staff must have a sense of *autonomy*, be *competent* at their job, and feel they can *relate* well with their colleagues.[54] These are described as basic psychological needs for psychological growth and well-being.[44] Previous research with PCC staff corroborated this theory[30,55] and these concepts were identified in a recent British Medical Association (BMA) report to represent the A-B-C of well-being in medical practice[29]: *autonomy/control*, *belonging* and *competence*. Together with evidence cited, these psychological theories help explain the findings of this research. Furthermore, they identify the prerequisites for workplace well-being and the priorities for interventions to improve workplace well-being in PCC.

4.1 | Limitations

This study took place in one UK hospital PCC unit. Results may not transfer to other sites or countries but it clearly resonates internationally.[30,55,56] Further research in other countries would help confirm this transferability.

Data collection took place during the COVID-19 pandemic, which might raise questions about the longevity or relevance of findings in 'typical' working conditions. Nevertheless, as findings show, issues raised were not specific to the pandemic and relate closely to existing literature which predates it. Furthermore, health care work has been affected significantly by the pandemic[36,37,57] (Calkins et al., 2023), which has worked to further emphasize the urgent need to prioritize workplace well-being if PCC staff are to continue to deliver the high-quality, high-pressured work that is required of them.

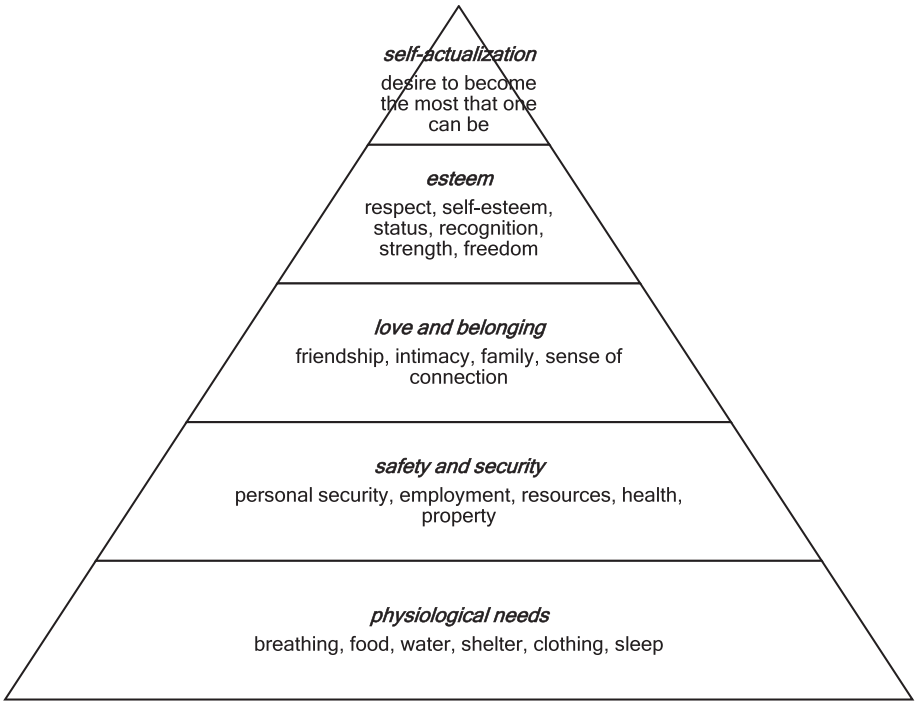

FIGURE 3 Maslow's hierarchy of needs (adapted from[53]).

4.2 | Clinical implications and recommendations for future research

Health care staff well-being is a key priority which must be integrated into everyday practice and workforce management in PCC.[9] Staff well-being interventions need to be guided by evidence and psychological theory, which help us identify active ingredients within interventions that are most likely to result in sustainably changed behaviours and systems.[58]

The evidence-based prerequisites for workplace well-being we have generated are re-thinking rostering to introduce flexibility; advanced communication training; psychologically-informed support, for example, psycho-education, structured reflective sessions, peer support, counselling; training for senior staff supporting others, for example, mental health first aid, setting boundaries; adequate accommodation for on-call staff, hot food available 24 h and safe parking.

Moreover, research needs to be collaborative, working closely with national health agencies, professional bodies and individual hospitals to pilot interventions before beginning to evaluate their effectiveness. Appropriate outcome measures must be identified and tested for feasibility. Primary outcomes are likely to be psychological measures of well-being, resilience, burnout, post-traumatic stress, and moral distress, with the possibility of examining the impact of well-being interventions on staff sickness and retention rates.

5 | CONCLUSION

This novel research has described in-depth significant challenges to workplace well-being among PCC staff. Recommendations from lived experience resonate with worldwide evidence. Investment in research, collaborative working with governments, professional bodies, and clinical and academic researchers is required to build an evidence base which will deliver successful interventions to improve and maintain PCC staff well-being.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

Research data are not shared.

PATIENT CONSENT STATEMENT

All participants gave informed consent.

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REFERENCES

1. Yee A. Clinical decision-making in the intensive care unit: a concept analysis. *Intensive Crit Care Nurs*. 2023;77:103430. doi:10.1016/j.iccn.2023.103430

2. Colville GA, Dawson S, Rabinthiran S, Chaudry-Daley Z, Perkins-Porras L. A survey of moral distress in staff working in intensive care in the UK. *J Intensive Care Soc*. 2019;20(3):196-203.
3. Coomber S, Todd C, Park G, Baxter P, Firth-Cozens J, Shore S. Stress in UK intensive care unit doctors. *Br J Anaesth*. 2022;89(6):873-881.
4. Jones G, Colville G, Ramnarayan P, et al. Psychological impact of working in paediatric intensive care. A UK-wide prevalence study. *Arch Dis Child*. 2019;105(5):470-475.
5. Rodríguez-Rey R, Palacios A, Alonso-Tapia J, et al. Burnout and post-traumatic stress in paediatric critical care personnel: prediction from resilience and coping styles. *Aust Crit Care*. 2019;32(1):46-53. doi:10.1016/j.aucc.2018.02.003
6. Maslach C, Jackson SE, Leiter MP. *Maslach Burnout Inventory*. Consulting Psychologists Press, Incorporated Sunnyvale; 1996.
7. Garcia TT, Garcia PCR, Molon ME, et al. Prevalence of burnout in pediatric intensivists: an observational comparison with general pediatricians. *Pediatr Crit Care Med*. 2014;15(8):e347-e353.
8. West MA, Eckert R, Steward K, Pasmore WA. *Developing Collective Leadership for Health Care*. Vol 36. King's Fund; 2014.
9. Tume LN, Menzies JC, Ray S, Scholefield BR. Research priorities for UK pediatric critical care in 2019: healthcare. *Pediatr Crit Care Med*. 2019;22(5):e294-e309. doi:10.1097/PCC.0000000000002647
10. Joinson A. Coping with compassion fatigue. *Nursing*. 1992;22(4):116-122.
11. Craig CD, Sprang G. Compassion satisfaction, compassion fatigue and burnout in a national sample of trauma treatment therapists. *Anxiety Stress Coping*. 2010;23(3):319-339.
12. Yoder E. Compassion fatigue in nurses. *Appl Nurs Res*. 2010;23:191-197.
13. American Psychological Association. *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed., American Psychiatric Publishing, Inc.; 2020. doi:10.1176/appi.books.9780890425787
14. Roden-Foreman JW, Bennet MM, Rainey EE, Garrett JS, Powers MB, Warren AM. Secondary traumatic stress in emergency medicine clinicians. *Cogn Behav Ther*. 2017;46(6):552632. doi:10.1080/16506073.2017.1315612
15. Jameton A. *Nursing Practice: The Ethical Issues*. Prentice Hall; 1984.
16. Whitehead PB, Herbertson RK, Hamric AB, Epstein EG, Fisher JM. Moral distress among healthcare professionals: report of an institution-wide survey. *J Nurs Scholarsh*. 2014;47:117-125.
17. Wilkinson JM. Moral distress in nursing practice: experience and effect. *Nurse Forum*. 1988;23:16-29.
18. Health & Social Care Committee. Workforce Burnout and Resilience in the NHS and Social Care. Available from 2021 https://committees.parliament.uk/work/494/workforce-burnout-and-resilience-in-the-nhs-and-social-care/publications/
19. Royal College of Nursing. Investing in Patient Safety and Outcomes: Health and Care Nursing Workforce and Supply in England. Available from 2022 https://www.rcn.org.uk/Professional-Development/publications/investing-in-patient-safety-and-outcomes-uk-pub-010-567
20. American Association of Colleges of Nursing. The essentials: Core competencies for professional nursing education. Retrieved December 1, 2021, from 2021 https://www.aa, cnnursing.org/AACN-Essentials
21. Brown JP, Martin D, Nagaria Z, Verceles AC, Jobe SL, Wickwire EM. Mental health consequences of shift work: an updated review. *Curr Psychiatry Rep*. 2020;22(2):7. doi:10.1007/s11920-020-1131-z
22. Maltese F, Adda M, Bablon A, et al. Night shift decreases cognitive performance of ICU physicians. *Intensive Care Med*. 2016;42(3):393-400.
23. Rimmer A. Almost half of consultant anaesthetists have had a car accident or near miss on their commute home because of fatigue. *BMJ*. 2019;366:l5341. doi:10.1136/bmj.l5341
24. Sanches I, Teixeira F, Dos Santos JM, Ferreira AJ. Effects of acute sleep deprivation resulting from night shift work on young doctors. *Acta Medica Portuguesa*. 2015;28(4):457-462. doi:10.20344/amp.5777
25. Clendon J, Walker L. Nurses aged over 50 years and their experiences of shift work. *J Nurs Manag*. 2013;21(7):903-913.
26. NHS Staff Survey Co-ordination Centre. NHS Staff Survey: National Results Briefing. Available from 2021 https://www.nhsstaffsurveys.com/results/national-results/
27. Dyo M, Kalowes P, Devries J. Moral distress and intention to leave: a comparison of adult and paediatric nurses by hospital setting. *Intensive Crit Care Nurs*. 2016;36:42-48. doi:10.1016/j.ccn.2016.04.003
28. Butcher I, Morrison R, Balogun O, et al. Burnout and coping strategies in paediatric and neonatal intensive care staff. *Clin Pract Pediatr Psychol*. 2023. Accessed December 15, 2022. https://psycnet.apa.org/fulltext/2023-65133-001.pdf
29. West M, Coia D. Caring for doctors, caring for patients. *General medical council*. Ref: GMC/CFDCFP/1119. 2019.
30. Butcher I, Saeed S, Morrison R, Donnelly P, Shaw R. Qualitative study exploring the wellbeing experiences of paediatric critical care consultants working in the UK during the COVID-19 pandemic. *BMJ Open*. 2022;12(8):e063697. doi:10.1136/bmjopen-2022-063697
31. Flanagan JC. The critical incident technique. *Psychol Bull*. 1954;51:327-358.
32. Butterfield LD, Maglio A-ST, Borgen WA, Amundson NE. Using the enhanced critical incident technique in counselling psychology research. *Can J Couns Psychother*. 2009;43(4):265-282.
33. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 2006;3(2):77-101. doi:10.1191/1478088706qp063oa
34. Matlakala MC, Botha ADH. Intensive care unit nurse managers' views regarding nurse staffing in their units in South Africa. *Intensive Crit Care Nurs*. 2016;32:49-57. doi:10.1016/j.iccn.2015.07.006
35. West M. Written evidence submitted by the King's fund (WBR0017) presented to UK Health & Social Care Committee. Workforce Burnout and Resilience in the NHS and Social Care. Available from 2021 https://committees.parliament.uk/writtenevidence/10944/html/
36. Nordin A, Engström A, Fredholm A, Persenius M, Andersson M. Measuring moral distress in Swedish intensive care: psychometric and descriptive results. *Intensive Crit Care Nurs*. 2023;76:103376. doi:10.1016/j.iccn.2022.103376
37. Romero-García M, Delgado-Hito P, Gálvez-Herrer M, et al. Moral distress, emotional impact and coping in intensive care unit staff during the outbreak of COVID-19. *Intensive Crit Care Nurs*. 2022;70:103206. doi:10.1016/j.ccn.2022.103206
38. Atkins E, Sued-Sabir H. PIE in PICU and NICU: developing psychologically informed environments. *Clin Psychol Forum*. 2022;359:9-19.
39. Colville G, Smith J, Brierley J, Citron K. Coping with staff burnout and work-related posttraumatic stress in intensive care. *Paediatr Crit Care Med*. 2017;18(7):e267-e273. doi:10.1097/PCC0000000000001179
40. Amateau G, Gendron TL, Rhodes A. Stress, strength, and respect: viewing direct care staff experiences through a trauma-informed lens. *Gerontol Geriatr Educ*. 2022;13:1-16. doi:10.1080/02701960.2022.2039132
41. Kazak AE. Pediatric psychological preventative health model (PPPHM): research, practice, and collaboration in pediatric family systems medicine. *Fam Syst Health*. 2006;24(4):381-395. doi:10.1037/1091-7527.24.4.381
42. Highfield J. The sustainability of the critical care workforce. *Crit Care Nurse*, British Association of Critical Care Nurses. 2019;24(1):6-7.
43. Highfield J, Neal A. Strategic working and supporting leadership within a healthcare context. In: Coniff H, ed. *Psychological Staff Support in Healthcare: Thinking and Practice*. Sequoia Books; 2022.
44. Deci EL, Ryan RM. The 'what' and 'why' of goal pursuits: human needs and the self-determination of behavior. *Psychol Inq*. 2000;11(4):227-268. doi:10.1207/S15327965PLI1104_01

45. Lyons N, Cooper C, Lloyd-Evans B. A systematic review and meta-analysis of group peer support interventions for people experiencing mental health conditions. *BMC Psychiatry*. 2021;21(315):315. doi:10.1186/s12888-021-03321-z
46. Scott Z, O'Curry S, Mastroyannopoulou K. The impact and experience of debriefing for clinical staff following traumatic events in clinical settings: a systematic review. *J Trauma Stress*. 2021;35:278-287.
47. Twigg S. Critical event debriefing: a review of approaches and objectives. *Curr Opin Pediatr*. 2021;32:337-342.
48. White S, Foster R, Marks J, et al. The effectiveness of one-to-one peer support in mental health services: a systematic review and meta-analysis. *BMC Psychiatry*. 2020;20(534):534. doi:10.1186/s12888-020-02923-3
49. British Medical Association. Supporting an ageing medical workforce. BMA 20190106. Available from 2019 https://www.bma.org.uk/advice-and-support/nhs-delivery-and-workforce/the-ageing-workforce/supporting-an-ageing-medical-workforce
50. The National Institute for Occupational Safety and Health (NIOSH). Productive aging and work. Centre for disease control and prevention. Available from 2015 https://www.cdc.gov/niosh/topics/productiveaging/dataandstatistics.html
51. Hansen AM, Nabe-Nielsen K, Albertsen K, et al. Self-rostering and psychosocial work factors: a mixed methods intervention study. *Appl Ergon*. 2015;47:203-210. doi:10.1016/j.aergo.2014.10.006
52. Webster B, Archibald D. Self-rostering, work-life balance and job satisfaction in UK nursing: a literature review. *Nurs Manag*. 2022;29:27-32. doi:10.7748/nm.2022.e2048
53. Maslow A. *Motivation and Personality*. 1st ed. Harper & Row; 1954.
54. van den Broeck A, Ferris DL, Chang C-H, et al. A review of self-determination theory's basic psychological needs at work. *J Manag*. 2016;42(5):1195-1229.
55. Pountney J, Butcher I, Donnelly P, Morrison R, Shaw RL. How the COVID-19 crisis affected the well-being of nurses working in paediatric critical care: a qualitative study. *Br J Health Psychol*. 2023;28:914-929. doi:10.1111/njhp.12661
56. Calkins K, Guttormson J, McAndrew NS, Losurdo H, Loonsfoot D, Schmitz S, Fitzgerald J. The early impact of COVID-19 on intensive nurses' personal and professional well-being: a qualitative study. *Intensive Crit Care Nurs*. 2023;76:103388. doi:10.1016/j.iccn.2023.103388
57. Stayt LC, Bench S, Credland N, Plowright C. Learning from COVID-19: cross-sectional e-survey of critical care nurses' satisfaction and experiences of their role in the pandemic response across the United Kingdom. *Nurs Crit Care*. 2023;28(2):298-306.
58. Michie S, Abraham C, Eccles MP, Francis JJ, Hardeman W, Johnston M. Strengthening evaluation and implementation by specifying components of behaviour change interventions: a study protocol. *Implement Sci*. 2011;6(1):1-8.

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