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Identifying the evidence base of interventions supporting mental health nurses to cope with stressful working environments: A scoping review

Alexis Foster BA, MPH, PhD, Research Fellow 🔟 | Emily Wood RNMH, PhD, Research Fellow 🔟 | Mark Clowes BA, MSc, Information Specialist 🔟

School of Health and Related Research, The University of Sheffield, Sheffield, UK

Correspondence
Alexis Foster, School of Health and Related Research, University of Sheffield, Regent Court, Regent Street, Sheffield S1 4DA, UK.
Email: alexis.foster@sheffield.ac.uk

Abstract

Aim: To scope the evidence on interventions used to help mental health nurses cope with stressful working environments.

Background: Nursing managers may implement interventions to support mental health nurses cope in their role. However, the evidence supporting these interventions has not been recently reviewed.

Methods: A scoping review was conducted which entailed searching and selecting potential studies, undertaking data extraction and synthesis.

Results: Eighteen studies published since 2000 were identified. They employed different designs, ten used quasi-experimental methods. Interventions involving active learning appeared beneficial, for example stress reduction courses and mindfulness. However, small sample sizes, short follow-up periods and variation in outcome measures make it difficult to identify the optimum interventions. No studies have considered cost-effectiveness.

Conclusion: There is some evidence that mental health nurses benefit from interventions to help them cope with stressful working environments. However, higher quality research is needed to establish the effectiveness and cost-effectiveness of different interventions.

Implications for Nursing Management: Managers should provide opportunities and encourage mental health nurses to engage in active learning interventions, for example mindfulness to help them cope with stressful working environments. Nurses also want managers to address organisational issues; however, no research on these types of interventions was identified.

KEYWORDS
burnout, coping, nurses, stress, well-being

1 | INTRODUCTION

Mental health nurses face stressful working environments because of their role in delivering support to people experiencing mental health issues. The role can entail significant emotional labour (Edward et al., 2017), aggression from service users (Jalil et al., 2017) and demanding workloads (Yanchus et al., 2017). This can result in workplace stress (Lanctôt & Guay, 2014), reduced well-being (Edward et al., 2017) and burnout (Morse et al., 2012). Furthermore, it can negatively impact on the quality of care delivered to service users (Roche et al., 2011) and result in increased absenteeism and decreased workplace retention (Lamont et al., 2017).

In response, nurse managers are implementing interventions to support mental health nurses to cope with working in stressful environments (Wood et al., 2019). Interventions include mindfulness practice (Munn, 2018a), resilience training (Foster, Shochet, et al., 2018) and communication skills courses (Traynor, 2017). We define coping as mental health nurses themselves or organisations adopting methods to support people working in mental health services (which are considered stressful environments), so coping is a process rather than a dichotomous variable of someone either coping or not coping (Carson & Kuipers, 1998). Often interventions focus on addressing a specific psychological construct including burnout, resilience or well-being but are comparable in terms of seeking to support mental health nurses to cope with stressful working environments (King & Rothstein, 2010). Furthermore, research has found that relevant psychological constructs are inter-related, so interventions which reduce burnout can also result in people experiencing improvements in their levels of stress and resilience (Lee et al., 2019).

Research has evaluated the impact of interventions supporting mental health nurses. These were reviewed by Edwards and Burnard (2003), who identified that interventions including stress management courses, relaxation sessions and training in psychosocial skills appeared effective. A more recent meta-analysis by Dreison et al. (2018) considered burnout interventions for mental health professionals and had similar findings. Foster et al. (2019) undertook a review focused on resilience and identified that resilience training programmes appear beneficial. Despite these two reviews being conducted a decade after Edwards and Burnard (2003), they all reported similar weaknesses with the evidence base. These included studies having small samples, short follow-up periods and studies using different outcome measures, making comparisons difficult. Whilst these three reviews are useful, they have limitations. Edwards and Burnard's (2003) review was conducted almost twenty years ago; Dreison et al. (2018) do not specifically focus on mental health nurses and Foster et al. (2019) only consider resilience interventions. Consequently, there is a need to understand the breath of literature that evaluates interventions to support mental health nurses to cope with stressful working environments, irrespective of the specific psychological construct that they are aimed at. This will help nurse managers understand the evidence on interventions that they may be implementing whilst also identifying priorities for future research.

1.1 | Aim of the review

The aim of the review is to scope the literature to identify the nature of evidence evaluating interventions supporting mental health nurses to cope with stressful working environments.

2 | METHODS

A scoping review was conducted because we wanted to explore the nature of evidence as well as considering what future research is needed (Armstrong et al., 2011; Grant & Booth, 2009). Scoping reviews can be undertaken iteratively, developing the parameters of the review as literature is identified. We conducted the review in 2020, drawing upon established guidance (Arksey & O'Malley, 2005; Colquhoun et al., 2014) and reporting standards (Tricco et al., 2018) (Appendix S1).

2.1 | Stage 1—Identifying the research questions

The research questions were to scope the nature of evidence on interventions that may help mental health nurses cope with stressful working environments and to identify areas of future research.

2.2 | Stage 2–Identifying the relevant studies

We iteratively refined the inclusion and exclusion criteria after performing the search. Initially, we were unsure about the extent of research on mental health nurses. Consequently, a search process was designed that also identified literature related to any type of nurse or mental health professional, for example psychologists. This gave us the potential to consider the relevance of studies focused on similar occupational groups if there was a lack of literature on mental health nurses.

Database searches were undertaken in MEDLINE, EMBASE, PsycINFO and CINAHL. Search terms were related to workplace, potential interventions, for example yoga, psychological constructs such as stress and staffing terms including team and staff (Appendix S2 provides an example of the search). The search sought to identify the breadth of literature rather than be exhaustive (Grant & Booth, 2009). Consequently, the search strategy did not undergo the extent of refinement that would be undertaken for a systematic review (Morris et al., 2016). We also conducted reference checking of identified reviews for relevant primary studies. A lack of researcher resource prevented us from utilizing other search techniques.

As the search identified a number of studies involving mental health nurses, we amended the inclusion criteria to focus on them. Other inclusion criteria were studies including information on an intervention's impact, be published between 2000 and June 2020 and be in English.

2.3 | Stage 3—Study selection

AF screened all the titles and abstracts, undertaking full-text review on potentially relevant studies. EW and MC provided support including giving a second opinion about some studies' eligibility. We did not have the resources to have two researchers undertake study selection. The results were reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow chart (Moher et al., 2009).

2.4 | Stage 4—Charting the data

AF undertook data extraction using a standardized form to chart the data. We considered study design, population, sample size, setting, conduct, findings and reported limitations. We also extracted information on the interventions including content and delivery method. We reflected on the quality of studies because it has implications for future research. However, systematic quality appraisal using a specific criteria was not undertaken because it was a scoping rather than systematic review (Munn et al., 2018b).

2.5 | Stage 5—Collating, summarizing and reporting the results

Narrative synthesis was used to collate the extracted data (Barnett-Page & Thomas, 2009).

3 | RESULTS

3.1 | Selection of studies

The search yielded 8,682 records (Figure 1). Initially, 166 duplicates were removed. Following title/abstract review, 8,439 records were excluded. Key reasons for exclusion were studies (a) focused on service users/informal carers or the general public, (b) measuring prevalence or causes of stress-related constructs and (c) staff development. There was a high rate of exclusion because the search was not restricted to studies about mental health nurses (as explained previously). Seventy-seven studies underwent full-text review, 59 were excluded, mainly because the studies were about other types of mental health professionals (*n* = 41). Eighteen studies were included in the review.
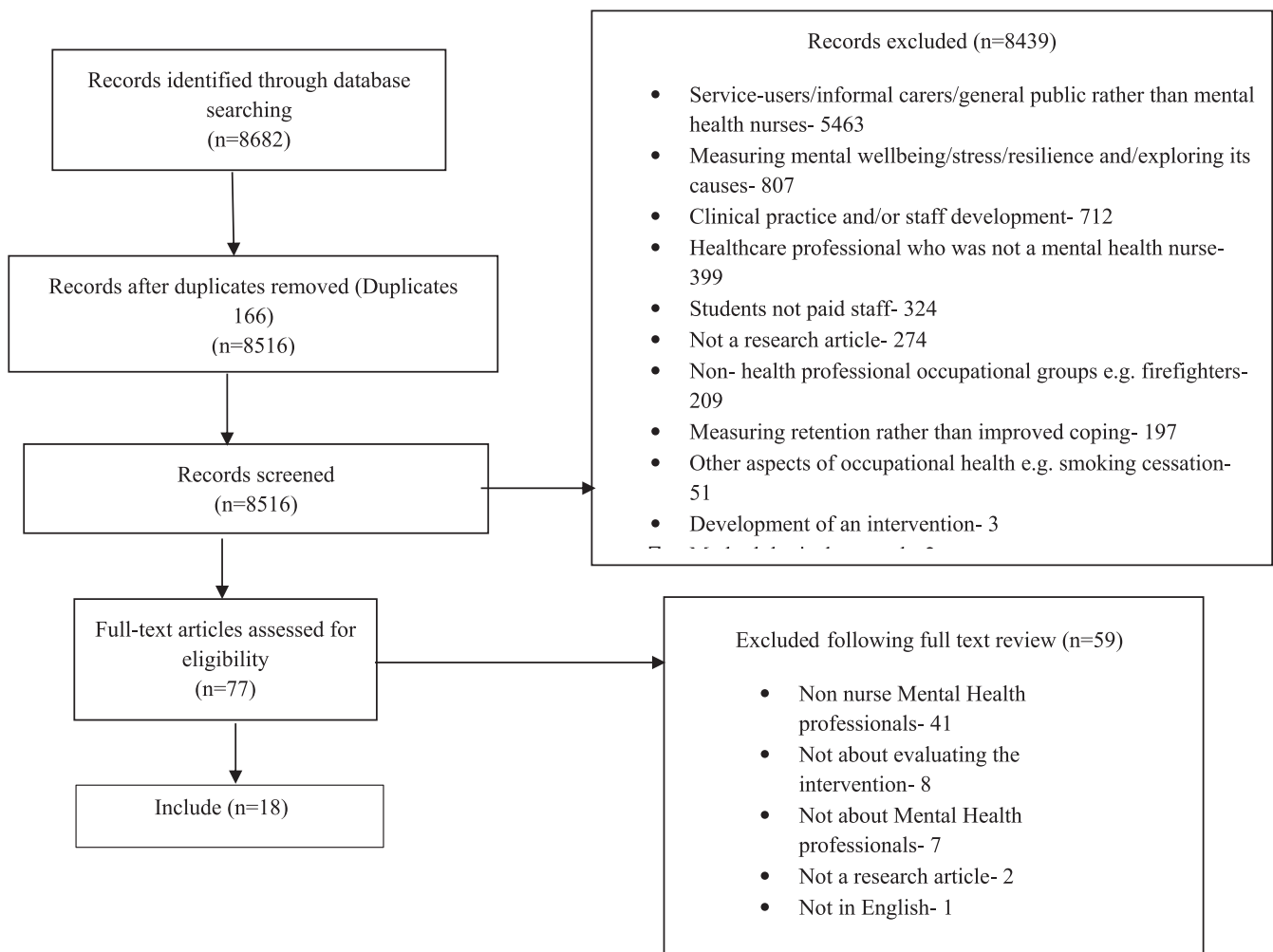
FIGURE 1 PRISMA Statement

3.2 | Description of studies

The 18 studies utilized a variety of study designs (Table 1). Five studies used a quasi-experimental design with intervention and control groups (Alenezi et al., 2019; Ewers et al., 2002; Ghazavi et al., 2010; Hsieh et al., 2020; Nhiwatiwa, 2003). Five studies involved a quasi-experimental design with no control group (Abdelaziz et al., 2020; Edwards, 2015; Flarity et al., 2016; Foster, Shochet, et al., 2018; Sailaxmi & Lalitha, 2015). Safarzei et al. (2016) and Yang et al. (2018) utilized a randomized controlled trial (RCT) design whilst Bernburg et al. (2019) conducted a pilot RCT. Henshall et al. (2020) and Rush (2018) undertook mixed methods. Foster Cuzzillo and Furness (2018) and Olofsson (2005) used qualitative methods including interviews. Finally, Lakeman and Glasgow (2009) conducted action research, involving nurses in designing and evaluating the intervention. The quantitative studies largely focused on impact whilst the qualitative and mixed methods explored both the impact and feasibility of interventions. Foster, Shochet, et al. (2018) and Foster, Cuzzillo, et al. (2018) evaluated the same intervention using different study designs. The majority of studies were published since 2015 ($n = 13$). The studies were based in 12 different countries including the United Kingdom, China and Australia.

The studies were focused on different psychological constructs. The prominent construct was stress (e.g. Yang et al., 2018; Rush, 2018; Sailaxmi & Lalitha, 2015; Ghazavi et al., 2010; Bernburg et al., 2019). Other constructs included resilience, burnout and assertiveness. Regardless of a study's specific focus, the interventions being evaluated appeared similar, for example providing mental health nurses with opportunities to practise relaxation techniques (detailed in Section 3.3).

The quantitative studies were of variable quality. The majority had small sample sizes and short follow-up periods. For example, Edwards (2015) and Flarity et al. (2016) had 10 or less participants. Most of the studies did not consider the long-term impact of interventions, with only Bernburg et al. (2019) measuring outcomes for longer than six months. An additional challenge in comparing findings was that studies used different primary outcome measures including the Maslach Burnout Inventory (Alenezi et al., 2019; Edwards, 2015; Ewers et al., 2002) the Nursing Stress Scale (Yang et al., 2018) and measures designed for the study (Ghazavi et al., 2010; Henshall et al., 2020).

The majority of studies were based in adult inpatient wards and a small number focused on mental health nurses working in specialist services including forensics (Henshall et al., 2020) and dementia care (Edwards, 2015). A small number of studies targeted the interventions at people with higher levels of stress (Yang et al., 2018) or those who had experienced workplace violence (Hsieh et al., 2020; Nhiwatiwa, 2003). Some studies reported recruitment issues because nurses felt stigmatized for accessing support, worrying that nurse managers and colleagues would think that they cannot cope with their role (Henshall et al., 2020).

3.3 | The interventions

All of the studies focused on interventions aimed at individual nurses. The majority of studies evaluated active learning interventions, for example assertiveness training and mindfulness, where nurses had the opportunity to practise coping strategies. Nine studies evaluated group-based courses where participants shared their concerns, learnt about specific mental health constructs, received peer support, developed coping strategies and practised relaxation techniques (Abdelaziz et al., 2020; Alenezi et al., 2019; Bernburg et al., 2019; Flarity et al., 2016; Foster, Cuzzillo, et al., 2018; Foster, Shochet, et al., 2018; Henshall et al., 2020; Safarzei et al., 2016; Sailaxmi & Lalitha, 2015). Four studies focused specifically on relaxation techniques including mindfulness (Edwards, 2015; Hsieh et al., 2020; Rush, 2018; Yang et al., 2018). Two studies evaluated supervision-based interventions (Lakeman & Glasgow, 2009; Olofsson, 2005). Ewers et al. (2002) and Ghazavi et al. (2010) focused on enhancing communication skills. Different to the other studies, Nhiwatiwa (2003) evaluated an information booklet on coping with trauma. None of the identified studies considered organisational- or management-level interventions such as decreasing caseloads, with Foster, Cuzzillo, et al. (2018)) and Henshall et al. (2020) reporting that this was a research gap.

The studies evaluated interventions that were heterogeneous in their length and nature of delivery (Table 1). Variation in length ranged from six all day workshops (Henshall et al., 2020) to a two-hour reflection group (Olofsson, 2005). Fourteen studies focused on in-person group-based interventions whereas others evaluated online interventions (Rush, 2018). One reason for online delivery was that nurses did not always have time to be released from their duties to attend training (Lakeman & Glasgow, 2009). Hsieh et al. (2020) reported no difference in outcomes between in person and online delivery.

3.4 | Identified impact

The identified studies generally reported that mental health nurses appeared to benefit from receiving support, with all of the interventions besides the booklet (Nhiwatiwa, 2003) having a positive impact (Table 1). Benefits included improvements in resilience (Foster, Shochet, et al., 2018), assertiveness (Abdelaziz et al. (2020) and reductions in stress (Yang et al., 2018). One of the larger studies: Alenezi et al. (2019) identified that mental health nurses receiving a burnout prevention group programme experienced a statistically significant reduction in their burnout compared to the control group at 1-month post-intervention ($p = <.001$) and 6 months post-intervention ($p = .04$) (measured by the Maslach Burnout Inventory). Bernburg et al. (2019) also identified that participants experienced a statistically significant improvement in their stress levels when engaging in a mental well-being group at 3 months ($p = <.001$), 6 months ($p = <.001$) and 12 months post-intervention ($p = .01$) (measured by

the Perceived Stress Scale). The only intervention which did not appear beneficial was the booklet, the intervention group experienced a worse outcome than the control group ($p = .03$) (measured using the Impact of Events Scale) (Nhiwatiwa, 2003). Undertaking a meta-analysis would be useful to understand the relative effectiveness of different interventions.

There appears a need for studies which consider the longer-term impact of interventions. This is because there was some evidence that the benefits of an intervention decreased over time. For example, Alenezi et al. (2019) reported that burnout amongst the intervention group increased between 1 month post-intervention: 63.15 (SD: 9.85) to 66.15 (SD: 17.23) at 6 months post-intervention (measured by the Maslach Burnout Inventory). Furthermore, future studies may want to consider the effect of providing follow-up intervention sessions because Foster, Cuzzillo, et al. (2018)) identified that participants felt they needed additional sessions. None of the identified studies considered whether the interventions were cost-effective. For example, whether the costs of delivering the intervention and covering staff to attend training were offset by reduced absenteeism.

4 | DISCUSSION

The aim of the review was to scope the evidence on interventions used to support mental health nurses cope with stressful working environments. Eighteen studies were identified which used different methods to evaluate a range of interventions including stress management courses and mindfulness practice. The studies indicated interventions involving active learning appeared beneficial. However, many of the quantitative studies had small sample sizes, short follow-up periods and did not consider cost-effectiveness. These factors indicate that whilst nurse managers may want to implement interventions, there is a need for further research to identify the most effective interventions.

Active learning interventions appeared to result in improvement in burnout, resilience and stress. The need to involve active learning reflects the findings of Edwards and Burnard's (2003) review. Furthermore, other reviews of different occupational groups have also identified the importance of active learning (Askey-Jones, 2018; Dreison et al., 2018; Hamilton-West et al., 2018; Richardson & Rothstein, 2008). However, it is unknown which specific interventions are most effective or the optimum delivery models, for example whether the same benefits are derived from 2 or 8 sessions. Consequently, there is a need to undertake a meta-analysis so that recommendations can be made to nurse managers on the relative value of different interventions. At present, the identified studies focus on interventions aimed at supporting individual nurses rather than organisational changes such as reduced caseloads. Nurse managers may want to consider the impact of organisational approaches because mental health nurses feel these approaches are important (Itzhaki et al., 2015). Supporting this rationale is evidence that

organisational approaches such as different shift patterns are effective for general nurses (Barrientos-Trigo et al., 2018).

Some studies targeted mental health nurses who had higher levels of stress or who had been assaulted at work whereas other studies were aimed at any mental health nurses. Further research is needed to establish which approach has the greatest impact. This is because Dreison et al. (2018) identified that interventions may have greater impact when targeted at mental health professionals experiencing higher levels of burnout. However, Johnson et al. (2018) propose that all mental health nurses need support because the role generally involves high levels of stress and burnout because of the working environment. Furthermore, the studies were generally based on inpatient settings and nurse managers should consider how relevant the findings are for community-based mental health nurses, who may experience specific stressors, for example lone working (Edwards et al., 2001). Issues were identified that mental health nurses were concerned that accessing support attracted stigma. This is consistent with Knaak et al. (2017) in respect of health care professionals generally. Consequently, future studies need to consider the acceptability alongside the effectiveness of interventions.

We identified similar issues with the evidence base as Edwards and Burnard (2003) including small sample sizes and short follow-up periods. This indicates that the quality of evidence has not evolved and there is a need for further quantitative studies that utilize larger sample sizes and collect outcome measures for longer than 6 months. The latter is important because nurse managers want interventions which provide longer-term benefits (Wood et al., 2019).

The variety of outcome measures used by studies including researchers developing measures specifically for their study makes it difficult to compare the findings of studies. This challenge was also identified in Edwards and Burnard (2003) and Dreison et al. (2018). Consequently, it is recommended that a Core Outcome Set is developed for future studies to utilize (Prinsen et al., 2014). None of the identified studies considered cost-effectiveness. This absence of cost-effectiveness has also been identified in relation to other occupational groups (Pieper et al., 2019), indicating that further research is needed.

A key strength of the review is that it explores recent research on supporting mental health nurses; this is salient because a number of studies have recently been published which had not been synthesized. However, there were six key limitations. First, the search strategy could have been developed further for example, including terms associated with symptoms of mental health illnesses, for example depressive symptoms. Second, there was not the capacity to utilize additional search methods including exploring grey literature, creating publication bias. Third, only including studies published in English may have excluded potentially relevant studies. Fourth, whilst we applied a date limitation to focus on more recent publications, this could have excluded relevant papers. Fifth, limited staff resource meant it was not possible to undertake double selection of the studies. Finally, as it was a scoping review, formal quality assessment of identified studies was not undertaken. However, future

Author (Year)	Country	Setting	Information about the intervention	Type of study	Methods	Sample	Findings[a]
Abdelaziz et al. (2020)	Egypt	Mental health hospital	**Assertiveness training** Intervention was for 1.5–2 hr and consisted of 2–3 sessions a week for 7 weeks delivered in groups of 9. Content included: • Exploring different elements of assertiveness. • Developing coping mechanisms. • Improving communication skills.	Quasi-experimental—all received the intervention	Participants completed measures at baseline and post-intervention. Outcomes measured: • Assertiveness • Well-being	Newly qualified mental health nurses Sample size = 36	Participants experienced an improvement in assertiveness. Baseline: 45.78 (SD: 11.12) Post-intervention: 53.75 (SD: 8.05) t test: 4.204, p = .001 (measured by the Rathus Assertiveness Scale)
Alenezi et al. (2019)	Saudi Arabia	Inpatient units	**Burnout prevention training** Intervention entailed 2 × 6 hr programme delivered at the hospital (12 hr) in groups of 20–25 mental health nurses. Content included: • What is burnout and its symptoms. • Developing coping skills, for example social support and communication skills.	Quasi-experimental including randomization at hospital level	Participants completed outcome measures at baseline and 1 and 6 months post-intervention. Outcomes measured: • Burnout	Sample size = 296 Intervention group = 154 Control group = 142	Participants who received the intervention experienced an improvement in burnout. Baseline: Intervention group: 71.13 (SD: 1.18) Control group: 66.28 (SD: 11.36) 1 month post-intervention: Intervention group: 63.15 (SD: 9.85) Control group: 67.93 (SD:11.32) p = <0.001 6 months post-intervention: Intervention group: 66.15 (SD: 17.23) Control group: 69.99 (SD: 11.48) p = .04 (Measured by the Maslach Burnout Inventory)
Bernburg et al. (2019)	Germany	Mental health hospital	**Mental Well-being group** Intervention entailed 12 × 1.5–2-hr group sessions of 10–12 mental health nurses, facilitated by a psychologist. Content included • Learning skills in cognitive behaviour therapy and solution focused therapy. • Developing relaxation techniques. • Enhancing communication skills. • Exploring ways of coping with the organisational culture.	Pilot RCT	Participants completed outcome measures at baseline and 1, 6 and 12 months post-intervention. Outcomes measured: • Job stress	Sample size = 86 Intervention group = 44 Control group = 42	Participants who received the intervention experienced a reduction in stress. Baseline: Intervention group: 3.34 (SD: 0.49) Control group: 3.49 (SD: 0.5) 3 months post-intervention: Intervention group: 2.86 (SD: 0.51 Control group: 3.45 (SD: 0.52) p = <0.001 6-month intervention: Intervention group: 2.90 (SD: 0.59) Control group: 3.39 (SD: 0.58) p = <0.001 12 months post-intervention: Intervention group: 3.05 (SD: 0.51) Control group: 3.32 (SD: 0.47) p = .01 (Measured by the Perceived Job Stress Scale)

Author (Year)	Country	Setting	Information about the intervention	Type of study	Methods	Sample	Findings[a]
Edwards (2015)	United States of America	Inpatient unit for people with dementia	**Mindfulness training** Intervention entailed mental health nurses attending 2 × 2 hr group training sessions on mindfulness facilitated by a mental health nurse. Additionally, participants were asked to practise mindfulness for 15–20 min a day for 5 days per week for 2 weeks. Intervention content: • Understanding of stress and its causes. • Learning about mindfulness and its potential benefits. • Developing skills in utilizing mindfulness.	Quasi-experimental—all received the intervention.	Participants completed outcome measures at baseline and post-intervention. Outcomes measured: • Burnout	Sample size = 10	Participants experienced a reduction in burnout. Baseline = 31.3 Post-intervention = 9 t test = 6.208 (p = <0.05) (Measured by the Maslach Burnout Scale)
Ewers et al. (2002)	United Kingdom	Forensic services	**Psychosocial intervention training** Intervention consisted of 20 sessions delivered at the hospital by an expert in psychosocial interventions. Content included • Improving understanding of schizophrenia and developing coping strategies for when supporting people with schizophrenia.	Quasi-experimental including randomization	Participants completed outcome measures at baseline and post-intervention. Outcomes measured: • Knowledge of schizophrenia • Burnout	Sample size = 20 Intervention group = 10 Control group = 10	Participants who received the intervention experienced an improvement in emotional exhaustion. Baseline: Intervention group: 13.52 Control group: 18.82 Post-intervention: Intervention group: 10.51 Control group: 18.91 p = .04 (Measured by the Emotional Exhaustion scale of the Maslach Burnout Inventory).
Flarity et al. (2016)	United States of America	Forensic services	**Preventing compassion fatigue workshop** Intervention entailed a 4-hr interactive group workshop delivered by a specialist trainer. Content included: • Learning about compassion fatigue and it symptoms. • Opportunity to develop and practise coping skills to manage compassion fatigue.	Quasi-experimental—all received the intervention	Participants completed measures at baseline and post-intervention. Outcomes measured: • Burnout • Compassion satisfaction	Sample size = 7	Participants experienced an improvement in compassion satisfaction. Baseline: 36.6 Post-intervention: 43.7 p = <0.001 (Measured by the ProQOL)

Author (Year)	Country	Setting	Information about the intervention	Type of study	Methods	Sample	Findings[a]
Foster, Shochet, et al. (2018)[b]	Australia	Inpatient Units	**Resilience training** Intervention entailed 2-day workshops, 3 weeks apart. Booster emails between the sessions & for 3 months afterwards. Content included: • What is resilience and causes of reduced resilience. • How to increase resilience. • Developing and practice coping methods to develop resilience.	Quasi-experimental—all received the intervention.	Participants completed outcome measures at baseline and 3 months post-intervention. Outcomes measured: • Mental health—stress, anxiety and depression • Well-being • Satisfaction with life • Satisfaction with work • Self-efficacy • Resilience	Sample size = 24	Participants experienced decreased stress. Baseline: 12.3 (SD: 8.8) 3 months post-intervention: 9.6 (SD: 6.8) $p = .02$ (Measured by DASS-21-Stress Component)
Foster, Cuzzillo, et al. (2018)[b]	Australia	Inpatient units	**Resilience training** Intervention entailed 2-day workshops, 3 weeks apart. Booster emails between the sessions & for 3 months afterwards. Content included: • What is resilience and causes of reduced resilience. • How to increase resilience. • Developing and practise coping methods to develop resilience.	Qualitative study	Participants were mental health nurses and facilitators. Data collection included focus groups and interviews. Thematic analysis was used to analyse the data.	Sample size = 29	Participants reported increased knowledge on resilience and how to cope better with work especially with managing traumatic events, for example assault from patients. Participants felt they could also apply the learning to their personal lives. Participants found the group format useful—they learnt from each other and gained peer support. Participants felt receiving support deterred them from leaving their roles. Participants felt follow-up sessions were needed to help them to sustain improvements. Participants felt organisational issues also need to be addressed.
Ghazavi et al. (2010)	Iran	Inpatient units	**Reducing occupational stress by improving communication skills**. 2 × weekly group sessions over 3 weeks. Intervention content: • Developing and trying out communication skills.	Quasi-experimental including randomization	Participants completed outcome measures at baseline, post-interventions and 1 month post-intervention. Outcomes measured: • Stress	Sample size = 45 Intervention group = 23 Control group = 22	Participants who received the intervention experienced a reduction in stress. Baseline: Intervention group: 63.3 Control group: 63.2 Post-intervention: Intervention group: 54.9 Control group: 63.9 $p = .04$ 1 month post-intervention Intervention group: 54.8 Control group: 64.3 $p = .03$ (Measured by a study developed measure)

Author (Year)	Country	Setting	Information about the intervention	Type of study	Methods	Sample	Findings[a]
Henshall et al. (2020)	United Kingdom	Forensic unit	**Resilience training** Interventions entailed 6 full day workshops over 12 weeks. Additionally, participants were provided with mentoring from senior mental health nurses. Intervention content included: • Resilience, spirituality and self-care including developing coping strategies	Mixed methods— Questionnaire and interviews	Semi-structured interviews with mental health nurses and mentors after the intervention was delivered. Participants completed outcome measures at baseline and post-intervention. Outcomes measured: • Resilience	Questionnaire = 26 Mental health nurse interviews = 12 Mentor interviews = 12	Participants experienced an improvement in resilience. Baseline: 3.42 (*SD*: 0.70) Post-intervention: 4.12 (*SD*: 0.60) (t_{49} = 3.80, p = <0.001, 95% CI = 0.32, 1.07). (Measured by study developed resilience measure) Intervention provided mental health nurses the opportunity to learn more about resilience and to develop coping skills. Participants felt they benefitted from peer support including developing networks. Participants felt the intervention could be useful for any mental health nurses, irrespective of their specific role. Participants were concerned that attending the intervention would attract stigma.
Hsieh et al. (2020)	Taiwan	Inpatient units	**Breathing/relaxation intervention** 2-hr resilience workshop for all participants (the control). This was followed by either: 1 hr weekly sessions for 6 weeks of self-guided training. Or Relaxation sessions delivered by smartphone rather than in person.	Quasi-experimental including randomization	Participants completed measures at baseline and post-intervention. Outcomes measured: • Resilience • Occupational stress • Depressive symptoms	Mental health nurses who had experienced workplace violence in the last 12 months. Sample size = 135 Biofeedback training intervention group = 49 Smart phone intervention group = 47 Control group = 39	Participants who received an intervention experienced an improvement in resilience but there was no difference between those who received the intervention in person or via smartphone. Baseline: Biofeedback training group: 153.98 (*SD*: 26.58) Smartphone delivered training group: 143.13 (*SD*: 26.29) Control group: 151.9 (*SD*:24.56) Post-intervention: Biofeedback training group: 164.15 (*SD*: 23.16) Smartphone delivering training group: 158.77 (*SD*: 19.20) Control group: 153.67 (*SD*: 23.75) Difference between control & two interventions groups was: p = <0.05 No difference between the different models of delivery p = .36 (Measured by the Resilience Scale)

Author (Year)	Country	Setting	Information about the intervention	Type of study	Methods	Sample	Findings[a]
Lakeman and Glasgow (2009)	Trinidad and Tobago	Inpatient Units	**Supervision/reflection groups** The participants co-designed the intervention. Intervention involved a 1-day training session on clinical supervision. People then received 1.5–2 hr of fortnightly supervision for approximately 4 months in groups of 5 mental health nurses. Content included: • Clinical supervision including opportunities to reflect on practice, share learning and develop ways of coping with the role.	Action research project	Mental health nurses met monthly to design then evaluate the intervention through focus groups. Focus groups analysed using thematic analysis.	Sample size = 10	Mental health nurses chose to develop a peer-led supervision intervention. Participants found the support helpful in terms of reflection on their practice and developing ways of coping in their roles. Participants found it difficult to find time to attend the intervention.
Nhiwatiwa (2003)	United Kingdom	Privately funded inpatient units	**Information booklet** Booklet contains information about trauma and potential coping techniques.	Quasi-experimental including randomization	Participants completed measures at baseline and post-intervention. Outcomes measured: • Distress	Mental health nurses who had experienced an assault by a patient in the last month. Sample size = 40 Intervention group = 20 Control group = 20	Participants who received the intervention experienced less improvement than the control group. Baseline: Intervention group: 8.40 (*SD*: 13.22) Control group: 12.62 (*SD*:14.48) Post-intervention: Intervention group: 10.40 (*SD*: 16.79) Control group: 6.62 (*SD*: 8.66) $Z = -2.18$, two-tailed, $p = .03$ (Measured by the Impact of Events Scale)
Olofsson (2005)	Sweden	Inpatient units—one elderly & one adult.	**Supervision/reflection groups** One off reflective group for 1.5–2 hr following a coercive incident. Delivered in groups of 2–4 at the hospital and facilitated by a supervisor. Content included: • Supervision focused on the coercive event and developing coping mechanisms for future events.	Qualitative interviews	Undertook interviews with mental health nurses participating in the intervention.	Mental health nurses involved in a coercive incident, for example restraint. Sample size = 23	Participants valued receiving peer support. Receiving clinical supervision helped mental health nurses manage their role. Participants found it difficult to attend the intervention because of getting cover for their role. Participants felt it was important that the intervention was facilitated by someone skilled. Not all mental health nurses felt they needed support.
Rush (2018)	United States of America	Inpatient units	**Mindfulness training** Interventions entailed 4 × 30 min weekly online modules. Content included: • Learning about mindfulness. • Developing skills in mindfulness and incorporating it into work and personal lives.	Mixed methods—focus group and questionnaire after the intervention.	Focus groups with mental health nurses. Participants completed outcome measures after receiving the intervention. Outcomes measured: • Stress	Questionnaire = 16 Focus group = 2	87.5% of participants reported that they found the mindfulness programme helpful and acceptable. Participants reported that the resources were accessible and they were able to use mindfulness to manage workplace stress.

Author (Year)	Country	Setting	Information about the intervention	Type of study	Methods	Sample	Findings[a]
Safarzei et al. (2016)	Iran	Inpatient units	**Stress management intervention** Intervention entailed 2 × 4 hr stress inoculation workshops a week apart. Participants also received a fortnightly phone call with a researcher during and after the intervention to check in. Content included: • Developing an understanding of stress and causes. • Exploring ways of managing stress including relaxation techniques and time management. • Developing coping mechanisms.	RCT (waitlist control)	Participants completed outcome measures at baseline, post-interventions and 1 month post-intervention. Outcomes measured: • Work–life quality	Sample size = 60 Intervention group = 30 Control group = 30	Participants who received the intervention experienced an improvement in their work life quality. Baseline: Intervention group: 80 (*SD*: 13.8) Control group: 83.4 (*SD*: 11.4) Post-intervention: Intervention group: 86.7 (*SD*: 18.1) Control group: 83.3 (*SD*: 11.0) 1 month post-intervention: Intervention group: 88.3 (*SD*: 17.6) Control group: 82.7 (*SD*: 10.9) *p* = <0.001 (Measured by Dargahi's work life quality questionnaire)
Sailaxmi and Lalitha (2015)	India	Inpatient units	**Stress management intervention** Interventions entailed 2 × 1 hr session a week for 9 weeks delivered in groups of 10 mental health nurses. Content included: • Exploring what is stress and its causes. • Developing coping techniques. • Learning relaxation and assertiveness methods.	Quasi-experimental— all received the intervention.	Participants completed outcome measures at baseline, post-intervention and 4 weeks post-intervention Outcomes measured: • Stress	Mental health nurses who had at least a years' experience. Sample size = 53	Participants experienced a reduction in stress. Baseline: 57.45 (*SD*: 16.42) Post-intervention: 41.06 (*SD*: 16.51) *p* = <0.001 4 weeks post-intervention: 26.43 (12.82) *p* = <0.001 (Measured by the DCL stress scale)
Yang et al. (2018)	China	Mental health settings	**Mindfulness training** Sessions over 8 weeks that could be done at home or at work. Content included: • Learning about stress • Developing and practising mindfulness.	RCT	Participants completed outcome measures at baseline and post-intervention. Outcomes measured: • Stress • Anxiety • Depression	Mental health nurses experiencing higher levels of stress. Sample size = 100 Intervention group = 50 Control group = 50	Participants who received the intervention experienced a reduction in stress. Baseline: Intervention group: 83.9 (*SD*: 8.3) Control group: 84.8 (*SD*: 8.1) Post-intervention: Intervention group: 68.2 (*SD*: 9.1) Control group: 83.1 (*SD*: 8.4) *p* = <0.001 (Measured by the Nursing Stress Scale)

[a] The reporting of statistical tests is limited by what the authors included in their paper.[b] These two studies were evaluating the same intervention.

reviews should do this, so that nurse managers can understand the nature of evidence underpinning potential interventions.

5 | CONCLUSION

There have been a number of studies identifying interventions which can support mental health nurses develop their coping mechanisms. Further primary research along with meta-analyses is needed to establish the most effective interventions including the optimum delivery models, the cost-effectiveness of interventions and whether they have longer-term benefits.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

Emerging evidence indicates that managers should encourage and provide opportunities for mental health nurses to engage in interventions which support nurses develop techniques to help them cope with stressful working environments. However, to date it is not possible to make recommendations on which interventions are most beneficial, the optimum delivery models, whether nurses sustain improvements, the cost-effectiveness of providing support and whether some nurses should be prioritized for support. Furthermore, there is a gap in the literature evaluating organisational- and management-level interventions. Given the limitations of the current evidence base, nurse managers are encouraged to evaluate any interventions that they deliver.

CONFLICT OF INTEREST
All of the authors declare that we have no conflicts of interests.

ETHICAL APPROVAL
Ethical approval was not required for this paper.

DATA AVAILABILITY STATEMENT
As it is a review all the data is drawn from articles available in the public domain.

ORCID
Alexis Foster https://orcid.org/0000-0002-7978-2791
Emily Wood https://orcid.org/0000-0002-1910-6230
Mark Clowes https://orcid.org/0000-0002-5582-9946

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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