# Evidence Search Service Results of your search request:

## “What interventions aimed at psychological wellbeing / recovery / resilience are effective?” [Review articles limited to healthcare workers]

**ID of request:** 25103; **Date of request:** 14th September, 2020; **Date of completion:** 17th September, 2020

If you would like to request any articles or any further help, please contact:  Adam Tocock at [adam.tocock@nhs.net](mailto:adam.tocock@nhs.net)

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**Date range used** (5 years, 10 years): 2000-   
**Limits used** (gender, article/study type, etc.): Reviews only   
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### [B. Search History](#SearchHistory)

## A. Review articles

1. **'Creating health': evaluation of three arts for health training events for GP trainees**  
   Ellis V. Perspectives in Public Health 2020;:No page numbers.

Background: General practitioners (GPs) and other health professionals have a key role in signposting their patients to appropriate opportunities for engaging in arts and creative activities for the health and wellbeing benefits they may bring. Training is needed to ensure that GPs are aware of the evidence supporting the role of the arts, and the local availability of 'creative arts for health' activities for their patients. <br/>Aim(s): This article describes the content and evaluation of three arts and health training events for trainee GPs conducted over the period 2016-2019. They took place in association with Guy's and St Thomas, Hillingdon and York and Scarborough General Practice Vocational Training Schemes (GPVTS). <br/>Method(s): Evaluation was undertaken for the London events using a specially constructed questionnaire, with rating scales, completed before and after the training events. For the York event, a simple bespoke evaluation questionnaire was employed at the end of the training day. All participants gave consent for photography and filming during the events. <br/>Result(s): Feedback from GPs on the training events revealed increased awareness of the evidence for arts and health interventions, and more positive attitudes towards the role of creative arts in primary care in promoting the health and wellbeing of patients. An additional finding was a recognition by GP trainees that creative activities can enhance a holistic approach to patient care and play a positive part in supporting their own wellbeing. <br/>Conclusion(s): Training events of the kind described, with opportunities for creative participation for GP trainees, can enhance awareness of the benefits of creative activity for patient health and wellbeing, and may motivate future GPs to signpost patients towards opportunities for engaging in creative activities. This training model is applicable for any health worker who can refer patients to arts for health activities and has potential to be scaled up nationally.<br/>Copyright &#xa9; Royal Society for Public Health 2020.

1. **A literature review of interventions to reduce stress in doctors**  
   Locke R. Perspectives in Public Health 2020;140(1):38-53.

Aim: Stress is prevalent among doctors, and interventions are offered, often as part of their continuing professional development, to help doctors learn in the workplace about the recognition, prevention and management of the harmful effects of stress. The aim of this review was to examine existing research to ascertain the features of successful educational interventions with practising doctors and any factors that may affect outcomes. <br/>Method(s): We searched key databases for papers published between 1990 and 2017 on the themes of stress that included an education-based intervention and practising doctors. Using an inclusive approach to the review, a broad evaluation was made of the primary research using both quantitative and/or qualitative evidence where the study reported a positive outcome in terms of stress management. <br/>Result(s): Review criteria were met in 31 studies of 1,356 originally retrieved. Three broad categories of interventions emerged from the coding process: mindfulness-type (n = 12), coping and solutions focused (CSF) (n = 12) and reflective groups (n = 7). There is evidence that these interventions can be successful to help doctors deal with stress. Based on the results from this review, an original guide is advanced to help educators choose an educational intervention. <br/>Conclusion(s): Although evidence for some interventions may be 'hierarchically stronger', it is misleading to assume that interventions can be imported as successfully into any context. Factors such as medical specialty and health care systems may affect which intervention can be used. The guide offers an evidence base on which further research can be built.<br/>Copyright &#xa9; Royal Society for Public Health 2019.

1. **Battle Buddies: Rapid Deployment of a Psychological Resilience Intervention for Health Care Workers During the COVID-19 Pandemic.**  
   Albott Cristina Sophia Anesthesia and analgesia 2020;131(1):43-54.

The outbreak of the coronavirus disease 2019 (COVID-19) and its rapid global spread have created unprecedented challenges to health care systems. Significant and sustained efforts have focused on mobilization of personal protective equipment, intensive care beds, and medical equipment, while substantially less attention has focused on preserving the psychological health of the medical workforce tasked with addressing the challenges of the pandemic. And yet, similar to battlefield conditions, health care workers are being confronted with ongoing uncertainty about resources, capacities, and risks; as well as exposure to suffering, death, and threats to their own safety. These conditions are engendering high levels of fear and anxiety in the short term, and place individuals at risk for persistent stress exposure syndromes, subclinical mental health symptoms, and professional burnout in the long term. Given the potentially wide-ranging mental health impact of COVID-19, protecting health care workers from adverse psychological effects of the pandemic is critical. Therefore, we present an overview of the potential psychological stress responses to the COVID-19 crisis in medical providers and describe preemptive resilience-promoting strategies at the organizational and personal level. We then describe a rapidly deployable Psychological Resilience Intervention founded on a peer support model (Battle Buddies) developed by the United States Army. This intervention-the product of a multidisciplinary collaboration between the Departments of Anesthesiology and Psychiatry & Behavioral Sciences at the University of Minnesota Medical Center-also incorporates evidence-informed "stress inoculation" methods developed for managing psychological stress exposure in providers deployed to disasters. Our multilevel, resource-efficient, and scalable approach places 2 key tools directly in the hands of providers: (1) a peer support Battle Buddy; and (2) a designated mental health consultant who can facilitate training in stress inoculation methods, provide additional support, or coordinate referral for external professional consultation. In parallel, we have instituted a voluntary research data-collection component that will enable us to evaluate the intervention's effectiveness while also identifying the most salient resilience factors for future iterations. It is our hope that these elements will provide guidance to other organizations seeking to protect the well-being of their medical workforce during the pandemic. Given the remarkable adaptability of human beings, we believe that, by promoting resilience, our diverse health care workforce can emerge from this monumental challenge with new skills, closer relationships, and greater confidence in the power of community.

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1. **Causes and consequences of burnout among mental health professionals: A practice-oriented review of recent empirical literature**  
   Yang Ying Psychotherapy 2020;57(3):426-436.

Burnout is a psychological syndrome characterized by emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment. Due to the demands of treating people with psychological problems, burnout is prevalent among psychotherapists. In this article, we present a comprehensive review of 44 quantitative and qualitative studies from the past decade focusing on both the risk factors for, and effects of, burnout among psychotherapists. Factors influencing burnout include perceived job control, the nature of psychotherapists’ caseload, countertransference reactions, supervisory support, and psychotherapists’ mental health history. Burnout affects psychotherapists’ general well-being, as well as the extent to which clients engage in and benefit from psychotherapy. Implications for psychotherapists and their supervisors for burnout prevention and intervention are discussed, and recommendations for further research in this area are identified. (PsycInfo Database Record (c) 2020 APA, all rights reserved) (Source: journal abstract) Impact statementClinical Impact Statement: Question: What does research from the past decade reveal about the prevalence, predictors, and consequences of burnout among mental health professionals? Findings: A review of 44 studies found that factors related to therapists’ workplaces, clients, and personal characteristics can affect their physical and psychological well-being, as well as client outcomes. Meaning: This information can be used to help prevent and treat burnout among psychotherapists. Next Steps: Research is needed to evaluate programs designed to prevent and minimize burnout among psychotherapists. (PsycInfo Database Record (c) 2020 APA, all rights reserved)

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1. **Effectiveness of lifestyle health promotion interventions for nurses: A systematic review**  
   Stanulewicz N. International Journal of Environmental Research and Public Health 2020;17(1):No page numbers.

Background: Prior research has investigated various strategies to improve health, wellbeing and the job-related outcomes of nurses. However, the scope of this evidence is not clear and the types of intervention most likely to have positive outcomes are unknown. <br/>Objective(s): To provide an overview and synthesis of the effectiveness of interventions conducted with the goal of improving health, wellbeing and the job-related outcomes of nurses. <br/>Method(s): A systematic database search was conducted from January 2000 to December 2018, with pre-defined criteria (Cochrane Central Register of Controlled Trials; MEDLINE and PubMed; EMBASE; CINAHL; PsycINFO; and BioMed Central). In total, 136 intervention studies with a total sample of 16,129 participants (range 9-3381) were included and evaluated. Data extraction, quality assessment and risk of bias analyses were performed. <br/>Result(s): Studies included randomised controlled trials (RCTs; n = 52, 38%), randomised crossover design studies (n = 2, 1.5%) and non-randomised pre-post studies with a control group (n = 31, 23%) and without a control group (n = 51, 37.5%). The majority of interventions focused on education, physical activity, mindfulness, or relaxation. Thirty-seven (27%) studies had a multimodal intervention approach. On average, studies had relatively small samples (median = 61; mode = 30) and were conducted predominantly in North America (USA/Canada, n = 53). The findings were mixed overall, with some studies reporting benefits and others finding no effects. Dietary habits was the most successfully improved outcome (8/9), followed by indices of body composition (20/24), physical activity (PA) (11/14), and stress (49/66), with &gt;70% of relevant studies in each of these categories reporting improvements. The lowest success rate was for work-related outcomes (16/32). Separate analysis of RCTs indicated that interventions that focus solely on education might be less likely to result in positive outcomes than interventions targeting behavioural change. <br/>Conclusion(s): Interventions targeting diet, body composition, PA, or stress are most likely to have positive outcomes for nurses' health and/or wellbeing. The methodologically strongest evidence (RCTs) is available for body composition and stress. Interventions relying solely on educational approaches are least likely to be effective. Organisational outcomes appear to be more challenging to change with lifestyle intervention, likely requiring more complex solutions including changes to the work environment. There is a need for more high-quality evidence since many studies had moderate or high risk of bias and low reporting quality.<br/>Copyright &#xa9; 2019 by the authors. Licensee MDPI, Basel, Switzerland.

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1. **Improving mental health of student and novice nurses to prevent dropout: a systematic review**  
   Bakker E.J.M. Journal of advanced nursing 2020;:No page numbers.

AIMS: To provide: (1) an overview of interventions aimed at improving mental health of student or novice nurses; and (2) an evaluation of their effectiveness on dropout-related outcomes. DESIGN: Systematic review. DATA SOURCES: Research papers published between January 1971 - February 2019 were identified from the following databases: Embase, Medline, PsycInfo, CINAHL, ERIC, the Cochrane Library, Web of Science and Google Scholar. REVIEW METHODS: We followed the procedures recommended by the Editorial Board of the Cochrane Collaboration Back Review Group. We included peer-reviewed articles with a quantitative research design, examining interventions aimed at improving mental health of student and novice nurses and their effect on dropout-related outcomes. The large variation in studies prohibited statistical pooling and a synthesis without meta-analysis of studies was performed. <br/>RESULT(S): We identified 21 studies with three areas of focus: managing stress or stressors (N=4); facilitating the transition to nursing practice (N=14); and a combined approach (N=3). Five studies showed a statistically significant effect on dropout-related outcomes. The overall risk of bias was high. <br/>CONCLUSION(S): A wide range of interventions are available, but the evidence for their effectiveness is limited. There is a need for high-quality studies in this field, preferably with a randomised controlled design.<br/>Copyright This article is protected by copyright. All rights reserved.

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1. **Intensive care nurses' well-being: A systematic review**  
   Jarden R.J. Australian Critical Care 2020;33(1):106-111.

Background and purpose: Unique work challenges of intensive care nurses can cause both stress and distress to nurses, evident in prevailing literature regarding burnout, compassion fatigue, and moral distress. Identifying factors contributing to intensive care nurses' well-being would complement this focus on nurse ill-being, supporting the development of workplace well-being initiatives. The review seeks to balance the existing negatively skewed evidence base by investigating intensive care nurses' well-being rather than ill-being. <br/>Objective(s): The objective of this review was to systematically identify, appraise, and synthesise primary research reporting intensive care nurses' well-being. <br/>Method(s): The electronic search strategy included (1) bibliographic databases for published work and (2) forward and backward citation searches. Key search terms included [critical OR intensive] AND [nurs\*] AND [well\*]. Inclusion criteria were as follows: (1) population: critical or intensive care nurses working with adult or mixed adult and paediatric patients, (2) study type: primary research studies, (3) outcome: intensive care unit nurses' well-being, and (4) publication available in the English language. Studies were excluded if the group of intensive care nurses was not independently reported. Included studies were critically appraised, and results were synthesised and presented descriptively. Semantics of the included studies were explored to identify frequently used terms. <br/>Result(s): Four primary research studies met the inclusion criteria, focussing on spiritual well-being, team commitment, emotional well-being, and the effects of a mindfulness programme. The studies were heterogeneous in terms of study focus, definitions, and measures, with small sample sizes, and of variable quality and generalisability. <br/>Conclusion(s): The well-being of intensive care nurses is currently understudied. Conceptualising intensive care nurses' well-being, understanding correlates of well-being, and testing workplace interventions to improve well-being remain significant opportunities for future research.<br/>Copyright &#xa9; 2018 Australian College of Critical Care Nurses Ltd

1. **Interventions to Improve Mental Health, Well-Being, Physical Health, and Lifestyle Behaviors in Physicians and Nurses: A Systematic Review**  
   Melnyk B.M. American Journal of Health Promotion 2020;:No page numbers.

Objective: This systematic review focused on randomized controlled trials (RCTs) with physicians and nurses that tested interventions designed to improve their mental health, well-being, physical health, and lifestyle behaviors. Data Source: A systematic search of electronic databases from 2008 to May 2018 included PubMed, CINAHL, PsycINFO, SPORTDiscus, and the Cochrane Library. Study Inclusion and Exclusion Criteria: Inclusion criteria included an RCT design, samples of physicians and/or nurses, and publication year 2008 or later with outcomes targeting mental health, well-being/resiliency, healthy lifestyle behaviors, and/or physical health. Exclusion criteria included studies with a focus on burnout without measures of mood, resiliency, mindfulness, or stress; primary focus on an area other than health promotion; and non-English papers. <br/>Data Extraction: Quantitative and qualitative data were extracted from each study by 2 independent researchers using a standardized template created in Covidence. <br/>Data Synthesis: Although meta-analytic pooling across all studies was desired, a wide array of outcome measures made quantitative pooling unsuitable. Therefore, effect sizes were calculated and a mini meta-analysis was completed. <br/>Result(s): Twenty-nine studies (N = 2708 participants) met the inclusion criteria. Results indicated that mindfulness and cognitive-behavioral therapy-based interventions are effective in reducing stress, anxiety, and depression. Brief interventions that incorporate deep breathing and gratitude may be beneficial. Visual triggers, pedometers, and health coaching with texting increased physical activity. <br/>Conclusion(s): Healthcare systems must promote the health and well-being of physicians and nurses with evidence-based interventions to improve population health and enhance the quality and safety of the care that is delivered.<br/>Copyright &#xa9; The Author(s) 2020.

1. **Mapping the peer-reviewed literature on accommodating nurses' return to work after leaves of absence for mental health issues: a scoping review**  
   Covell C.L. Human resources for health 2020;18(1):36.

BACKGROUND: The complexity of nursing practice increases the risk of nurses suffering from mental health issues, such as substance use disorders, anxiety, burnout, depression, and posttraumatic stress disorder (PTSD). These mental health issues can potentially lead to nurses taking leaves of absence and may require accommodations for their return to work. The purpose of this review was to map key themes in the peer-reviewed literature about accommodations for nurses' return to work following leaves of absence for mental health issues. <br/>METHOD(S): A six-step methodological framework for scoping reviews was used to summarize the amount, types, sources, and distribution of the literature. The academic literature was searched through nine electronic databases. Electronic charts were used to extract code and collate the data. Findings were derived inductively and summarized thematically and numerically. <br/>RESULT(S): Academic literature is scarce regarding interventions for nurses' return to work following leaves of absence for mental health issues, and most focused on substance use concerns. Search of the peer-reviewed literature yielded only six records. The records were primarily quantitative studies (n = 4, 68%), published between 1997 and 2018, and originated in the United States (n = 6, 100%). The qualitative thematic findings addressed three major themes: alternative to discipline programs (ADPs), peer support, and return to work policies, procedures, and practices. <br/>CONCLUSION(S): While the literature supports alternative to discipline programs as a primary accommodation supporting return to work of nurses, more on the effectiveness of such programs is required. Empirical evidence is necessary to develop, maintain, and refine much needed return to work accommodations for nurses after leaves of absence for mental health issues.

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1. **Prevalence of burnout in mental health nurses in China: A meta-analysis of observational studies**  
   Zeng L.-N. Archives of psychiatric nursing 2020;34(3):141-148.

OBJECTIVE: Burnout is common in mental health nurses because of work-related stress. Burnout has a negative impact on nurses' health and work performance. The prevalence of high burnout in mental health nurses has been inconclusive across studies. This meta-analysis aimed to estimate the pooled prevalence of high burnout in mental health nurses in China. <br/>METHOD(S): Electronic databases (PubMed, EMBASE, PsycINFO, Web of Science, CNKI, WanFang and SinoMed) were independently and systematically searched from their commencement date up to 14 May 2018. Studies that reported the prevalence of any of the 3 burnout dimensions (high Emotional Exhaustion (EE), Depersonalization (DP), and low Personal Accomplishment (PA)) as measured by the Maslach Burnout Inventory (MBI) were included and analyzed using the random-effects model. <br/>RESULT(S): A total of 19 studies were included in this meta-analysis. The pooled prevalence of high EE was 28.1% (95% CI: 20.4-35.8%), DP was 25.4% (18.1-32.6%) and low PA was 39.7% (28.3-51.1%). Subgroup analyses found that short working experience, use of MBI-Human Services Survey (HSS), and younger age had moderating effects on prevalence of high burnout. <br/>CONCLUSION(S): Burnout is common in mental health nurses in China. Considering its negative impact on health and work performance, regular screening, preventive measures and effective interventions should be implemented.<br/>Copyright &#xa9; 2020. Published by Elsevier Inc.

1. **PTSD symptoms in healthcare workers facing the three coronavirus outbreaks: What can we expect after the COVID-19 pandemic**  
   Carmassi C. Psychiatry Research 2020;292:No page numbers.

The COronaVIrus Disease-19 (COVID-19) pandemic has highlighted the critical need to focus on its impact on the mental health of Healthcare Workers (HCWs) involved in the response to this emergency. It has been consistently shown that a high proportion of HCWs is at greater risk for developing Posttraumatic Stress Disorder (PTSD) and Posttraumatic Stress Symptoms (PTSS). The present study systematic reviewed studies conducted in the context of the three major Coronavirus outbreaks of the last two decades to investigate risk and resilience factors for PTSD and PTSS in HCWs. Nineteen studies on the SARS 2003 outbreak, two on the MERS 2012 outbreak and three on the COVID-19 ongoing outbreak were included. Some variables were found to be of particular relevance as risk factors as well as resilience factors, including exposure level, working role, years of work experience, social and work support, job organization, quarantine, age, gender, marital status, and coping styles. It will be critical to account for these factors when planning effective intervention strategies, to enhance the resilience and reduce the risk of adverse mental health outcomes among HCWs facing the current COVID-19 pandemic.<br/>Copyright &#xa9; 2020 Elsevier B.V.

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1. **Resilience strategies to manage psychological distress among healthcare workers during the COVID-19 pandemic: a narrative review.**  
   Heath C. Anaesthesia 2020;75(10):1364-1371.

The COVID-19 pandemic marks an extraordinary global public health crisis unseen in the last century, with its rapid spread worldwide and associated mortality burden. The longevity of the crisis and disruption to normality is unknown. With COVID-19 set to be a chronic health crisis, clinicians will be required to maintain a state of high alert for an extended period. The support received before and during an incident is likely to influence whether clinicians experience psychological growth or injury. An abundance of information is emerging on disease epidemiology, pathogenesis and infection control prevention. However, literature on interventions for supporting the psychological well-being of healthcare workers during disease outbreaks is limited. This article summarises the available management strategies to increase resilience in healthcare workers during the COVID-19 pandemic and beyond. It focuses on self-care and organisational justice. It highlights various individual as well as organisational strategies. With the success of slowing disease spread in many countries to date, and reduced work-load due to limitations on elective surgery in many institutions, there is more time and opportunity to be pro-active in implementing measures to mitigate or minimise potential adverse psychological effects and improve, restore and preserve the well-being of the workforce now and for years to come. The purpose of this review is to review available literature on strategies for minimising the psychological impact of the COVID-19 pandemic on clinicians and to identify pro-active holistic approaches which may be beneficial for healthcare workers both for the current crisis and into the future.

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1. **The impact of mindfulness-based interventions on doctors' well-being and performance: A systematic review**  
   Scheepers R.A. Medical education 2020;54(2):138-149.

OBJECTIVES: The well-being of doctors is at risk, as evidenced by high burnout rates amongst doctors around the world. Alarmingly, burned-out doctors are more likely to exhibit low levels of professionalism and provide suboptimal patient care. Research suggests that burnout and the well-being of doctors can be improved by mindfulness-based interventions (MBIs). Furthermore, MBIs may improve doctors' performance (eg in empathy). However, there are no published systematic reviews that clarify the effects of MBIs on doctor well-being or performance to inform future research and professional development programmes. We therefore systematically reviewed and narratively synthesised findings on the impacts of MBIs on doctors' well-being and performance. <br/>METHOD(S): We searched PubMed and PsycINFO from inception to 9 May 2018 and independently reviewed studies investigating the effects of MBIs on doctor well-being or performance. We systematically extracted data and assessed study quality according to the Medical Education Research Study Quality Instrument (MERSQI), and narratively reported study findings. <br/>RESULT(S): We retrieved a total of 934 articles, of which 24 studies met our criteria; these included randomised, (un)controlled or qualitative studies of average quality. Effects varied across MBIs with different training contents or formats: MBIs including essential mindfulness training elements, or employing group-based training, mostly showed positive effects on the well-being or performance of doctors across different educational and hospital settings. Doctors perceived both benefits (enhanced self- and other-understanding) and challenges (time limitations and feasibility) associated with MBIs. Findings were subject to the methodological limitations of studies (eg the use of self-selected participants, lack of placebo interventions, use of self-reported outcomes). <br/>CONCLUSION(S): This review indicates that doctors can perceive positive impacts of MBIs on their well-being and performance. However, the evidence was subject to methodological limitations and does not yet support the standardisation of MBIs in professional development programmes. Rather, health care organisations could consider including group-based MBIs as voluntary modules for doctors with specific well-being needs or ambitions regarding professional development.<br/>Copyright &#xa9; 2019 The Authors. Medical Education published by Association for the Study of Medical Education and John Wiley & Sons Ltd.

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1. **:Systematic Review: Expressive arts interventions to address psychosocial stress in healthcare workers**  
   Phillips C.S. Journal of Advanced Nursing 2019;75(11):2285-2298.

Aims: To synthesize evidence about the effectiveness of expressive arts interventions used to reduce psychosocial stress among healthcare workers. <br/>Design(s): Quantitative systematic review following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. <br/>Data Sources: SocINDEX, PsycINFO, Pubmed, CINAHL. Review Methods: Databases were searched from 1997-2017. Fourteen studies met the criteria for final selection. <br/>Result(s): Most studies occurred in the US (N = 11). Of the 897 participants, 59% were nurses. Two studies were randomized controlled trials and the others were a variation of a 1-group or 2-group pre- or quasi-experimental study. The intervention characteristics included 50% art-based, 29% music-based, and 21% used storytelling or narrative. The length of intervention varied from 1 hr to 13 weeks; 5 lasted 6 weeks. Improved outcomes were found in 13 of 14 studies reviewed and the greatest improvements were seen in burnout, stress, and emotional outcomes. Overall, music and art-based interventions had greater impact on well-being than storytelling or narrative. <br/>Conclusion(s): This systematic review provides preliminary evidence for the effectiveness of expressive arts interventions. Impact: Care for others is a preeminent value in health care; however, this can come at the expense of caring for oneself. Psychosocial stress poses a significant threat to the well-being of the healthcare workforce. Expressive arts interventions provide a creative means for reducing caregiver stress to remain well and able to provide high quality care to patients. The use of arts for healing has global application because expressive arts intervention can be culturally tailored and relevant.<br/>Copyright &#xa9; 2019 John Wiley & Sons Ltd

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1. **A scoping review of the literature on the current mental health status of physicians and physicians-in-training in North America.**  
   Mihailescu Mara BMC public health 2019;19(1):1363.

BACKGROUNDThis scoping review summarizes the existing literature regarding the mental health of physicians and physicians-in-training and explores what types of mental health concerns are discussed in the literature, what is their prevalence among physicians, what are the causes of mental health concerns in physicians, what effects mental health concerns have on physicians and their patients, what interventions can be used to address them, and what are the barriers to seeking and providing care for physicians. This review aims to improve the understanding of physicians' mental health, identify gaps in research, and propose evidence-based solutions.METHODSA scoping review of the literature was conducted using Arksey and O'Malley's framework, which examined peer-reviewed articles published in English during 2008-2018 with a focus on North America. Data were summarized quantitatively and thematically.RESULTSA total of 91 articles meeting eligibility criteria were reviewed. Most of the literature was specific to burnout (n = 69), followed by depression and suicidal ideation (n = 28), psychological harm and distress (n = 9), wellbeing and wellness (n = 8), and general mental health (n = 3). The literature had a strong focus on interventions, but had less to say about barriers for seeking help and the effects of mental health concerns among physicians on patient care.CONCLUSIONSMore research is needed to examine a broader variety of mental health concerns in physicians and to explore barriers to seeking care. The implication of poor physician mental health on patients should also be examined more closely. Finally, the reviewed literature lacks intersectional and longitudinal studies, as well as evaluations of interventions offered to improve mental wellbeing of physicians.

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1. **A systematic review and meta-analysis of the impact of mindfulness-based interventions on the well-being of healthcare professionals**  
   Lomas Tim Mindfulness 2019;10(7):1193-1216.

Efforts to improve the well-being of healthcare professionals include mindfulness-based interventions (MBIs). To understand the value of such initiatives, we conducted a systematic review and meta-analysis of empirical studies pertaining to the use of MBIs with healthcare professionals. Databases were reviewed from the start of records to January 2016 (PROSPERO registration number: CRD42016032899). Eligibility criteria included empirical analyses of well-being outcomes acquired in relation to MBIs. Forty-one papers met the eligibility criteria, consisting of a total of 2101 participants. Studies were examined for two broad classes of well-being outcomes: (a) "negative" mental health measures such as anxiety, depression, and stress; (b) "positive" indices of well-being, such as life satisfaction, together with outcomes associated with well-being, such as emotional intelligence. MBIs were generally associated with positive outcomes in relation to most measures (albeit with moderate effect sizes), and mindfulness does appear to improve the well-being of healthcare professionals. However, the quality of the studies was inconsistent, so further research is needed, particularly high-quality randomised control trials. (PsycINFO Database Record (c) 2019 APA, all rights reserved) (Source: journal abstract)

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1. **Beyond Burnout: A Physician Wellness Hierarchy Designed to Prioritize Interventions at the Systems Level.**  
   Shapiro Daniel E. The American journal of medicine 2019;132(5):556-563.

Burnout has been implicated in higher physician turnover, reduced patient satisfaction, and worsened safety, but understanding the degree of burnout in a given physician or team does not direct leaders to solutions. The model proposed integrates a long list of variables that may ameliorate burnout into a prioritized, easy-to-understand hierarchy. Modified from Maslow's hierarchy, the model directs leaders to address physicians' basic physical and mental health needs first; patient and physician physical safety second; and then address higher-order needs, including respect from colleagues, patients, processes, and the electronic health record; appreciation and connection; and finally, time and resources to heal patients and contribute to the greater good. Assessments based on this model will help leaders prioritize interventions and improve physician wellness.

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1. **Intern Mental Health Interventions.**  
   Bommarito Sarah Current psychiatry reports 2019;21(7):55.

PURPOSE OF REVIEWIntern year is a uniquely stressful transition with interns facing higher rates of major depression compared with the general population. While burnout and depression during intern year are well documented, we aimed to examine which interventions have been implemented to prevent these issues and to consider the effectiveness of these interventions.RECENT FINDINGSBased on a review of recent literature, we located very few studies focusing on interventions for resident mental health and even fewer focusing on interns specifically. We found that such studies vary in design with most using online or app-based tools and others incorporating in-person workshops. There is significant variation among the scales used and the primary outcomes in each study. While most studies demonstrate a modest reduction in depression and burnout with implementation of some form of mindfulness practice, many were unable to reach a significant level of statistical power. More research is needed to determine generalizable findings.

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1. **Interventions to improve resilience in physicians who have completed training: A systematic review**  
   Venegas Carolina Lavin PLoS ONE 2019;14(1):No page numbers.

Background: Resilience is a contextual phenomenon where a complex and dynamic interplay exists between individual, environmental, and socio-cultural factors. With growing interest in enhancing resilience in physicians, given their high risk for experiencing prolonged or intense stress, effective strategies are necessary to improve resilience and reduce negative outcomes including burnout. The objective of this review was to identify effective interventions to improve resilience in physicians who have completed training, working in any setting. Methods and findings: We included randomized controlled trials (RCT), and observational studies (including pilot studies) published in English, French, and Spanish that included an intervention to improve resilience in physicians who have completed training. We included studies that implemented interventions to reduce burnout, anxiety, and depression or to improve empathy to ultimately enhance resilience, rather than studies designed solely to reduce stress or trauma-induced stress. We performed a systematic search of Medline, EMBASE, PsychInfo, CINAHL and Cochrane Library with no publication year limit. The last search was conducted on March 29, 2017. We used random effect models to calculate pooled standardized mean differences. Resilience was the primary outcome measure using validated resilience scores. Secondary outcome measures included proxy measures of resilience such as burnout, empathy, anxiety and depression. Our search strategy identified 7,579 records;74 met the criteria for full-text review. Seventeen studies were included in the final review published between 1998 and 2016 of which 9 (4 RCT, 5 observational) had physician data extractable. Interventions varied greatly regarding their approach, duration, and follow-up. Two RCTs measured resilience using validated scales; both found a significant improvement. No meta-analysis for resilience was conducted due to the presence of high clinical and methodological heterogeneity. Conclusions: Our systematic review demonstrates that there is weak evidence to support one intervention over another to improve resilience in physicians who have completed training. The quality of evidence for the outcomes ranged from very low to low. There is a need for a consensus on the definition of resilience and how it is measured. Longer follow-up is required to ensure any intervention effects are sustained over time. (PsycInfo Database Record (c) 2020 APA, all rights reserved) (Source: journal abstract)

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1. **Mindfulness training for healthcare professionals and trainees: A meta-analysis of randomized controlled trials**  
   Spinelli Christina Journal of Psychosomatic Research 2019;120:29-38.

[Correction Notice: An Erratum for this article was reported in Vol 123[109733] of Journal of Psychosomatic Research (see record 2019-48050-001). The authors regret that an error appears in Section 3.3 ‘Intervention Characteristics’. In the original article the last sentence of this section reads as: "Follow-up times (n = 15) ranged from 4 to 80 weeks (M = 24.27)." However, it should have been written as follows: "Follow-up times (n = 15) ranged from 4 to 312 weeks (M = 43.20)."] Objective: Healthcare professionals (HCPs) experience a wide range of physical and psychological symptoms that can affect quality of patient care. Previous meta-analyses exploring mindfulness-based interventions (MBIs) for HCPs have been limited by their narrow scope regarding intervention type, target population, and/or measures, and reliance on uncontrolled studies; therefore, a more comprehensive and methodologically rigorous examination is warranted. This meta-analysis quantified the effectiveness of MBIs on distress, well-being, physical health, and performance in HCPs and HCPs-in-training. Method: RCTs examining the effect of meditation and MBIs on HCPs and HCPs-in-training were identified and reviewed. Two independent reviewers extracted data and assessed risk of bias. Results: Thirty-eight studies were included in the analyses (n = 2505; 75.88% female). Intervention had a significant moderate effect on anxiety (Hedge's g = 0.47), depression (Hedge's g = 0.41), psychological distress (Hedge's g = 0.46), and stress (Hedge's g = 0.52). Small to moderate effects were also found for burnout (Hedge's g = 0.26) and well-being at post-intervention (Hedge's g = 0.32). Effects were not significant for physical health and performance. Larger intervention effects on overall outcomes were found with HCPs (Hedge's g = 0.52), with Mindfulness-based Stress Reduction intervention (Hedge's g = 0.47), and inactive controls (Hedge's g = 0.36). Conclusions: Results suggest mindfulness-based interventions are effective in reducing distress and improving well-being in HCPs and HCP-ITs. Subgroup analyses suggest the importance of exploring potential participants' needs prior to selecting the type of mindfulness intervention. Future studies should assess changes in mindfulness and include active controls. (PsycInfo Database Record (c) 2020 APA, all rights reserved) (Source: journal abstract)

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1. **Mindfulness-based stress reduction for psychological distress among nurses: A systematic review.**  
   Ghawadra Sajed Faisal Journal of clinical nursing 2019;28(21-22):3747-3758.

AIMS AND OBJECTIVESTo explore the studies that used interventions based on the Mindfulness-Based Stress Reduction (MBSR) for decreasing psychological distress among nurses.BACKGROUNDBecause of the demanding nature of their work, nurses often have significantly high levels of stress, anxiety and depression. MBSR has been reported to be an effective intervention to decrease psychological distress.DESIGNSystematic review.METHODSThe databases included were Science Direct, PubMed, EBSCO host, Springer Link and Web of Science from 2002 to 2018. Interventional studies published in English that used MBSR among nurses to reduce their psychological distress were retrieved for review. The PRISMA guideline was used in this systematic review. The included studies were assessed for quality using "The Quality Assessment Tool For Quantitative Studies (QATFQS)."RESULTSNine studies were found to be eligible and included in this review. Many benefits, including reduced stress, anxiety, depression, burnout and better job satisfaction, were reported in these studies.CONCLUSIONThe adapted/brief versions of MBSR seem promising for reducing psychological distress in nurses. Future research should include randomised controlled trials with a larger sample size and follow-up studies. There should also be a focus on creative and effective ways of delivering MBSR to nurses.RELEVANCE TO CLINICAL PRACTICEThe results of this review are substantial for supporting the use of MBSR for nurses' psychological well-being.

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1. **Organizational Factors Affecting Physician Well-Being**  
   Tawfik D.S. Current Treatment Options in Pediatrics 2019;5(1):11-25.

Purpose of review: Symptoms of burnout affect approximately half of pediatricians and pediatric subspecialists at any given time, with similarly concerning prevalence of other aspects of physician distress, including fatigue, depressive symptoms, and suicidal ideation. Physician well-being affects quality of care, patient satisfaction, and physician turnover. Organizational factors influence well-being, stressing the need for organizations to address this epidemic. Recent findings: Organizational characteristics, policies, and culture influence physician well-being, and specific strategies may support an environment where physicians thrive. We highlight four organizational opportunities to improve physician well-being: developing leaders, cultivating community and organizational culture, improving practice efficiency, and optimizing administrative policies. Leaders play a key role in aligning organizational and individual values, promoting professional fulfillment, and fostering a culture of collegiality and social support among physicians. Reducing documentation burden and improving practice efficiency may help balance job demands and resources. Finally, reforming administrative policies may reduce work-home conflict, support physician's efforts to attend to their own well-being, and normalize use of supportive resources. <br/>Summary: Physician well-being is critical to organizational success, sustainment of an adequate workforce, and optimal patient outcomes. Because burnout is primarily influenced by organizational factors, organizational interventions are key to promoting well-being. Developing supportive leadership, fostering a culture of wellness, optimizing practice efficiency, and improving administrative policies are worthy of organizational action and further research.<br/>Copyright &#xa9; 2019, Springer Nature Switzerland AG.

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1. **Organizational strategies to reduce physician burnout: a systematic review and meta-analysis**  
   De Simone S. Aging - Clinical and Experimental Research 2019;:No page numbers.

Background: The growing "process" of burnout impair performance and quality of professional services, with consequences for physicians, healthcare care organization, and patient's outcomes. <br/>Aim(s): We aim to evaluate which strategy of intervention, individual or organization directed, is more effective to reduce physician burnout and to provide management suggestions in terms of actual organizational strategies and intensity leading to reductions in physician burnout. <br/>Method(s): The meta analysis was conducted according to the PRISMA guidelines. We included physicians of any specialty in the primary, secondary, or intensive care setting, including residents and fellows. Eligible interventions were any intervention designed to relieve stress and/or improve the performance of physicians and reported burnout outcomes, including physician-directed interventions and organization-directed interventions. The electronic search strategy applied standard filters for identification of the different studies. Databases searched were the Cochrane Central Register of Controlled Trials (CENTRAL, The Cochrane Library), MEDLINE (from inception to September 2018), and EMBASE (from beginning to September 2018). Meta analysis was performed with mixed random effect using DerSimonian and Laird method. The standardized mean difference (SMD) and 95% CI for each outcome were separately calculated for each trial pooling data when needed, according to an intention-to-treat principle. <br/>Result(s): Pooled interventions were associated with small significant reductions in burnout (SMD = - 0.289; 95% CI, - 0.419 to - 0.159; I2 = 29%) (Fig. 2). Organization-directed interventions were associated with a medium reduction in burnout score (SMD = - 0.446; 95% CI, - 0.619 to - 0.274; I2 = 8%) while physician-directed interventions were associated with a moderate reduction in burnout score (SMD = - 0.178; 95% CI, - 0.322 to - 0.035; I2 = 11%). <br/>Discussion(s): This systematic review and meta-analysis showed that (1) organization-directed interventions were associated with moderate reduction in burnout score, (2) physician-directed interventions were associated with small reduction in burnout score, (3) organization-directed interventions reduced more the depersonalization than physician-directed interventions, (4) organization-directed interventions were related to a more improvement of the personal accomplishment than physician-directed interventions. <br/>Conclusion(s): This meta analysis found that physicians could gain important benefits from interventions to reduce burnout, especially from organizational strategies, by viewing burnout rooted in issues related to the working environment and organizational culture.<br/>Copyright &#xa9; 2019, Springer Nature Switzerland AG.

1. **Resilience in medical doctors: a systematic review.**  
   McKinley Nicola Postgraduate medical journal 2019;95(1121):140-147.

INTRODUCTIONResilience can be difficult to conceptualise and little is known about resilience in medical doctors.AIMSThis systematic review discusses the existing literature on influences on resilience levels of medical doctors.METHODSThe bibliographic databases PubMed, MEDLINE, EMBASE and PsycINFO were searched from 2008 to November 2018 using keyword search terms resilience\* AND ("medical physician\*" OR doctor\* OR surgeon\* OR medical trainee\* or clinician\*).RESULTSTwenty-four studies were deemed eligible for inclusion. A narrative synthesis was performed. The following influences on resilience in doctors were identified: demographics, personality factors, organisational or environmental factors, social support, leisure activities, overcoming previous adversity and interventions to improve resilience.CONCLUSIONSResilience is not limited to a doctor's own personal resource. Published studies also highlight the influence of other modifiable factors.

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1. **Update on Addressing Mental Health and Burnout in Physicians: What Is the Role for Psychiatry?**  
   McFarland Daniel C. Current psychiatry reports 2019;21(11):108.

PURPOSE OF REVIEWTo highlight an emerging understanding of burnout and physician mental health. This review will provide a discussion of conceptual and diagnostic issues of the burnout syndrome with its relevance to psychiatry, and how psychiatry may interface with other medical disciplines to provide support in creating burnout prevention and treatment programs.RECENT FINDINGSDescriptive data of burnout correlations and risk factors are available while an understanding of burnout best practices is lacking but growing. Two recent meta-analyses provide efficacy data along with key subgroup analyses that point to greater efficacy among systemic/organizational over individual level interventions. Among individual interventions, groups work better than individual therapy and the incorporation of Mindfulness-Based Stress Reduction and/or Cognitive Behavioral Therapy modalities provide greater efficacy over other therapies. Ultimately, addressing burnout will be an iterative process specific to institutional cultures and therefore should be thought of as quality improvement initiatives involving leadership to adopt the quadruple aim of physician wellness and to seek institution-specific collaboration and feedback. Psychiatry is uniquely positioned to help change institutional cultures regarding the burnout syndrome, which has been labeled a national crisis. Combinatorial strategies that combine efficacious individual-level interventions with systemic-level interventions that enhance workflow will likely provide the most sustainable model for preventing and treating burnout. Psychiatry should be involved, especially at the level of the liaison psychiatrist to assist with how these types of interventions may be best implemented in specific institutions.

1. **Using technology to support the emotional and social well-being of nurses: A scoping review.**  
   Webster Natalie L. Journal of advanced nursing 2019;:No page numbers.

AIMS(a) To review the literature on the use of technology to offer emotional and social support to nurses; (b) to identify and evaluate gaps in the research; (c) to assess whether a systematic review would be valuable and (d) to make recommendations for future research.DESIGNA robust methodological scoping framework was used as the basis for this review design. A manualized systematic approach to quality appraisal was implemented.DATA SOURCESBetween 11-12 June 2018, five databases were searched. A search of the grey literature was conducted alongside hand searching reference lists of included studies.REVIEW METHODSTwo researchers conducted the literature search, data extraction and quality appraisal. Three searches were conducted, combining nursing and technological terms. A narrative review approach to knowledge synthesis was used to compare and evaluate included studies.RESULTSEleven articles were retrieved. Results are presented under three subheadings: (a) text messaging and messenger apps; (b) social media and online forums; and (c) online interventions accessible via PC, smartphone and tablet. All included studies described how such provision could be beneficial; decreasing stress, isolation and anxiety and fostering a sense of community.CONCLUSIONThe review identified a dearth of research into how technology can support the well-being of nurses. A high proportion of studies were based on student nurse populations using small sample sizes, therefore further research is needed.IMPACTTechnology may offer a sustainable and accessible means of providing support for nurses who find it difficult to communicate in person due to time pressures at work. It is important that the psychological well-being of nurses is seriously addressed as more nurses are now leaving than joining the profession. Online interventions may offer a sustainable and accessible means of providing support for busy nursing staff who have difficulty finding time to communicate with one another face-to-face. Nurse retention is an international issue linked to quality of patient care. There are financial implications for healthcare providers who compensate for the workforce deficit by employing costly agency staff. This scoping review aims to map and evaluate the available literature on technology-mediated support for the emotional and social well-being of nurses. Recommendations for future research, policy and practice will be offered from the findings of the review.

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1. **A systematic review of interventions to foster physician resilience.**  
   Fox Susan Postgraduate medical journal 2018;94(1109):162-170.

This review aimed to synthesise the literature describing interventions to improve resilience among physicians, to evaluate the quality of this research and to outline the type and efficacy of interventions implemented. Searches were conducted in April 2017 using five electronic databases. Reference lists of included studies and existing review papers were screened. English language, peer-reviewed studies evaluating interventions to improve physician resilience were included. Data were extracted on setting, design, participant and intervention characteristics and outcomes. Methodological quality was assessed using the Downs and Black checklist. Twenty-two studies were included. Methodological quality was low to moderate. The most frequently employed interventional strategies were psychosocial skills training and mindfulness training. Effect sizes were heterogeneous. Methodologically rigorous research is required to establish best practice in improving resilience among physicians and to better consider how healthcare settings should be considered within interventions.

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1. **Can Schwartz Center Rounds support healthcare staff with emotional challenges at work, and how do they compare with other interventions aimed at providing similar support? A systematic review and scoping reviews**  
   Taylor C. BMJ Open 2018;8(10):No page numbers.

Objectives (i) To synthesise the evidence-base for Schwartz Center Rounds (Rounds) to assess any impact on healthcare staff and identify key features; (ii) to scope evidence for interventions with similar aims, and compare effectiveness and key features to Rounds. Design Systematic review of Rounds literature; scoping reviews of comparator interventions (action learning sets; after action reviews; Balint groups; caregiver support programme; clinical supervision; critical incident stress debriefing; mindfulness-based stress reduction; peer-supported storytelling; psychosocial intervention training; reflective practice groups; resilience training). Data sources PsychINFO, CINAHL, MEDLINE and EMBASE, internet search engines; consultation with experts. Eligibility criteria Empirical evaluations (qualitative or quantitative); any healthcare staff in any healthcare setting; published in English. Results The overall evidence base for Rounds is limited. We developed a composite definition to aid comparison with other interventions from 41 documents containing a definition of Rounds. Twelve (10 studies) were empirical evaluations. All were of low/moderate quality (weak study designs including lack of control groups). Findings showed the value of Rounds to attenders, with a self-reported positive impact on individuals, their relationships with colleagues and patients and wider cultural changes. The evidence for the comparative interventions was scant and also low/moderate quality. Some features of Rounds were shared by other interventions, but Rounds offer unique features including being open to all staff and having no expectation for verbal contribution by attenders. Conclusions Evidence of effectiveness for all interventions considered here remains limited. Methods that enable identification of core features related to effectiveness are needed to optimise benefit for individual staff members and organisations as a whole. A systems approach conceptualising workplace well-being arising from both individual and environmental/structural factors, and comprising interventions both for assessing and improving the well-being of healthcare staff, is required. Schwartz Rounds could be considered as one strategy to enhance staff well-being.<br/>Copyright &#xa9; Author(s) (or their employer(s)) 2018. Re-use permitted under CC BY. Published by BMJ.

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1. **Group interventions to promote mental health in health professional education: a systematic review and meta-analysis of randomised controlled trials.**  
   Lo Kristin Advances in health sciences education : theory and practice 2018;23(2):413-447.

Effects of interventions for improving mental health of health professional students has not been established. This review analysed interventions to support mental health of health professional students and their effects. The full holdings of Medline, PsycINFO, EBM Reviews, Cinahl Plus, ERIC and EMBASE were searched until 15th April 2016. Inclusion criteria were randomised controlled trials of undergraduate and post graduate health professional students, group interventions to support mental health compared to alternative education, usual curriculum or no intervention; and post-intervention measurements for intervention and control participants of mindfulness, anxiety, depression, stress/distress or burnout. Studies were limited to English and short term effects. Studies were appraised using the PEDro scale. Data were synthesised using meta-analysis. Four comparisons were identified: psychoeducation or cognitive-behavioural interventions compared to alternative education, and mindfulness or relaxation compared to control conditions. Cognitive-behavioural interventions reduced anxiety (-0.26; -0.5 to -0.02), depression (-0.29; -0.52 to -0.05) and stress (0.37; -0.61 to -0.13). Mindfulness strategies reduced stress (-0.60; -0.97 to -0.22) but not anxiety (95% CI -0.21 to 0.18), depression (95% CI -0.36 to 0.03) or burnout (95% CI -0.36 to 0.10). Relaxation strategies reduced anxiety (SMD -0.80; 95% CI -1.03 to -0.58), depression (-0.49; -0.88 to -0.11) and stress (-0.34; -0.67 to -0.01). Method quality was generally poor. Evidence suggests that cognitive-behavioural, relaxation and mindfulness interventions may support health professional student mental health. Further high quality research is warranted.

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1. **Impact of Internet-Based Interventions on Caregiver Mental Health: Systematic Review and Meta-Analysis.**  
   Sherifali Diana Journal of medical Internet research 2018;20(7):e10668.

BACKGROUNDThe health of informal caregivers of adults with chronic conditions is increasingly vital since caregivers comprise a large proportion of supportive care to family members living in the community. Due to efficiency and reach, internet-based interventions for informal caregivers have the potential to mitigate the negative mental health outcomes associated with caregiving.OBJECTIVEThe objective of this systematic review and meta-analysis was to examine the impact of internet-based interventions on caregiver mental health outcomes and the impact of different types of internet-based intervention programs.METHODSMEDLINE, EMBASE, CINAHL, PsycINFO, Cochrane, and AgeLine databases were searched for randomized controlled trials or controlled clinical trials published from January 1995 to April 2017 that compared internet-based intervention programs with no or minimal internet-based interventions for caregivers of adults with at least 1 chronic condition. The inclusion criteria were studies that included (1) adult informal caregivers (aged 18 years or older) of adults living in the community with a chronic condition; (2) an internet-based intervention program to deliver education, support, or monitoring to informal caregivers; and (3) outcomes of mental health. Title and abstract and full-text screening were completed in duplicate. Data were extracted by a single reviewer and verified by a second reviewer, and risk of bias assessments were completed accordingly. Where possible, data for mental health outcomes were meta-analyzed.RESULTSThe search yielded 7923 unique citations of which 290 studies were screened at full-text. Of those, 13 studies met the inclusion criteria; 11 were randomized controlled trials, 1 study was a controlled clinical trial, and 1 study comprised both study designs. Beneficial effects of any internet-based intervention program resulted in a mean decrease of 0.48 points (95% CI -0.75 to -0.22) for stress and distress and a mean decrease of 0.40 points (95% CI -0.58 to -0.22) for anxiety among caregivers. For studies that examined internet-based information and education plus professional psychosocial support, the meta-analysis results showed small to medium beneficial effect sizes of the intervention for the mental health outcomes of depression (-0.34; 95% CI -0.63 to -0.05) and anxiety (-0.36; 95% CI -0.66 to -0.07). Some suggestion of a beneficial effect on overall health for the use of information and education plus combined peer and professional support was also shown (1.25; 95% CI 0.24 to 2.25). Overall, many studies were of poor quality and were rated at high risk of bias.CONCLUSIONSThe review found evidence for the benefit of internet-based intervention programs on mental health for caregivers of adults living with a chronic condition, particularly for the outcomes of caregiver depression, stress and distress, and anxiety. The types of interventions that predominated as efficacious included information and education with or without professional psychological support, and, to a lesser extent, with combined peer and psychological support. Further high-quality research is needed to inform the effectiveness of interactive, dynamic, and multicomponent internet-based interventions.TRIAL REGISTRATIONPROSPERO CRD42017075436; https://www.crd.york.ac.uk/prospero/display\_record.php?RecordID=75436 (Archived by WebCite at http://www.webcitation.org/709M3tDvn).

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1. **Job burnout in mental health providers: A meta-analysis of 35 years of intervention research.**  
   Dreison Kimberly C. Journal of occupational health psychology 2018;23(1):18-30.

Burnout is prevalent among mental health providers and is associated with significant employee, consumer, and organizational costs. Over the past 35 years, numerous intervention studies have been conducted but have yet to be reviewed and synthesized using a quantitative approach. To fill this gap, we performed a meta-analysis on the effectiveness of burnout interventions for mental health workers. We completed a systematic literature search of burnout intervention studies that spanned more than 3 decades (1980 to 2015). Each eligible study was independently coded by 2 researchers, and data were analyzed using a random-effects model with effect sizes based on the Hedges' g statistic. We computed an overall intervention effect size and performed moderator analyses. Twenty-seven unique samples were included in the meta-analysis, representing 1,894 mental health workers. Interventions had a small but positive effect on provider burnout (Hedges' g = .13, p = .006). Moderator analyses suggested that person-directed interventions were more effective than organization-directed interventions at reducing emotional exhaustion (Qbetween = 6.70, p = .010) and that job training/education was the most effective organizational intervention subtype (Qbetween = 12.50, p < .001). Lower baseline burnout levels were associated with smaller intervention effects and accounted for a significant proportion of effect size variability. The field has made limited progress in ameliorating mental health provider burnout. Based on our findings, we suggest that researchers implement a wider breadth of interventions that are tailored to address unique organizational and staff needs and that incorporate longer follow-up periods. (PsycINFO Database Record

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1. **Mental health interventions with community health workers in the united states: A systematic review**  
   Weaver A. Journal of Health Care for the Poor and Underserved 2018;29(1):159-180.

Mental health conditions are common in the United States, yet the mental health workforce is limited in its capacity to reach disadvantaged populations. While a number of recent reviews demonstrate that community health worker (CHW)-supported physical health interventions are effective, and increase access to services, there are no recent reviews that systematically assess CHW-supported mental health interventions. To address this gap, the authors conducted a systematic review of mental health interventions with CHWs in the United States, and assessed the methodological rigor of such studies. Nine studies met review criteria. Though most of the studies reviewed showed inadequate methodological rigor, findings suggest CHW-supported mental health interventions show promise, particularly given evidence of feasibility and acceptability with underserved populations. The authors describe the rationale for mental health CHWs in the workforce, offer recommendations to strengthen the evidence base, and discuss implications of mental health interventions with CHWs for underserved populations.<br/>Copyright &#xa9; Meharry Medical College.

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1. **Mental healthcare staff well-being and burnout: A narrative review of trends, causes, implications, and recommendations for future interventions**  
   Johnson J. International Journal of Mental Health Nursing 2018;27(1):20-32.

Rising levels of burnout and poor well-being in healthcare staff are an international concern for health systems. The need to improve well-being and reduce burnout has long been acknowledged, but few interventions target mental healthcare staff, and minimal improvements have been seen in services. This review aimed to examine the problem of burnout and well-being in mental healthcare staff and to present recommendations for future research and interventions. A discursive review was undertaken examining trends, causes, implications, and interventions in burnout and well-being in healthcare staff working in mental health services. Data were drawn from national surveys, reports, and peer-reviewed journal articles. These show that staff in mental healthcare report poorer well-being than staff in other healthcare sectors. Poorer well-being and higher burnout are associated with poorer quality and safety of patient care, higher absenteeism, and higher turnover rates. Interventions are effective, but effect sizes are small. The review concludes that grounding interventions in the research literature, emphasizing the positive aspects of interventions to staff, building stronger links between healthcare organizations and universities, and designing interventions targeting burnout and improved patient care together may improve the effectiveness and uptake of interventions by staff.<br/>Copyright &#xa9; 2017 Australian College of Mental Health Nurses Inc.

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1. **Outcomes of interventions for nurse leaders' well-being at work: A quantitative systematic review.**  
   Häggman-Laitila Arja Journal of advanced nursing 2018;74(1):34-44.

AIMSThe aim of this study was to gather, assess and synthesize current research knowledge on interventions that aimed to improve nurse leaders' well-being at work.BACKGROUNDThe research evidence on interventions for nurse leaders' well-being at work has been sporadic and there are a lack of evidence-based recommendations for effective interventions that inform practice, future studies and education.DESIGNA quantitative systematic review, in accordance with the Cochrane Collaboration procedures and the reporting guidance in the PRISMA statement.METHODSCINAHL, Cochrane, EBSCO, PubMed, PsycInfo and Scopus databases were searched from 2009 - December 2016. The final data consisted of five studies, which were assessed with the Cochrane Risk of Bias Tool. The data were summarized narratively.RESULTSThe interventions were mainly concerned with stress management and were targeted at individuals. Four of the five interventions examined produced statistically significant outcomes on well-being at work.CONCLUSIONSStress management interventions that included mental exercises were the most successful. Interventions primarily reduced the stress experienced by participants, but the evidence on the stability of these outcomes was poor because of the short follow-up periods. The certainty of evidence was low, indicating that the use of these interventions among nurse leaders might be beneficial. Further studies are needed to provide more reliable recommendations for their use. As the performance of nurse leaders influences organizations, through interpersonal relationships, it is important to pay more attention in the future to the development of organization- and person-directed interventions and their combinations. A structural empowerment approach should also be considered.

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1. **Perspectives on Healthcare Provider Well-Being: Looking Back, Moving Forward.**  
   Penwell-Waines Lauren Journal of clinical psychology in medical settings 2018;25(3):295-304.

Recognizing the impact of healthcare professional (HCP) burnout has led to vigorous interest from organizations and individuals regarding how to most effectively promote HCP well-being. The present paper reviews the literature on HCP well-being and describes factors that impact well-being at various levels (i.e., system, institution, program, interpersonal, and individual). We propose that change must occur at all levels to have the greatest impact. Further, we highlight opportunities to advance research on HCP well-being (e.g., being more inclusive regarding study populations and designing longitudinal intervention studies).

1. **Retaining and valuing newly qualified nursing staff: Evaluation of a peer support group**  
   Jackson H. Mental Health Practice 2018;21(8):No page numbers.

This article describes a service evaluation of the introduction of a successful local initiative aimed at assisting the development and retention of a group of newly qualified mental health nurses in adult inpatient teams at Humber Teaching NHS Foundation Trust. The project offered extra support to complement the trust's preceptorship programme. The nurses reported the group to be beneficial and identified peer support as important in the transition to becoming a staff nurse.<br/>Copyright &#xa9; RCN Publishing Company Limited 2018.

1. **The effectiveness of interventions to improve resilience among health professionals: A systematic review.**  
   Cleary Michelle Nurse education today 2018;71:247-263.

OBJECTIVETo assess the effectiveness of resilience interventions in improving resilience outcome among health professionals.BACKGROUNDThe nature of health professionals' work is physically and emotionally demanding, with trauma a common consequence with the act of providing health care.DESIGNA systematic review.DATA SOURCEA comprehensive search of the literature was conducted in February 2018 using PubMed, PsychInfo, Cumulative Index of Nursing and Allied Health Literature (CIHAHL) and Scopus.REVIEW METHODSMethodological quality was assessed and a standardized data coding form was used to extract data.RESULTSOf the 33 included studies, 15 were single-arm pre-post-design, 10 were RCTs, five used a non-randomized controlled design, and three were qualitative. Eleven studies (out of 16) showed a significant improvement in resilience scores while five (out of eight) studies reported a significant difference in resilience scores between treatment and control groups.CONCLUSIONFindings suggest that resilience training may be of benefit to health professionals. However, not all interventions enhanced resilience with training volume being more effective. Not all studies reporting resilience used standard resilience instruments. The results of the current review may inform resilience programs as well as future interventional studies on resilience building.

1. **Time to create a healthy work environment in ICU: a review of current evidence and commentary.**  
   Karanikola CONNECT: The World of Critical Care Nursing 2018;12(2):44-47.

The intensive care unit (ICU) is a stressful environment for clinicians, patients and patients' family members. The purpose of this paper is to critically synthesize and discuss recent evidence on: a) the association between the conditions prevailing in ICUs and disturbing psychological responses in clinicians, as well as patients and their family, and b) effective interventions and healthcare policy development towards this goal. A number of studies suggest that prolonged work-related stress is associated with neuro-biological and psychological distress in ICU personnel, which might be severe enough to compromise clinicians' ability to work and provide proper care. People hospitalized in ICUs, even after discharge, frequently suffer from psychiatric symptoms, and so do their family members. Interventions at an organizational level aiming to support ICU nurses' professional role within the demands and stressors of the ICU environment are pivotal. Similarly, prospective studies to support the implementation of evidence-based strategies are also needed. Overall, reformation of occupational health policies is obligatory. At the same time, approaches aiming to support ICU clinicians at an individual level, including training and education, such as development of stress-management skills, and coping with the stressors, such as enhancement of resilience, physical strength or taking time away from work, although valuable, they do not make the work-environment less toxic.

1. **What Do We Mean by Physician Wellness? A Systematic Review of Its Definition and Measurement.**  
   Brady Keri J. S Academic psychiatry : the journal of the American Association of Directors of Psychiatric Residency Training and the Association for Academic Psychiatry 2018;42(1):94-108.

OBJECTIVEPhysician wellness (well-being) is recognized for its intrinsic importance and impact on patient care, but it is a construct that lacks conceptual clarity. The authors conducted a systematic review to characterize the conceptualization of physician wellness in the literature by synthesizing definitions and measures used to operationalize the construct.METHODSA total of 3057 references identified from PubMed, Web of Science, and a manual reference check were reviewed for studies that quantitatively assessed the "wellness" or "well-being" of physicians. Definitions of physician wellness were thematically synthesized. Measures of physician wellness were classified based on their dimensional, contextual, and valence attributes, and changes in the operationalization of physician wellness were assessed over time (1989-2015).RESULTSOnly 14% of included papers (11/78) explicitly defined physician wellness. At least one measure of mental, social, physical, and integrated well-being was present in 89, 50, 49, and 37% of papers, respectively. The number of papers operationalizing physician wellness using integrated, general-life well-being measures (e.g., meaning in life) increased [X 2 = 5.08, p = 0.02] over time. Changes in measurement across mental, physical, and social domains remained stable over time.CONCLUSIONSConceptualizations of physician wellness varied widely, with greatest emphasis on negative moods/emotions (e.g., burnout). Clarity and consensus regarding the conceptual definition of physician wellness is needed to advance the development of valid and reliable physician wellness measures, improve the consistency by which the construct is operationalized, and increase comparability of findings across studies. To guide future physician wellness assessments and interventions, the authors propose a holistic definition.

1. **What Is the Impact of Targeted Health Education for Mental Health Nurses in the Provision of Physical Health Care? An Integrated Literature Review.**  
   Hennessy Sinead Issues in mental health nursing 2018;39(8):700-706.

Individuals with a severe mental illness have a gap in life expectancy of up to 20 years in comparison to the general population. Nurses who work in mental health services have been identified as best placed to improve the physical health outcomes of individuals with mental illness. The literature identifies a lack of nursing knowledge related to physical health care and the presence of metabolic syndrome which is impeding nurses in providing essential physical health care to patients. An integrated literature review was carried out due to the dearth of research evidence pertaining to the impact of targeted education specifically with psychiatric/mental health nurses in the provision of physical healthcare. A search for literature included the following databases: CINAHL, Medline, PsycINFO, Embase and Web of Science revealed nine studies: seven quantitative, one qualitative and one mixed method. Qualitative synthesis has shed light on the value of targeted education on improving knowledge and skills in providing physical health care that can then be translated into clinical practice. Targeted education in physical healthcare grows psychiatric/mental health nurse's confidence and develops the skills necessary to enable them to screen and monitor and offer range of physical health interventions to individuals with severe mental illness. Accessible summary • The poor physical health outcomes and premature death of individuals with severe mental illness is of growing concern; a contributing factor is a lack of knowledge and confidence amongst psychiatric/mental health nurses to providing physical health screening and intervening in preventable diseases such as cardiovascular disease, stroke cancer, and type 2 diabetes mellitus. • An integrated literature review was used to ascertain if targeted education on physical health care can improve the knowledge base of psychiatric/mental health nurses within physical health care. • Nine studies were critically appraised, and the data reduced using a narrative synthesis that tells a story of the findings from these research studies. • The review found that targeted education with psychiatric/mental health nurses does result in a statistical increase in knowledge This review finds that nurses have not been regularly supported with physical health education to alter existing practices. This lack of knowledge within physical healthcare is hindering psychiatric/mental health nurses to fully engaging in physical health care activities in practice.

1. **A mixed-methods systematic review of the effects of mindfulness on nurses.**  
   Guillaumie Laurence Journal of advanced nursing 2017;73(5):1017-1034.

AIMTo review the effects of mindfulness-based interventions on Registered Nurses and nursing students.BACKGROUNDWork-related stress among nurses is estimated to be the biggest occupational health problem after musculoskeletal disorders.DESIGNA mixed-method systematic review incorporating quantitative and qualitative data was conducted.DATA SOURCESStudies on the effects of mindfulness-based interventions for nurses and nursing students published between 1980 and 2014 were identified through a systematic search in electronic databases: Medline, Embase, PsycINFO, Cochrane Library and Cinahl.REVIEW METHODSData analysis was conducted based on the framework of Thomas and Harden (2004).RESULTSA total of 32 studies, including 17 controlled designs, 11 pre-post designs and four qualitative designs were reviewed. Meta-analysis suggests that mindfulness-based interventions may be effective in significantly reducing state anxiety and depression at posttreatment and state anxiety and trait anxiety at follow-up. Qualitative studies and uncontrolled studies shed light on benefits overlooked in RCTs, including improvements in the well-being of individuals (e.g. inner state of calmness, awareness and enthusiasm) and improved performance at work (better communication with colleagues and patients, higher sensitivity to patients' experiences, clearer analysis of complex situations and emotional regulation in stressful contexts).CONCLUSIONSMindfulness appeared to improve nurses' mental health significantly. It could be used in worksite health promotion programmes. Only a few studies have explored the impact of mindfulness on nurses' professional behaviours and their relationships with patients and colleagues. Future research should further explore the long-term impacts of mindfulness on performance and well-being at work using sound methodological designs.

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1. **Burnout syndrome and wellbeing in anesthesiologists: The importance of emotion regulation strategies**  
   Lapa T.A. Minerva Anestesiologica 2017;83(2):191-199.

Anesthesiologists face stressful working conditions that can culminate in burnout syndrome. Despite various studies and protective measures which have attempted to prevent this situation, burnout continues to be a problem within the profession, impacting negatively on physicians' lives and their performance. In this review article mechanisms and consequences of burnout are described in addition to individual strategies for stress management and burnout reduction with potential impact on health care quality and wellbeing in anesthesiologists. Organizational strategies appear to have an important role in burnout reduction but need to be used in conjunction with individual programs. The latter are essential to both reducing stress and burnout in anesthesiologists and improving happiness and wellbeing. New measures of emotion regulation strategies such as mindfulness, self-compassion, resilience and empathy promotion have been shown to be approaches with substantial supporting evidence for reducing burnout and improving stress management. The evaluation and implementation of these self-regulatory competencies is a challenge. Further research is necessary to identify which programs will best suit the needs of anesthesiologists and to measure their effects on patient care and health care system quality.<br/>Copyright &#xa9; 2016 EDIZIONIMINERVAMEDICA.

1. **Executive Leadership and Physician Well-being: Nine Organizational Strategies to Promote Engagement and Reduce Burnout**  
   Shanafelt T.D. Mayo Clinic Proceedings 2017;92(1):129-146.

These are challenging times for health care executives. The health care field is experiencing unprecedented changes that threaten the survival of many health care organizations. To successfully navigate these challenges, health care executives need committed and productive physicians working in collaboration with organization leaders. Unfortunately, national studies suggest that at least 50% of US physicians are experiencing professional burnout, indicating that most executives face this challenge with a disillusioned physician workforce. Burnout is a syndrome characterized by exhaustion, cynicism, and reduced effectiveness. Physician burnout has been shown to influence quality of care, patient safety, physician turnover, and patient satisfaction. Although burnout is a system issue, most institutions operate under the erroneous framework that burnout and professional satisfaction are solely the responsibility of the individual physician. Engagement is the positive antithesis of burnout and is characterized by vigor, dedication, and absorption in work. There is a strong business case for organizations to invest in efforts to reduce physician burnout and promote engagement. Herein, we summarize 9 organizational strategies to promote physician engagement and describe how we have operationalized some of these approaches at Mayo Clinic. Our experience demonstrates that deliberate, sustained, and comprehensive efforts by the organization to reduce burnout and promote engagement can make a difference. Many effective interventions are relatively inexpensive, and small investments can have a large impact. Leadership and sustained attention from the highest level of the organization are the keys to making progress.<br/>Copyright &#xa9; 2016 Mayo Foundation for Medical Education and Research

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1. **Interventions for nurses’ well-being at work: A quantitative systematic review**  
   Romppanen Johanna Journal of Advanced Nursing 2017;73(7):1555-1569.

Aim: To gather, assess and synthesize current research knowledge on the interventions aiming to improve nurses’ well-being at work. Background: Previous reviews describe health care professionals’ well-being at work from the perspective of burnout. Research on the interventions for and their effectiveness on nurses’ well-being at work is sporadic. Design: A quantitative systematic review based on the procedure of the Centre for Reviews and Dissemination. Methods: CINAHL, Cochrane, EBSCO, PubMed, PsycInfo, Scopus databases were sought from 2009–March 2015. The final data consisted of eight studies described in 10 articles. The study design was RCT in three studies, CBA in three and ITS in two studies. The studies were assessed with the Cochrane risk of bias tool. Data were summarised narratively and displayed in a harvest plot. Results: Two of the six interventions were person-directed, two combined person- and organisation-directed and two organisation-directed interventions. Half of them were mainly targeted at stress management while the others aimed at improving interaction with colleagues, work methods and conditions or at supervision of professional skills. Conclusions: There was a lot variation in the conceptual bases and the use of evaluation measurements in the studies and the interventions were carried out in a heterogeneous way. Moderate evidence was found to support the use of interventions among nurses employed at in-patient and out-patient units in four out of the six interventions. The review pointed out a need for research on standardised interventions on nurses’ well-being at work and their effectiveness with long-term follow-ups. (PsycINFO Database Record (c) 2017 APA, all rights reserved) (Source: journal abstract)

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1. **Methods for Alleviating Stress and Increasing Resilience in the Midwifery Community: A Scoping Review of the Literature**  
   Wright E.M. Journal of Midwifery and Women's Health 2017;62(6):737-745.

Introduction: Work-related stress and exposure to traumatic birth have deleterious impacts on midwifery practice, the midwife's physiologic well-being, and the midwifery workforce. This is a global phenomenon, and the specific sources of this stress vary dependent on practice setting. This scoping review aims to determine which, if any, modalities help to reduce stress and increase resilience among a population of midwives. <br/>Method(s): A scoping review of the literature published between January 2011 and September 2016 using PubMed, CINAHL, Embase, PsycINFO, and Cochrane databases was performed. Of the initial 796 reviewed records, 6 met inclusion criteria. <br/>Result(s): Three of the 6 included studies were quantitative in nature, 2 were qualitative, and one used mixed methods. Countries where studies were conducted include Uganda, Iran, the United Kingdom, Israel, and Australia. Three of the studies used interventions for stress reduction and increased coping. Two of these 3 used a mindfulness-based stress reduction program resulting in improved stress levels and coping skills. In each study, midwives express a desire for work-based programs and support from colleagues and employers for increasing coping abilities. These studies focused on stress reduction and/or increasing resilience. <br/>Discussion(s): While modalities such as mindfulness-based stress reduction show promise, further studies with a cohort of midwives should be conducted. These studies should include interventions aimed at addressing the needs of midwives to improve psychological outcomes related to employment-related stress on a global scale and specific to each health care context.<br/>Copyright &#xa9; 2017 by the American College of Nurse-Midwives

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1. **Mindfulness and acceptance-based trainings for fostering self-care and reducing stress in mental health professionals: A systematic review**  
   Rudaz Myriam Journal of Contextual Behavioral Science 2017;6(4):380-390.

This review summarizes the effectiveness of Mindfulness-Based Stress Reduction (MBSR), Mindfulness-Based Cognitive Therapy (MBCT), Mindful Self-Compassion (MSC), and Acceptance and Commitment Therapy (ACT) to foster self-care and reduce stress in mental health professionals. Twenty-four quantitative articles from PsycInfo and PubMed were identified that focused on mindfulness, self-compassion, psychological flexibility, stress, burnout, or psychological well-being. All MBSR and MBCT studies lacked active control conditions, but some of the ACT studies and one MSC study included an active control. Most studies support evidence that all training programs tend to improve mindfulness and some also self-compassion. In addition, psychological flexibility was measured in the ACT studies and tends to improve over time. Further, MBSR, MSC, and ACT tend to reduce stress or burnout. The results were less supportive for psychological well-being. The value of the various training adaptations as well as directions for future research are discussed. (PsycInfo Database Record (c) 2020 APA, all rights reserved) (Source: journal abstract)

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1. **Mindfulness Training for Health Profession Students-The Effect of Mindfulness Training on Psychological Well-Being, Learning and Clinical Performance of Health Professional Students: A Systematic Review of Randomized and Non-randomized Controlled Trials.**  
   McConville Janet Explore (New York, N.Y.) 2017;13(1):26-45.

BACKGROUNDHigh levels of stress have been identified in medical students and increasingly in other health profession student population groups. As stress can affect psychological well-being and interfere with learning and clinical performance, there is a clear argument for universities to include health professional student well-being as an outcome in core curriculum. Mindfulness training is a potential construct to manage stress and enhance academic success.OBJECTIVESThe aims of this systematic review were to assess the effectiveness of mindfulness training in medical and other health professional student population groups and to compare the effectiveness of the different mindfulness-based programs.DATA SOURCESA literature search was completed using The Cochrane library, Medline, Cinahl, Embase, Psychinfo, and ERIC (proquest) electronic databases from inception to June 2016. Randomized and non-randomized controlled trials were included. Of the potential 5355 articles, 19 met the inclusion criteria.STUDY SELECTION PARTICIPANTS AND INTERVENTIONSStudies focused on medical (n = 10), nursing (n = 4), social work (n = 1), psychology (n = 1), and medical plus other health (n = 3) students. Interventions were based on mindfulness.DATA EXTRACTIONThe 19 studies included 1815 participants. Meta-analysis was performed evaluating the effect of mindfulness training on mindfulness, anxiety, depression, stress, mood, self-efficacy, and empathy. The effect of mindfulness on academic performance was discussed.DATA SYNTHESIS AND CONCLUSIONSMindfulness-based interventions decrease stress, anxiety, and depression and improve mindfulness, mood, self-efficacy, and empathy in health profession students. Due to the range of presentation options, mindfulness training can be relatively easily adapted and integrated into health professional training programs.

1. **Whole-system approaches to improving the health and wellbeing of healthcare workers: A systematic review.**  
   Brand Sarah L. PloS one 2017;12(12):e0188418.

BACKGROUNDHealthcare professionals throughout the developed world report higher levels of sickness absence, dissatisfaction, distress, and "burnout" at work than staff in other sectors. There is a growing call for the 'triple aim' of healthcare delivery (improving patient experience and outcomes and reducing costs; to include a fourth aim: improving healthcare staff experience of healthcare delivery. A systematic review commissioned by the United Kingdom's (UK) Department of Health reviewed a large number of international healthy workplace interventions and recommended five whole-system changes to improve healthcare staff health and wellbeing: identification and response to local need, engagement of staff at all levels, and the involvement, visible leadership from, and up-skilling of, management and board-level staff.OBJECTIVESThis systematic review aims to identify whole-system healthy workplace interventions in healthcare settings that incorporate (combinations of) these recommendations and determine whether they improve staff health and wellbeing.METHODSA comprehensive and systematic search of medical, education, exercise science, and social science databases was undertaken. Studies were included if they reported the results of interventions that included all healthcare staff within a healthcare setting (e.g. whole hospital; whole unit, e.g. ward) in collective activities to improve physical or mental health or promote healthy behaviours.RESULTSEleven studies were identified which incorporated at least one of the whole-system recommendations. Interventions that incorporated recommendations to address local need and engage the whole workforce fell in to four broad types: 1) pre-determined (one-size-fits-all) and no choice of activities (two studies); or 2) pre-determined and some choice of activities (one study); 3) A wide choice of a range of activities and some adaptation to local needs (five studies); or, 3) a participatory approach to creating programmes responsive and adaptive to local staff needs that have extensive choice of activities to participate in (three studies). Only five of the interventions included substantial involvement and engagement of leadership and efforts aimed at up-skilling the leadership of staff to support staff health and wellbeing. Incorporation of more of the recommendations did not appear to be related to effectiveness. The heterogeneity of study designs, populations and outcomes excluded a meta-analysis. All studies were deemed by their authors to be at least partly effective. Two studies reported statistically significant improvement in objectively measured physical health (BMI) and eight in subjective mental health. Six studies reported statistically significant positive changes in subjectively assessed health behaviours.CONCLUSIONSThis systematic review identified 11 studies which incorporate at least one of the Boorman recommendations and provides evidence that whole-system healthy workplace interventions can improve health and wellbeing and promote healthier behaviours in healthcare staff.

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1. **Healthcare Staff Wellbeing, Burnout, and Patient Safety: A Systematic Review.**  
   Hall Louise H. PloS one 2016;11(7):e0159015.

OBJECTIVETo determine whether there is an association between healthcare professionals' wellbeing and burnout, with patient safety.DESIGNSystematic research review.DATA SOURCESPsychInfo (1806 to July 2015), Medline (1946 to July 2015), Embase (1947 to July 2015) and Scopus (1823 to July 2015) were searched, along with reference lists of eligible articles.ELIGIBILITY CRITERIA FOR SELECTING STUDIESQuantitative, empirical studies that included i) either a measure of wellbeing or burnout, and ii) patient safety, in healthcare staff populations.RESULTSForty-six studies were identified. Sixteen out of the 27 studies that measured wellbeing found a significant correlation between poor wellbeing and worse patient safety, with six additional studies finding an association with some but not all scales used, and one study finding a significant association but in the opposite direction to the majority of studies. Twenty-one out of the 30 studies that measured burnout found a significant association between burnout and patient safety, whilst a further four studies found an association between one or more (but not all) subscales of the burnout measures employed, and patient safety.CONCLUSIONSPoor wellbeing and moderate to high levels of burnout are associated, in the majority of studies reviewed, with poor patient safety outcomes such as medical errors, however the lack of prospective studies reduces the ability to determine causality. Further prospective studies, research in primary care, conducted within the UK, and a clearer definition of healthcare staff wellbeing are needed.IMPLICATIONSThis review illustrates the need for healthcare organisations to consider improving employees' mental health as well as creating safer work environments when planning interventions to improve patient safety.SYSTEMATIC REVIEW REGISTRATIONPROSPERO registration number: CRD42015023340.

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1. **Resilience of primary healthcare professionals: a systematic review.**  
   Robertson Helen D. The British journal of general practice : the journal of the Royal College of General Practitioners 2016;66(647):e423.

BACKGROUNDModern demands and challenges among healthcare professionals can be particularly stressful and resilience is increasingly necessary to maintain an effective, adaptable, and sustainable workforce. However, definitions of, and associations with, resilience have not been examined within the primary care context.AIMTo examine definitions and measures of resilience, identify characteristics and components, and synthesise current evidence about resilience in primary healthcare professionals.DESIGN AND SETTINGA systematic review was undertaken to identify studies relating to the primary care setting.METHODOvid(®), Embase(®), CINAHL, PsycINFO, and Scopus databases were searched in December 2014. Text selections and data extraction were conducted by paired reviewers working independently. Data were extracted on health professional resilience definitions and associated factors.RESULTSThirteen studies met the inclusion criteria: eight were quantitative, four qualitative, and one was an intervention study. Resilience, although multifaceted, was commonly defined as involving positive adaptation to adversity. Interactions were identified between personal growth and accomplishment in resilient physicians. Resilience, high persistence, high self-directedness, and low avoidance of challenges were strongly correlated; resilience had significant associations with traits supporting high function levels associated with demanding health professional roles. Current resilience measures do not allow for these different aspects in the primary care context.CONCLUSIONHealth professional resilience is multifaceted, combining discrete personal traits alongside personal, social, and workplace features. A measure for health professional resilience should be developed and validated that may be used in future quantitative research to measure the effect of an intervention to promote it.

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1. **Systematic review of interventions to improve the psychological well-being of general practitioners.**  
   Murray Marylou BMC family practice 2016;17:36.

BACKGROUNDThe health of doctors who work in primary care is threatened by workforce and workload issues. There is a need to find and appraise ways in which to protect their mental health, including how to achieve the broader, positive outcome of well-being. Our primary outcome was to evaluate systematically the research evidence regarding the effectiveness of interventions designed to improve General Practitioner (GP) well-being across two continua; psychopathology (mental ill-health focus) and 'languishing to flourishing' (positive mental health focus). In addition we explored the extent to which developments in well-being research may be integrated within existing approaches to design an intervention that will promote mental health and prevent mental illness among these doctors.METHODSMedline, Embase, Cinahl, PsychINFO, Cochrane Register of Trials and Web of Science were searched from inception to January 2015 for studies where General Practitioners and synonyms were the primary participants. Eligible interventions included mental ill-health prevention strategies (e.g. promotion of early help-seeking) and mental health promotion programmes (e.g. targeting the development of protective factors at individual and organizational levels). A control group was the minimum design requirement for study inclusion and primary outcomes had to be assessed by validated measures of well-being or mental ill-health. Titles and abstracts were assessed independently by two reviewers with 99% agreement and full papers were appraised critically using validated tools.RESULTSOnly four studies (with a total of 997 GPs) from 5392 titles met inclusion criteria. The studies reported statistically significant improvement in self-reported mental ill-health. Two interventions used cognitive-behavioural techniques, one was mindfulness-based and one fed-back GHQ scores and self-help information.CONCLUSIONThere is an urgent need for high quality, controlled studies in GP well-being. Research on improving GP well-being is limited by focusing mainly on stressors and not giving systematic attention to the development of positive mental health.

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1. **Which educational interventions improve healthcare professionals' resilience?**  
   Rogers David Medical teacher 2016;38(12):1236-1241.

INTRODUCTIONThis literature review summarizes the current evidence on educational interventions to develop healthcare worker resilience.METHODSElectronic databases were systematically searched using the search terms: education OR training OR medical students AND resilience. The initial search was refined using criteria including population (healthcare students and professionals), interventions (educational), and outcome (resilience changes).RESULTSResilience has been defined and measured in various ways. The following educational interventions to develop resilience were identified: resilience workshops, small group problem solving, reflection, cognitive behavioral training, mindfulness and relaxation training, and mentoring.CONCLUSIONSThe strongest evidence was for using resilience workshops, cognitive behavioral training, or a combination of interventions. The literature is sometimes conflicting suggesting that developing resilience is a complex process, and our understanding is not fully developed.

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1. **Barriers and facilitators of the use of mind-body therapies by healthcare providers and clinicians to care for themselves.**  
   Mensah Sylvanus Brenya Complementary therapies in clinical practice 2015;21(2):124-130.

Healthcare providers may experience a high level of stress, fatigue, and anxiety originating from different factors. Mind-body therapies, which include many interventions, have been proposed to alleviate these conditions. These interventions have been reported to decrease the level of stress, and the negative outcomes associated with these factors: high burnout rate, and poor quality of care for patients. Although research validating the effectiveness of healthcare providers' use of mind-body therapies to care for themselves is emerging, there is little focus on barriers and facilitators that healthcare providers encounter with these mind-body practices, thereby questioning the feasibility and sustainability of these interventions. As such, this systematic review examined the barriers preventing healthcare providers from using mind-body interventions to care for themselves and ways that it has been facilitated. Overall, 12 studies addressed the research question with a limited focus on the facilitators and barriers of the use of mind-body therapies.

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1. **Strategies to promote coping and resilience in oncology and palliative care nurses caring for adult patients with malignancy: a comprehensive systematic review.**  
   Gillman Lucia JBI database of systematic reviews and implementation reports 2015;13(5):131-204.

BACKGROUNDCancer care nursing is perceived as personally and professionally demanding. Developing effective coping skills and resilience has been associated with better health and wellbeing for nurses, work longevity and improved quality of patient care.OBJECTIVESThe objective of this systematic review was to identify personal and organizational strategies that promote coping and resilience in oncology and palliative care nurses caring for adult patients with malignancy.METHODSThe search strategy identified published and unpublished studies from 2007 to 2013. Individual search strategies were developed for the 12 databases accessed and search alerts established. The review considered qualitative, quantitative and mixed methods studies that assessed personal or organizational interventions, programs or strategies that promoted coping and resilience. These included studies employing clinical supervision, staff retreats, psycho-educational programs, compassion fatigue resilience programs, stress inoculation therapy and individual approaches that reduced the emotional impact of cancer care work. The outcomes of interest were the experience of factors that influence an individual's coping and resilience and outcomes of validated measures of coping or resilience. Methodological quality of studies was independently assessed by two reviewers prior to inclusion in the review using standardized critical appraisal instruments developed by the Joanna Briggs Institute. Standardized Joanna Briggs Institute tools were also used to extract data. Agreement on the synthesis of the findings from qualitative studies was reached through discussion. The results of quantitative studies could not be statistically pooled given the different study designs, interventions and outcome measures. These studies were presented in narrative form.RESULTSTwenty studies were included in the review. Ten studies examined the experience of nurse's caring for the dying, the emotional impact of palliative care and oncology work and strategies to prevent burnout or avoid compassion fatigue, challenges in self-care, and processes nurses adopted to cope with work related stress. Six studies evaluated different interventions provided by organizations to improve coping and resilience. Evidence for the effectiveness of interventions was limited to three studies. The results are discussed under four headings: (i) preventative measures (ii) control measures (iii) unburdening and "letting go", and (iv) growing and thriving.CONCLUSIONThis review identified a number of strategies to better prepare nurses for practice and maintain their psychological wellbeing. Although no firm conclusions can be drawn in respect to the most effective interventions, strategies with merit included those that: a) foster connections within the team; b) provide education and training to develop behaviors that assist in controlling or limiting the intensity of stress, or aiding recovery; and c) assist in processing emotion and learning from experiences. Although individuals must take responsibility for developing personal strategies to assist coping and resilience, organizational support is integral to equipping individuals to deal with work related challenges.IMPLICATIONS FOR PRACTICEA range of formal and informal support is required to promote coping and resilience.IMPLICATIONS FOR RESEARCHThere is a need for large, well designed, multisite, experimental studies to evaluate the effectiveness of interventions that promote coping and resilience in adult palliative care or oncology nurses.

1. **Mindfulness, Self-Compassion, and Empathy Among Health Care Professionals: A Review of the Literature.**  
   Raab Journal of Health Care Chaplaincy 2014;20(3):95-108.

The relationship between mindfulness and self-compassion is explored in the health care literature, with a corollary emphasis on reducing stress in health care workers and providing compassionate patient care. Health care professionals are particularly vulnerable to stress overload and compassion fatigue due to an emotionally exhausting environment. Compassion fatigue among caregivers in turn has been associated with less effective delivery of care. Having compassion for others entails self-compassion. In Kristin Neff's research, self-compassion includes self-kindness, a sense of common humanity, and mindfulness. Both mindfulness and self-compassion involve promoting an attitude of curiosity and nonjudgment towards one's experiences. Research suggests that mindfulness interventions, particularly those with an added lovingkindness component, have the potential to increase self-compassion among health care workers. Enhancing focus on developing self-compassion using MBSR and other mindfulness interventions for health care workers holds promise for reducing perceived stress and increasing effectiveness of clinical care.

1. **Philosophy in medical education: a means of protecting mental health.**  
   Keller Eric J. Academic psychiatry : the journal of the American Association of Directors of Psychiatric Residency Training and the Association for Academic Psychiatry 2014;38(4):409-413.

OBJECTIVEThis study sought to identify and examine less commonly discussed challenges to positive mental health faced by medical students, residents, and physicians with hopes of improving current efforts to protect the mental health of these groups. Additionally, this work aimed to suggest an innovative means of preventing poor mental health during medical education.METHODSLiterature on medical student, resident, and physician mental health was carefully reviewed and a number of psychiatrists who treat physician-patients were interviewed.RESULTSThe culture of medicine, medical training, common physician psychology and identity, and conflicting professional expectations all seem to contribute to poor mental health among medical students, residents, and physicians. Many current efforts may be more successful by better addressing the negative effects of these characteristics of modern medicine.CONCLUSIONSPrograms aimed at promoting healthy mental lifestyles during medical education should continue to be developed and supported to mitigate the deleterious effects of the challenging environment of modern medicine. To improve these efforts, educators may consider incorporating philosophical discussions on meaning and fulfillment in life between medical students and faculty. Through medical school faculty members sharing and living out their own healthy outlooks on life, students may emulate these habits and the culture of medicine may become less challenging for positive mental health.

1. **Resilience in nurses: an integrative review.**  
   Hart Patricia L. Journal of nursing management 2014;22(6):720-734.

AIMTo describe nursing research that has been conducted to understand the phenomenon of resilience in nurses.BACKGROUNDResilience is the ability to bounce back or cope successfully despite adverse circumstances. Nurses deal with modern-day problems that affect their abilities to remain resilient. Nursing administrators/managers need to look for solutions not only to recruit nurses, but to become knowledgeable about how to support and retain nurses.EVALUATIONA comprehensive search was undertaken for nursing research conducted between 1990 and 2011. Key search terms were nurse, resilience, resiliency and resilient. Whittemore and Knafl's integrative approach was used to conduct the methodological review.KEY ISSUESChallenging workplaces, psychological emptiness, diminishing inner balance and a sense of dissonance are contributing factors for resilience. Examples of intrapersonal characteristics include hope, self-efficacy and coping. Cognitive reframing, toughening up, grounding connections, work-life balance and reconciliation are resilience building strategies.CONCLUSIONThis review provides information about the concept of resilience. Becoming aware of contributing factors to the need for resilience and successful strategies to build resilience can help in recruiting and retaining nurses.IMPLICATIONS FOR NURSING MANAGEMENTUnderstanding the concept of resilience can assist in providing support and developing programmes to help nurses become and stay resilient.

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1. **Building capacity and resilience in the dementia care workforce: A systematic review of interventions targeting worker and organizational outcomes**  
   Elliott Kate-Ellen J. International Psychogeriatrics 2012;24(6):882-894.

Background: Dementia increasingly impacts every health and social care system in the world. Preparing the dementia care workforce is therefore paramount, particularly in light of existing problems of staff retention and turnover. Training interventions will need to increase worker and organizational capacity to deliver effective patient care. It is not clear which training interventions best enhance workers’ capacity. A review of the evidence for dementia care training interventions to enhance worker capacity and facilitate organizational change is presented. Methods: A systematic literature review was conducted. All selected randomized intervention studies aimed to enhance some aspect of dementia care worker or workforce capacity such as knowledge of dementia, psychological well-being, work performance, and organizational factors such as retention or service delivery in dementia care. Results: Seventy-four relevant studies were identified, but only six met inclusion criteria for the review. The six studies selected focused on worker and organizational outcomes in dementia care. All interventions were multi-component with dementia education or instructional training most commonly adopted. No interventions were found for the community setting. Variable effects were found for intervention outcomes and methodological concerns are raised. Conclusion: The rigor of scientific research in training interventions that aim to build capacity of dementia care workers is poor and a strong need exists for evaluation and delivery of such interventions in the community sphere. Wider domains of interest such as worker psychological health and well-being need to be examined further, to understand capacity-building in the dementia care workforce. (PsycINFO Database Record (c) 2016 APA, all rights reserved) (Source: journal abstract)

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1. **Review of literature on the mental health of doctors: are specialist services needed?**  
   Brooks Samantha K. Journal of mental health (Abingdon, England) 2011;20(2):146-156.

BACKGROUNDMental ill health is common among doctors. Fast, efficient diagnosis and treatment are needed as mentally ill doctors pose a safety risk to the public, yet they are often reluctant to seek help.AIMSTo review literature regarding risk factors and potential barriers to help-seeking unique to doctors; to consider the success of interventions by specialist services for doctors.METHODKey phrases regarding the 'mental health of doctors' were entered into internet searches and journal databases to identify relevant research. When key authors were identified, author-specific searches were carried out.FINDINGSThere are contradictory reports about the prevalence of mental ill health in doctors but it is generally agreed that doctors face a large number of risk factors, both occupational and individual; and help-seeking is difficult due to complexities surrounding a doctor becoming a patient. Specialist services developed specifically for interventions for doctors with mental health problems tend to show promising results but further research is needed.CONCLUSIONSThe unique and complex situation of a doctor becoming a patient benefits from specialist services; such services should focus on early intervention and raising awareness.

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1. **Care for the caregiver: Benefits of expressive writing for nurses in the United States**  
   Sexton J.D. Progress in Palliative Care 2009;17(6):307-312.

This paper introduces expressive writing as a new tool to build psychological resilience in nurses by helping themto reduce the negative impact of the primary sources of stress in their jobs.Delivering care to patients exposes nurses to intense stressors including staffing and workload problems, communication breakdowns, death, bereavement, and medical error. Not surprisingly, these conditions contribute to job dissatisfaction and burnout which are primary causes of nurse turnover. There is an acute need for low cost and simple interventions that enhance nurses' coping with problems leading up to burnout and turnover.We found almost 2 out of 3 RNs reported trouble sleeping, almost half reported feeling burned out, and 1 out of 4 were depressed.Expressive writing has been widely used and is well validated inmany non-nursing populations in helping people cope more effectively with job-related stress and traumatic events. Writing improves health in several ways. One way is through exposure, the process by which difficult emotions become less potent and more manageable. Second is cognitive restructuring, which brings about new ways of thinking about stress thatmakes painful events less upsetting.Third is improved self-regulation, which is the ability to cope with and regulate one's emotions. The well-being of nurses directly affects the quality of patient care.Expressive writing is a time-efficient and easy-to-use intervention to help nurses cope with job upheavals in an effort to reduce job distress, turnover and, ultimately, improve the work environment and patient outcomes. &#xa9; 2009 W.S. Maney & Son Ltd.

1. **Physician wellness: a missing quality indicator.**  
   Wallace Jean E. Lancet (London, England) 2009;374(9702):1714-1721.

When physicians are unwell, the performance of health-care systems can be suboptimum. Physician wellness might not only benefit the individual physician, it could also be vital to the delivery of high-quality health care. We review the work stresses faced by physicians, the barriers to attending to wellness, and the consequences of unwell physicians to the individual and to health-care systems. We show that health systems should routinely measure physician wellness, and discuss the challenges associated with implementation.

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1. **Applying the lessons of SARS to pandemic influenza: an evidence-based approach to mitigating the stress experienced by healthcare workers.**  
   Maunder Robert G. Canadian journal of public health = Revue canadienne de sante publique 2008;99(6):486-488.

We describe an evidence-based approach to enhancing the resilience of healthcare workers in preparation for an influenza pandemic, based on evidence about the stress associated with working in healthcare during the SARS outbreak. SARS was associated with significant long-term stress in healthcare workers, but not with increased mental illness. Reducing pandemic-related stress may best be accomplished through interventions designed to enhance resilience in psychologically healthy people. Applicable models to improve adaptation in individuals include Folkman and Greer's framework for stress appraisal and coping along with psychological first aid. Resilience is supported at an organizational level by effective training and support, development of material and relational reserves, effective leadership, the effects of the characteristics of "magnet hospitals," and a culture of organizational justice. Evidence supports the goal of developing and maintaining an organizational culture of resilience in order to reduce the expected stress of an influenza pandemic on healthcare workers. This recommendation goes well beyond the provision of adequate training and counseling. Although the severity of a pandemic is unpredictable, this effort is not likely to be wasted because it will also support the health of both patients and staff in normal times.

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1. **Improved education and training for nursing assistants: Keys to promoting the mental health of nursing home residents**  
   Glaister J.A. Issues in Mental Health Nursing 2008;29(8):863-872.

The mental health of older adults contributes to their overall well-being. However, numerous studies have reported substantial prevalence of mental health problems, especially depression, in nursing home residents. Due to the poor quality of education and training provided to nursing home front-line caregivers, most of whom are nursing assistants, many residents experiencing depression are not recognized as such and consequently receive no treatment. Emphasizing the aging process and mental health components in education and training programs for nursing assistants could have a positive impact on the detection and treatment of depression in residents. Copyright &#xa9; Informa Healthcare USA, Inc.

1. **Can we improve the morale of staff working in psychiatric units? A systematic review**  
   Gilbody S. Journal of Mental Health 2006;15(1):7-17.

Background: Those working in psychiatric units care for some of the most vulnerable and needy patients within health services, and suffer some of the highest levels of job dissatisfaction and burnout within healthcare workforce. Poor staff morale is bad for patient care and is economically wasteful. The same level of evidence of effectiveness and efficiency should be considered in workforce planning as is required in patient care. This has hitherto not occurred. <br/>Aim(s): To examine the impact and cost effectiveness of strategies to improve staff morale and reduce "burnout" amongst staff working in psychiatric units. <br/>Method(s): We conducted a systematic review of robust evaluations of strategies designed to improve psychological wellbeing or the working experience of staff working in psychiatric units. We searched the following databases: EMBASE; MEDLINE; PsycINFO; CINAHL; Sociological Abstracts; HMIC; Management and Marketing Abstracts; Management Contents and Inside Conferences (all to 2004), and sought the following outcomes: Psychological wellbeing; Job satisfaction; staff burnout and stress; staff sickness and turnover; Direct and indirect costs. The following designs were included: Randomised Controlled Trails (RCTs); Controlled Clinical Trials (CCTs); Controlled Before and after studies (CBAs); and interrupted time series (ITSs). We conducted a narrative overview of key design features, endpoints and results. <br/>Result(s): We identified eight evaluations of strategies to improve staff morale (3 RCTs; 3 CCTs and 2 CBAs). Educational interventions designed to enhance the skill and competency of staff were the most commonly evaluated, and showed positive impact on at least one outcome of interest. Psycho-social interventions that sought out members of staff who were experiencing emotional problems and offered work-based support and enhanced social support networks were positive in US healthcare settings, but had been incompletely implemented and evaluated in UK settings. Organisational interventions, such as a shift to continuous care and primary nursing also showed a potential to be effective in reducing sickness rates and improving job satisfaction. <br/>Conclusion(s): There is substantial opportunity to design and implement interventions to improve the working experience of staff in psychiatric units. There is an onus to evaluate the longer term impact and cost effectiveness of these strategies. Unfortunately strategies are currently being implemented in the absence of any prospective evaluation. Declaration of interest: The authors have no conflict of interest. &#xa9; Shadowfax Publishing and Taylor & Francis.

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1. **Exercise: who needs it?**  
   Blaber Amanda Y. British journal of nursing (Mark Allen Publishing) 2005;14(18):973-975.

Nurses will be involved in delivering the UK Government's 'Choosing Activity: a physical activity action plan' (Department of Health, 2005), so it is important to ensure that nurses benefit from the implementation of this policy. It is accepted that in some areas of nursing, the daily routine can be physically and mentally demanding; all the more reason to examine lifestyle and the benefits of exercise. This article considers some factors that may affect nurses' physical and mental health. The potential value of the Healthy Workplace Award Scheme is discussed and some recommendations are made about future strategies that employers could adopt or develop to give nurses the opportunity to improve their physical and mental well-being within the workplace. These opportunities could improve nurses' health and impact on the care nurses provide.

1. **Fostering psychosocial wellness in oncology nurses: addressing burnout and social support in the workplace.**  
   Medland Jacqueline Oncology nursing forum 2004;31(1):47-54.

PURPOSE/OBJECTIVESTo identify psychosocial wellness and the avoidance of burnout as key priorities for the retention of oncology nurses and to describe a program designed for a specific setting to enhance the psychosocial wellness and coping skills of oncology nurses.DATA SOURCESPublished research, books, and journal articles; theory; practice; and personal experience.DATA SYNTHESISOncology nurses benefit from programs designed to bolster the development of coping skills to reduce stress, foster supportive relationships in the workplace, facilitate work-related grief and bereavement, and reduce burnout.CONCLUSIONSFostering psychosocial wellness in the workplace potentially can increase oncology nurse retention.IMPLICATIONS FOR NURSINGA renewed recognition of the stressful nature of oncology nursing should give rise to programs that address the psychological well-being of oncology nurses. Oncology nursing leadership, recognizing the potential for stress and burnout inherent in this profession, should research and develop programs to enhance staff coping skills and mutual support.

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1. **Psychological well-being of surgery residents before the 80-hour work week: A multiinstitutional study**  
   Zare S.M. Journal of the American College of Surgeons 2004;198(4):633-640.

Background Accreditation Council on Graduate Medical Education work-hour restrictions are aimed at improving patient safety and resident well-being. Although surgical trainees will be dramatically affected by these changes, no comprehensive assessment of their well-being has been recently attempted. Study design A multicenter study of psychological well-being of surgical residents (n = 108) across four US training programs before implementation of the 80-hour work week was performed using two validated surveys (Symptom Checklist-90-R [SCL-90-R] and Perceived Stress Scale [PSS]) during academic year 2002-03. Societal normative populations served as controls. Primary outcomes measures were psychologic distress (SCL-90-R) and perceived stress (PSS). Secondary outcomes measures (SCL-90-R) were somatization, depression, anxiety, interpersonal sensitivity, hostility, obsessive-compulsive behavior, phobic anxiety, paranoid ideation, and psychoticism. The impact of personal variables (age, gender, marital status) and programmatic variables (level of training, laboratory experience, institution) was assessed. Results Mean psychologic distress was significantly higher in general surgery residents than in the normative population (p &lt; 0.0001), with 38% scoring above the 90 <sup>th</sup> percentile and 72% above the 50<sup>th</sup> percentile. Mean perceived stress among surgery residents was higher than historic controls (p &lt; 0.0001), with 21% scoring above the 90<sup>th</sup> percentile and 68% above the 50<sup>th</sup> percentile. Among secondary outcomes, eight of nine symptom dimensions were significantly higher in surgical residents than in societal controls. In subgroup analyses, male gender was associated with phobic anxiety (p &lt; 0.001) and anxiety (p &lt; 0.05), and junior level of training (PGY 1 to 3) with anxiety (p &lt; 0.05), obsessive-compulsive behavior (p &lt; 0.05), and interpersonal sensitivity (p &lt; 0.05). Conclusions More than one-third of general surgery residents meet criteria for clinical psychologic distress. Surgery residents perceive significantly more stress than societal controls. Both personal and programmatic variables likely affect resident well-being and should be considered in assessing the full impact of Accreditation Council on Graduate Medical Education directives and in guiding future restructuring efforts. &#xa9; 2004 by the American College of Surgeons.

1. **A systematic review of stress and stress management interventions for mental health nurses**  
   Edwards D. Journal of Advanced Nursing 2003;42(2):169-200.

Background. Health care professionals in the United Kingdom (UK) appear to have higher absence and sickness rates than staff in other sectors, and stress may be a reason for nurses leaving their jobs. These problems need to be addressed, particularly in the mental health field, if current service provision is to be maintained. Aim. The aim was to identify stressors, moderators and stress outcomes (i.e. measures included those related to stress, burnout and job satisfaction) for mental health nurses, as these have clear implications for stress management strategies. Method. A systematic review of research published in English between 1966 and 2000 and undertaken in the UK that specifically identified participants as mental health nurses was carried out to determine the effectiveness of stress management interventions for those working in mental health nursing. Studies from non-UK countries were examined as potential models of good practice. The study was limited to primary research papers that specifically involved mental health nurses, where the health outcomes measured were stressors, moderators and stress outcomes and where sufficient data was provided. Results. The initial search identified 176 papers, of these 70 met the inclusion criteria. Seven studies have been reported since the completion of the review and have been included in this article. Sixty-nine focused on the stressors, moderators and stress outcomes and eight papers identified stress management techniques. Relaxation techniques, training in behavioural techniques, stress management workshops and training in therapeutic skills were effective stress management techniques for mental health nurses. Methodological flaws however, were detracted from the rigour of many of the studies. Conclusions. The review demonstrated that a great deal is known about the sources of stress at work, about how to measure it and about the impact on a range of outcome indicators. What was found to be lacking was a translation of these results into practice, into research that assessed the impact of interventions that attempt to moderate, minimize or eliminate some of these stressors.

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1. **A systematic review of the effects of stress and coping strategies used by occupational therapists working in mental health settings**  
   Edwards D. British Journal of Occupational Therapy 2003;66(8):345-355.

A systematic review of the research literature published in the United Kingdom between 1966 and 2000 was carried out to determine the effectiveness of stress management interventions for occupational therapists working in mental health settings. Studies from other countries were examined as potential models of good practice. The review was limited to primary research papers that involved occupational therapists working in the mental health arenas, where the health outcomes measured were stressors, moderators and stress outcomes and where sufficient data were provided. The initial search identified 30 papers, of which 13 met the inclusion criteria. One study has been reported since the completion of the review and has been included in this article. All the papers focused on the stressors, moderators and stress outcomes. There was no paper that specifically investigated the effectiveness of stress management interventions for occupational therapists working in the mental health arena. The only literature available was aimed at the occupational therapy profession as a whole and was in the form of a number of recommendations at an organisational and an individual level. Methodological flaws, however, detracted from the rigour of many of the studies. The review demonstrated that a great deal is known about the sources of stress at work, about how to measure stress and about the impact of stress on a range of outcome indicators. What was found to be lacking was a translation of these results either into practice or into research that assessed the impact of interventions that attempted to moderate, minimise or eliminate some of these stressors.

1. **Stress management for mental health professionals: A review of effective techniques**  
   Edwards D. Stress and Health 2002;18(5):203-215.

This paper presents the findings of a systematic review of the current evidence for the effectiveness of stress management interventions for those working in the mental health field. Research articles from 1966 to 2000 which reported studies undertaken in the United Kingdom and which specifically identified participants as mental health workers were included in the review. Studies from other European countries and from the USA were examined as potential models of good practice. The review demonstrated that a great deal is known about the sources of stress at work, about how to measure them and about their interaction and impact on a range of outcome indicators. What was found to be lacking was a translation of these results into practice, into research that assessed the impact of interventions that attempted to moderate, minimize or eliminate some of these stressors. Three papers were retrieved which reported intervention strategies for workers classified as working within the mental health arena. Copyright &#xa9; 2002 John Wiley & Sons, Ltd.

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## B. Search History

|  | **Source** | **Criteria** | **Results** |
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| 5. | Medline | ((frontline\* OR "front line" OR clinical OR medical OR health\* OR "health care" OR hospital\* OR nursing) ADJ (worker\* OR staff\* OR professional\* OR personnel\* OR employee\* OR assistant\* OR workforce\* OR "work force\*")).ti | 44154 |
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| 8. | Medline | (5 OR 6 OR 7) | 591137 |
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| 13. | Medline | exp "RESILIENCE, PSYCHOLOGICAL"/ | 5840 |
| 14. | Medline | (9 OR 10 OR 12 OR 13) | 59221 |
| 15. | Medline | (8 AND 14) | 4577 |
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| 18. | Medline | exp "CRISIS INTERVENTION"/ | 5654 |
| 19. | Medline | exp "PREVENTIVE HEALTH SERVICES"/ OR exp "HEALTHY PEOPLE PROGRAMS"/ | 684282 |
| 20. | Medline | (16 OR 17 OR 18 OR 19) | 2384877 |
| 21. | Medline | (15 AND 20) | 1603 |
| 23. | Medline | exp "COST-BENEFIT ANALYSIS"/ OR exp "TREATMENT OUTCOME"/ OR exp "PROGRAM EVALUATION"/ OR exp "OUTCOME ASSESSMENT, HEALTH CARE"/ | 1269324 |
| 24. | Medline | (effective\* OR efficac\* OR benefit\* OR beneficial\* OR improv\* OR success\*).ti,ab | 5695007 |
| 25. | Medline | (23 OR 24) | 6279362 |
| 26. | Medline | (21 AND 25) | 964 |
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| 40. | EMBASE | exp \*"HEALTH PROGRAM"/ | 26376 |
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| 126. | BNI | "CLINICAL OUTCOMES"/ | 10952 |
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| 128. | BNI | (123 AND 127) | 306 |
| 129. | BNI | (123 AND 127) [DT FROM 2000] [Document type Literature Review OR Review] | 10 |

NICE Evidence Search at [www.evidence.nhs.uk](http://www.evidence.nhs.uk) searched using the terms ("nurse well being" or "nurse wellbeing" or "doctor well being" or "doctor wellbeing" or "staff well being" or "staff wellbeing") intervention\*: [https://www.evidence.nhs.uk/search?from=01%2F01%2F2000&to=17%2F09%2F2020&ps=100&q=(%22nurse%20well%20being%22%20or%20%22nurse%20wellbeing%22%20or%20%22doctor%20well%20being%22%20or%20%22doctor%20wellbeing%22%20or%20%22staff%20well%20being%22%20or%20%22staff%20wellbeing%22)%20intervention\*](https://www.evidence.nhs.uk/search?from=01%2F01%2F2000&to=17%2F09%2F2020&ps=100&q=(%22nurse%20well%20being%22%20or%20%22nurse%20wellbeing%22%20or%20%22doctor%20well%20being%22%20or%20%22doctor%20wellbeing%22%20or%20%22staff%20well%20being%22%20or%20%22staff%20wellbeing%22)%20intervention*)

Cochrane Library at [www.cochranelibrary.com](http://www.cochranelibrary.com) searched using the terms ((doctor\* or nurse\* or staff\*) next (wellbeing or "well being" or resilien\*)) and intervention\* in Title Abstract Keyword fields

ERIC database at <https://eric.ed.gov/> searched using the terms ((doctor\* or nurse\* or staff\*) and (wellbeing or "well being" or resilien\*)) and intervention\*: [https://eric.ed.gov/?q=+%28%28doctor\*+or+nurse\*+or+staff\*%29+and+%28wellbeing+or+%22well+being%22+or+resilien\*%29%29+and+intervention\*](https://eric.ed.gov/?q=+%28%28doctor*+or+nurse*+or+staff*%29+and+%28wellbeing+or+%22well+being%22+or+resilien*%29%29+and+intervention*)

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