# Evidence Search Service Results of your search request:

## “What factors are protective of psychological health

## (modifiable and non-modifiable)?”

**ID of request:** 25173; **Date of request:** 18th September, 2020; **Date of completion:** 18th 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.): English language review articles only.   
**Search terms and notes**: full search strategy for database searches included at the end of this document.

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### [B. Search History](#SearchHistory)

## A. Original Research

1. **Burnout Among Women Physicians: a Call to Action.**  
   Chesak Sherry S. Current cardiology reports 2020;22(7):45.

PURPOSE OF REVIEWThe purposes of this discussion are to describe what is known about burnout among women physicians and identify contributing factors, categories of impact, and methods for mitigating the phenomenon. The authors conclude with current gaps in research.RECENT FINDINGSAlthough there are a lack of investigations analyzing and reporting physician burnout data by gender, there is evidence to suggest that women physicians experience stress and burnout differently than their men counterparts. Women physicians are more likely to face gender discrimination, gender biases, deferred personal life decisions, and barriers to professional advancement, all of which may contribute to burnout. Interventions specific to preventing physician burnout in women should include (1) addressing barriers to career satisfaction, work life integration, and mental health; (2) identification and reduction of gender and maternal bias; (3) mentorship and sponsorship opportunities; (4) family leave, lactation, and child care policies and support. In addition, gaps in research must be addressed in an effort to inform best practices for measuring and addressing burnout among women physicians.

1. **Clinician Wellness During the COVID-19 Pandemic: Extraordinary Times and Unusual Challenges for the Allergist/Immunologist.**  
   Bansal Priya The journal of allergy and clinical immunology. In practice 2020;8(6):1781.

The global spread of coronavirus disease 2019 (COVID-19) has caused sudden and dramatic societal changes. The allergy/immunology community has quickly responded by mobilizing practice adjustments and embracing new paradigms of care to protect patients and staff from severe acute respiratory syndrome coronavirus 2 exposure. Social distancing is key to slowing contagion but adds to complexity of care and increases isolation and anxiety. Uncertainty exists across a new COVID-19 reality, and clinician well-being may be an underappreciated priority. Wellness incorporates mental, physical, and spiritual health to protect against burnout, which impairs both coping and caregiving abilities. Understanding the stressors that COVID-19 is placing on clinicians can assist in recognizing what is needed to return to a point of wellness. Clinicians can leverage easily accessible tools, including the Strength-Focused and Meaning-Oriented Approach to Resilience and Transformation approach, wellness apps, mindfulness, and gratitude. Realizing early warning signs of anxiety, depression, substance abuse, and posttraumatic stress disorder is important to access safe and confidential resources. Implementing wellness strategies can improve flexibility, resilience, and outlook. Historical parallels demonstrate that perseverance is as inevitable as pandemics and that we need not navigate this unprecedented time alone.

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1. **Coronavirus Disease 2019 (COVID-19) and Beyond: Micropractices for Burnout Prevention and Emotional Wellness.**  
   Fessell David Journal of the American College of Radiology : JACR 2020;17(6):746-748.

[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=0012b1ce33ed09e6b7334c0ba739fa3c)

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1. **Factors associated with burnout syndrome in surgeons: a systematic review.**  
   Galaiya R. Annals of the Royal College of Surgeons of England 2020;102(6):401-407.

INTRODUCTIONTo date, studies have shown a high prevalence of burnout in surgeons. Various factors have been found to be associated with burnout, and it has significant consequences personally and systemically. Junior doctors are increasingly placing their own health and wellbeing as the most important factor in their decisions about training. Finding ways to reduce and prevent burnout is imperative to promote surgical specialties as attractive training pathways.METHODSThe MEDLINE, PsychInfo and EMBASE databases were searched using the subject headings related to surgery and burnout. All full text articles that reported data related to burnout were eligible for inclusion. Articles which did not use the Maslach Burnout Inventory or included non-surgical groups were excluded; 62 articles fulfilled the criteria for inclusion.FINDINGSYounger age and female sex tended to be associated with higher levels of burnout. Those further in training had lower levels of burnout, while residents suffered more than their seniors. Burnout is associated with a lower personal quality of life, depression and alcohol misuse. Academic work and emotional intelligence may be protective of burnout. Certain personality types are less likely to be burnt out. Mentorship may reduce levels of burnout.CONCLUSIONSWorkload and work environment are areas that could be looked at to reduce job demands that lead to burnout. Intervening in certain psychological factors such as emotional intelligence, resilience and mindfulness may help to reduce burnout. Promoting physical and mental health is important in alleviating burnout, and these factors likely have a complex interplay.

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1. **Health Issues Among Healthcare Workers During COVID-19 Pandemic: a Psychosomatic Approach**  
   Widjaja F.F. Acta medica Indonesiana 2020;52(2):172-176.

Healthcare workers as the front-liner to fight COVID-19 pandemic, need reassurance of their safety. The stress and the demands from the healthcare system can affect their health as well as the morality. Hence, psychosomatic approach should be used to keep their condition in good shape. The combination between biological, psychological, and social approaches may affect their vulnerability from SARS-CoV-2 infection. The biological aspect includes personal protective equipment, nutrition, and resting/sleeping time. The psychological distress is shown to affect the immune system; and mental relaxation and management of work shift may reduce the distress. There should be an effort from the stakeholders to keep the morality of the healthcare workers. The social aspect such as providing place to live, having supportive family members, and avoiding stigmatization also improve their psychological health. In conclusion, psychosomatic approach is important to keep the healthcare workers healthy.

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1. **Impact of social support in preventing burnout syndrome in nurses: A systematic review.**  
   Velando-Soriano Almudena Japan journal of nursing science : JJNS 2020;17(1):e12269.

AIMBurnout is a reality in the nursing profession. It is composed of three dimensions: emotional exhaustion, depersonalization and reduced personal accomplishment, and results from being subjected to chronic stress in the healthcare context. Social support (SS), that is, the assistance and protection given by others, is a predictive and protective factor against burnout syndrome. The aim of this study is to analyze the relationship between SS, in its different forms, and burnout syndrome in nurses, and to identify the risk factors for burnout.METHODSA systematic literature review was carried out, following the PRISMA recommendations. The databases CINAHL, PsycINFO, Proquest Platform (Proquest Health & Medical Complete), Pubmed and Scopus were consulted, using the descriptors: "burnout, professional AND social support AND nursing". To minimize potential publication bias, the search had no time or sample size limitation.RESULTSBurnout was reported, to a greater or lesser extent, in all the articles analyzed, and the SS received by nurses in the workplace from supervisors and coworkers was found to play a fundamental role in preventing the syndrome. However, to date the bibliography on this issue is scant, and there is little consensus as to the degree of SS received.CONCLUSIONSBurnout prevention plans, with particular attention to SS, should be developed to improve nurses' quality of life and to enhance the care they provide.

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1. **Physician Burnout: Achieving Wellness for Providers and Patients.**  
   Niconchuk Jonathan A. Current anesthesiology reports 2020;:1-6.

Purpose of ReviewThis review summarizes the history and scope of physician burnout, and explores recent advances in its understanding. With a particular focus on physicians who have completed their training, it also explores the present and future of interventions designed to alleviate the symptoms and sequelae of burnout.Recent FindingsNearly 50 years since first described, burnout continues to remain a pervasive issue within anesthesia and medicine as a whole. Recent work has continued to outline risk factors and specialty-specific prevalence, and explore individual and institutional interventions to prevent and treat symptoms.SummaryBurnout continues to impact all who work in healthcare, at all levels of training. This review highlights recent advances in our understanding of the scope, causes, and management of burnout. In light of the current COVID-19 pandemic, we hope that the national and international focus on preventing and remediating burnout will continue to expand and strengthen.

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1. **Positive Emotion Skills Intervention to Address Burnout in Critical Care Nurses.**  
   Cheung AACN Advanced Critical Care 2020;31(2):167-178.

Critical care nurses experience high levels of workplace stress, which can lead to burnout. Many medical centers have begun offering wellness programs to address burnout in their nursing staff; however, most of these programs focus on reducing negative states such as stress, depression, and anxiety. A growing body of evidence highlights the unique, independent role of positive emotion in promoting adaptive coping in the face of stress. This article describes a novel approach for preventing burnout in critical care nurses: an intervention that explicitly aims to increase positive emotion by teaching individuals empirically supported skills. This positive emotion skills intervention has been used successfully in other populations and can be tailored for critical care nurses. Also discussed are recommendations for addressing burnout in intensive care unit nurses at both the individual and organizational levels.

1. **Pre-incident Training to Build Resilience in First Responders: Recommendations on What to and What Not to Do.**  
   Wild Jennifer Psychiatry: Interpersonal & Biological Processes 2020;83(2):128-142.

Emergency services are under enormous pressure to offer programmes that could protect their staff from the psychological impact of stressors encountered in their roles. There has been a surge in the number of pre-incident training programmes aimed at first responders to maintain their psychological wellbeing after critical incidents. These include pre-employment screening programmes, psychoeducation, operational training, line manager training and interventions aimed at improving resilience, wellbeing or stress management. Whilst developed with the best intentions, these programmes vary in efficacy. Therefore, knowing what training to offer first responders prior to exposure to critical incidents is far from clear. In this review, we critique the available evidence and make recommendations about what to offer and what to avoid offering first responders prior to exposure to critical incidents. We found no evidence of the effectiveness of pre-employment screening or psychoeducation offered as a standalone package, and little evidence for interventions aimed to improve wellbeing and resilience to stress - although current trials of empirically-driven interventions for first responders are underway and show promise in preventing stress-related psychopathology. Operational and line manager training showed the most promise but need to be evaluated in high quality trials with sufficient follow-up to draw conclusions about their preventative benefits.

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

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. 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. 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. 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. • Burnout is common in mental health nurses, but its prevalence is mixed across studies. • The pooled prevalence of high EE was 28.1%, DP was 25.4% and low PA was 39.7%. • Short working experience, use of MBI-HSS, and younger age had moderating effects on prevalence of high burnout. • Regular screening, preventive measures and effective interventions should be conducted.

1. **Resilience in palliative healthcare professionals: a systematic review.**  
   Zanatta Francesco Supportive care in cancer : official journal of the Multinational Association of Supportive Care in Cancer 2020;28(3):971-978.

PURPOSEExposure to end-of-life and chronic illness on a daily basis may put palliative healthcare professionals' well-being at risk. Resilience may represent a protective factor against stressful and demanding challenges. Therefore, the aim is to systematically review the quantitative studies on resilience in healthcare professionals providing palliative care to adult patients.METHODSA literature search on PubMed, Scopus, Web of Science and PsycINFO databases was performed. The review process has followed the international PRISMA statement guidelines.RESULTSAt the initial search, a total of 381 records were identified. Twelve articles were assessed for eligibility and, finally, 6 studies met all the inclusion criteria. Of these, four researches were observational and two interventional pilot studies. From the systematic synthesis, palliative care providers' resilience revealed to be related to other psychological constructs, including secondary traumatic stress, vicarious posttraumatic growth, death anxiety, burnout, compassion satisfaction, hope and perspective taking.CONCLUSIONSThe current systematic review reported informative data leading to consider resilience as a process modulator and facilitator among palliative care professionals. A model on palliative healthcare providers' experience and the role of resilience was proposed. Further studies may lead to its validation and implementation in assessment and intervention contributing to foster palliative healthcare professionals' well-being.

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1. **Saglik Calisanlarinin Sorunlari ve COVID-19 Salgini: Bir DerlemeHealthcare workers issues and COVID-19 pandemic: A review**  
   Rahman A.A. Gazi Medical Journal 2020;31(2):303-308.

Background: Since December 2019, COVID-19 pandemic has continued to grow it spread and has currently affected more than 200 countries and for the last four months, healthcare workers (HCW) has worked performed their duties endlessly, more than the norms at their respective health care facility. Therefore this review paper aims to describe healthcare workers issues in managing the current COVID-19 pandemic <br/>Material(s) and Method(s): Articles were chosen using a structured search via three electronic databases, namely PubMed, Scopus, and Direct Science coupled with a combination of keywords namely "healthcare workers"OR "health staff"AND "COVID19". Other inclusion criteria include full accessible, original studies in English language, published in peer-reviewed journals from December 2019 till 30th April 2020. Result and Discussion: A total of 17 articles were chosen to be reviewed which can be further broadly categorised into three domains which are; physical effects, psychological effects and socioeconomic effects. COVID-19 infection among healthcare workers is not uncommon as they represent the essential human resources in managing the pandemic. Of the three effects, mental health burden ranging from anxiety to burnout was studied along with its risk and protective factors discussed. Socioeconomic factors describe how prevention and control measures adopted has given a toll to this vulnerable group. <br/>Conclusion(s): Health-related effects and unforeseen factors has impacted healthcare workers such as the direct effect of the infection, issues related to the use of personal protective equipment, the spectrum of mental health burden as well as the socio-economic effects as a result of the demands faced by them in responding and providing healthcare needs.<br/>&#xa9;Copyright 2020 by Gazi University Medical Faculty.

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1. **The Psychological Impact of Epidemic and Pandemic Outbreaks on Healthcare Workers: Rapid Review of the Evidence.**  
   Preti Emanuele Current psychiatry reports 2020;22(8):43.

PURPOSE OF REVIEWWe aim to provide quantitative evidence on the psychological impact of epidemic/pandemic outbreaks (i.e., SARS, MERS, COVID-19, ebola, and influenza A) on healthcare workers (HCWs).RECENT FINDINGSForty-four studies are included in this review. Between 11 and 73.4% of HCWs, mainly including physicians, nurses, and auxiliary staff, reported post-traumatic stress symptoms during outbreaks, with symptoms lasting after 1-3 years in 10-40%. Depressive symptoms are reported in 27.5-50.7%, insomnia symptoms in 34-36.1%, and severe anxiety symptoms in 45%. General psychiatric symptoms during outbreaks have a range comprised between 17.3 and 75.3%; high levels of stress related to working are reported in 18.1 to 80.1%. Several individual and work-related features can be considered risk or protective factors, such as personality characteristics, the level of exposure to affected patients, and organizational support. Empirical evidence underlines the need to address the detrimental effects of epidemic/pandemic outbreaks on HCWs' mental health. Recommendations should include the assessment and promotion of coping strategies and resilience, special attention to frontline HCWs, provision of adequate protective supplies, and organization of online support services.

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1. **The Society of Gynecologic Oncology wellness curriculum pilot: A groundbreaking initiative for fellowship training**  
   Turner T.B. Gynecologic Oncology 2020;156(3):710-714.

Objectives: Trainee well-being is a core component of ACGME program requirements and the SGO has recognized the high incidence of burnout among gynecologic oncologists and its negative impact. To foster a culture of wellness throughout the SGO community we sought to engage current fellows along with fellowship directors in a structured didactic program designed to teach wellness. We evaluated the feasibility of and preliminary responses to a pilot curriculum designed to teach skills that promote wellness and prevent burnout. <br/>Method(s): The SGO Wellness Taskforce developed a curriculum with topics based on established evidence as well as specialty specific stressors such as end of life discussions. Faculty leaders from 15 pilot-sites attended a full-day training course and then taught four modules over four months. Interactive modules engaged fellows through reflective writing, guided discussion, and multimedia presentations. Fellows completed the Perceived Stress Scale pre- and post-implementation and provided feedback regarding attitudes toward wellness and the individual modules. Faculty curriculum leaders completed surveys regarding their attitudes toward the curriculum as well as their trainees' reactions. <br/>Result(s): Among 73 participating gynecologic oncology fellows, 95% (69/73) and 52/73 (71%) completed the pre-and post-surveys, respectively. Only 34/73 (49%) respondents reported that there was wellness programming at their institution prior to the initiation of the SGO curriculum. At institutions where such programming was available, 35% (12/34) reported not utilizing them. Fifty-five (80%) fellows had PSS scores greater than 12 compared to 39 (75%) post-intervention. After the curriculum, the percentage of fellows comfortable discussing wellness topics increased from 63 to 74%. Prior to the curriculum, 75% felt they could identify symptoms of burnout or psychosocial distress. This increased to 90% post-intervention. The modules were well received by fellows, and the time spent addressing wellness was widely appreciated. <br/>Conclusion(s): A structured curriculum to promote wellness among gynecologic oncology fellows is feasible and was associated with observed decreased reported stress among fellows at participating programs. This curriculum addresses ACGME requirements regarding trainee well-being, and showed potential for more programmatic, nationwide implementation. Fellowship culture change was not directly measured, but may have been one of the most significant positive outcomes of the wellness program. Further longitudinal studies will be necessary to understand the natural course of fellow burnout and the impact of structured wellness programming.<br/>Copyright &#xa9; 2019 Elsevier Inc.

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1. **What is known about paediatric nurse burnout: a scoping review.**  
   Buckley Laura Human resources for health 2020;18(1):9.

Burnout in healthcare providers has impacts at the level of the individual provider, patient, and organization. While there is a substantial body of literature on burnout in healthcare providers, burnout in pediatric nurses has received less attention. This subpopulation may be unique from adult care nurses because of the specialized nature of providing care to children who are typically seen as a vulnerable population, the high potential for empathetic engagement, and the inherent complexities in the relationships with families. Thus, the aim of this scoping review was to investigate, among pediatric nurses, (i) the prevalence and/or degree of burnout, (ii) the factors related to burnout, (iii) the outcomes of burnout, and (iv) the interventions that have been applied to prevent and/or mitigate burnout. This scoping review was performed according to the PRISMA Guidelines Scoping Review Extension. CINAHL, EMBASE, MEDLINE, PsycINFO, ASSIA, and The Cochrane Library were searched on 3 November 2018 to identify relevant quantitative, qualitative, and mixed-method studies on pediatric nurse burnout. Our search identified 78 studies for inclusion in the analysis. Across the included studies, burnout was prevalent in pediatric nurses. A number of factors were identified as impacting burnout including nurse demographics, work environment, and work attitudes. Similarly, a number of outcomes of burnout were identified including nurse retention, nurse well-being, patient safety, and patient-family satisfaction. Unfortunately, there was little evidence of effective interventions to address pediatric nurse burnout. Given the prevalence and impact of burnout on a variety of important outcomes, it is imperative that nursing schools, nursing management, healthcare organizations, and nursing professional associations work to develop and test the interventions to address key attitudinal and environmental factors that are most relevant to pediatric nurses.

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1. **Work strain and burnout risk in postgraduate trainees in general practice: an overview.**  
   Bugaj T. J Postgraduate medicine 2020;132(1):7-16.

Primary care physicians (general practitioners (GPs)) are burdened for various reasons and are particularly affected by stress-related complaints and an increasing prevalence of burnout. Thus, the prevention of physician burnout has become a major interest for health care services. Although many studies have addressed this issue in recent years, little seems to be known about the work strain and burnout rates in GP trainees. Therefore the objective of this article is to review the psychosocial burden and relevant prevention strategies for GPs with a special emphasis on GP trainees. Regardless of the specialty, burnout is more prevalent among medical trainees and so-called 'early career' physicians than among the age-matched population. Accordingly, burnout seems to be frequent among GP trainees, although there is some evidence that there are fewer doctors working in general medicine who were already heavily burdened at the time of choosing their career. The sudden assumption of responsibility in patient care as well as the fear of showing imperfection in front of their supervisors, or lack of recognition from senior doctors, the medical team, or patients might be stressors typical to this career stage. GP trainees might also feel burdened by the new level of personal involvement and thus have to develop or increase their individual level of professionality to deal with the patients' medical and personal problems. In conclusion, interventions to promote physical and mental health of GP trainees are a necessity to ensure passionate GPs in the future and should therefore be integrated into any postgraduate training curriculum in general practice.

1. **Addressing depression, burnout, and suicide in oncology physicians**  
   McFarland D.C. American Society of Clinical Oncology Educational Book 2019;39:590-598.

The best practice of oncology relies heavily on a mentally and physically healthy oncology clinician workforce. Historically, the mental health of physicians and clinicians has largely been ignored, perhaps in the spirit of a collective collusion to maintain the illusion of Oslerian equanimity. With exceedingly high and unacceptable rates of burnout and suicide in the practice of medicine and oncology in particular, a tacit disavowal of the problem is no longer acceptable. The practice of oncology presents several unique work-related issues that challenge the mental health of its clinicians and contribute to burnout, depression, and suicide. Oncologists work with patients at or nearing the end of life and face administrative and insurance hurdles to obtain needed anticancer medications, heavy workloads, paperwork and electronic medical record demands, and keeping up with expanding pertinent oncologic knowledge for practice and public relations issues. Although oncologists exhibit higher rates of depression with longer work hours than many other internal medicine colleagues, they have higher job satisfaction ratings. This article will (1) review the mental health of professionals in oncology, (2) explore similarities and differences between depression and burnout, (3) describe the unique nature of the oncology work environment, (4) examine suicide and its implications for oncology, and (5) review the evidence for interventions to prevent burnout and suicide. Although individual and system-level strategic approaches to the problem of burnout and its consequences are effective, combinatorial approaches offer the most hope for affecting the most long-lasting change and lessening burnout, depression, and suicide in oncology.<br/>Copyright &#xa9; 2019 American Society of Clinical Oncology. All rights reserved.

1. **Avoiding burnout: A gastroenterologist's toolbox**  
   Patel R.V. Techniques in Gastrointestinal Endoscopy 2019;21(3):162-166.

Physician burnout is an increasingly recognized syndrome which not only negatively affects physicians but has a detrimental impact on the overall healthcare system; similar to other physicians, gastroenterologists are susceptible to burnout due to multiple competing responsibilities. Avoiding and treating burnout must utilize a multifaceted approach to enhance recognition among physicians and peers, identify triggers and potential solutions, promote optimal coping mechanisms, and correct systemic issues. While as a medical community we have raised awareness regarding burnout, continued efforts are needed to develop modalities to prevent and mitigate burnout.<br/>Copyright &#xa9; 2019 Elsevier Inc.

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1. **Battling Intensivist Burnout: A Role for Workload Management**  
   Lilly C.M. Chest 2019;156(5):1001-1007.

Burnout syndrome is an increasingly common phenomenon that threatens our critical care workforce and the well-being of its members. Burnout syndrome can be conceived of as a workforce manifestation of chronic workload and workforce capacity imbalance. This study explores the role of workload management tools that can address workload as a complement to the resilience-based countermeasures that seek to increase worker capacity. We were able to use step-wise increments in the volume of documentation-related tasks that occurred at the time of electronic health record (EHR) implementation to investigate the relation of workload and burnout. Specialty-specific increases in the prevalence of self-reported burnout during the era of EHR adoption were compared with increases of the length of documentation created by the corresponding specialists observed prior to and following EHR implementation; a robust direct association was reported. To connect ICU workload to burnout, the number of tasks performed was extracted from the EHR, and we measured the average time that our ICU team members required to complete these tasks. Our ICU workforce efficiency was calculated as the ratio of mandatory task time to scheduled time. Comparing this ratio vs a well-established industrial standard for equipment efficiency made us realize that our average workload seemed excessive and placed our staff at risk of burnout syndrome. It is difficult to conceive that our resilience-based countermeasures to prevent and treat burnout would not be more effective when combined with measures that reduce the time our staff members spend on mandatory ICU tasks.<br/>Copyright &#xa9; 2019 American College of Chest Physicians

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1. **Burnout among music therapists: An integrative review.**  
   Gooding Nordic Journal of Music Therapy 2019;28(5):426-440.

Introduction: Burnout is a psychological syndrome that develops in response to chronic interpersonal job stressors and music therapists, like other healthcare providers, are at risk for burnout. To date, over 25 manuscripts related to burnout among music therapists have been published, however, no integration of the information exists. Methods: An integrative review was conducted to provide a comprehensive synthesis of the literature on burnout among music therapists between the years of 1981 and 2017. Results: A total of 26 publications from North America, Europe, and Asia were included, 17 of which were descriptive research studies. The findings indicated that music therapists are at average risk for burnout; however, they also experience more burnout than other mental health workers. Emotional exhaustion was the most experienced dimension of burnout, and Korean music therapists appear to be at greater risk than music therapists in other countries. Hours worked, years in the field, and gender did not appear to be strongly correlated with burnout, but work environment and work demands did appear to be connected. The most common contributors to burnout cited were work environment issues followed by compensation and workload, and individual personality traits may also increase the risk for burnout. However, self-care strategies may lower the degree of burnout experienced. Discussion: Music therapists, like other helping professionals, are at risk for burnout. Strategies for managing and preventing burnout have been suggested, and those strategies are consistent with research in other fields. However, research is needed to explore the effectiveness of specific strategies.

1. **Burnout in orthopaedic surgeons: A systematic review**  
   Hui R.W.H. Journal of Clinical Orthopaedics and Trauma 2019;10:No page numbers.

Occupational burnout is a syndrome composing of emotional exhaustion, depersonalisation and low sense of personal accomplishment. Burnout has been shown to negatively affect both the personal lives and professional performance of doctors. Orthopaedic surgery is a challenging specialty, and while burnout has been studied in orthopaedic surgeons, a comprehensive review article in this area is lacking. Hence we performed a systematic review to summarise the evidence regarding burnout in orthopaedic surgeons. We conducted a systematic literature review using the terms "orthopaedic surgeons" and "burnout" and related terms. Studies were reviewed by two independent reviewers. English articles that were (a) peer-reviewed original research articles; (b) measures burnout directly in study participants; (c) uses validated scales for burnout assessment; and (d) on orthopaedic surgeons, were included. Discrepancies between reviewers were resolved by panel discussion. 216 papers were identified and 14 papers were selected for qualitative synthesis. The prevalence of burnout varied considerably between orthopaedic surgeons from different centres and of different seniority. There is insufficient evidence to suggest that the burnout rate in orthopaedic surgeons is different from doctors in other specialties. A range of risk factors and protective factors associated with burnout were identified. Similar to prior studies in the general medical population, key determinants of burnout included personal, family, working environment and career factors. One paper identified an association between burnout and irritable behaviour during operation, yet no studies have assessed the effect of burnout on orthopaedic patient outcomes. We did not identify papers on the management of burnout in orthopaedic surgeons. To conclude, the evidence on burnout in orthopaedic surgeons is preliminary and key methodological limitations have been noted in the current studies. Large-scale prospective studies are warranted to better understand the determinants and effects of burnout in orthopaedic surgeons, in order to guide appropriate interventions against this occupational mental health hazard.<br/>Copyright &#xa9; 2019 Delhi Orthopedic Association

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1. **Burnout Prevention and Resilience Training for Critical Care Trainees**  
   Pai Cole S. International Anesthesiology Clinics 2019;57(2):118-131.

1. **Compassion-oriented mindfulness-based program and health professionals: A single-centered pilot study on burnout**  
   Marconi A. European Journal of Mental Health 2019;14(2):280-295.

This pre-post, single-centered study evaluates the effects of a compassion-oriented mindfulness-based intervention on health professionals' quality of life. The intervention was conducted in an Italian general hospital in the province of Milan. Between 2014 and 2015, thirty-four health professionals operating in the territorial psychiatric services followed an 18-week Compassion-Oriented Mindfulness-based Program. The program involved the practice of mindfulness meditation combined with a psycho-educational training. This pilot study analysed the impact of the intervention on mood, quality of life, and burnout-related characteristics. Outcome measures included the State-Trait Anxiety Inventory, the Beck Depression Inventory, the Maslach Burnout Inventory, the Five Facets of Mindfulness Questionnaire, and the Professional Quality of Life Scale. After the intervention, participants showed significantly decreased levels of depression, state anxiety, and emotional exhaustion. We found that an overall beneficial effect of the Compassion-Oriented Mindfulness-based Program existed in preventing burnout symptomatology. Non-evaluative and mindful attention was shown to improve stress resilience and coping strategies while simultaneously reducing worry and rumination. These results suggest that a compassion-oriented mindfulness program could prevent the development of anxiety and depression traits.<br/>Copyright &#xa9; 2019 Semmelweis University Institute of Mental Health, Budapest

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1. **Healthcare professionals' moral distress in adult palliative care: a systematic review.**  
   Maffoni Marina BMJ supportive & palliative care 2019;9(3):245-254.

OBJECTIVESPalliative care providers may be exposed to numerous detrimental psychological and existential challenges. Ethical issues in the healthcare arena are subject to continual debate, being fuelled with ongoing medical, technological and legal advancements. This work aims to systematically review studies addressing the moral distress experienced by healthcare professionals who provide adult palliative care.METHODSA literature search was performed on PubMed, Scopus, Web of Science and PsycINFO databases, searching for the terms 'moral distress' AND 'palliative care'. The review process has followed the international PRISMA statement guidelines.RESULTSThe initial search identified 248 papers and 10 of them were considered eligible. Four main areas were identified: (1) personal factors, (2) patients and caregivers, (3) colleagues and superiors and (4) environment and organisation. Managing emotions of self and others, witnessing sufferance and disability, caring for highly demanding patients and caregivers, as well as poor communication were identified as distressing. Moreover, the relationship with colleagues and superiors, and organisational constraints often led to actions which contravened personal values invoking moral distress. The authors also summarised some supportive and preventive recommendations including self-empowerment, communication improvement, management of emotions and specific educational programmes for palliative care providers. A holistic model of moral distress in adult palliative care (integrating emotional, cognitive, behavioural and organisational factors) was also proposed.CONCLUSIONSCognisance of risk and protective factors associated with the moral distress phenomenon may help reframe palliative healthcare systems, enabling effective and tailored actions that safeguard the well-being of providers, and consequently enhance patient care.

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1. **Importance of Physician Wellness in Battling Burnout**  
   Mossabeb R. Current Treatment Options in Pediatrics 2019;5(1):37-43.

Purpose of review: Recently, much attention has been given to physician well-being and wellness programs in order to decrease physician burnout. Burnout has been known to emerge during the early years of medical training and has been reported among a large proportion of medical students. Burnout not only affects the well-being of medical providers, but also the delivery of safe and high-quality patient care. The goal of this article is to review the literature and examine the evidence of various studies and physician wellness programs and their effects on physician well-being. Recent findings: Physician burnout is a pervasive problem and is a cause for concern. Burnout is characterized as emotional exhaustion, depersonalization (treating patients as objects), and low sense of accomplishment. Consequences of physician burnout are poor quality of care delivered to patients, decreased patient satisfaction, increased risk for medical errors, and lawsuits. Physician burnout may also negatively impact the individual's health, interpersonal relationships with family, and loved ones, and can also lead to substance abuse and mental health challenges. <br/>Summary: About one-third to one-half of physicians experience burnout. Burnout can alter the physician-patient relationship and the quality of care physicians provide. The primary purpose of this report is to shift the focus from burnout to physician preventive health and wellness strategies.<br/>Copyright &#xa9; 2019, Springer Nature Switzerland AG.

1. **Preventing physician burnout: Satisfaction or something more?**  
   Slavin S. Israel Journal of Health Policy Research 2019;8(1):No page numbers.

Physician burnout and depression have been recognized as serious international problems and the secondary costs of poor physician mental health are substantial. Interventions to address this problem can be split into two categories: those focusing on the individual, and those addressing the work environment. Individual-focused programs often include instruction in mindfulness, nutrition, and exercise, while those in the work environment have focused largely on stressors such as administrative burden, electronic health records, and productivity pressures. The recent IJHPR article entitled "Burnout and intentions to quit the practice among community pediatricians: Associations with specific professional activities", by Grosman et al., offers an additional path to address burnout and well-being in pediatricians through increasing of hours in more satisfying professional activities. While "satisfaction" was the metric in this study, what lay at the root of that satisfaction may be deeper and more profound. What the study does not measure is that the less-burned out physicians who felt greater satisfaction may have also felt a greater sense of meaning in their lives. Grossman et al. rightly urge health care managers to encourage diversification of the pediatrician's job by enabling greater engagement in the identified 'anti- burnout' professional activities, however more can and should be done. Physicians themselves should take an active role in both the seeking of, and connection to, meaning. Burnout and frustration, understandably, may have led some doctors to possess a sense of cynicism that has obscured meaning in their lives. If physicians cannot find a path to meaning on their own, they should seek colleague partners, coaches, or therapists to assist. Physicians can advocate for programs to reduce work-force stressors, but they can also advocate for formal programs such as Healers Arts programs, Schwartz rounds, and narrative medicine programs to help reconnect to meaning in their daily clinical work. Brief courses in cognitive behavioral techniques may also help in combating problematic mindsets endemic in medicine such as negativity bias, maladaptive perfectionism, and pessimistic explanatory style. With effort, a growth mindset, and when needed, guidance and some reinforcement, these negative and toxic mindsets can diminish; they can fade, and further open physicians to the healing power of meaning.<br/>Copyright &#xa9; 2019 The Author(s).

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1. **Prevention Actions of Burnout Syndrome in Nurses: An Integrating Literature Review.**  
   de Oliveira Sidney Medeiros Clinical practice and epidemiology in mental health : CP & EMH 2019;15:64-73.

AimsTo identify the strategies for the prevention of burnout syndrome in nurses; and discuss the results for future interventions that can decrease burnout in these professionals.DesignAn integrative review of the literature.Data SourcesPubMed, Lilacs, Medline, Scielo, and Science Direct, from April 2018 to July 2018.MethodsThe sources were in all 553 references were found. The following guiding question was: Which interventions for the prevention of burnout in nurses have been applied and have obtained high effectiveness?ResultsBased on the inclusion and exclusion factors, 30 studies were selected for analysis. The studies were categorized in individual, group and organizational, being the studies with actions in groups those of greater prevalence.ConclusionThe actions used to cope with burnout were, for the most part, effective, with some demonstrating greater success than others. From the 30 reviewed studies, the results did not obtain satisfactory improvement in burnout in only three interventions: 1) Systematic nursing supervision; 2) Basic nursing care; and 3) Psycho-oncological training program.

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1. **Stress and burnout syndrome and their associations with coping and job satisfaction in critical care nurses: a literature review.**  
   Friganović Adriano Psychiatria Danubina 2019;31:21-31.

BACKGROUNDBurnout is usually defined as a prolonged response to chronic emotional and interpersonal stressors, characterrized by emotional exhaustion, depersonalization and lack of social accomplishment. Coping mechanisms and job satisfaction are associated with the incidence of burnout symptoms in a work context.SUBJECTS AND METHODSThe aim of this paper was to make a systematic analysis of the literature related to nurses' stress and the incidence of burnout syndrome in intensive care nurses, and also to determine the research into associations between coping mechanisms and job satisfaction on one side, and burnout on the other side. Appropriate databases (Scopus, PubMed) were searched with the aim of finding relevant studies and articles published in the last 15 years. The keywords were burnout, coping mechanisms, job satisfaction, nurses, and intensive care. Two independent reviewers carried out a selection of the studies.RESULTSThe literature review found 786 studies about burnout and its association with different variables. Twenty-nine original research papers were discovered in this review process. Open questions still remain concerning burnout and the associations between the considered variables. We also found that studies using a qualitative approach, which could provide better insight into the investigation of burnout, was insufficient in this area.CONCLUSIONBurnout syndrome is serious problem for healthcare systems and affects almost all profiles of healthcare workers. Although burnout is an evidence-based public health problem, there is still no systematic approach to prevention. Prevention activities to reduce stress and the incidence of burnout should be provided for nurses, especially those in very demanding posts.

1. **Study of the relationship between self-efficacy, general health and burnout among Iranian health workers**  
   Amiri M. Osong Public Health and Research Perspectives 2019;10(6):359-367.

Objectives: To evaluate the relationship between self-efficacy, general health and burnout of the staff at Shahroud University of Medical Sciences. <br/>Method(s): In 2015, 249 staff at Shahroud University of Medical Sciences (from a total reference population of 520 staff members) were selected through stratified random sampling. To collect the data, Sherer self-efficacy Scale, General Health Questionnaire and Maslach Burnout Inventory were used. The collected data were analyzed through ANOVA, Pearson correlation and Chi-square tests using SPSS 16. The relationship between self-efficacy, general health and burnout (latent factors) were studied using structural equation modeling with Stata 14. <br/>Result(s): The mean age of participants was 36.97 +/- 7.60 years, and the mean number of years work experience was 12.29 +/- 7.57. The mean scores of general health, self-efficacy and burnout were 28.24 +/- 11.14, 62.30 +/- 9.21 and 81.67 +/- 22.18, respectively. The results of the study showed a statistically significant relationship between self-efficacy and general health which equals - 0.32. A statistically significant relationship also existed between burnout scores and general health scores (beta = 0.78). <br/>Conclusion(s): The results showed that high self-efficacy improves the general health of employees at the Shahroud University of Medical Sciences and reduces burnout. Special attention should be paid to self-efficacy in the prevention of burnout.<br/>Copyright &#xa9; 2019 Korea Centers for Disease Control and Prevention.

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1. **The Use of Yoga to Manage Stress and Burnout in Healthcare Workers: A Systematic Review.**  
   Cocchiara Rosario Andrea Journal of clinical medicine 2019;8(3):No page numbers.

The purpose of this systematic review is to analyze and summarize the current knowledge regarding the use of yoga to manage and prevent stress and burnout in healthcare workers. In February 2017, a literature search was conducted using the databases Medline (PubMed) and Scopus. Studies that addressed this topic were included. Eleven articles met the inclusion criteria. Seven studies were clinical trials that analyzed yoga interventions and evaluated effectiveness by gauging stress levels, sleep quality and quality of life. A study on Chinese nurses showed statistical improvement in stress levels following a six-month yoga program (χ2 = 16.449; p < 0.001). A population of medical students showed improvement in self-regulation values after an 11-week yoga program (from 3.49 to 3.58; p = 0.04) and in self-compassion values (from 2.88 to 3.25; p = 0.04). Four of the included articles were observational studies: They described the factors that cause stress in the work environment and highlighted that healthcare workers believe it is possible to benefit from improved physical, emotional and mental health related to yoga activity. According to the literature, yoga appears to be effective in the management of stress in healthcare workers, but it is necessary to implement methodologically relevant studies to attribute significance to such evidence.

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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.

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1. **What Is Underlying Resident Burnout in Urology and What Can Be Done to Address this?**  
   Fainberg Jonathan Current urology reports 2019;20(10):62.

Physician burnout-a constellation of depersonalization, emotional exhaustion, reduced feelings of personal attachment, and a low sense of accomplishment-is a term that has been around since the 1980s. Burnout rates among residents and fellows are higher than medical students, attending physicians, and age-matched college graduates, with rates ranging from 40-80% of trainees across subspecialties. Unfortunately, burnout among residents and trainees has been linked to lower scores on in-service examinations for internal medicine residents as well as poorer overall health and exercise habits. The purpose of this review is to quantify the extent of burnout among urology residents and examine effective techniques and measures to prevent burnout and practically what can be done to combat this growing epidemic.

1. **Burnout in mental health professionals: A systematic review and meta-analysis of prevalence and determinants.**  
   O'Connor Karen European psychiatry : the journal of the Association of European Psychiatrists 2018;53:74-99.

This study aimed to estimate the level of burnout in mental health professionals and to identify specific determinants of burnout in this population. A systematic search of MEDLINE/PubMed, PsychINFO/Ovid, Embase, CINAHL/EBSCO and Web of Science was conducted for original research published between 1997 and 2017. Sixty-two studies were identified as meeting the study criteria for the systematic review. Data on the means, standard deviations, and prevalence of the dimensions of burnout were extracted from 33 studies and included in the meta-analysis (n = 9409). The overall estimated pooled prevalence for emotional exhaustion was 40% (CI 31%-48%) for depersonalisation was 22% (CI 15%-29%) and for low levels of personal accomplishment was 19% (CI 13%-25%). The random effects estimate of the mean scores on the Maslach Burnout Inventory indicate that the average mental health professional has high levels of emotional exhaustion [mean 21.11 (95% CI 19.98, 22.24)], moderate levels of depersonalisation [mean 6.76 (95% CI 6.11, 7.42)] but retains reasonable levels of personal accomplishment [mean 34.60 (95% CI 32.99, 36.21)]. Increasing age was found to be associated with an increased risk of depersonalisation but also a heightened sense of personal accomplishment. Work-related factors such as workload and relationships at work, are key determinants for burnout, while role clarity, a sense of professional autonomy, a sense of being fairly treated, and access to regular clinical supervision appear to be protective. Staff working in community mental health teams may be more vulnerable to burnout than those working in some specialist community teams, e.g., assertive outreach, crisis teams.

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1. **Burnout in Radiation Therapy: Causes, Concerns, and Prevention.**  
   Passmore Radiation Therapist 2018;27(1):43-57.

The article discusses the adverse effects of burnout on radiation therapists, medical dosimetrists, and other health care workers, which could impact emotional exhaustion and job satisfaction. It describes factors that could prevent burnout including manageable workload, autonomy, fairness, reward and recognition. It also explores the impact of burnout on the patient safety and the work environment.

1. **Burnout syndrome among healthcare professionals**  
   Bridgeman P.J. American Journal of Health-System Pharmacy 2018;75(3):147-152.

Recognizing indicators and risk factors for burnout and addressing these issues on systemwide and professionwide levels may help to mitigate professional pressures and improve healthcare provider satisfaction and fulfillment. Mechanisms for coping with professional stress and pressures are imperative for those involved with professional and postgraduate training. The onus for implementing strategies to prevent burnout and for reenergizing pharmacy practitioners in their work lies with employers, institutions, businesses, schools of pharmacy, hospitals, and health systems. The influence of burnout on patient safety and quality of care cannot be ignored and demands attention.<br/>Copyright &#xa9; 2018, American Society of Health-System Pharmacists, Inc. All rights reserved.

1. **Evidence of burnout in health-system pharmacists**  
   Durham M.E. American Journal of Health-System Pharmacy 2018;75(23):No page numbers.

Purpose: Results of a study to determine levels of and risk factors for professional burnout among health-system pharmacists are reported. <br/>Method(s): The Maslach Burnout Inventory Human Services Survey (MBI-HSS) was distributed to a target population of health-system pharmacists to assess study participants for burnout, which is characterized by feelings of emotional exhaustion, depersonalization, and reduced personal accomplishment. Health-system pharmacists were solicited via email through a professional network listserver to complete an anonymous, electronic questionnaire regarding burnout. Demographic information, employment characteristics, and responses to the MBI-HSS were collected using a cross-sectional cohort survey methodology. Descriptive statistics were used to assess MBI-HSS scores and risk factors associated with burnout. <br/>Result(s): Of the 371 survey responses received, 329 were complete and included in the final analysis. Overall, 175 study participants (53.2%) reported scores indicating a high degree of burnout on at least 1 subscale of the MBI-HSS. Twenty-eight respondents (8.5%) had scores indicating burnout on all 3 subscales. Average scores were 22.9, 6.2, and 36.3 for feelings of emotional exhaustion, depersonalization, and reduced personal accomplishment, respectively. Modifiable and nonmodifiable risk factors for burnout were identified. The findings warrant further research on burnout prevention and action to promote resilience in the profession. <br/>Conclusion(s): Half of health-system pharmacists assessed using the MBI-HSS in this study identified themselves as being at risk for burnout.<br/>Copyright &#xa9; 2018 American Society of Health-System Pharmacists, Inc. All rights reserved.

1. **How to prevent burnout in cardiologists? A review of the current evidence, gaps, and future directions.**  
   Panagioti Maria Trends in cardiovascular medicine 2018;28(1):1-7.

Burnout is rising in all physicians, and cardiologists are not an exemption. Cardiology is a very popular specialty among medical students as it is associated with outstanding training standards and high prestige and income. In this review, we critically summarize the evidence on consequences, causes, and evidence-based interventions for burnout with a view toward recommending the best strategies for promoting wellness in cardiologists. Only a handful of studies have examined burnout specifically in cardiologists. Evidence therefore was mainly extrapolated by larger studies in all physicians and other physician specialties. Burnout in cardiologists has serious negative personal and professional consequences and is associated with suboptimal healthcare outcomes for patients. Burnout in cardiologists is primarily driven by professional and healthcare system demands and inefficiencies such as excessive workload and role complexity, training and certification demands, inefficient compensation models and lack of resources, computerization, and loss of autonomy. Moreover, loss of connectedness with patients, difficulties in balancing work and personal life and overvaluing compulsiveness and perfectionism in medical practice further increase the risk for burnout. Burnout among cardiologists may be best mitigated by organizational strategies complemented by individual stress reduction and reflection techniques under the resilience-based approach. Large-scale strategies are needed to mitigate burnout and promote physician wellness as a shared responsibility of healthcare systems and individuals and be committed in creating a new culture in medicine.

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1. **Managing workplace stress in community pharmacy organisations: lessons from a review of the wider stress management and prevention literature.**  
   Jacobs Sally The International journal of pharmacy practice 2018;26(1):28-38.

BACKGROUNDWorkplace stress in community pharmacy is increasing internationally due, in part, to pharmacists' expanding roles and escalating workloads. Whilst the business case for preventing and managing workplace stress by employers is strong, there is little evidence for the effectiveness of organisational stress management interventions in community pharmacy settings.AIMTo identify and synthesise existing evidence for the effectiveness of organisational solutions to workplace stress from the wider organisational literature which may be adaptable to community pharmacies.METHODA secondary synthesis of existing reviews. Publications were identified through keyword searches of electronic databases and the internet; inclusion and exclusion criteria were applied; data about setting, intervention, method of evaluation, effectiveness and conclusions (including factors for success) were extracted and synthesised.FINDINGSEighteen reviews of the stress management and prevention literature were identified. A comprehensive list of organisational interventions to prevent or manage workplace stress, ordered by prevalence of evidence of effectiveness, was produced, together with an ordered list of the benefits both to the individual and employing organisation. An evidence-based model of best practice was derived specifying eight factors for success: top management support, context-specific interventions, combined organisational and individual interventions, a participative approach, clearly delineated tasks and responsibilities, buy-in from middle management, change agents as facilitators and change in organisational culture.CONCLUSIONSThis literature review provides community pharmacy organisations with evidence from which to develop effective and successful stress management strategies to support pharmacists and pharmacy staff. Well-designed trials of stress management interventions in community pharmacy organisations are still required.

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1. **Physician burnout: Action items to confront the problem**  
   Collins P.B. Osteopathic Family Physician 2018;10(4):22-26.

The well-being of physicians has been a trending topic among professionals in the field, medical organizations, and the media in recent years. The increased attention placed on burnout is with good reason, as research indicates that burnout among physicians is increasing at an alarming rate. Burnout can affect aspects of physical, mental, emotional, and spiritual health. Three symptoms define burnout: loss of enthusiasm for work (emotional exhaustion), cynicism (depersonalization), and low sense of personal accomplishment (lack of efficacy). Identifying and combatting burnout can prove to be difficult. The most beneficial way to address burnout is to view it as a two-way street in which organizations and physicians commit to preventing, identifying, and addressing burnout. On the individual level, burnout and burnout prevention can be addressed through various lifestyle changes including mindfulness, adjusting eating habits, maintaining physical activity levels, and improving sleep habits. While we as individuals can try to mitigate the symptoms and causes of burnout, health care organizations and policymakers must do their part in addressing the problem as well. Wellness promotion and burnout prevention can and should begin in medical school, and continue throughout training and into our careers.<br/>Copyright &#xa9; 2018 by the American College of Osteopathic Family Physicians. All rights reserved.

1. **Physician Well-Being: Organizational Strategies for Physician Burnout.**  
   Andolsek Kathryn M. FP essentials 2018;471:20-24.

Until recently, most initiatives to address physician burnout have focused on improving the resilience of individual physicians. These measures are necessary but insufficient since it is now recognized that organizations have a major role in causing, preventing, and mitigating physician burnout. Burnout must be addressed by organizational change. The first steps to improving clinician well-being are measurement and monitoring. Several validated scales are available to assess well-being. Results of assessments can be used to engage clinicians in open conversations on issues and potential solutions. Specific leadership behaviors and positive organizational cultures decrease burnout and enhance engagement. There must be an institutional commitment to enhancing physician autonomy and transparent communication, improving the meaning of work, reducing administrative and regulatory burdens, and reducing the stigma related to seeking care.

1. **Prevalence of burnout among nurses in Iran: a systematic review and meta-analysis.**  
   Rezaei S. International nursing review 2018;65(3):361-369.

AIMThis study aimed to summarize the available information in the literature to make an accurate estimate of the prevalence of burnout among Iranian nurses.BACKGROUND AND INTRODUCTIONBurnout is a work-related stress syndrome that has negative impact on healthcare providers, patients and healthcare delivery systems.METHODA comprehensive search of literature using international [PubMed, Scopus and the Institute for Scientific Information (ISI)] and Iranian scientific data bases [Scientific Information Database (SID), IranMedex and Magiran] was conducted to identify English and Persian language studies, published between 2000 and 2016, that examined the prevalence of burnout among nurses in Iran. The I-squared test and Chi-squared-based Q-test suggested heterogeneity of reported prevalence among the qualified studies; thus, a random-effects model was applied to estimate the overall prevalence of burnout among nurses in Iran.RESULTSBased on 21 selected articles with 4180 participants, the overall prevalence of burnout among Iranian nurses was estimated to be 36% [95% confidence interval (CI), 20-53%] in Iran. Meta-regression indicated that sample size and year of data collection, mean age of samples, female to male ratio and geographic regions were not statistically significantly associated with the prevalence of burnout. Also, based on Egger's test and funnel plot, there is no publication bias among studies included in the analysis.CONCLUSIONProfessional burnout affects more than one-third of nursing staff in Iran; thus, effective interventions and strategies are required to reduce and prevent burnout among nurses.IMPLICATION FOR NURSING AND HEALTH POLICYDue to the negative consequences of burnout on patients, nurses and organizations, nursing and healthcare managers should intervene to prevent and reduce burnout among nurses in Iran. Policy attention should focus on developing effective interventions to prevent and minimize the burden of burnout among nurses in Iran. Nurses' involvement in the policy-making process is crucial in the implementation of effective programs and initiatives tailored to address the higher prevalence of burnout among Iranian nurses.

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1. **The Impact of Resiliency on Nurse Burnout: An Integrative Literature Review**  
   Brown Shanon Medsurg Nursing 2018;27(6):349.

In this literature review, the correlation between resiliency and nurse burnout is analyzed, and strategies to increase resiliency are identified. By identifying contributing factors associated with burnout and high-risk work environments, healthcare leaders can implement strategies to build resiliency and prevent burnout. To develop programs that support nurses with needed resources and tools to overcome adversity, nurse leaders should understand the challenges nurses face and how they respond to these challenges. The goal of this integrative review is to identify causes of nurse burnout, characteristics of nurses with high resiliency, and strategies to increase resiliency in nurses.The following questions were used to guide the review:\* What factors contribute to nurse burnout?\* Is there a relationship between nurse burnout and resiliency?\* What characteristics are present in nurses with high resiliency?\* What strategies can nurses implement to increase their resiliency?\* What strategies and programs can organizational leaders implement to increase resiliency among nurses?

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1. **Web-Based Tools and Mobile Applications To Mitigate Burnout, Depression, and Suicidality Among Healthcare Students and Professionals: a Systematic Review.**  
   Pospos Sarah Academic psychiatry : the journal of the American Association of Directors of Psychiatric Residency Training and the Association for Academic Psychiatry 2018;42(1):109-120.

OBJECTIVEBeing a healthcare professional can be a uniquely rewarding calling. However, the demands of training and practice can lead to chronic distress and serious psychological, interpersonal, and personal health burdens. Although higher burnout, depression, and suicide rates have been reported in healthcare professionals, only a minority receive treatment. Concerns regarding confidentiality, stigma, potential career implications, and cost and time constraints are cited as key barriers. Web-based and mobile applications have been shown to mitigate stress, burnout, depression, and suicidal ideation among several populations and may circumvent these barriers. Here, we reviewed published data on such resources and selected a small sample that readily can be used by healthcare providers.METHODSWe searched PubMed for articles evaluating stress, burnout, depression, and suicide prevention or intervention for healthcare students or providers and identified five categories of programs with significant effectiveness: Cognitive Behavioral Therapy (online), meditation, mindfulness, breathing, and relaxation techniques. Using these categories, we searched for Web-based (through Google and beacon.anu.edu.au -a wellness resource website) and mobile applications (Apple and mobile. va.gov/appstore ) for stress, burnout, depression, and suicide prevention and identified 36 resources to further evaluate based on relevance, applicability to healthcare providers (confidentiality, convenience, and cost), and the strength of findings supporting their effectiveness.RESULTSWe selected seven resources under five general categories designed to foster wellness and reduce burnout, depression, and suicide risk among healthcare workers: breathing (Breath2Relax), meditation (Headspace, guided meditation audios), Web-based Cognitive Behavioral Therapy (MoodGYM, Stress Gym), and suicide prevention apps (Stay Alive, Virtual Hope Box).CONCLUSIONSThis list serves as a starting point to enhance coping with stressors as a healthcare student or professional in order to help mitigate burnout, depression, and suicidality. The next steps include adapting digital health strategies to specifically fit the needs of healthcare providers, with the ultimate goal of facilitating in-person care when warranted.

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1. **Burnout in Orthopaedic Surgeons: A Challenge for Leaders, Learners, and Colleagues: AOA Critical Issues.**  
   Ames S. Elizabeth The Journal of bone and joint surgery. American volume 2017;99(14):e78.

Burnout, depression, suicidal ideation, and dissatisfaction with work-life balance have been reported in all medical specialties and at all stages of medical education and practice experience. Burnout consists of progressive emotional, attitudinal, and physical exhaustion. Physicians with burnout may treat patients as objects and feel emotionally depleted. Burnout is characterized by a loss of enthusiasm for work (emotional exhaustion), feelings of cynicism (depersonalization), and a low sense of personal accomplishment. The most complete study of emotional burnout among different medical specialties demonstrated that orthopaedic surgery is one of the specialties with the highest burnout rate. Qualitative descriptive studies are available. There was a 45.8% burnout rate among physicians in the U.S. in 2012, and a 2014 update suggested even higher rates. Burnout has a correlation with medical education. Burnout rates are similar to those in the general population when medical students enter school, and increase steadily through medical education prior to residency. Burnout rates in residents are high, reported to be between 41% and 74% across multiple specialties. This impacts our young physician workforce in orthopaedics. The purpose of this review is to provide the available information that characterizes burnout and addresses the issues inherent to preventing burnout, and to build awareness in orthopaedic surgeons. Wellness "goes beyond merely the absence of distress and includes being challenged, thriving, and achieving success in various aspects of personal and professional life." The challenge for the orthopaedic community is to develop interventions and strategies that are personalized to the individuals in this specialty.

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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. **Causes and Adverse Impact of Physician Burnout: A Systematic Review.**  
   Azam Kamran Journal of the College of Physicians and Surgeons--Pakistan : JCPSP 2017;27(8):495-501.

OBJECTIVETo review the significant causes and effects of physician burnout in published literature.METHODOLOGYAsystematic review was conducted for searching published literature on the causes and effects of burnout in three online databases. Inclusion and exclusion criteria were developed for final selection of papers. The selected papers were critically appraised and thematic analysis was done to identify major themes related to physician burnout.RESULTSThirty-one papers were finally selected among the 2,828 identified studies. The thematic analysis revealed demographic factors, e.g. age, gender, marital status, specialty and job position; and organizational factors, e.g. workload, interpersonal demands, job insecurity and lack of resources, as significant causes of burnout. The consequences of burnout included individual and organizational effects. The individual effects of burnout included physical health problems; while organizational effects included poor job performance, low organizational commitment, and turnover intentions.CONCLUSIONBurnout is a recognized workplace hazard in the healthcare sector. The individual characteristics of physicians and working environment within hospitals are contributory factors of burnout. Therefore, proactive interventions should be taken at individual and institutional levels for preventing physician burnout by improving the personal lifestyle of physician and working environment in hospitals.

1. **Decreasing Patient Stress and Physician/Medical Workforce Burnout Through Health Care Environments: Uncovering the Serious Leisure Perspective at Mayo Clinic's Campus in Rochester, Minnesota.**  
   Dieser Rodney B. Mayo Clinic proceedings 2017;92(7):1080-1087.

Health care environments are places of high stress for both patients and medical professionals. Although organizational efforts of workload and efficiency are often implemented to decrease both patient and physician/medical workforce stress, what is often overlooked is how leisure opportunities and programs located in day-to-day experiences and in physically built environments can increase both patient and medical staff enjoyment and pleasure, thus lowering patient stress and physician/medical staff burnout. Combining historical research on the leisure pursuits of Drs William J. Mayo and Charles H. Mayo, literature on leisure, stress, and burnout, and a case study methodology of Mayo Clinic's campus in Rochester, Minnesota, the purpose of this study was to describe how the Serious Leisure Perspective (SLP) exists at Mayo Clinic and contributes to relieving stress among patients and preventing burnout among physicians.

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1. **Mastering Resilience in Oncology: Learn to Thrive in the Face of Burnout.**  
   Hlubocky Fay J. American Society of Clinical Oncology educational book. American Society of Clinical Oncology. Annual Meeting 2017;37:771-781.

Oncology clinician burnout has become a noteworthy issue in medical oncology directly affecting the quality of patient care, patient satisfaction, and overall organizational success. Due to the increasing demands on clinical time, productivity, and the evolving medical landscape, the oncology clinician is at significant risk for burnout. Long hours in direct care with seriously ill patients/families, limited control over daily responsibilities, and endless electronic documentation, place considerable professional and personal demands on the oncologist. As a result, the oncology clinician's wellness is adversely impacted. Physical/emotional exhaustion, cynicism, and feelings of ineffectiveness evolve as core signs of burnout. Unaddressed burnout may affect cancer clinician relationships with their patients, the quality of care delivered, and the overall physical and emotional health of the clinician. Oncology clinicians should be encouraged to build upon their strengths, thrive in the face of adversity and stress, and learn to positively adapt to the changing cancer care system. Fostering individual resilience is a key protective factor against the development of and managing burnout. Empowering clinicians at both the individual and organizational level with tailored resilience strategies is crucial to ensuring clinician wellness. Resilience interventions may include: burnout education, work-life balance, adjustment of one's relationship to work, mindful practice, and acceptance of the clinical work environment. Health care organizations must act to provide institutional solutions through the implementation of: team-based oncology care, communication skills training, and effective resiliency training programs in order to mitigate the effects of stress and prevent burnout in oncology.

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1. **Predictors of compassion fatigue in mental health professionals: A narrative review**  
   Turgoose David Traumatology 2017;23(2):172-185.

Professionals who work in mental health settings are at risk of developing psychological distress themselves. The term "compassion fatigue" has been used to describe the negative effects of working in a psychologically distressing environment on a person’s ability to feel compassion for others. A number of studies have investigated predictors and correlates of compassion fatigue. However, as yet there is no consensus on which psychosocial factors are most commonly related to compassion fatigue. This review examines research on common correlates and predictors of compassion fatigue in mental health professionals. A literature search yielded 32 studies describing compassion fatigue in a range of mental health professionals and in relation to a variety of psychosocial factors. Quality of papers was variable. The review highlights several factors that were commonly associated with compassion fatigue (e.g., trauma history of mental health professionals, empathy). Some potential protective factors were also indicated, including certain behavioral and cognitive coping styles and mindfulness. Findings and implications are discussed, and directions for future studies are indicated. In particular, we highlight the need for longitudinal studies to investigate compassion fatigue’s development over time and to test models of the etiology of compassion fatigue. (PsycINFO Database Record (c) 2018 APA, all rights reserved) (Source: journal abstract)

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1. **They did not start the fire: reviewing and resolving the issue of physician stress and burnout.**  
   Babyar Journal of Health Organization & Management 2017;31(4):410-417.

Purpose Physician stress and burnout is a serious and common concern in healthcare, with over half of physicians in the USA meeting at least one criterion for burnout. The paper aims to discuss these issues. Design/methodology/approach A review on current state of physician stress and burnout research, from 2008 to 2016, was undertaken. A subsequent perspective paper was shaped around these reviews. Findings Findings reveal research strength in prevalence and incidence with opportunities for stronger intervention studies. While descriptive studies on causes and consequences of physician burnout are available, studies on interventions and prevention of physician burnout are lacking. Future research on physician stress and burnout should incorporate intervention studies and take care to avoid limitations found in current research. Accountability and prevention of physician burnout is the responsibility of the healthcare industry as a whole, and organizational strategies must be emphasized in future research. Originality/value The value of this research comes in the original comprehensive review, international inclusion and succinct summary of physician burnout research and strategies.

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1. **What factors affect the emotional well-being of newly qualified midwives in their first year of practice?**  
   Bacchus Alexandra MIDIRS Midwifery Digest 2017;27(4):444-450.

The Royal College of Midwives (RCM) reports that between 5-10% of newly qualified midwives (NQM) leave the profession in the UK within a year of registration, with similar losses reported internationally (RCM 2010). NQMs are in a position of vulnerability and are highly susceptible to workplace adversity that subsequently may affect their emotional well-being. This literature review explores the experiences of NQMs surrounding their emotional well-being within the first 12 months of transition. Following a thorough search and appraisal of the literature, four papers were reviewed. Two key themes were identified consisting of factors that challenge NQMs' resilience causing negative emotional well-being, and factors that enhance resilience, promoting positive emotional well-being. The findings of this review demonstrate that there is a need for the consistent implementation of protective mechanisms such as structured preceptorship and supportive mentorship. Such interventions may improve physical and emotional well-being, increase retention and better prepare NQMs for the journey ahead; ultimately also improving quality of care for women and patient safety.

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1. **A systematic review of suicidal thoughts and behaviors among police officers, firefighters, EMTs, and paramedics.**  
   Stanley Ian H. Clinical psychology review 2016;44:25-44.

First responders-police officers, firefighters, emergency medical technicians (EMTs), and paramedics-experience significant job-related stressors and exposures that may confer increased risk for mental health morbidities (e.g., posttraumatic stress disorder [PTSD], suicidal thoughts and behaviors) and hastened mortality (e.g., death by suicide). Inherent in these occupations, however, are also factors (e.g., camaraderie, pre-enlistment screening) that may inoculate against the development or maintenance of psychiatric conditions. Several reviews of the literature have documented the prevalence and potency of PTSD among first responders; the value of these extant reviews is considerable. Nonetheless, the literature has not been systematically described with regard to suicidality. In this systematic review, we present 63 quantitative studies examining suicidal thoughts, behaviors, and/or fatalities among first responders; identify population-specific risk and protective factors; and pinpoint strengths and weaknesses of the existing literature. Findings reveal elevated risk for suicide among first responders; however, studies utilizing more rigorous methodologies (e.g., longitudinal designs, probability sampling strategies) are sorely needed. First responders have an armamentarium of resources to take care of others; it is the duty of researchers, clinicians, and the public to aid in taking care of their health as well, in part by reducing suicide risk.

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1. **Burnout and Doctors: Prevalence, Prevention and Intervention.**  
   Kumar Shailesh Healthcare (Basel, Switzerland) 2016;4(3):No page numbers.

Doctors are exposed to high levels of stress in the course of their profession and are particularly susceptible to experiencing burnout. Burnout has far-reaching implications on doctors; patients and the healthcare system. Doctors experiencing burnout are reported to be at a higher risk of making poor decisions; display hostile attitude toward patients; make more medical errors; and have difficult relationships with co-workers. Burnout among doctors also increases risk of depression; anxiety; sleep disturbances; fatigue; alcohol and drug misuse; marital dysfunction; premature retirement and perhaps most seriously suicide. Sources of stress in medical practice may range from the emotions arising in the context of patient care to the environment in which doctors practice. The extent of burnout may vary depending on the practice setting; speciality and changing work environment. Understanding dynamic risk factors associated with burnout may help us develop strategies for preventing and treating burnout. Some of these strategies will be reviewed in this paper.

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1. **Orthopaedic Surgeon Burnout: Diagnosis, Treatment, and Prevention.**  
   Daniels Alan H. The Journal of the American Academy of Orthopaedic Surgeons 2016;24(4):213-219.

Burnout is a syndrome marked by emotional exhaustion, depersonalization, and low job satisfaction. Rates of burnout in orthopaedic surgeons are higher than those in the general population and many other medical subspecialties. Half of all orthopaedic surgeons show symptoms of burnout, with the highest rates reported in residents and orthopaedic department chairpersons. This syndrome is associated with poor outcomes for surgeons, institutions, and patients. Validated instruments exist to objectively diagnose burnout, although family members and colleagues should be aware of early warning signs and risk factors, such as irritability, withdrawal, and failing relationships at work and home. Emerging evidence indicates that mindfulness-based interventions or educational programs combined with meditation may be effective treatment options. Orthopaedic residency programs, departments, and practices should focus on identifying the signs of burnout and implementing prevention and treatment programs that have been shown to mitigate symptoms.

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1. **Pathology in the Medical Profession?: Taking the Pulse of Physician Wellness and Burnout.**  
   Schrijver Iris Archives of pathology & laboratory medicine 2016;140(9):976-982.

CONTEXT-In the past decades, physician wellness has diminished in every aspect of professional life. Burnout symptoms in the United States affect 30% to 68% of physicians overall-exceeding the levels of any other professional group. The ramifications of burnout present an underrecognized crisis in the health care system that carries the consequences of personal, professional, institutional, and societal costs.OBJECTIVE-To bring to light the elements of current medical practice that contribute to physician professional fulfillment and burnout. Intervention measures, steps toward burnout prevention, and the present limitations thereof are also addressed.DATA SOURCES-This narrative literature review was performed by using studies in PubMed (National Center for Biotechnology Information) and large online physician surveys, published through December 2015. Because of geographic differences, the review is primarily concentrated on physicians across specialties in the United States. Small studies and those of single disciplines were excluded.CONCLUSIONS-Many physicians learn to tolerate burnout symptoms despite negative personal consequences. Long-term work-related stress, however, may lead to the potential for negative effects on the quality of patient care, and to attrition. Interestingly, the factors that enhance physician fulfillment and those that may precipitate burnout symptoms are distinct. Optimization of physician well-being, therefore, requires tailored approaches in each of these 2 dimensions and is most likely to succeed if it includes approaches that are customized to career phase, physician specialty, and practice setting. Importantly, organization leaders must prioritize this issue and provide sustained support for wellness initiatives, to foster a culture that is conducive to physician well-being.

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1. **Psychosocial burden in medical students and specific prevention strategies**  
   Bugaj T.J. Mental Health and Prevention 2016;4(1):24-30.

High rates of psychosocial morbidity among students are acknowledged. Compared to an age-matched population, medical students show higher anxiety and depression symptoms as well as higher suicide rates. Distress and burnout among medical students or doctors could potentially put patients at risk and pose a major issue in patient safety. The fact that young physicians in particular experience high levels of professional burnout in their residency training years reaffirms the need for professional initiatives at medical school level to ensure the early prevention of burnout or depression in future doctors. This review aims to summarize what is known about distress and psychosocial burden as well as the relevant prevention strategies for the specific group of medical students.<br/>Copyright &#xa9; 2016 Elsevier GmbH.

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. **Efficacy of burnout interventions in the medical education pipeline.**  
   Williams Daniel Academic psychiatry : the journal of the American Association of Directors of Psychiatric Residency Training and the Association for Academic Psychiatry 2015;39(1):47-54.

OBJECTIVELittle is known about the efficacy of current interventions to mitigate burnout among medical students and residents, despite its association with mood disorders, absenteeism, low job satisfaction, and medical errors. This review summarizes the efficacy data of burnout interventions and how each modality is used.METHODOVID-SP Medline, Google Scholar and PsychINFO were searched for combinations of medical subject headings (MeSH) terms: premedical students, medical students, internships, intern, medical graduate, clinical clerkship, and residents in combination with a keyword group of burnout, professional burnout, suicide, attempted suicide, and prevention. Studies with data on the efficacy from burnout prevention programs were included for review.RESULTSNineteen studies were selected for inclusion in this review. Eleven different types of interventions and combinations of interventions were used. There were six studies on the impact of the 2003 duty-hour restrictions by the Accreditation Council for Graduate Medical Education on burnout. Other approaches included self-development groups, conversion to a pass-fail grading system and training in mindfulness, communication, and stress management. Half of the intervention approaches had at least one study demonstrating benefit in reducing burnout. Self-development groups, the Respiratory One Method for relaxation, and conversion to a pass-fail grading system appear to reduce burnout. The burnout data on mindfulness training and the 2003 resident duty-hour restrictions are mixed. There were no studies available on burnout among premedical students or suicide prevention among medical students or residents.CONCLUSIONSThere is a growing body of evidence-based interventions to mitigate burnout which can be used in the development of future programs. More research is needed to identify and intervene against burnout earlier in the medical education pipeline, including at the undergraduate level.

1. **Preventing Burnout: What Does the Research Tell Us?**  
   Rupert Professional Psychology: Research & Practice 2015;46(3):168-174.

Practicing psychologists face many demands that place them at risk for professional burnout. This article provides empirically supported recommendations for reducing or preventing burnout. Drawing from theoretical models of burnout, 4 critical questions are identified: What job demands increase risk for burnout? What job resources decrease risk for burnout? What personal resources decrease risk for burnout? How does home life influence risk for burnout? Findings from empirical studies with psychologists related to each question are summarized and are integrated with conceptual literatures to develop specific recommendations. Consistent with the positive psychology movement and with recent conceptual shifts in the burnout literature, these recommendations encourage a positive, proactive approach that strives to maximize a fit between work demands and personal strengths, to develop resources at work and at home, and to establish a balance between work and personal lives.

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1. **Role of the mental health professional in education and support of the medical staff.**  
   Grill Elizabeth Fertility and sterility 2015;104(2):271-276.

This review argues that mental health professionals are underutilized in the reproductive health care system. Counselors in the field of reproductive medicine could broaden their care from a strictly one-on-one patient care perspective to a more integrated and collaborative approach that also involves education, training, and support of the fertility clinic staff. The literature has shed light on reasons for patient discontinuation, but little is known about staff burnout in reproductive health care, and even less has been done to address work-related stress, job dissatisfaction, and poor emotional and physical health among fertility clinic staff. Specific educational strategies and training techniques are addressed to help reduce staff stress, prevent burnout, and improve overall patient care.

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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. **Understanding and reducing work-related psychological distress in interns: A systematic review**  
   Facey A.D. Internal Medicine Journal 2015;45(10):995-1004.

The aim of this study was to collate and evaluate studies investigating either the factors influencing work-related psychological distress in postgraduate year one (PGY1) doctors or the strategies designed to reduce it. This is a systematic review conducted in May 2014. The data sources were key databases (MEDLINE, PsycINFO and Embase) and manual searches of reference lists for relevant studies published in the last 15 years. This study is an empirical research designed either to elucidate the factors influencing work-related psychological distress in PGY1 doctors, or examine the effects of an intervention designed to reduce it. Key information was extracted into an electronic data extraction form, which incorporated elements of Murphy's model of work stress factors. A total of 21 studies was included in the review; 16 studies had examined the factors influencing work-related psychological distress, four studies had investigated strategies to reduce it, and a single study addressed both. Analysis of the findings of each individual study through the conceptual framework provided by Murphy's model revealed a discrepancy between the factors influencing work-related psychological distress and the focus of strategies designed to reduce it. Factors such as career progression and a PGY1 doctor's role within the organisation were not addressed in the interventions identified. Significant sources of psychological distress in PGY1 doctors remain overlooked by current interventions. Strategies designed to prevent or reduce psychological distress should be broad-based and grounded in both the literature exploring salient factors and existing theories of work-related stress.<br/>Copyright &#xa9; 2015 Royal Australasian College of Physicians.

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1. **Burnout among physicians.**  
   Romani Maya The Libyan journal of medicine 2014;9:23556.

Burnout is a common syndrome seen in healthcare workers, particularly physicians who are exposed to a high level of stress at work; it includes emotional exhaustion, depersonalization, and low personal accomplishment. Burnout among physicians has garnered significant attention because of the negative impact it renders on patient care and medical personnel. Physicians who had high burnout levels reportedly committed more medical errors. Stress management programs that range from relaxation to cognitive-behavioral and patient-centered therapy have been found to be of utmost significance when it comes to preventing and treating burnout. However, evidence is insufficient to support that stress management programs can help reducing job-related stress beyond the intervention period, and similarly mindfulness-based stress reduction interventions efficiently reduce psychological distress and negative vibes, and encourage empathy while significantly enhancing physicians' quality of life. On the other hand, a few small studies have suggested that Balint sessions can have a promising positive effect in preventing burnout; moreover exercises can reduce anxiety levels and exhaustion symptoms while improving the mental and physical well-being of healthcare workers. Occupational interventions in the work settings can also improve the emotional and work-induced exhaustion. Combining both individual and organizational interventions can have a good impact in reducing burnout scores among physicians; therefore, multidisciplinary actions that include changes in the work environmental factors along with stress management programs that teach people how to cope better with stressful events showed promising solutions to manage burnout. However, until now there have been no rigorous studies to prove this. More interventional research targeting medical students, residents, and practicing physicians are needed in order to improve psychological well-being, professional careers, as well as the quality of care provided to patients.

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1. **Hoop dancing to prevent and decrease burnout and compassion fatigue.**  
   Sánchez Caroline Journal of emergency nursing 2014;40(4):394-395.

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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. **The consequences of nursing stress and need for integrated solutions.**  
   Roberts Rashaun K. Rehabilitation nursing : the official journal of the Association of Rehabilitation Nurses 2014;39(2):62-69.

PURPOSEIn a 2011 survey sponsored by the American Nurses Association (ANA), nurses identified the acute and chronic effects of stress and overwork as one of their two top safety and health concerns.DESIGN/METHODSA review of the literature was conducted to investigate the impact that job stress has on the health and safety of nursing professionals and the role that working conditions and job characteristics play in fostering job stress.FINDINGSStrong evidence supporting links between job stress, safety and health in general and within different types of nursing populations exists. Working conditions also contribute to the development of job stress.CONCLUSIONCombining and integrating "person-focused" strategies designed to build nurses' ability to manage stress at the individual level with "organization-focused" strategies that eliminate stressful working conditions is critical to the reduction and prevention of job stress among nursing professionals.

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1. **Academic report on burnout among Japanese nurses**  
   Kitaoka Kazuyo Japan Journal of Nursing Science 2013;10(2):273-279.

Aim: Japanese nurses have increasingly experienced "burnout" in the past several years. Studies on Japanese nurses are required in order to explore how to prevent nursing burnout. The objectives of this report were to: (i) introduce the concept, definition, and measurement of burnout; (ii) look at an overview of the prevalence, possible causes, and consequences of burnout among Japanese nurses; and (iii) explore how to prevent burnout among nurses. Methods: The authors and co-researchers have been studying burnout among Japanese workers for more than 15 years. Therefore, previously performed studies were reviewed and summarized. Results: In Japan, approximately 36% of human services professionals, such as nurses, were burned out compared to 18% of civil servants, and 12% of company employees. It was quite obvious that nurses are prone to burnout. The possible causes and consequences of burnout among Japanese nurses were reviewed. Excessive workloads and interpersonal conflict in the workplace were possible causes of burnout among Japanese nurses. The consequences of nurse burnout are potentially very serious, including medical accidents/errors. Issues to prevent nursing burnout were then reviewed. Enhancement of cognitive coping skills for female nurses and problem-solving skills for male nurses could contribute to prevention of burnout in nurses. Conclusion: The authors’ previous study revealed that the new model of the organizational context of burnout developed by Leiter and Maslach could be applied to Japanese. Further examination is needed. This report supports the call to scale up burnout prevention strategy for Japanese nurses. (PsycINFO Database Record (c) 2016 APA, all rights reserved) (Source: journal abstract)

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1. **Burnout in critical care nurses: a literature review.**  
   Epp Kirstin Dynamics (Pembroke, Ont.) 2012;23(4):25-31.

Burnout and its development in critical care nurses is a concept that has received extensive study, yet remains a problem in Canada and around the world. Critical care nurses are particularly vulnerable to developing burnout due to the chronic occupational stressors they are exposed to, including high patient acuity, high levels of responsibility, working with advanced technology, caring for families in crisis, and involved in morally distressing situations, particularly prolonging life unnecessarily. The purpose of this article is to explore how the chronic stressors that critical care nurses are exposed to contribute to the development of burnout, and strategies for burnout prevention. A review of the literature between the years 2007 and 2012 was conducted and included the search terms burnout, moral distress, compassion fatigue, intensive care, critical care, and nursing. The search was limited to the adult population, English language, and Western cultures. The results revealed that nurse managers play a crucial role in preventing burnout by creating a supportive work environment for critical care nurses. Strategies for nurse managers to accomplish this include being accessible to critical care nurses, fostering collegial relationships among the different disciplines, and making a counsellor or grief team available to facilitate debriefing after stressful situations, such as a death. In addition, critical care nurses can help prevent burnout by being a support system for each other and implementing self-care strategies.

1. **Revisiting job satisfaction and burnout in community mental health teams.**  
   Onyett Steve Journal of Mental Health 2011;20(2):198-209.

Background. Staff morale is critical to the effectiveness and viability of teams and the models of care that they are implementing. Aims. To update the findings on burnout, job satisfaction and sources of high or low morale in teams since the national survey of community mental health teams published by the Journal of Mental Health in 1997. Method. The literature on job satisfaction, stress and burnout in community mental health teams published between 1997 and 2010 is reviewed. Results. Though beset with contradictory findings and inconsistent methodologies it is possible to conclude that although many studies report high levels of emotional exhaustion, there is no evidence for a decline in morale. Morale tends to vary across discipline and site location. Lack of resources and workload pressures remain the most consistent source of concern among staff. Conclusion. The literature on morale in teams is beset by inconsistent findings and methodologies that are inadequate to providing a generalisable perspective on the highly complex and inter-related factors affecting morale. Effective team working and good leadership, management, support and supervision appear to be protective factors that need further enhancement informed by evidence.

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1. **Individual and work-related factors influencing burnout of mental health professionals: A meta-analysis**  
   Lim Nayoung Journal of Employment Counseling 2010;47(2):86-96.

The current study identifies and assesses individual and work-related factors as correlates of burnout among mental health professionals. Results of a meta-analysis indicate that age and work setting variables are the most significant indicators of emotional exhaustion and depersonalization. In terms of level of personal accomplishment, the age and work hours variables were the most significant indicators with positive correlations. On the basis of these results, the authors seek to determine resources that can assist with developing programs for preventing and treating burnout syndromes of mental health professionals. (PsycINFO Database Record (c) 2016 APA, all rights reserved) (Source: journal abstract)

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1. **Preventive staff-support interventions for health workers.**  
   van Wyk Brian E. The Cochrane database of systematic reviews 2010;(3):CD003541.

BACKGROUNDHealthcare workers need to be supported to maintain sufficient levels of motivation and productivity, and to prevent the debilitating effects of stress on mental and physical well-being.OBJECTIVESTo assess the effects of preventive staff-support interventions to healthcare workers.SEARCH STRATEGYWe searched The Cochrane Effective Practice and Organisation of Care Group (EPOC) Specialised Register (and the database of studies awaiting assessment), Biblioweb (searched 28 August 2008); The Cochrane Central Register of Controlled Trials (The Cochrane Library 2008, Issue 3) (searched 28 August 2008); MEDLINE, Ovid 1950 to August Week 2 2008 (searched 26 August 2008); CINAHL, Ovid 1982 to August Week 4 2008 (searched 26 August 2008); EMBASE, Ovid 1980 to 2008 Week 34 (searched 26 August 2008); PsycINFO, Ovid 1806 to July Week 5 2008 (searched 27 August 2008); Soc iological Abstracts, CBA 1952 to present (searched 28 August 2008).SELECTION CRITERIARandomised controlled trials of interventions to support healthcare workers in coping with work-related stress, preventing burnout and improving job satisfaction, without changing contractual conditions of service or physical work environment. Three types of interventions were included in this review: (1) support groups for staff; (2) training in stress management techniques; and (3) management interventions for supporting staff.DATA COLLECTION AND ANALYSISTwo authors independently performed study selection, quality assessments and data abstraction.MAIN RESULTSTen studies involving 716 participants met the criteria for inclusion. None assessed the effects of support groups for health workers. Eight studies assessed the effects of training interventions in various stress management techniques on measures of stress and/or job satisfaction, and two studies assessed the effects of management interventions on stress, job satisfaction and absenteeism.Three studies demonstrated a beneficial effect of stress management training intervention on job stress. Only one of these showed that this effect is sustainable over the medium-term. One study demonstrated the beneficial effect of a high intensity, stress management training intervention on burnout. Low and moderate intensity stress management training interventions failed to demonstrate benefit on burnout or staff satisfaction.Management interventions demonstrated increases in job satisfaction, but failed to show effect on absenteeism.Most studies had several methodological shortcomings leaving them vulnerable to potential biases.AUTHORS' CONCLUSIONSThere is insufficient evidence for the effectiveness of stress management training interventions to reduce job stress and prevent burnout among healthcare workers beyond the intervention period. Low quality evidence suggests that longer-term interventions with refresher or booster sessions may have more sustained positive effect, but this needs to be rigorously evaluated in further trials.Low quality evidence exists to show that management interventions may improve some measures of job satisfaction. However, further trials are needed to assess whether this finding is replicable in other settings. There was insufficient evidence of the benefit of management interventions on staff absenteeism.Rigorous trials are needed to assess the effects of longer-term stress management training and management interventions in primary care and developing country settings.

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1. **Nurse burnout and stress in the NICU.**  
   Braithwaite Mercedes Advances in neonatal care : official journal of the National Association of Neonatal Nurses 2008;8(6):343-347.

The effects of nurse burnout and stress in a neonatal intensive care unit (NICU)-high levels of absenteeism, low morale, mental fatigue, and exhaustion-can have detrimental effects on neonatal care. Because of the nature of this highly specialized form of nursing, NICU nurses can experience high levels of psychologic and physical stress. Burnout is a response to workplace stress that results in emotional and mental exhaustion, depersonalization, and decreased sense of personal accomplishment. Job satisfaction, emotional support, and self-care are important components for preventing burnout in staff. Therefore, the implications regarding practice and nurse burnout in the NICU are clear. It is the responsibility of both individual nurses and administrative leaders to take the necessary steps to prevent nurse burnout. Preventing this phenomenon in the NICU can lead to better retention and recruitment rates and delivery of safe neonatal care.

1. **Preventing occupational stress in healthcare workers.**  
   Marine A. The Cochrane database of systematic reviews 2006;(4):CD002892.

BACKGROUNDHealthcare workers can suffer from occupational stress which may lead to serious mental and physical health problems.OBJECTIVESTo evaluate the effectiveness of work and person-directed interventions in preventing stress at work in healthcare workers.SEARCH STRATEGYWe searched the Cochrane Depression Anxiety and Neurosis Group trials Specialised Register, MEDLINE, PsychInfo and Cochrane Occupational Health Field database.SELECTION CRITERIARandomised controlled clinical trials (RCT) of interventions aimed at preventing psychological stress in healthcare workers. For work-directed interventions interrupted time series and prospective cohort were also eligible.DATA COLLECTION AND ANALYSISTwo authors independently extracted data and assessed trial quality. Meta-analysis and qualitative synthesis were performed where appropriate.MAIN RESULTSWe identified 14 RCTs, three cluster-randomised trials and two crossover trials, including a total of 1,564 participants in intervention groups and 1,248 controls. Two trials were of high quality. Interventions were grouped into 1) person-directed: cognitive-behavioural, relaxation, music-making, therapeutic massage and multicomponent; and 2) work-directed: attitude change and communication, support from colleagues and participatory problem solving and decision-making, and changes in work organisation. There is limited evidence that person-directed interventions can reduce stress (standardised mean difference or SMD -0.85; 95% CI -1.21, -0.49); burnout: Emotional Exhaustion (weighted mean difference or WMD -5.82; 95% CI -11.02, -0.63) and lack of Personal Accomplishment (WMD -3.61; 95% CI -4.65, -2.58); and anxiety: state anxiety (WMD -9.42; 95% CI -16.92, -1.93) and trait anxiety (WMD -6.91; 95% CI -12.80, -1.01). One trial showed that stress remained low a month after intervention (WMD -6.10; 95% CI -8.44, -3.76). Another trial showed a reduction in Emotional Exhaustion (Mean Difference or MD -2.69; 95% CI -4.20, -1.17) and in lack of Personal Accomplishment (MD -2.41; 95% CI -3.83, -0.99) maintained up to two years when the intervention was boosted with refresher sessions. Two studies showed a reduction that was maintained up to a month in state anxiety (WMD -8.31; 95% CI -11.49, -5.13) and trait anxiety (WMD -4.09; 95% CI -7.60, -0.58). There is limited evidence that work-directed interventions can reduce stress symptoms (Mean Difference or MD -0.34; 95% CI -0.62, -0.06); Depersonalization (MD -1.14; 95% CI -2.18, -0.10), and general symptoms (MD -2.90; 95% CI -5.16, -0.64). One study showed that the difference in stress symptom level was nonsignificant at six months (MD -0.19; 95% CI -0.49, 0.11).AUTHORS' CONCLUSIONSLimited evidence is available for the effectiveness of interventions to reduce stress levels in healthcare workers. Larger and better quality trials are needed.

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1. **Stress and burnout in nursing faculty.**  
   Shirey Maria R. Nurse educator 2006;31(3):95-97.

Nursing faculty are at risk for stress and burnout that threaten to worsen the current nursing faculty shortage. The author discusses the importance of preventing nursing faculty burnout and presents specific burnout prevention strategies.

1. **Compassion fatigue and burnout: the role of Balint groups.**  
   Benson Jill Australian family physician 2005;34(6):497-498.

General practitioners are often the 'first port of call' for patients with a range of mental health problems, many of whom have a history of trauma or loss. Exposure to emotionally difficult situations puts them at risk of burnout and compassion fatigue. Balint groups are groups of GPs, usually facilitated by a psychiatrist, who discuss the doctor-patient relationship and provide peer support. Participation in Balint groups, along with other professional and personal activities, has the potential to prevent compassion fatigue and burnout in participants.

1. **Work stress and burnout among dental hygienists.**  
   Gorter R. C International journal of dental hygiene 2005;3(2):88-92.

OBJECTIVESThe aim of this study was to describe the factors associated with work stress and burnout among dental hygienists. Furthermore, how to deal with work stressors in order to prevent burnout in the dental hygienist work environment will be discussed.METHODSFrom a small literature search, only a few empirical studies could be traced that describe work stress or burnout among dental hygienists.RESULTSBurnout incidence among dental hygienists appears to be relatively favourable, when compared with other professions, according to a 20-year-old study. On the contrary, in a recent study, it was described that one out of eight dental hygienists felt emotionally exhausted from work. Dental hygienists, when compared with other professionals, are relatively negative about the variety of tasks they find in their work. Factors associated with experienced work stress are, according to another study, musculoskeletal pain, combining work and private life, highly efficient organization of work, long working hours, working without assistant, difficult or demanding patients, lack of leisure time, lack of support by practice management and doubts about one's own capabilities. Some factors that may prevent burnout are: recognition of one's own work pressure, learning to unwind, time management and organization of work, realistic career expectancies, social skills, healthy life-style, peer-group contacts and pre-graduate reflection.CONCLUSIONSThere appears to be a lack of recent data on burnout among dental hygienists. Although some knowledge exists on work stressors, a thorough investigation on burnout incidence, risk factors, as well as job resources is needed.

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1. **Working with the psychological effects of trauma: Consequences for mental health-care workers - A literature review**  
   Collins S. Journal of Psychiatric and Mental Health Nursing 2003;10(4):417-424.

This literature review explores how interacting with seriously traumatized people has the potential to affect health-care workers. The review begins with an introduction to post-traumatic stress disorder as being one of the possible negative consequences of exposure to traumatic events. The report proceeds with examining the concepts of vicarious traumatization, secondary traumatic stress, traumatic countertransference, burnout and compassion fatigue, as potential adverse consequences for workers who strive to help people who are traumatized. The differences between these concepts are also discussed. The notion of compassion satisfaction is examined as findings have demonstrated that it is a protective factor which can be used as a buffer to prevent the aforementioned concepts. Conversely, findings have shown that a history of previous stressful life events in helpers is a potential risk factor. The review concludes with an overview of the concepts considered, but cautions against generalization of the findings owing to the dearth of longitudinal studies into the issues raised and also the lack of investigation into the many different types of trauma.

[Available online at this link](https://www.knowledgeshare.nhs.uk/index.php?PageID=link_resolver&link=61e00a6dc21654f7a44dc4265f94f96f)

1. **Stress prevention and management: a challenge for patients and physicians.**  
   Duhault Jacques L. Metabolism: clinical and experimental 2002;51(6):No page numbers.

Chronic stress is now the commonest contributor to ill health in modern societies. The cost of stress in terms of absenteeism, lost productivity, and health care expense is rapidly increasing. As the problem continues to worsen, there will be an increasing need for interactive systems designed to help people cope with stress. Effective prevention of stress's adverse effects will require the widest possible deployment and implementation of stress reduction strategies.

1. **Predicting and preventing physician burnout: Results from the United States and the Netherlands**  
   Linzer M. American Journal of Medicine 2001;111(2):170-175.

1. **Experience awareness tools for preventing burnout in nurses.**  
   Sherwood P. The Australian journal of holistic nursing 2000;7(1):15-20.

Philophonetics counselling is a radically new method of coping with stress through the development of individually tailored self-controlling emotional and cognitive strategies. This paper proposes that philophonetics counselling provides an innovative holistic approach of dealing with burnout in the nursing profession.

### Opening Internet Links

The links to internet sites in this document are 'live' and can be opened by holding down the CTRL key on your keyboard while clicking on the web address with your mouse

### Full text papers

Links are given to full text resources where available. For some of the papers, you will need an **NHS OpenAthens Account**. If you do not have an account you can [register online](https://openathens.nice.org.uk/).

You can then access the papers by simply entering your username and password. If you do not have easy access to the internet to gain access, please let us know and we can download the papers for you.

### Guidance on searching within online documents

Links are provided to the full text of each document. Relevant extracts have been copied and pasted into these results. Rather than browse through lengthy documents, you can search for specific words as follows:

**Portable Document Format / pdf / Adobe**  
Click on the Search button (illustrated with binoculars). This will open up a search window. Type in the term you need to find and links to all of the references to that term within the document will be displayed in the window. You can jump to each reference by clicking it.

**Word documents**  
Select Edit from the menu, the Find and type in your term in the search box which is presented. The search function will locate the first use of the term in the document. By pressing 'next' you will jump to further references.

## B. Search History

|  | **Source** | **Criteria** | **Results** |
| --- | --- | --- | --- |
| 1. | 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 |
| 2. | Medline | exp \*"HEALTH PERSONNEL"/ | 377267 |
| 3. | Medline | (medic OR medics OR clinician\* OR physician\* OR therapist\* OR doctor\* OR nurse\* OR "allied health professional\*" OR AHPs OR AHPs OR pharmacist\* OR physiotherapist\* OR specialist\* OR "healthcare support worker\*" OR "healthcare assistant\*" OR "health care support worker\*" OR "health care assistant\*" OR HCSW OR HCSWs OR HCA OR HCAs).ti | 308180 |
| 4. | Medline | (1 OR 2 OR 3) | 591245 |
| 5. | Medline | exp "PROTECTIVE FACTORS"/ AND exp "STRESS, PSYCHOLOGICAL"/ | 127 |
| 7. | Medline | exp "PROTECTIVE FACTORS"/ AND exp "MENTAL HEALTH"/ | 98 |
| 11. | Medline | (protect\* AND ("mental health" OR (psycho\* ADJ health\*) OR wellbeing\* OR "well being\*")).ti,ab | 9194 |
| 12. | Medline | (prevent\* ADJ3 (stress\* OR psycho\* OR burnout\* OR "burn out\*")).ti,ab | 11464 |
| 13. | Medline | (5 OR 7 OR 11 OR 12) | 20741 |
| 14. | Medline | (4 AND 13) | 1406 |
| 15. | Medline | (4 AND 13) [DT FROM 2000] [Document type Meta-analysis OR Review] [Languages English] | 140 |
| 16. | EMBASE | ((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 | 38532 |
| 17. | EMBASE | (medic OR medics OR clinician\* OR physician\* OR therapist\* OR doctor\* OR nurse\* OR "allied health professional\*" OR AHPs OR AHPs OR pharmacist\* OR physiotherapist\* OR specialist\* OR "healthcare support worker\*" OR "healthcare assistant\*" OR "health care support worker\*" OR "health care assistant\*" OR HCSW OR HCSWs OR HCA OR HCAs).ti | 329006 |
| 18. | EMBASE | exp \*"HEALTH CARE PERSONNEL"/ | 515686 |
| 19. | EMBASE | (16 OR 17 OR 18) | 724485 |
| 20. | EMBASE | exp \*PROTECTION/ AND exp \*"MENTAL HEALTH"/ | 25 |
| 21. | EMBASE | exp \*"PREVENTION AND CONTROL"/ AND (exp \*STRESS/ OR exp \*PSYCHOTRAUMA/ OR exp \*BURNOUT/) | 1243 |
| 22. | EMBASE | (protect\* AND ("mental health" OR (psycho\* ADJ health\*) OR wellbeing\* OR "well being\*")).ti,ab | 12343 |
| 23. | EMBASE | (prevent\* ADJ3 (stress\* OR psycho\* OR burnout\* OR "burn out\*")).ti,ab | 14756 |
| 24. | EMBASE | (20 OR 21 OR 22 OR 23) | 28178 |
| 25. | EMBASE | (19 AND 24) | 1744 |
| 26. | EMBASE | (19 AND 24) [DT FROM 2000] [Publication types Review] [Languages English] | 149 |
| 27. | CINAHL | ((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 | 31385 |
| 28. | CINAHL | (medic OR medics OR clinician\* OR physician\* OR therapist\* OR doctor\* OR nurse\* OR "allied health professional\*" OR AHPs OR AHPs OR pharmacist\* OR physiotherapist\* OR specialist\* OR "healthcare support worker\*" OR "healthcare assistant\*" OR "health care support worker\*" OR "health care assistant\*" OR HCSW OR HCSWs OR HCA OR HCAs).ti | 274462 |
| 29. | CINAHL | exp \*"HEALTH PERSONNEL"/ | 339838 |
| 30. | CINAHL | (27 OR 28 OR 29) | 538343 |
| 32. | CINAHL | exp "MENTAL HEALTH"/ AND (protect\*).ti,ab | 1254 |
| 33. | CINAHL | exp "PREVENTIVE HEALTH CARE"/ AND (exp "STRESS, PSYCHOLOGICAL"/ OR exp "STRESS, OCCUPATIONAL"/) | 2927 |
| 34. | CINAHL | (protect\* AND ("mental health" OR (psycho\* ADJ health\*) OR wellbeing\* OR "well being\*")).ti,ab | 5649 |
| 35. | CINAHL | (prevent\* ADJ3 (stress\* OR psycho\* OR burnout\* OR "burn out\*")).ti,ab | 4122 |
| 36. | CINAHL | (32 OR 33 OR 34 OR 35) | 12870 |
| 37. | CINAHL | (30 AND 36) | 1402 |
| 38. | CINAHL | (30 AND 36) [DT FROM 2000] [Publication types Meta Analysis OR Meta Synthesis OR Review OR Systematic Review] [Languages eng] | 103 |
| 39. | EMCARE | ((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 | 18191 |
| 40. | EMCARE | (medic OR medics OR clinician\* OR physician\* OR therapist\* OR doctor\* OR nurse\* OR "allied health professional\*" OR AHPs OR AHPs OR pharmacist\* OR physiotherapist\* OR specialist\* OR "healthcare support worker\*" OR "healthcare assistant\*" OR "health care support worker\*" OR "health care assistant\*" OR HCSW OR HCSWs OR HCA OR HCAs).ti | 138719 |
| 41. | EMCARE | exp \*"HEALTH CARE PERSONNEL"/ | 211166 |
| 42. | EMCARE | (39 OR 40 OR 41) | 258551 |
| 43. | EMCARE | exp \*PROTECTION/ AND exp \*"MENTAL HEALTH"/ | 58 |
| 44. | EMCARE | exp \*"PREVENTION AND CONTROL"/ AND (exp \*STRESS/ OR exp \*PSYCHOTRAUMA/ OR exp \*BURNOUT/) | 422 |
| 45. | EMCARE | (protect\* AND ("mental health" OR (psycho\* ADJ health\*) OR wellbeing\* OR "well being\*")).ti,ab | 7447 |
| 46. | EMCARE | (prevent\* ADJ3 (stress\* OR psycho\* OR burnout\* OR "burn out\*")).ti,ab | 4013 |
| 47. | EMCARE | (43 OR 44 OR 45 OR 46) | 11786 |
| 48. | EMCARE | (42 AND 47) | 969 |
| 49. | EMCARE | (42 AND 47) [DT FROM 2000] [Publication types Review] [English language] | 106 |
| 50. | BNI | ((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 | 8046 |
| 51. | BNI | (medic OR medics OR clinician\* OR physician\* OR therapist\* OR doctor\* OR nurse\* OR "allied health professional\*" OR AHPs OR AHPs OR pharmacist\* OR physiotherapist\* OR specialist\* OR "healthcare support worker\*" OR "healthcare assistant\*" OR "health care support worker\*" OR "health care assistant\*" OR HCSW OR HCSWs OR HCA OR HCAs).ti | 83173 |
| 52. | BNI | "MEDICAL PERSONNEL"/ | 11723 |
| 53. | BNI | (50 OR 51 OR 52) | 99439 |
| 54. | BNI | "MENTAL HEALTH"/ AND (protect\*).ti,ab | 556 |
| 55. | BNI | PREVENTION/ AND STRESS/ | 27 |
| 56. | BNI | (protect\* AND ("mental health" OR (psycho\* ADJ health\*) OR wellbeing\* OR "well being\*")).ti,ab | 1291 |
| 57. | BNI | (prevent\* ADJ3 (stress\* OR psycho\* OR burnout\* OR "burn out\*")).ti,ab | 495 |
| 58. | BNI | (54 OR 55 OR 56 OR 57) | 2000 |
| 59. | BNI | (53 AND 58) | 347 |
| 60. | BNI | (53 AND 58) [DT FROM 2000] [Document type Literature Review OR Review] | 7 |
| 61. | PsycINFO | ((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 | 10319 |
| 62. | PsycINFO | (medic OR medics OR clinician\* OR physician\* OR therapist\* OR doctor\* OR nurse\* OR "allied health professional\*" OR AHPs OR AHPs OR pharmacist\* OR physiotherapist\* OR specialist\* OR "healthcare support worker\*" OR "healthcare assistant\*" OR "health care support worker\*" OR "health care assistant\*" OR HCSW OR HCSWs OR HCA OR HCAs).ti | 59969 |
| 63. | PsycINFO | exp \*"HEALTH PERSONNEL"/ | 119722 |
| 64. | PsycINFO | (61 OR 62 OR 63) | 155890 |
| 65. | PsycINFO | exp "PROTECTIVE FACTORS"/ AND exp STRESS/ | 401 |
| 66. | PsycINFO | exp "PROTECTIVE FACTORS"/ AND exp "MENTAL HEALTH"/ | 370 |
| 67. | PsycINFO | (protect\* AND ("mental health" OR (psycho\* ADJ health\*) OR wellbeing\* OR "well being\*")).ti,ab | 11042 |
| 68. | PsycINFO | (prevent\* ADJ3 (stress\* OR psycho\* OR burnout\* OR "burn out\*")).ti,ab | 4653 |
| 69. | PsycINFO | (65 OR 66 OR 67 OR 68) | 15990 |
| 70. | PsycINFO | (64 AND 69) | 1294 |
| 71. | PsycINFO | (64 AND 69) [DT FROM 2000] [Languages English] [Methodology Literature Review OR Meta Analysis OR Systematic Review] | 44 |

NICE Evidence Search at [www.evidence.nhs.uk](http://www.evidence.nhs.uk) searched using the terms "protective factor\*" and (psycholog\* or "mental health" or wellbeing or "well being") and (doctor\* or nurse\* or physician\* or staff\*): [https://www.evidence.nhs.uk/search?from=01%2f01%2f2000&om=[{%22ety%22:[%22Guidance%22]},{%22ety%22:[%22Policy%20and%20Strategy%22]}]&ps=100&q=%22protective%20factor\*%22%20and%20(psycholog\*%20or%20%22mental%20health%22%20or%20wellbeing%20or%20%22well%20being%22)%20and%20(doctor\*%20or%20nurse\*%20or%20physician\*%20or%20staff\*)&sp=on&to=18%2f09%2f2020](https://www.evidence.nhs.uk/search?from=01%2f01%2f2000&om=%5b%7b%22ety%22:%5b%22Guidance%22%5d%7d,%7b%22ety%22:%5b%22Policy%20and%20Strategy%22%5d%7d%5d&ps=100&q=%22protective%20factor*%22%20and%20(psycholog*%20or%20%22mental%20health%22%20or%20wellbeing%20or%20%22well%20being%22)%20and%20(doctor*%20or%20nurse*%20or%20physician*%20or%20staff*)&sp=on&to=18%2f09%2f2020)

Cochrane Library at [www.cochranelibrary.com](http://www.cochranelibrary.com) searched using the terms "protective factor\*" and (psycholog\* or "mental health" or wellbeing or "well being") and (doctor\* or nurse\* or physician\* or staff\*) in Title Abstract Keyword fields - (Word variations have been searched)

ERIC Database at <https://eric.ed.gov/> searched using the terms "protective factor\*" and (psycholog\* or "mental health" or wellbeing or "well being") and (doctor\* or nurse\* or physician\* or staff\*): [https://eric.ed.gov/?q=%22protective+factor\*%22+and+%28psycholog\*+or+%22mental+health%22+or+wellbeing+or+%22well+being%22%29+and+%28doctor\*+or+nurse\*+or+physician\*+or+staff\*%29](https://eric.ed.gov/?q=%22protective+factor*%22+and+%28psycholog*+or+%22mental+health%22+or+wellbeing+or+%22well+being%22%29+and+%28doctor*+or+nurse*+or+physician*+or+staff*%29)

For more information about these resources and more please go to: <https://www.bartshealth.nhs.uk/knowledge-and-library>.

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