

Wellness Review 2021, Part 2

Brian Ferguson, DO^{1,2*}, Martin Huecker, MD¹

ABSTRACT

Introduction: This article presents Part 2 of the biannual JWellness Review of literature from 2021 (July – December). We emphasize new science and resilience initiatives published outside of JWellness that seek understanding of burnout and thriving among healthcare professionals (HCPs).

Methods: For the interval of July 1 to December 30, 2021, PubMed was queried for empirical and observational research studies, review articles, guideline summaries, letters, and editorials. Of 93 results, we reviewed methods and salient points to arrive at a final list of 48 articles for inclusion.

Literature in Review: Common themes that emerged included teamwork, EMR optimization, group decompression, applications to support wellness interventions, and digital means of assessing burnout outcomes. COVID-19 exposed incident physician suicidal ideation and completion; however, some resilience measures are increasing despite continued waves of the pandemic. A few landmark publications described precedent control-measured wellness outcomes, each with positive results.

Conclusion: Results of early randomized controlled investigations are inspiring, especially those involving small groups, positive psychology, coaching, mindfulness, religion, and wellness curricula. We note a resounding commonality among investigated causes for provider burnout: poor institutional culture. Conversely, quality teams and collegiality represent protective factors. Individuals cannot succeed in large groups without systems interventions and support. Training programs must assess stress, motivation, engagement, financial health, and clinical supervision—all variables meaningfully associated with resilience.

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Affiliations: ¹University of Louisville, Department of Emergency Medicine, ²AFSOC (Air Force Special Operations Command)



INTRODUCTION

Welcome to Part 2 of the Journal of Wellness 2021 wellness literature review. JWellness editors continue the goal of summarizing recent publications within the wellness domain to bring a cohesive awareness of recent literature to our readers. We summarize new science and resilience initiatives published outside of JWellness that seek understanding of burnout and resilience among healthcare workers (HCWs).

METHODS

The team's librarian searched PubMed for empirical and observational research studies, review articles, guideline summaries, letters, and editorials. A prespecified algorithm was applied such that each article was required to have two delineating keywords, each from a separate grouping. The first grouping identified medical professionals in either the title or the abstract ("clinical professional," "healthcare personnel," "healthcare professional," "healthcare worker," "physician," "doctor," or "advanced practice provider"), and the other identified a wellness-related keyword in the title ("wellness," "burnout," "fatigue," "resilience," or "resiliency").

From the interval of July 1 to December 31, 2021, 93 articles resulted. This list was reduced to 52 on a first pass for regional and topic relevancy. We deeply reviewed the 52 articles for methods and salient points to arrive at a final list of 48 significant articles focusing on medical professionals.

LITERATURE REVIEW

Recent literature into HCW wellness, burnout, and resilience continues to describe previously measured effects of the COVID-19 pandemic, but now anticipates the future culture and delivery of medicine. Teamwork, EMR optimization, group decompression, applications to support wellness interventions, and digital means of assessing outcomes were common themes in the literature of the last six months.

COVID-19 exposed previously present significant issues (such as physician suicide). Some resilience measures are increasing, despite continued waves of the pandemic. Some publications described control-measured wellness outcomes, each with positive results. This review is divided into the following overarching research sections: thriving and resilience, COVID-19 and wellness, general burnout, and special topics.

*Correspondence To: Brian Ferguson
Email: batmanferguson@gmail.com

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Thriving and Resilience

Qualities desired in HCWs include kindness, empathy, intelligence, and courage [1]. Why courage—and not merely confidence? Because we are defined more by our response to defeat than defeat itself [1]. When risks and complications inevitably arise, we must overcome the tendency to define our care (and especially ourselves) on an invariable need to be perfect [1]. If we meet medicine without courage, we are hampered from practicing medicine by a tendency to always play it safe, which engenders burnout by means of an overemphasis on making things look good / defensible [1]. Practicing only to avoid shame and maintain worth is exhausting. Joy in the practice of medicine comes less from innate brilliance and more from peer collegiality and relationships with patients who validate our competence by trusting us [1].

Aside from courage, resilience emerged as a protective factor, mitigating burnout, anxiety, depression, and improving patient outcomes [2]. Thankfully this cycle of publications allows for some early conclusions from randomized control trials (RCTs) that evaluate resilience and wellness.

Randomized controlled trials

One RCT investigated well-being among 276 NICU workers, with the study arm receiving a web-based intervention to enhance resilience, known as the WISER (Web-based Implementation for the Science of Enhancing Resilience). Comprised of six 20-minute guided well-being modules, the WISER combines education and practice-based learning. WISER decreased average burnout relative to the control group ($p=0.046$). Results at 1-month post intervention showed decreased burnout ($p=0.008$) and depression ($p=0.022$), with improved work-life integration ($p<0.001$). Compounding these optimistic observations, improvements endured at the six-month follow up assessment [3].

Though potentially surprising in our busy and highly incentivized era, an RCT evaluating the impact of small groups on physicians wellness offered no monetary benefit for subjects beyond free lunch, and yet observed remarkable outcomes [4]. A trial of 125 practicing physicians at Mayo Clinic were provided only discussion topics to drive small groups (no trained facilitators). Protected time was not provided (only meal expenses). At six months after completion of the intervention (one year from baseline), the rate of overall burnout had decreased by 12.7% in the intervention arm versus a 1.9% control increase ($p < 0.001$). Similarly, depressive symptoms decreased by 12.8% among those participating, while the control arm saw an increase (1.1%) ($p < 0.001$). The proportion of physicians considering leaving their current practice increased by 6.1% in the control group but decreased by 1.9% in the intervention arm ($p < 0.001$) [4].

In a smaller (18 resident) prospective randomized, crossover trial, researchers evaluated a virtual reality (VR) protocol to improve wellness [5]. A successful treatment modality for anxiety, VR was adapted to residents to target a population defined by high levels of stress. At two months all subjects completed a Maslach Burnout Inventory (MBI) and then crossed over. Weekly use of VR (utilizing paced breathing and guided

meditation) was associated with decreased emotional exhaustion ($p = 0.009$) [5].

In a prospective, self-controlled observational study, a mindfulness smartphone application (Headspace®) demonstrated impact in depressive symptom reduction. While the intervention failed to directly affect Maslach markers of depersonalization and emotional exhaustion, participants did have improved outcomes related to personal accomplishment (and depression) [6].

Metanalyses / Reviews

In a review of 21 worldwide interventions of positive psychology for physician well-being / burnout reduction, authors found a general trend toward improvement in mental status [7]. Similar results surfaced in a systemic review of mindfulness psychological interventions [8]. Eighteen studies (chosen from an initial list of 1194) showed that mindfulness interventions had some level of positive impact on empathy, well-being, and burnout reduction among physicians [8]. On a similar platform, literature also highlights the benefit of adherence to religion and spirituality, which can be supported both institutionally / culturally and carried out individually [9]. Among these studies, the most successful outcomes resulted from system-initiated changes [7].

Twenty-four curricular interventions to support resilience and reduce burnout were systemically reviewed from 3,534 papers [10]. Ten programs decreased burnout [10]. Content most frequently included stress management, resilience, and general wellness—with discussion groups utilized most frequently for pedagogics. Unfortunately, authors found no consistent pattern of success, recommending future RCTs to determine the most effective curricula [10].

A foundational curricular commitment to the topic of well-being remains important and feasible [11]. Performance coaching of resident physicians had the greatest potential for impact. Clinically-efficient residents are less time-burdened with required tasks and thus have greater bandwidth for activities that support well-being [12].

Residency Training

The topics of stress [13], motivation [14], and financial wellness [15] are underrepresented as educational pillars in the training of healthcare professionals. All three have robust evidence for resilience improvement in front-line workers.

Stress in medicine, while frequently discussed and often catastrophized, is rarely defined. McQueen et al. recommend we look to the humanities to better understand the complexity of the composite phenomena involved in physician stress. The authors prescribe the goal of better appreciation for dimensions of emotion, environmental considerations, and sociocultural context. A deeper understanding of subjective intrapersonal phenomena will ultimately lead to better physician well-being, and patient care [13].

Motivation is commonly assumed to exist among new and eager HCWs. This can lead to complacency in educators who should be nurturing and bolstering motivation in students. By promoting an understanding of motivation and engagement

in the workplace, we can indirectly promote wellness in residents by energizing trainees [14]. Examples involve promotion of open ended-thinking, research projects, intellectually stimulating quality improvement initiatives, and co-chairing of committees [14]. Residents are more motivated when they feel accountable, responsible, and autonomous [14].

Financial literacy in graduate medical education is generally poor [15]. Assessments from anonymous survey data of residents and fellows reveal a 48% miss rate on financial questions, along with high levels of personal debt, minimal retirement investments, and difficulty with cash flow [15]. Training programs do not offer enough sound financial advice / education, missing an opportunity to cultivate financial well-being that could reduce stress and burnout [15].

In a cross-section from 10 centers comprising 483 physicians, poor sleep ($p < 0.005$), younger age (< 30 years; $p < 0.0005$) and single relationship status ($p < 0.009$) correlated with burnout. Having children was protective ($p < 0.006$) [16]. Rather than increased negative stress from greater task load, the multifaceted nature of balancing life as parents and spouses could lead to greater resilience.

COVID-19 and Wellness

We found a greater focus in the literature from the latter half of 2021 on stay-at-home orders and financial implications of lost revenue—both in childcare alternatives and elective case reduction [17]. Some evidence showed that female healthcare workers may have carried a disproportionate burden due to pandemic repercussions [18].

Teamwork consistently served as a protective factor during COVID, resulting in less stress, positive sentiment, less anxiety, and less burnout. [19, 20]. Teams offer greater sustainability for the provider, perhaps by preventing siloed perfectionism [1].

The pandemic saw increased democratic physician groups in some areas [21], improving the nature of top-down communications and implementation of new protocols. Organizational evolutions brought less misinformation, and the decreased occupational infection risk engendered less fear [21]. Virtual care and telehealth (consequent to COVID-incentivized adoption) has shown remarkable progress, with clear potential for future healthcare delivery [22].

Care in the pandemic is still associated with increased task demand, compromised mental health, sleep disturbance, and burnout [20, 23–26]. Chahley et al. explored the lived experience of healthcare workers during prior outbreaks (SARS, 2009 H1N1, 2012 MERS, and 2014 Ebola), finding five recurrent themes: uncertainty, adapting to change, commitment, sacrifice, and resilience [27]. Due to the novelty of the outbreaks, initial unpredictable elements made it difficult for HCWs to respond, resulting in feelings of powerlessness. These negative perspectives were ameliorated with resilience borrowed from collegial support and camaraderie that maintained morale [27]. Additional positive factors included leadership support and open communication [27]—similar to that which has occurred with SARS-CoV-2 [17, 28].

In a poignant piece in the NY Times, the story of Dr. Lorna Breen offered a voice to the underacknowledged issue of physician suicide. Dr. Breen's death was heavily influenced by the COVID-19 surge in New York City. The rate of suicidal ideation among physicians is almost twice as high as the general population at (7.2% vs. 4%), with suicide as the only cause of death that is higher in physicians than non-physicians [29].

In a final conversation that Dr. Breen had with a close colleague, she reportedly kept repeating the same relentless refrain, *"I couldn't help anyone. I couldn't do anything. I just wanted to help people, and I couldn't do anything."*¹

HCWs on the front lines of the COVID-19 response remain at significant risk for post-traumatic stress and psychological distress [26], and female HCWs have higher susceptibility to negative coping [26, 29, 18].

Pandemic Leadership

As we watched prescient leadership stabilize healthcare systems [17, 28]—we wonder what behaviors are most effective. Managers should not underestimate the value of sincere action following feedback [28]. When a response is warranted or expected, but is left suspended in ambiguous inaction, morale decreases as the perceived value of employee input drops [28]. The result is a lack of engagement (closely related to motivation [14]), fractured trust, and stagnation of innovation [28]. Drawing recommendations from Richard Branson's ethos, the authors argue that humans are the greatest capital investment of an organization. We deserve environments conducive to flourishing, with ripple effects for the success of entire organizations [28].

General Burnout

Maslach and Leiter define burnout as a "psychological syndrome emerging as a prolonged response to chronic interpersonal stressors on the job" [30] with three dimensions:

1. Overwhelming exhaustion (chronic loss of energy, a reduced capacity)
2. Feelings of cynicism and detachment from the job (depersonalization, irritability, loss of idealism)
3. A sense of ineffectiveness and lack of accomplishment (reduced capability, lack of productivity, low morale, inability to cope)

In a systemic review of malpractice literature from 2011 – 2020, risk factors associated with impaired physician performance included self-reported exhaustion, depersonalization of patients, and reduced sense of personal accomplishment [31]—precisely the three dimensions of classic burnout [30]. Burnout predicted a higher likelihood of harmful medical errors among surgery residents [32]. Mistreatment of surgery residents by senior team members was correlated with emotional exhaustion, with a mistreatment prevalence rate of 68% [33].

¹<https://www.nytimes.com/2020/07/11/nyregion/lorna-breen-suicide-coronavirus.html>

In consideration of disparities in physician wellness, we point out that females appear to have more (and different) burnout compared to males [34]. A separate paper found higher resilience in individuals who identify as racially under-represented in medicine [35]. Though discrimination can adversely affect the well-being of underrepresented clinicians, ethnic and racial minority physicians reported a lower frequency of emotional exhaustion and depersonalization in a study of 3,096 family physicians (450 from racial and ethnic groups underrepresented in medicine) [35].

Remedies

Systemic interventions are lauded as the key to fixing the burnout problem [30, 36–39, 7, 11]. As stated by Ahmed, “Ultimately, it is an organization that must acknowledge physician burnout, identify risk factors, and invest in targeted interventions to prevent this immense threat to their stability.” As people are the greatest asset of an organization [28], leaders should expend the relatively higher effort in retaining and supporting workers. Overworked and time-pressured medical providers are not in an ideal position to lead this change [36]. Efforts on the individual level may have little enduring effect, especially when aggregated [36].

One interesting systemic solution proposed is a single-payer system, which has been endorsed both by the American College of Physicians and the Society of General Internal Medicine [36]. Much of burnout can be indirectly sourced to a medical system that is profit driven, incentivizing fee-centered charting and resulting in increasing demands on physicians. A single-payer system could involve electronic health record (EHR) redesign with focus on patient care instead of billing. This could reduce charting requirements, resulting in more time with patients, while also improving interoperability [36]. A single-payer system could additionally reduce exorbitant out-of-pocket expenses, and physicians would ultimately fulfill a public service role, rather than the current profit-centered paradigm [36]. As one physician wrote, “...our collective attention has turned away from relational aspects of medical care and [has] been replaced by a greater emphasis on transactional aspects” [30].

We should continue to focus on workplace climate [40] and physician compassion [41], while considering specific interventions targeted to women [42]. A collection of 87 published reflective narratives, written by doctors that described system flaws, found seven recurring themes, five of which related directly to climate / culture [30]. Beginning with the 5 cultural:

1. Communication failures
2. Hidden curricula and its erosive impact
3. Inadequate health advocacy
4. Frenzied pace
5. Stigma experiences
6. Limited / disparate healthcare resources
7. Restrictive institutional practices that impede patient-centered care

A particularly insightful elaboration from this piece dealt with the stresses of medicine: “Every time students achieve what looks to the rest of us like a successful milestone—getting into a

great college, the medical school of their choice, a residency in a competitive clinical specialty—it is to some of them the opening of another door to a haunted house, behind which lie demons, suffocating uncertainty, and unimaginable challenges” [30].

Even the best students will eventually experience significant vulnerability and uncertainty. Educators can meaningfully contribute to the sustainment of that original motivation and engagement, lessening burnout and shepherding in resiliency [14].

Special Topics

Measuring: A new tablet application is available for measurement of physician mood and stress, specifically related to on-shift sentiment [19]. In the proof of concept trial, positive sentiment was again attributed to colleagues and teamwork [19].

Diet: In a survey of emergency medicine residents, 94% stated that their own eating habits were important to their wellness as a physician, but only 7% had enough time to cook a meal every day. Nearly one fifth reported the vending machine as a top three source for food [43].

EHR: Salient EHR optimization can encourage compassionate care [44]. Modifications should coordinate efforts of the team, provide separate lenses for the viewer (e.g., patient view is separate from physician view), make team efforts and outcomes simpler to measure for quality improvement and tracking, and maintain easier revenue generation [44]. Interoperability and reduced click count are pivotal [45].

Oversight: In a review of 32 studies that detailed clinical supervision and its affect on organizational outcomes, researchers found that having effective clinical supervisors was associated with lower burnout and greater job satisfaction. Enthusiastic supervision can mitigate burnout, facilitate staff retention and improve the work environment [46]. Supervising doctors should allow autonomy to facilitate engagement of trainees, while providing guardrails to ensure student and resident confidence and patient safety.

Slow down: Slow medicine (providing longer and higher quality consultations) represents a possible strategy to mitigate burnout and improve patient outcomes. This approach could also yield substantial savings in hospital use in varied settings [47].

Say no: During a national healthcare crisis, the most immediate and impactful intervention could be reclaiming. Focusing on what is within personal control is empowering. Declining new responsibilities can help us reclaim protected time for our families and ourselves. Exercising this personal agency is paramount to balancing personal and institutional expectations [48].

CONCLUSION

Recent literature into physician wellness, burnout and resilience includes more and more randomized controlled investigations. We are inspired by results of some of these

studies, especially those involving small groups, positive psychology, coaching, mindfulness, religion, and wellness curricula. Individuals cannot succeed in large groups without systems interventions and support. Training programs must meaningfully assess stress, motivation, engagement, financial health, and clinical supervision. There is a resounding commonality among burned-out providers – poor institutional culture. Conversely, there is a clear protective factor: quality teams and collegiality. We encourage leaders to earnestly assess their work environments by directly interfacing with their healthcare workers.

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