

Wellness Review 2022, Part 1

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ABSTRACT

Introduction: This article represents the first of a two-part assessment of 2022 literature addressing wellness in healthcare professionals published from January 1, 2022 to June 30, 2022.

Methods: Three editors conducted a similar keyword search in Pubmed, also adding manually curated articles. Focusing chiefly on clinical trials and other prospective research, we settled on a final 25 significant papers focusing on wellness in medical professionals to include in this review.

Literature in Review: Recent literature into HCW wellness continues to describe burnout factors and COVID-19 impact, but includes more resilience-targeting interventions and systematic reviews of trials seeking bolstering of well-being. Subsections of this review include: Mindfulness, Well-being among surgeons, coaching, night shift, COVID-19, students, general burnout, and a few review articles.

Conclusion: JWell editors continue to be excited about trends focusing on thriving and positive wellness aspects, rather than furthering the imbalance of heavily negative tone related to burnout and stress.

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INTRODUCTION

Welcome to Part 1 of the Journal of Wellness 2022 wellness literature review. This review from JWellness editors provides a selection of interesting research published in the first half of 2022. We summarize new science and well-being initiatives published outside of JWellness related to burnout and resilience among healthcare professionals (HCPs).

METHODS

Editors searched PubMed for empirical and observational research studies, review articles, guideline summaries, letters, and editorials. For the interval of January 1 to June 30, 2022, the team searched Pubmed for prespecified keywords: (“clinical professional,” OR “healthcare personnel,” OR “healthcare professional,” OR “healthcare worker,” OR “physician,” OR “doctor,” OR “advanced practice provider,”) AND (“wellness,” OR “burnout,” OR “fatigue,” OR “resilience”). The total yield of 277 articles was reduced to 21 papers based on topic relevancy and broad applicability.

Additionally, the editors searched Pubmed with the terms: “physician wellness” OR “healthcare wellness,” with filters for clinical trials or randomized controlled trials, involving humans in the English language. This search yielded 392 papers. Selection for relevant publications yielded four additional papers not included in the original 21. The team excluded research focused on small subpopulations of HCPs to spend more time on larger scale perspectives and investigations. This resulted in a final 25 significant articles focusing on wellness in medical professionals for inclusion in this review.

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LITERATURE REVIEW

Recent literature into HCP wellness continues to focus chiefly on burnout factors and COVID-19 impact, but includes more resilience-targeting interventions and systematic reviews of trials measuring attempting to promote well-being. As always, we seek to present an interesting sample of wellness research applicable to as much of our audience as possible. Ideally, readers can use actionable knowledge from these reviews to conceive and test wellness strategies in different practices and healthcare systems around the world. Subsections of this review include: mindfulness, well-being among surgeons, coaching, night shift, COVID-19, students, general burnout, and a few review articles.

Mindfulness

Four recent publications describe research on mindfulness [1-4]. A study used mindfulness training among pediatric interns from fifteen US programs to determine impact on burnout. The authors randomized subjects into an intervention group with 7 sessions of a mindfulness curriculum and mindfulness refreshers. Findings were compared against an active control arm which entailed monthly social lunches. The authors found that emotional exhaustion did not differ between the two groups nor did the added curriculum seem to affect empathy or burnout. The authors suggested these findings may be a result of study design and emphasized the importance of research rigor in future work [1].

One study of 91 physicians collected data on patient safety. Forty-six subjects were randomly assigned to an 8-week mindfulness intervention or control. Within the intervention group, mindfulness, patient safety culture and competency

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were significantly higher compared to control subjects. Additionally, adverse events in the intervention group were lower, indicating mindfulness meditation's potential for patient care outcomes [2]. A randomized controlled study utilizing a mobile mindfulness intervention demonstrated positive trends on emergency department staff stress levels. The study revealed that the mindfulness training had a modest but positive influence on mindfulness, burnout, stress and well-being across the study participants [3].

One study combined music therapy with mindfulness-based breathing to improve nurse well-being during the COVID-19 pandemic. The study included a control group. The intervention group had significant improvements in stress, work-related stress, and well-being; whereas the control group did not experience significant changes regarding these same metrics [4].

Well-being Among Surgeons

A qualitative study examined surgeon professional fulfillment and well-being with a total of 32 interviews conducted [5].

1. At the individual level, autonomy, and adequate time to complete non-work-related endeavors were important for well-being.
2. At the team level, cohesion and boundaries were important.
3. Finally, within the institutional level, recognizing individual values and achievements was key; further, diversifying performance evaluations was fundamental.

Well-being Coaching Endeavors

Trained life coaches and physicians aimed to help 101 female resident physicians regarding their mental health through a structured professional group-coaching program. The authors randomized study participants into two groups (50 assigned to intervention). Residents in the intervention group were found to have significantly less emotional exhaustion, less feelings of impostor syndrome, and improved self-compassion compared to the control group. There were no significant differences among measures for depersonalization, professional accomplishment, or moral injury [6].

One study utilized stress management and resilience training to investigate resilience effects. Authors randomized 40 physicians into each arm. The intervention group received a workshop and optional online program with outcome data collected at baseline, three months, and six months. Results indicate no significant differences between the two groups for happiness, resilience, stress, or anxiety; although, the intervention group did demonstrate improvements in resilience, stress, and anxiety [7].

Nightshift Well-being Efforts

Night shift nutrition was the focus of a study examining the typical eating habits of 61 doctors who each received one of two interventions: (1) a low carbohydrate-to-protein diet, and (2) a high carbohydrate-to-protein diet. Improvements were seen in the low carb diet: improved psychomotor vigilance (the basic requirement for processing and is associated with focused attention and response) and less sleepiness. The high carbohydrate diet also found improvements in sleepiness. Neither

intervention impacted sensory-motor speed, memory, risk decision making, or work exhaustion. Overall, authors noted how nutritional interventions may mitigate negative effects of overnight sleep deprivation given relative improvements in psychomotor vigilance [8].

COVID-19 Pandemic

Three studies included in our review focused on the impact of the COVID-19 pandemic [9-11]. One study of 812 health care professionals who treat opioid use disorder (OUD) examined well-being during the COVID-19 pandemic. The authors administered a survey between July and August 2020, discovering that function-impairing anxiety occurred in 17% of the sample and maintaining a healthy work-life balance was a struggle for 28% of respondents. The authors noted that healthcare workers with function-impairing anxiety were more likely to be female and have staff who were sick with COVID-19. Among those with unsatisfactory work-life balance, authors noted recurrent complaints regarding working in multiple settings, experiencing layoffs or furloughs, reduced hours, and team illness [9].

A second study utilized semi-structured interviews of intensivists to examine the impact of COVID-19 on well-being within 33 physicians. Moral distress was common, with potential reasons including restriction of visitors, and perceived negative impacts. Subjects also commented on how burnout transpired due to patient death, exhaustion as a result of the duration of the pandemic, and feeling unsupported [11].

One study focused on returning to work after falling ill to COVID-19. The study included 427 healthcare workers with 84.5% having symptoms at the time of positive test. Persistent symptoms three months after infection were more common in females, older individuals, and healthcare assistants. Specific features (age, sex, and specific job type) had an impact on mental and physical health; the authors noted the importance of tailored interventions in healthcare system to augment well-being [10].

Healthcare Students

Four studies examined wellness within healthcare professional students [12-15]. Al-Zain et al. examined grit, resilience, stress, burnout, and well-being among 355 dental students. Not surprisingly, the authors discovered grit, stress and academic rank were all associated with burnout. The authors distinguished how levels of grit, resilience, stress, burnout, and well-being varied among dental students and that reinforcing programs aiming to increase resilience is recommended in order to improve well-being profiles [12].

Researchers aimed to use Training for Awareness, Resilience, and Action (TARA) to prevent mental disorders and stress symptoms in medical students. They report data from focus groups in addition to pre- and post-study data on depression, anxiety, stress, and burnout. Improvement was seen in all metrics, with no participants deteriorating significantly during the intervention. TARA represents a feasible tool to assist medical students [13].

Similarly, but with broader interventional concepts, another study involving medical students compared the benefits of

exercise to those from mindfulness. The study discovered that students in both the exercise and the mindfulness groups had improvements in sleep quality and overall well-being. The effect size was similar among the mindfulness and exercise arms [15]. The final student-focused paper studied nursing students' (N=417) health-related behaviors and self-rated health in relation to well-being and stress. The authors found that exercise and meditation were both related to improved well-being and lower stress; however, adjustments for demographic and specific health data revealed a diminished difference. The authors concluded that self-reported health factors are related to nursing student well-being and that resiliency skills and mindfulness training may improve health profiles [14].

Burnout

Burnout was a principal study outcome in six included studies [16-21]. One study focused on gender and occupational differences as they relate to post-traumatic stress, burnout, and global functioning in 126 emergency healthcare workers. Key findings included higher female susceptibility to post-traumatic stress symptoms, and increased burnout + decreased compassion in physicians compared to nurses. This work provides support for preventive strategies for stress and burnout, which may be especially important as a result of the COVID-19 pandemic [16].

The impact of patient, family, and visitor mistreatment of providers on burnout among 6,512 physician respondents was examined in one article. Mistreatment and discrimination toward physicians were common, as 29.4% of respondents had been subjected to racially or ethnically offensive remarks. Female and racial / ethnic minority physicians had higher incidences of mistreatment. These experiences correlated directly with burnout [17].

A team of researchers reported clinical activity logs' relationship with physician burnout. Eighty-eight physicians participated in the project, completing monthly burnout surveys. The authors distinguished a workload feature (which included time in the EHR, patient load, orders, time writing notes, and reviewing charts) and a temporal feature (measured by the difference in time stamps between activities). The authors noted how the workload feature and temporal feature sets were both able to predict burnout, but the addition of baseline burnout score did not meaningfully impact differences [18].

Another study attempted to better understand at which point burnout begins in newly qualified doctors. The authors discovered that both stress and burnout can begin on day one for susceptible PGY1 doctors and continues throughout clinical work regardless of the type of shift-formed patterns. Grit questionnaires may be a suitable tool to facilitate countermeasures toward stress [19].

Burnout was compared with psychological immune competency in a cross-sectional study of 145 nurses and 71 doctors in emergency medicine. Results showed individuals with superior levels of psychological immune competency had lower burnout. Authors noted how psychological immune competency should be further examined in future work to successfully combat burnout [21].

Burnout related and overall turnover were analyzed within

the context of health care expenditures among primary care doctors. This study utilized cross-sectional survey data and discovered that turnover of primary care physicians was associated with about \$979 million in surplus expenditures in health care within the US population; within this, \$260 million was associated specifically with burnout [20].

Wellness / Burnout Scale Crosswalk

One study aimed to establish a crosswalk between common measures of burnout applied in studies of US physicians. The authors utilized psychometric analyses, specifically item response theory (IRT) fixed calibration and equipercetile analyses to meet their study aim. They paired results with scores from the commonly utilized Maslach Burnout Inventory (MBI), the Stanford Professional Fulfillment Index (PFI), and Mini-Z Single-Item Burnout (MZSIB) scale. This study allows others interested in using these measures (or comparing different scores) to make accurate deductions across historical, regional, or instrument contexts [22].

Review Articles

The team included three review articles [23-25]. The first examined types of interventions to improve new physician well-being, covering seven papers that met inclusion criteria. Among the included papers, most focused on relieving stress and anxiety, and the majority reported positive impacts of interventions. They call for more comprehensive, holistic interventions with quality research methods to improve well-being [23].

A second review aimed to determine predictors of compassion, empathy and other similar constructs within physicians. A considerable 152 studies matched their criteria. Physician specific predictors were gender, level of experience, values, emotions, coping ability, quality of life, and burnout. Environmental predictors included organizational structure, resources, and clinical culture [24].

Finally, a review summarized research on mindfulness interventions in the context of nurse well-being, including 11 studies. The authors noted the potential of some interventions to augment wellness; however, randomized control trials with improved research methods must take place to determine overall effectiveness [25].

CONCLUSION

Mindfulness training coupled with music demonstrated positive impacts in three of four well-conducted randomized control trials. Randomized controlled trials of well-being coaching demonstrated significantly less emotional exhaustion, less feelings of impostor syndrome, and improved self-compassion, with concurrent improvements in resilience, stress, and anxiety. Studies on wellness in healthcare professional students showed signal for improvements after exercise and meditation, suggesting academic programs should look seriously into improving resilience among students. Check out the review articles for overviews of well-being interventions.

On the more negative aspects of our daily work, provider mistreatment / discrimination was clearly associated with

burnout. From a demographic and job standpoint, female gender increased burnout risk, and doctors reported greater burnout than nurses. However, we continue to be excited about the numerous studies published in the area of wellness. We hope to see continued trends focusing on thriving and positive wellness aspects, rather than furthering the imbalance of heavily published negative relation assessments in the fields of burnout and stress.

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