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Reframing Physician Burnout as an Organizational Problem: A Novel Pragmatic Approach to Physician Burnout

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More than half of practicing physicians are burned out, and greater than one quarter of physicians suffer depressive symptoms or frank depression during residency training [1, 2]. Burnout and depression are positively correlated and research suggests that burnout may be a precursor syndrome to depression in working populations [3, 4]. In studies of resident physicians, nearly all depressed residents are burned out [5]. Far from a quiescent process, rates of burnout and depression among physicians appear to be worsening with time [1, 6]. In fact, rates of depression and depressive symptoms during residency have increased an average of 0.5% per year since the 1980s despite significant Accreditation Council for Graduate Medical Education (ACGME) efforts to ameliorate resident suffering [2].

Work-related burnout and depression (conditions that we will refer to in aggregate as "discontent") are distinctly nonpartisan syndromes, affecting workers across all professions. Unfortunately, work-related discontent shows a special affinity for physicians. Rates of burnout among doctors at all levels of training are higher than any other US occupation studied, and US medical students exhibit higher rates of depression than both general population comparators and age-matched peers further along in medical training [7, 8]. And within 1 year of graduating from medical school, the average resident physician will experience depressive symptoms at a rate 115% that of his or her baseline [2]. This emotional distress tends to decrease as residents advance in their post-graduate training; however, as emotional distress decreases rates of depersonalization rise [9].

And yet, despite the rather sobering rates of burnout and depression, professional satisfaction remains high [7, 10]. In our opinion, the paradoxically high rates of professional satisfaction in the setting of significant burnout and depression may offer an optimistic prognosis for our occupational affliction. Our professional wounds seem to require superficial debridement rather than structural bony reduction. The core rewards of medical practice seem to be hidden rather than undone by work-related burnout and depression.

Maslach et al. describe burnout as a syndrome characterized by three dimensions: emotional exhaustion, depersonalization, and a decreased sense of personal accomplishment [11]. Emotional exhaustion represents the core individual stress response to an emotionally, mentally, or physically taxing environment and seems to represent the first step in a burnout cascade. Emotional exhaustion appears to encourage depersonalization which in turn conspires with emotional exhaustion to engender a decreased sense of personal accomplishment [12]. The primacy of the emotional exhaustion component of burnout has been confirmed in studies of physician burnout [13, 14].

Depersonalization is characterized by an overly detached emotional relationship between an individual and his or her work [15]. Depersonalization appears to function as a protective emotional reflex that, in the case of physician burnout, buffers the physician from the emotional impact of bearing witness to his or her patients' suffering [9].

The decreased sense of personal accomplishment characteristic of the burnout syndrome is defined by feelings of inefficacy, negative self-evaluation, and an impression of decreased personal agency [16]. There exists a strong positive association between the sense of personal accomplishment

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and coping strategies that engage active problem-solving skills and reinforce personal empowerment [17].

At the opposite end of the burnout continuum, we find engagement, which is defined by the antipodal dimensional triad: high energy (as opposed to exhaustion), strong involvement (rather than depersonalization), and an increased sense of personal accomplishment [12].

This article will outline a pragmatic approach to physician burnout and depression. We will begin by reviewing what is known about the causative and alleviative factors involved in physician burnout and depression. We will augment burnout research from the medical field with findings from industrial and organizational psychology to argue that our current level of knowledge regarding work-related burnout and depression is adequate to begin to make meaningful changes to the healthcare environment. We will suggest that the current lack of significant change within the healthcare system results from a lack of proper organizational incentivization rather than from an incomplete academic understanding of the problem and its potential solutions.

Around 50% of physicians currently work for a healthcare organization strictly as employees, without any ownership stake in the business [6, 18]. Even though the remaining 50% of practicing physicians work largely in physician-owned practices, they are still accountable to larger organizations as a result of federal, state, board, and insurance practice mandates [13, 19–21]. Thus, the modern physician works in a system in which bureaucratic or corporate organizations rather than physicians are increasingly steering policy and shaping the workplace environment. While this situation is certainly less than optimal for autonomous physicians, the leisurely pace of legislative change suggests that, at least in the short term, an adaptive engagement with organizational governance offers significant advantages over a purely antagonistic approach.

We will argue that to inspire change at an organizational level, we must reframe physician discontent as a problem that extends beyond the individual sufferer to affect the entire organizational system. The problem of physician discontent has thus far been cast in an antagonistic light, pitting the physician against the larger organization and society as a whole. We will argue that not only is this approach unlikely to be effective but it is also fundamentally incomplete. We will show that there is ample evidence to suggest that physician discontent negatively affects physician turnover, productivity, patient-customer satisfaction, and quality of care; and that the aforementioned negative consequences of physician discontent have real and significant financial implications as well as potentially serious patient-level ramifications.

Research has begun to quantify some of the organizational and societal costs associated with physician burnout and depression, but we will argue that further quantification of the problem is required to inform and direct the mutual goals of physicians and the organizations that employ and govern them.

Literature Acquisition

Literature acquisition was performed in two phases. The first phase consisted of a pilot search to survey the available literature. We searched the PubMed database using medical subject heading (MeSH) terms such as "burnout, professional" and "compassion fatigue." We expanded our search to Web of Science, JSTOR, and EconLit to gather literature from the field of industrial and organizational psychology. In our second phase, we developed a literature filtration strategy based on a flexible hierarchy of literature type and pertinence. Pertinent articles were stratified based on research design with meta-analyses and systematic reviews of randomized-control trials (RCTs) being considered as the highest level of evidence, followed by RCTs, followed by meta-analyses and systematic reviews of cohort and case-control studies, and so forth in this manner until we identified the articles with the least rigorously designed research methods. After the stratification process was complete, a full text review was conducted for the included articles. Finally, a further extraction of additional resources from article-specific citations was completed.

What We Know About Burnout: Lessons from Industrial and Organizational Psychology

Bakker et al. extended Dr. Christina Maslach's pioneering work on burnout, creating the job-demands resource theory [22]. The job-demands resource theory (J-DRT) conceives burnout as developing from an imbalance between demands and resources [23]. In the J-DRT, "demand" refers to elements in the work environment that deplete worker energy and produce a stress response, while "resource" refers to elements that buffer the ill effects of demands. J-DRT demands include work overload, emotional stress, and work-home interference while J-DRT resources include autonomy, social support from colleagues and supervisors, and effective performance feedback [22, 24]. We will examine components of the job-demands resource theory as they pertain to physician burnout and depression.

One should recall that the most important component of the burnout syndrome appears to be emotional exhaustion because of its role in initiating the burnout cascade [12–14]. Research has shown that the strongest predictor for the development of emotional exhaustion is work overload [12]. Lee et al. identified work overload and, in particular, increased work hours, call burden, and administrative responsibilities, as a key factor driving emotional exhaustion in their large meta-analysis ($N = 28{,}882$) of physician burnout research [13]. Dimou et al. identified work overload and the resultant work-life imbalance as the primary contributing factors in their systematic review of burnout research in surgeons [25]. A systematic review by Amoafo et al. arrived at similar

conclusions in regards to the strong predictive relationship between work overload and emotional exhaustion in physicians [26]. Interestingly, the way that work is perceived seems to matter. If an individual perceives their work as a challenge, the predictive relationship between work overload and emotional exhaustion disappears; it is only when the work is seen as a hindrance that emotional exhaustion develops [4].

Many of us are drawn to this most empathic of professions out of a desire to help others. As we progress in the field, we learn that the ember of professional satisfaction indeed burns brightly, but we also learn that it sometimes emits sparks of sorrow. As is often the case with an empathic relationship, our emotional fortune frequently reflects the fate of our patient. Our professional successes are inevitably interspersed with significant patient suffering, generating considerable emotional distress for a provider still incompletely clad in depersonalization armor. This intimate doctor-patient relationship proves more hazardous for physicians who score highly on ratings of perfectionism with the attendant predilection for high personal standards and self-blame. Indeed, high levels of perfectionism have been shown to render a physician uniquely susceptible to the negative emotional effects commensurate with an empathic doctor-patient relationship, increasing the physician's likelihood of developing burnout [27].

The resources of autonomy and social support reduce the likelihood that work overload and emotional stress will lead to emotional exhaustion and subsequent burnout [22, 28, 29]. Autonomy is hypothesized to buffer the harmful effects of work overload by providing the worker with the experience of choosing when and how to execute assigned work tasks [30]. This hypothesis is supported by research into learned helplessness and the significant influence that the subjective experience of control has over an individual's emotional interpretation of an event [31]. Regardless of the empirical validity of the explanatory model of autonomy, it has been demonstrated to protect physicians from developing burnout in real world settings. In a cross-sectional sample of 935 US physicians, Keeton et al. identified control over work schedule and hours (i.e., autonomy) as the strongest protective factor against the development of burnout [32].

Social support encompasses both colleague and supervisor-level support and feedback. Numerous lines of evidence point to the mitigating effects of positive social relationships, effective supervision, and high-quality feedback on emotional exhaustion and burnout [15, 22, 28, 29, 33–36]. In the healthcare system, in particular, one of the strongest predictors of a positive organizational climate is the quality of the relationship between nurses and physicians [33].

In our opinion, of the four demands and resources considered in previous paragraphs work overload, autonomy, and social support offer the most logical targets for organizational intervention. Emotional stress is so intrinsic to the practice of medicine that interventional excision risks ligating both the harmful and beneficial veins of the doctor-patient relationship.

Research into organization level interventions to reduce physician burnout is still largely in its academic infancy, but we will examine a few recent studies to guide further discussion [37]. Lucas et al. demonstrated that changing from a 4-week attending rotation schedule to a 2-week schedule (i.e., reducing work overload) decreased physician emotional exhaustion and burnout in a cluster randomized crossover non-inferiority trial [38]. Further evidence for the burnout-mitigating effect of reduced workload can be found in work by Dimou et al., which found that the 2003 restriction of resident work hours by the ACGME reduced resident emotional exhaustion in their systematic review of the literature [25]. And in a 2015 Cochrane review of stress prevention in healthcare workers, researchers concluded that adding weekend breaks to previously continuous work schedules led to a moderate reduction in stress [39].

Linzer et al. employed reductions in work overload as well as enhanced autonomy and social support in their cluster randomized trial involving primary care physicians [40]. Specifically, Linzer et al. demonstrated that workflow redesign, improved communication, and quality improvement projects decreased physician burnout [40]. Example workflow redesigns included an increase in the amount of electronic health record data entered by medical assistants, thus reducing the administrative burden on physicians [40]. An example improvement in communication was the introduction of a monthly wish list of practice issues that physicians wished to target for reform [40]. These interventions and their results are notable for their simplicity, revealing the plenitude of low hanging fruit within the healthcare environmental tree.

Barriers to Reform

With all that is known about the causative and alleviative factors involved in physician burnout and depression, the limited number of healthcare organizations that are making meaningful reforms appears puzzling. However, we would suggest that the research into physician burnout has thus far been infused with an antagonistic undercurrent that pitches the physician against the organization and society at large. In a healthcare environment in which bureaucratic and corporate organizations shape the majority of the physician workplace, it is unsurprising that the as of yet unincentivized organizational governing bodies have had little reason to prioritize work-environment reforms that mitigate burnout and promote engagement [6, 18, 19].

Business organizations respond to the same financial and motivational incentives that markets and individuals respond to [41]. Thus, we wish to suggest that physicians should focus their arguments for healthcare reform on the financial and

humanitarian impact of physician discontent rather than the singular impact on the individual physician. One need not see this suggestion in a disparaging light for, in our cash-strapped healthcare system, financial resources are limited and closely guarded [19, 42]. It is therefore wise to arm ourselves with the most convincing argument regarding the potential organizational and societal cost-savings, both financial and otherwise, of improving physician discontent.

Costs Associated with Physician Discontent

The intuitive conclusion that physician discontent increases physician turnover is substantiated by current research [43–45]. Turnover appears to be primarily mediated by the burnout dimensions of emotional exhaustion and depersonalization [17]. Turnover may be understood as an individual's attempt to escape the organizational and environmental antecedents that are perceived as having caused or exacerbated the emotional exhaustion, subsequent depersonalization, and resultant burnout syndrome.

Organizational cost estimates of physician turnover range from $250,000 to $300,000 per physician [43, 44, 46]. The significant expense of physician turnover can be accounted for by the cost of hiring a new physician, training said new physician, and the productivity lost during the interim between the departure of the old physician and the arrival of the new physician [43]. Estimates suggest that >5% of operating costs at a major medical center may go to paying for expenses associated with physician turnover [47].

The financial costs of lost productivity resulting from physician burnout and depression are significantly more difficult to quantify than costs associated with turnover; however, it is clear that no matter the exact cost, physician discontent negatively impacts the healthcare system as a whole [45, 48]. Physician discontent, and burnout, in particular, are positively correlated with an increased number of sick days utilized by physicians and a decrease in general work performance [49]. Physician burnout is strongly associated with subsequent reductions in full-time equivalent units worked [50]. Meta-analytic data from the economic literature suggest that emotional exhaustion negatively impacts employee job performance, organizational citizenship behavior, and customer satisfaction [51]. Despite the difficultly in quantifying the lost revenue associated with physician discontent, there is significant evidence both from within the healthcare industry and from economic research to suggest that the economic costs of lost productivity are substantial [19, 45, 48, 49, 51].

In the modern healthcare marketplace, patients are customers that can often choose among a variety of healthcare organizations. Thus, the commercial focus on customer satisfaction must extend to the business of medicine to maintain competitiveness. Physician discontent demonstrably worsens the customer experience and thus leads to additional lost revenue by eroding organizational brand image [45, 49].

While exact financial values associated with physician discontent are elusive, there is significant evidence to suggest that the combination of turnover, lost productivity, and decreased customer satisfaction contribute to considerable loss in revenue. Equally difficult to quantify, but of greater import to our professional ethos, are the human costs associated with physician discontent and the resultant decreased quality of care [44] (Fig. 1).

In conclusion, in this article, we have outlined a new pragmatic approach to the problem of physician burnout and depression. We have reviewed the current state of knowledge regarding the causative and alleviate factors involved in physician burnout and depression, concluding that through the

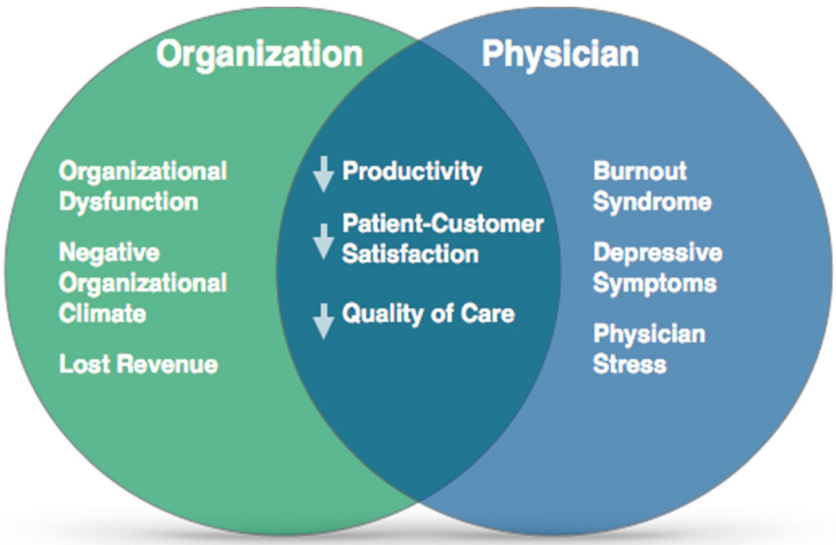

Fig. 1 Novel pragmatic conceptual model of physician discontent and organizational problems

lens of organizational psychology, our current picture of physician discontent is precise enough to enact meaningful organization level workplace improvements now.

Central to our pragmatic approach is the reframing of physician burnout and depression as organizational problems. We suggest that healthcare organizations must be provided the proper incentives to enact workplace improvements for physicians. We examined the current financial estimates of burnout-related physician turnover and revealed that each physician lost likely contributes to a more than one quarter of a million dollar financial loss for a healthcare organization [43, 44, 46].

We reviewed the literature that demonstrates impaired productivity, decreased patient-customer satisfaction, and deteriorations in quality of care associated with physician burnout and depression [45, 49, 51]. Although research has established a qualitative link between physician discontent and deficits in productivity, patient-customer satisfaction, and quality of care, we argue that quantitative data must be gathered. Specifically, research should seek to quantify the financial losses associated with discontent-related impaired productivity and patient-customer dissatisfaction. Furthermore, research should further clarify the effect of physician burnout and depression on quality of care. Equipped with a quantitative description of the larger costs of physician burnout and depression, we will be able to properly incentivize organizational change.

And finally, when we have established adequate organizational incentives and are poised to make changes to the physician workplace, we would be well-served to focus on increasing engagement rather than decreasing its obverse, burnout. In our opinion, a positive campaign to increase engagement is more likely to succeed than a negative effort to eliminate burnout even though engagement and burnout are essentially opposite faces of the same conceptual coin. There exists compelling evidence to suggest that an optimistic approach confers important esthetic advantages over a pessimistic one [52–54]. And no matter the success of our professional advocacy, we will likely require every bit of leverage we can muster to stem the tide of physician burnout and depression.

Compliance with Ethical Standards

Disclosures On behalf of all authors, the corresponding author states that there is no conflict of interest.

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