The Problems With Burnout Research
Jodie Eckleberry-Hunt, PhD, ABPP, Heather Kirkpatrick, PhD, ABPP, MSCP, and Thomas Barbera, PhD

Abstract
Burnout among physicians and physicians-in-training is well established as a potential threat to the health and well-being of health care providers and patients. However, there are myriad problems with current burnout research and its ongoing measurement that threaten the validity of the conclusions. For example, researchers have used differing ways of defining and measuring burnout. Those who have used the Maslach Burnout Inventory vary in recommended use of the instrument and cutoff scores. As a result, the authors suggest that the term “burnout” may be misused and recommend some reconsideration of the meaning of burnout. The measurement and discussion of burnout have strong implications for interventions and policy alike. In this article, the authors review the problems with burnout research and ask important questions about the future directions of research efforts. The authors recommend a consistent measurement approach and perhaps moving toward a focus on physician wellness from a positive psychology perspective.

Burnout among physicians and physicians-in-training, as well as other health care team members, is an important issue with numerous potential effects and consequences for professionals, patients, organizations, and society.1-9 The research and commentary literature on burnout has exploded over the last 40 years, attesting to the strong interest in exploring a lived phenomenon. However, there are some serious conceptualization and measurement issues associated with medical student, resident, and attending physician burnout studies that deserve consideration as research continues. The purpose of this Perspective is to draw attention to the problems with the dominant conceptualization of physician burnout, both in how it is being used to describe and the experience and how it is measured. A more clear conceptualization of burnout and associated measurement strategy during medical school, residency training, and post residency will improve efforts to increase trainees’ and physicians’ resilience and wellness and reduce burnout.

The Concept of Burnout and Early Research
In the mid-1970s, both Herbert Freudenberger, PhD10 (a psychologist who worked in substance abuse) and Christina Maslach, PhD11 (a social psychologist) were exploring a phenomenon experienced by those in the helping professions that would come to be known as burnout. Maslach systematically studied and defined burnout over the next 40 years and developed the Maslach Burnout Inventory (MBI)-Human Services Survey (HSS),11 now considered to be the gold standard measure. The MBI defines burnout as scoring in the high range (27 or more points) on emotional exhaustion (EE), in the high range (13 or more points) for depersonalization (DP), and in the low range (31 or fewer points) for personal accomplishment (PA). Maslach believes EE as the primary definition of burnout, researchers mistakenly prefer to focus on EE and DP are inextricable, and DP may be an even bigger contributor to the overall construct of burnout than EE.14 In contrast, Maslach notes that clinical researchers mistakenly prefer to focus on EE as the primary definition of burnout, and this appears to be the focus of most of the physician and physician-in-training research.

Issues With Burnout Measurement
Because the majority of burnout research uses the criteria outlined by the MBI, the way in which Maslach conceptualizes burnout is central to how we view that research. If burnout involves at least EE and DP when using the MBI-HSS, then...
research that classifies participants with either high EE or DP as having burnout is not technically accurate. Studies that label participants as burned out if they score within the high range on EE or DP and deviate from the published cutoff scores may contribute to overestimation error.

Although the extent of overestimation error is difficult to determine without access to raw data, the minimum amount of error can be ascertained by comparing the difference between reported burnout defined as a high EE or DP score versus burnout defined by a high score on both EE and DP. For example, in a study of 6,880 physicians, 46.9% scored high on EE, 34.6% high on DP, and 54.4% high on at least EE or DP.17 The authors used a definition based on high EE or DP scores and reported a 54.4% burnout rate. Yet, the maximum percentage who would be classified as burned out using the recommended combination of high scores on both EE and DP would be 34.6%, assuming that all of those scoring high on DP also scored high on EE. In this case, defining burnout by the use of high scores on either DP or EE (instead of using both) resulted in 57% more physicians being labeled as burned out. This study also used a lower cutoff score from that recommended in the MBI manual on DP, which may result in more physicians being labeled as depersonalized. Given the sample size and scope of the authors’ conclusions (over half of all U.S. physicians are burned out), clear conceptualization and accurate measurement of burnout are critical.

Other studies that ask participants to self-rate with a single question, such as “Are you burned out?” or self-rate “your burnout,” without defining the components, also seem to violate an underlying shared definition of burnout. In a convenience sample of 88 physicians, 45.8% reported moderate to high burnout as measured by a single-item question asking participants if they thought they were burned out.18 Similarly, an e-mail survey of 266 hospitalists found that 23% were classified as burned out when burnout was measured by a single question in which subjects rated their burnout on a five-point Likert scale.17 Consequently, participants used their own definition of burnout and were classified as experiencing burnout if they endorsed a 3 or higher. We are unaware, at the time of this writing, of a study that has investigated the correlation between the MBI and a single question asking about burnout. This type of assessment presumes that each individual conceptualizes burnout in the same way. We cannot help but compare this against the psychological literature, which has moved beyond “are you depressed?” without using at least a few validated questions to define “depression” for the individual.18 Although we sympathize with the need for brief measures when studying busy physicians, it is most respectful of their time to use the shortest valid measures.

Maslach has long argued against the tendency among clinical researchers to classify individuals as “burned out” or “not burned out.”19 She believes that burnout ranges along a continuum of low to high, and she provides cutoffs for those classifications. However, many studies classify physicians as burned out versus not burned out using the MBI-HSS as a primary study measure. A better way to describe the sample would be to state the percentage of participants with high, moderate, and low EE, DP, and PA. As with other psychological variables, like personality, that are classified on a continuous scale, with some individuals falling into extreme ranges of both, perhaps there are individuals who are at such a low risk of burnout that we would term them “well.” Others might be at such a high risk of burnout that it is justifiable to classify them as “burned out.” How do we capture those in the middle who are neither well nor burned out in a dichotomous system? Are there environments that push an individual from a moderate risk to an extreme? Without continuous scaling, we cannot answer these questions.

Another violation of the MBI application in research is the tendency to use the MBI-HSS among first- and second-year medical students, who do not regularly have helping relationships with patients. This research has been used to conclude that burnout increases among medical students as they progress in training. However, this is a flawed conclusion. If medical students are not regularly seeing patients, how can they feel cynical about the recipients of their care? How can they feel proud of their accomplishments with patients? Increases in EE and DP in the clinical third and fourth years would be expected because these students actually see patients as a routine.

There are other measurement issues that are specific to the MBI itself. First, the MBI doesn’t consider nonprofessional confounders of burnout, such as child care demands, the schedule and support of spouse or partner, life events, and financial concerns. Second, the MBI was not normed on physicians-in-training and included only a small normative sample of 43 attending physicians. Most of the normative data were made up of teachers, postsecondary educators, and social service workers. The convergent and discriminant validity studies were based on mental health workers, legal aid employees, attorneys, police officers, probation officers, ministers, librarians, and agency administrators. Medical students’ and residents’ professional lives, in particular, are dictated by frequent scheduling changes, rotational shifts, and evaluations. Their lives can be described as unpredictable, and at times, physicians-in-training lack control over many details of their lives. Further, one can score high on DP by simply stating that each of the five items occurs as little as once a month. If a physician feels a lack of empathy for or disconnected from patients on a month or less, does that mean the physician is depersonalized? Given this, it would seem reasonable that specific burnout norms for these groups are essential.

Finally, it is worth noting that in the instruction for the MBI-HSS, participants should not know that the instrument is meant to measure burnout.15 Maslach, Jackson, and Leiter10 suggest that participants may be oversensitized to the concept of burnout such that their responses will be unduly affected. It is not clear from research methodologies whether researchers have taken care to follow this instruction. It is at least worth considering that some participants have been overly sensitized. It is worth asking whether the noted increases in physician burnout over time are related to oversensitivity to the construct.

An Evolving Conceptualization of Burnout

When physician burnout was initially theorized, it was considered to be a reaction on the part of the caregiver to seeing challenging, struggling, suffering patients day after day. Current literature
sustains that burnout is related to excessive technology and clerical work either not related to or in addition to patient care that is adding to the workday. Is this distress related to change in the work that physicians do perhaps different from caregiver burnout as originally constructed? If so, then new measures are needed to assess this distress. Perhaps it is not just seeing difficult patients or just having too many nonclinical responsibilities. Perhaps it is both and more. Perhaps it is the societal changes that pressure everyone, including patients who need more help in less time with fewer resources. Perhaps trainee-related burnout risk changes with demands of differing rotations, whereas attending burnout is more enduring. Perhaps it is as Maslach and Leiter14 suggest in the Areas of Worklife model—that is, there is a mismatch between a physician and workload, control, reward/recognition, community, fairness, and values. Much more work is needed. A more comprehensive review of the burnout literature can be found elsewhere.21

**Improving Burnout Measurement and Research**

The impact of failing to address the methodological and conceptual problems of measuring burnout in physicians is large. Accurately capturing the patient-related distress physicians experience at different developmental levels is the first step in identifying who is at risk of burnout. How can one ameliorate a phenomenon when it is not reliably and validly measured? How can we identify those at risk? How can we design appropriate prevention programs? Are there nuances to the distress that physicians experience that call for specific interventions? The Accreditation Council for Graduate Medical Education recently released requirements that graduate medical education programs monitor burnout and have wellness promotion programs. Therefore, we need to work toward consensus regarding how physician burnout is defined in order to be most effective. We believe that the distress physicians feel when burnout out reflects a component of caregiver distress that is unique to the physician–patient relationship. If we are simply saying that burnout is distress (i.e., EE), then we consider the work of physicians to be similar to any other profession. Equating burnout with general distress distracts from the experience of suffering due to work-related caregiving demands that may, in the end, affect patient care.21 It is a moral imperative that we address physicians’ lack of engagement in their work because they have tremendous influence on the lives of the patients they serve. If physicians are disengaged (i.e., DP), how can they effectively engage their patients to achieve better outcomes?

We wholeheartedly believe that physician and physician trainee burnout is a critical issue and one worth further intensive study. We also believe that high levels of exhaustion are concerning, and there are clearly shifts in the workplace and training environments that do not prioritize the best interests of physicians or patients. What we suggest, however, is that research on burnout be more thoughtful of the underlying construct and faithful to the measurement principles associated with the burnout measure chosen. We should also be careful about drawing conclusions about causation of burnout when causal studies do not exist. If the research on physician and physician-in-training burnout is to be taken seriously, it needs to be done well so that we clearly know what steps to take next.

Finally, it is worth considering that it is time to move beyond burnout into positive psychology that focuses on strength, resilience, growth, and happiness rather than the absence of burnout. We need to ask ourselves if the end goal is to reduce burnout or to promote wellness. The study of positive psychology22 examines what factors contribute to an individual thriving in an environment in order to nurture those factors. The study of burnout focuses on pathology and what is bad and failing. Although both approaches provide valuable data, there are times that we are not able to fix the things that contribute to burnout; yet we might be able to promote wellness in the face of those circumstances. For example, difficult patients have been noted to be associated with work dissatisfaction,6 but we will not eliminate difficult patients. What we can do is examine what is protective when working with difficult patients to assist physicians in feeling effective and fulfilled. In the end, we need some standardized data to inform ways to optimize physicians’ worklives to have the highest level of patient safety, provider engagement, and appropriate professionalism modeling for our trainees. To keep attracting our brightest and most talented to medicine, we need to understand the components of physician wellness and satisfaction and design interventions that will help physicians recover from the major causes of their fatigue and dissatisfaction with medicine. We need interventions that are responsive to distress that has accumulated gradually over time, as can occur during medical school, on challenging rotations during residency, or during difficult months post residency. We also need interventions to address acute distress associated with negative evaluations or distressing patient interactions.

In summary, we are suggesting that the research highlighting physician and medical student burnout has been valuable in drawing attention to an important occupational hazard. We are not minimizing the value of this line of study. However, we are concerned that the term is becoming overused and mismeasured to the extent that we risk not having a valid construct. Moreover, the pathology-based approach of burnout research alone limits what we can do to ensure that medical practice remains a profession of allure and growth. We recommend a new approach to the study of the very real stress of medical practice: the positive, strength-based approach of positive psychology, which emphasizes resilience and the ability to thrive rather than just survive. The most useful next steps for the field to take are to use the MBI as it was intended, work to publish an MBI physician normative group, and continue to seek new measures that are specific to physicians. We recommend that medical leaders spend time asking medical professionals what is working and finding ways to transform the workplace into a place that is healing for the healer as well as the patient.

**Funding/Support:** None reported.

**Other disclosures:** None reported.

**Ethical disclosures:** None reported.

**References**


