



Regular Article

Features of burnout amongst pathologists: A reassessment

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A B S T R A C T

There has been little rigorous assessment of burnout among pathologists and pathology trainees. Given this relative dearth of relevant literature on pathologist burnout, this report aims to raise awareness of the issue among those working in and around this specialty. Our results are based on a survey given in conjunction with the American Board of Pathology's (ABPath) biennial Continuing Certification (CC) reporting of activities required of diplomates to maintain certification. The survey was voluntary, open to all diplomates participating in CC, and conducted over two consecutive years (2019 and 2020), with alternate years comprising different sets of diplomates. The data are based on 1256 respondents (820 from 2019 to 436 from 2020). The three highest aggregate reported rates of burnout (reported as experienced nearly all of the time, most of the time, or part of the time) occurred when respondents were in their first year of residency training (41.1%) and when they were in (47.6%) and beyond (46.6%) their first three years of practice. We considered this high-low-high, or U-shaped distribution in recollected burnout over time among pathologists a notable finding and investigated its distribution among respondents. Conversely at every point in their training and practice, from half to three-quarters of respondents reported never or infrequently experiencing burnout. This study represents the largest pathologist cohort survey to date about pathologists' burnout. Importantly, especially for those considering pathology as a career, these data are on the low end of the distribution of burnout among specialties for those in practice.

Keywords: Burnout, Pathology, Pathologists, Resilience, Stress, Well-being

Introduction

In the early 2000s, the triple aim of healthcare (cost/quality/patient experience) was extended to a quadruple aim to include the well-being of healthcare workforce personnel.^{1,2} This fourth aim includes physicians. Of the many studies published about this topic, several have focused on burnout.³ The World Health Organization (WHO) now recognizes "burnout syndrome" in the 11th International Classification of Diseases (ICD-11), although it is not recognized by the latest (2013) iteration of Diagnostic and Statistical Manual of Mental Disorders (DSM-5).

Most definitions of burnout follow that developed by Maslach in the 1970s–1980s.^{4–7} This includes three core aspects: emotional exhaustion, depersonalization, and lack of personal accomplishment. Maslach developed an assessment instrument "(Maslach Burnout Inventory, MBI)" in 1981, which is the most widely used tool to assess burnout.⁵ However, burnout also has a more colloquial use, something akin to weariness, languor, or lassitude. The attributes characterized in

Maslach's definition are associated with, and often lead to, cynicism, work inefficiency, and possibly diminution of a person's spirit or will. It is also important to point out, as discussed below, that (1) stress and burnout are not directly linked and (2) neither is burnout directly linked with mental health disorders, such as depression.

There has been a scant assessment of the prevalence of burnout among pathologists and pathology trainees. The few studies reporting on burnout for pathology residents have methodological limitations. Kelly et al. examined rates of burnout among pathology residents and fellows but, while having a larger sample size, did not apply the commonly accepted Maslach criteria for burnout or provide information on response rate.⁸ A similar study by Garcia et al. reported the results for about 408 pathologists where the Maslach criteria for burnout were not used, and information on the response rate was not provided.⁹

Given the scarcity of pathology-relevant literature about burnout, the primary aim of this report is to raise awareness of the issue among those working in and around this specialty by providing a more specific

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Table 1
ABPath data: 2019 & 2020 practice and training surveys.

Year of Training/Year In Practice	With Burnout	Without Burnout	Total
PGY-1 (N = 1226, M = 2.30)	504 (41.1%)	722 (58.9%)	1226 (100%)
PGY-2 (N = 1227, M = 2.16)	441 (35.9%)	786 (64.1%)	1227 (100%)
PGY-3 (N = 1214, M = 2.08)	381 (31.4%)	833 (68.6%)	1214 (100%)
PGY-4 (N = 1155, M = 2.02)	321 (27.8%)	834 (72.2%)	1155 (100%)
Fellowship training (N = 1167, M = 2.07)	374 (32.0%)	793 (68.0%)	1167 (100%)
First 3 years of practice (N = 1190, M = 2.41)	567 (47.6%)	623 (52.4%)	1190 (100%)
Beyond first 3 years in practice (N = 904, M = 2.38)	421 (46.6%)	483 (53.4%)	904 (100%)
All responses	3009 (37.2%)	5074 (62.8%)	8083 (100%)

assessment of the prevalence and chronological occurrence of burnout among pathologists. It is based on a survey sent to all pathologists who participated in the American Board of Pathology's (ABPath) Continuing Certification (CC) in 2019 and in 2020.

Materials and methods

Our results are based on a survey that was associated with the ABPath CC (formerly, Maintenance of Certification (MOC)) biennial reporting of activities required for diplomates to maintaining certification.¹⁰ The survey was voluntary and open to all diplomates participating in CC. By conducting the survey over two consecutive years (2019 and 2020), with each year consisting of a unique set of diplomates, the biennial groups serve as controls for each other. The surveys were conducted each year from September through the following mid-January. While these questions were not pre-tested on a representative sample of the survey audience, one of us (KJ) is an expert in the construction of survey questions, and the questions went through a rigorous process of review in the context of the annual review process for the ABPath CC survey.

The survey instrument consisted of three questions:

How frequently did you experience burnout during the following parts of your training and career?

This question included Maslach's definition of burnout: (a) overwhelming exhaustion; (b) cynicism and detachment; and (c) a sense of ineffectiveness and lack of accomplishment. The possible responses were as follows: nearly all of the time; most of the time; part of the time; infrequently; never – stressors I faced were expected; NA/prefer not to answer.

During your most severe period of burnout, how long did the burnout last?

Longer than a few months; a few months; a few weeks; I never experienced burnout or at most a few days; prefer not to answer.

For each of the above two questions, respondents specified during which of the following time the event occurred: PGY-1; PGY-2; PGY-3; PGY-4; fellowship training; first 3 years of practice; beyond first 3 years in practice.

How did your training institution address the topic of burnout to its trainees?

At the organizational level, addressed to all residents by institutional officials and leaders; at the departmental level, addressed explicitly by my department leaders/directors; at both the organizational level and departmental level; burnout was not addressed during my training.

Results

The results are summarized in Table 1. Results from both survey years (2019 and 2020) were so similar that they have been combined for analysis. The data, therefore, are based on 1256 respondents (820 from 2019 to 436 from 2020). The diplomates' perceived burnout was reported based on their individual understanding of burnout, as described in the survey questions above and recollected from their years in residency training, fellowship training, and their early years in practice; it was not based specifically on the Maslach's burnout inventory.

The three highest aggregate rates of reported burnout—for this purpose considered to be when reported as experienced nearly all of the time, most of the time, or part of the time—occurred when diplomates

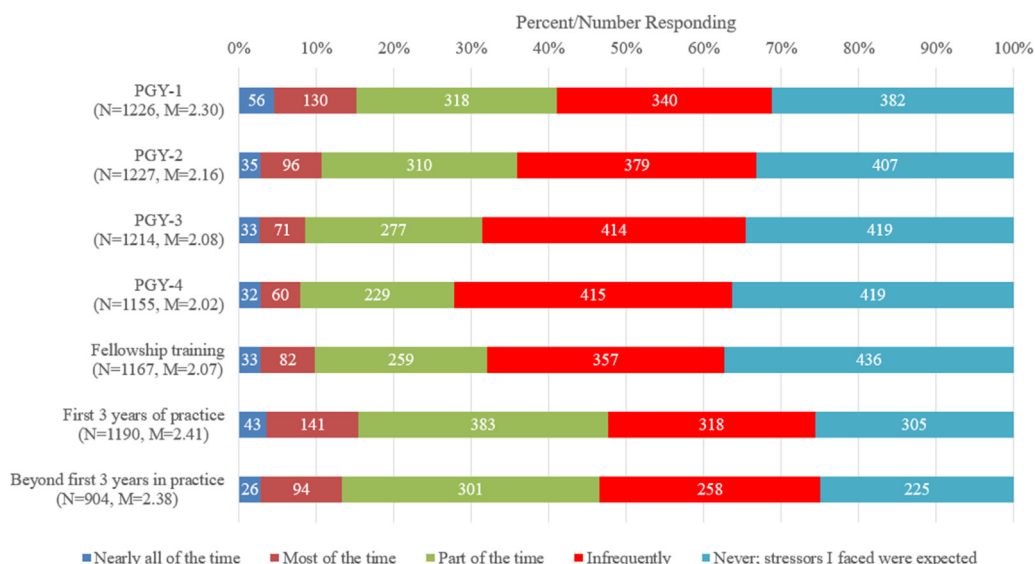


Fig. 1. Frequency of burnout (aggregate data) by the length of time in pathology.

Table 2
Duration of most severe period of burnout.

	2019		2020	
	n	%	n	%
Never	129	17%	65	16%
Few Days	264	35%	116	28%
Few Weeks	145	19%	77	19%
Few Months	112	15%	75	18%
More than few months	105	14%	79	19%
Total	755		412	

were in their first year of residency training (41.1%), when they were in the first three years in actual practice (47.6%), and beyond their first three years of practice (46.6%) (Table 1, Fig. 1). As shown in Fig. 1, most respondents reported experiencing burnout “part of the time”; about 10% reported they experienced burnout “most of the time,” while relatively few (<5%) reported they experienced burnout “nearly all of the time” during these periods. Reported aggregate burnout was lower during subsequent years of training, i.e., postgraduate years (PGY) 2–4 and fellowship (27.8%–35.9%). At the other end of the spectrum, about 30% of respondents reported never experiencing burnout during PGY-1 through fellowship, and a similar percentage reported it as infrequent.

The duration of reported burnout was also similar between the two survey years. About half said they either never had burnout or if they did it lasted for only a matter of days (Table 2). Conversely, about a third reported burnout that lasted months. We do not have this duration of burnout data by experience, e.g., training year, when in practice, etc. For some, however, it was “nearly all the time.”

Interestingly, as shown in Fig. 2, those respondents who reported experiencing burnout in PGY-1 were far more likely to report continuing to experience burnout throughout training and in practice than those who did not report experiencing burnout in PGY-1. Of the cohort reporting having experienced burnout in PGY-1, 78% reported it also in PGY-2, 65% reported it during the first three years of practice, and about half reported experiencing burnout during the other periods. By contrast, among those who did not report experiencing burnout in PGY-1, no more than 13% reported experiencing burnout in any single year of residency, 17% reported it in fellowship training, and 36%–39% reported experiencing it in years 0–3 of practice and beyond year 3, respectively.

Table 3 summarizes how training about burnout was addressed during the postgraduate training of CC diplomates. Again, the percentages

Table 3
How burnout education was addressed for trainees.

	2019		2020	
	n	%	n	%
Institutional Level Only	137	17%	67	15%
Departmental Level Only	92	11%	54	12%
Both Institutional and Departmental Levels	174	21%	104	24%
Not Addressed	417	51%	21	48%
Total	820		438	

are similar for both survey years. Recognizing this is a recall survey that for some included training as much as a decade previously, no education about burnout was provided to about half. Burnout education at the departmental (and potentially pathology-specific) level was even less frequently provided to just over 10%.

Discussion

Our data represent the largest pathologist cohort surveyed to date about burnout. Based on 1256 responses of “in-practice” pathologists, nearly half (48%) reported experiencing burnout at least “part of the time,” although fewer than 15% of those in practice experience burnout most or nearly all of the time. While in residency, very few experienced burnout most or all of the time (Fig. 1). Roughly two-thirds of all respondents experienced burnout only little or not at all. There were no significant differences observed between new-in-practice (first three years) and later career respondents. The periods of most severe reported burnout lasted on the order of days. While this survey is based only on respondents participating in the ABPath CC program and is retrospective in nature, we believe that this study provides critical data for informing the discussion of burnout among pathologists.

Our understanding of burnout has evolved but remains based on Maslach’s definition from the 1970s, which includes exhaustion, detachment, and inefficacy.^{6,7} Unfortunately, that definition is often confused with the more colloquial one, akin to weariness or languor, such as that from Miriam Webster: “exhaustion of physical or emotional strength or motivation usually as a result of prolonged stress or frustration.”¹¹ Thus, when healthcare workers talk about “burnout,” it may not be clear what each person means, even if—as in this study—the survey question clearly provides its definition of “burnout.” Such a limitation of reporting affects most studies, including the current one, where burnout

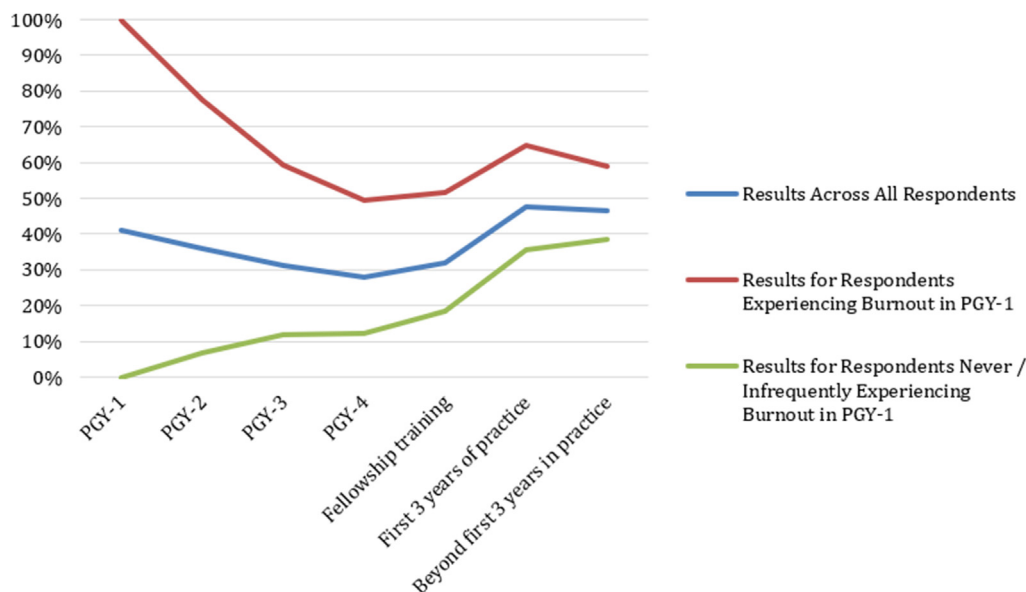


Fig. 2. Frequency of reporting burnout experienced more than infrequently.

Table 4

Comparison of respondents who reported experiencing burnout during PGY-1 and those that did not.

	Experienced Burnout PGY-1 ^a			Did Not Experience Burnout PGY-1 ^b			Full Sample		
	N	% Experiencing Burnout ^c	Mean Rating	N	% Experiencing Burnout ^c	Mean Rating	N	% Experiencing Burnout ^c	Mean Rating
PGY-2	503	78%	3.07	722	7%	1.53	1227	36%	2.16
PGY-3	498	60%	2.77	714	13%	1.60	1214	32%	2.08
PGY-4	476	49%	2.61	677	13%	1.61	1155	28%	2.02
Fellowship training	482	51%	2.60	677	17%	1.70	1167	32%	2.07
First 3 years of practice	484	65%	2.86	696	36%	2.10	1190	48%	2.41
Beyond first 3 years in practice	347	59%	2.70	547	39%	2.17	904	46%	2.38

^a Respondents who experienced burnout Part of the Time, Most of the Time, or Nearly All of the Time during PGY-1.

^b Respondents who Never or Infrequently experienced burnout in PGY-1.

^c Percent responding Part of the Time, Most of the Time, or Nearly All of the Time.

is self-reported rather than assessed formally using an instrument, such as the Maslach Burnout Inventory (MBI).⁵

Few studies about burnout have included pathologists. A 2009 review of residents specifically notes the specialty of pathology was underrepresented.¹² The first article reporting on pathologists appeared in 2016.¹³ A second in 2018 focused on potential solutions rather than prevalence.¹⁴ A more recent study appeared in a pathology journal but did not focus on pathologists per se.³ One additional study outlined a curriculum strategy for the well-being of pathology residents.¹⁵

In 2020, the American Journal of Clinical Pathology published a series of articles based on surveys conducted by the American Society of Clinical Pathology (ASCP) on job satisfaction, well-being, and burnout of laboratory professionals, residents, fellows, and pathologists.^{8,9,16} This work was based on self-reported burnout rather than the MBI or a similar instrument, and reported data from 101 residents and 29 fellows. Among these, about three-fourths reported burnout at some point, and another third reported burnout as ongoing. While reported rates of burnout in residency were substantially higher than in the present study, the sample size was much smaller and the response rate was unknown. The ASCP data for 402 practicing pathologists reported that 71.4% had felt burnout at some time and 32.9% reported it as a current issue. Age or years in practice seemed to show little difference.

Some large surveys have been conducted among physicians in training of all types, including pathologists. Generally, these studies report most pathologists as finding deep satisfaction in having chosen a career in pathology.^{17,18}

Burnout differs from stress, which we did not assess. Per *Merriam-Webster* stress is “a state of mental tension and worry caused by problems in your life, work, etc.”¹⁹ While stress and burnout involve exhaustion, the exhaustion in stress is predominantly physical although it has an emotional component as well. When experiencing burnout, as described by Maslach, the fatigue is predominately emotional, which can have physical manifestations. Stress manifests by over-engagement and over-reactive emotions, though chronic stress can become toxic and lead to burnout. Contrariwise, emotions are blunted in burnout, and disengagement is experienced. An important point about burnout is that it cannot be easily dampened by a quiet weekend or a vacation, which is different from stress.²⁰

The causes of burnout in any individual are likely several and accumulate over time. Maslach identified six contributing causes for workplace burnout, any of which might be mapped to the work environment of a practicing pathologist. These include work overload, sense of lack of control over the work environment, feeling of inadequate reward for contributions, breakdown of a sense of community among colleagues, absence of fairness in the work environment, and conflicting values, including ethical standards and adherence to the stated mission of the organization.⁶ Examples include lack of autonomy, bureaucracy (including regulatory and compliance issues), challenges of a LIS/EHR, mergers and acquisitions, workload, and isolation. Rehder et al. recently pointed out that the contributors to burnout among pathologists are largely similar to those of other healthcare providers.³ Still, they did

identify a few possibly unique contributors, including depersonalization due to lack of direct patient contact. They also found the perception that effort usually goes unrecognized. The consequences of burnout are also relatively generic and, therefore, not unique to pathologists. They may include inattentiveness, irritability, and “tiredness” resulting in job transitions, increased medical errors and consequent malpractice claims.

We consider the U-shaped temporal distribution in recollected burnout among pathologists (Figs. 1 and 2 and Tables 1 and 4) a notable finding. Considering that the respondents are at least two years beyond primary certification, their current perceived rate of burnout in the mid to high 40% range is a contemporary reflection of the condition of early (first decade) practitioners. It is reminiscent of their experience as first-year residents, while their subsequent years in training were relatively free of burnout. Furthermore, the data in Table 1 suggest that there are two distinct populations among our respondents with respect to reported experience with burnout—one group who appear to report themselves as burned out upon entering into new circumstances, whether training or practice, and then to become less burned out as they accommodate to these circumstances. The other group is overall less prone to report themselves as burned out but seems instead to respond to their circumstances with a gradually increasing perception of being burned out.

In the absence of similar data for comparison across the broad range of specialties, we cannot say whether the above-described phenomena are unique to pathology. Several of the authors are or have been pathology residency program directors and can attest that many residents entering pathology training have had far less exposure to the hospital practice of pathology in medical school than they have had to the actual practice of other medical specialties. This observation would plausibly align with an initial period of cognitive dissonance and possible burnout.

The observation that pathologists experience a jump in reported levels of burnout upon entry into practice may well reflect a more general phenomenon across specialties, reflecting taking on the full workload and responsibility (moral as well as legal) of practice, though without comparison data, we cannot say whether or how much this may vary among specialties. Future studies need robustly to tease out the factors that change among different periods of training and practice, and to assess how they might be eased.

We believe these conclusions may assist those responsible for pathology training programs and departments, but addressing burnout is a challenge throughout healthcare.²¹ Although focusing on causes and strategies for individual experiencing burnout is critical, it cannot be considered a complete solution to the challenge of burnout, since it affects groups broadly, e.g., institutions, patients, and society. Focusing too narrowly on those affected may appear to absolve society and healthcare organizations of correspondingly broad responsibility for the well-being of healthcare providers.

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Declaration of competing interest

None of the authors have declared any conflicting financial interests related to this manuscript.

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