"Pulling the Parachute": A Qualitative Study of Burnout's Influence on Emergency Medicine Resident Career Choices

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ABSTRACT

Objectives: About half of all resident physicians report symptoms of burnout. Burnout negatively influences multiple aspects of their education and training. How burnout may impact residents' career choices remains unclear. The authors explored the role burnout played in residents' career decisions.

Methods: This was a qualitative study among a sample of 29 emergency medicine residents from four institutions. Qualitative data were generated through four semistructured focus groups. The authors employed a constructivist approach to thematic analysis. Transcripts were coded and organized into major themes.

Results: Five major themes connecting burnout with residents' career choices emerged: 1) residents' current burnout and the prevention of future burnout figured prominently in their career considerations, 2) residents aimed to mitigate sources of burnout through their career choices, 3) residents' view of clinical work as a burden and a burnout contributor spurred the pursuit of other interests, 4) faculty advice and role modeling in relation to burnout shaped residents' career perspectives, and 5) residents weighed long-term burnout concerns with short-term financial needs.

Conclusion: Burnout played an important role in multiple aspects of residents' career considerations. Educators, program directors, and organization leaders can focus on identified target areas to address burnout's influence on residents' career decisions.

Burnout is a syndrome characterized by depersonalization, emotional exhaustion, and a sense of low personal accomplishment.[1] About half of all resident physicians report symptoms of burnout,[2,3] which has been attributed to high educational and work demands, lack of autonomy, and a poor work–life balance during training.[4–6] The Accreditation Council for Graduate Medical Education (ACGME) reinforced the significance of burnout's impact on resident education and training by adopting new standards that require programs to monitor and address resident burnout (e.g., creation of systems to identify burnout,

depression, and substance abuse; immediate, confidential, and affordable access to a mental health professional).[7] In addition, the recent publication of the National Academies of Medicine report "Taking Action Against Clinician Burnout" underscored the many detrimental consequences of burnout on physicians in training.[8]

One potential consequence of burnout on physicians may be its influence on their career decisions. Burnout appears to play a significant role in the career plans of medical students[9] and resident physicians across multiple specialties.[3] A prospective cohort study of U.S. resident physicians, for example, showed that burnout was associated with career choice regret.[3] Among practicing physicians, burnout was associated with early retirement or reductions in clinical hours despite the significant time, effort, and financial investment required to complete medical training.[10,11] In light of workforce concerns surrounding an anticipated national shortage of physicians[12] and transformations in the practice of medicine that contribute to burnout (e.g., greater emphasis on performance metrics, electronic health record documentation, and hospital reimbursement),[13,14] a better comprehension of the personal considerations that contribute to resident physicians' career decisions may shed light on the potential long-lasting effects of burnout on individual providers and the medical profession.

Knowledge of how burnout may influence residents' career plans remains limited despite increasing attention paid to their well-being during training.[3,15] Studies on the career choices of residents have focused mostly on programmatic and demographic factors that correlate with the pursuit of fellowship training, an academic career, or community practice.[16,17] An improved understanding of residents' considerations of their career plans in relation to burnout may inform ongoing efforts to address their burnout and professional well-being. The purpose of this study was to qualitatively explore the role of burnout in the career plans of emergency medicine (EM) resident physicians, who report some of the highest levels of burnout compared to trainees in other specialties.[18,19]

METHODS

Study Design

We performed a qualitative study to investigate the role of burnout in multiple aspects of resident education and training. Prior work from the same study examining burnout's impact on residents' educational experiences, attitudes, and practices has been previously described.[20] We focused specifically on burnout's influence on residents' career decisions in this paper. Details of the same methodology are summarized and briefly presented here. Participants' demographic data and burnout scores were generated through an electronic survey while qualitative data were generated through a series of semistructured focus groups. We applied a constructivist perspective and inductive approach to our qualitative data collection processes and analytic methods.[21,22] The study was approved by all participating sites' institutional review boards.

Settings and Participants

We enrolled EM residents from a convenience sample of four separate institutions located in the northeast, southeast, midwest, and west to ensure a sample from a range of geographic locations. Two of the selected institutions operated 4-year training programs, while the other two were home to 3-year programs. All sites were Level I trauma centers with annual emergency department volumes between 65,000 to 85,000 visits. Residents from all four programs also had opportunities to work in community ED settings via electives and rotations during their training. We recruited participants at each location via e-mail invitations on a first-response basis and limited each focus group to eight participants to ensure everyone had sufficient opportunities to speak.[23] We excluded PGY-1 residents from the study because at the time of recruitment they had only been in their roles as trainees for less than a year and their perspectives on burnout may still be partly based on their time as medical students. We also excluded residents who participated in the pilot focus group, in which study materials and procedures were tested and refined, that occurred at one of the four sites. Study focus groups occurred in January and February 2019 and were conducted face to face at each location in a quiet and private room. We provided a $100 Amazon gift card to each participant after completion of the survey and participation in the focus group.

Data Collection and Processing

Prior to participating in the focus groups, participants completed a survey consisting of the Maslach Burnout Inventory (MBI)[1] and demographic information (Data Supplement S1, Appendix S1, available as supporting

information in the online version of this paper, which is available at http://onlinelibrary.wiley.com/doi/10.1002/aet2.10535/full). As in previous studies, burnout was dichotomized and defined by high scores on the depersonalization (>12) or emotional exhaustion (>26) subscales of the inventory.[24] Quantitative data were collected through an electronic survey administered through Qualtrics (Provo, UT).

Qualitative data were generated through a series of in-person, semistructured focus groups centered on gathering information about participants' experiences with burnout and its role in their career decisions. For each group, the same moderator (DWL) was physically present to promote effective group process through the use of ground rules and a moderator guide (Data Supplement S1, Appendix S2). A second facilitator (CAG, SWN, JJ, TDS) audio-recorded the session, took field notes, and assisted in maintaining the flow of conversation. Moderators included active faculty at two of the four sites, although none were in formal roles of program leadership (i.e., program director or associate and assistant program director). To promote psychological safety and encourage frank discussions during focus groups, we informed participants that all conversations were confidential and that no one should share information outside of the study session. In addition, we made clear to participants that they were free to answer or not answer any question that was posed to the group. Finally, we emphasized that only deidentified data from the study would be analyzed and presented.

The moderator guide and group procedures were developed based on group process and focus group principles[23] with attention to the study's purpose. Semistructured questions and probes were developed through a modified nominal group technique[25] using information from published research findings, informed by expert opinion (DWL, TDS), undergraduate and graduate medical educators (CAG, SWN), and the professional experiences of the study team (DWL, TDS, CAG, SWN). Congruent with established focus group methodology,[23] no push toward ensuring consensus was made during each focus group. We reached thematic sufficiency after three focus groups but included data from all four focus groups for analyses.

Data Analysis

We analyzed quantitative data from Qualtrics using SPSS for Windows, v.25.0 (SPSS, Inc., Chicago, IL).

We used descriptive statistics and confidence intervals to describe the characteristics of the study sample.

We used Dedoose software, v.8.2.14 (SocioCultural Research Consultants, Manhattan Beach, CA), to aid qualitative analysis and data organization. We used the constant comparative approach to conduct thematic

Table 1
Steps to Increase Result Trustworthiness

Credibility (aka truth value)
- Conducting focus groups using semistructured questions about the influence of burnout on participants' career choices
- Asking participants to describe their experiences with burnout from their own perspectives and in their own words
- Identifying negative cases in data transcripts to analyze a full range of experiences
- Identifying individual patterns of responses (themes) and meanings for each participant
- Linking central themes and meanings about burnout and career choices across participants to form conclusions
- Member checking (data analyses taken back to some participants)
- Clarification during the focus group process, for example, "Can you elaborate further?"
- Audiotaping focus groups to generate an accurate representation of what was said and discussed

Dependability (aka consistency)
- Identifying explicit specific aims that are clear and congruent with the research design
- Frequent referral to the specific aims during data analysis and conclusion drawing phases of the study
- Utilizing comparable data collection (focus group moderator guide, demographic form, standardized instruments), and experienced, consistent moderators who reviewed each others' transcripts for equivalency
- Verbatim transcription of audiotaped focus group interviews into transcripts
- Accuracy checks of transcripts against audio recordings by study investigators
- Recording field notes during and immediately following each focus group
- Maintaining a comprehensive study journal as an audit trail of key decisions
- Independent and collaborative coding of transcripts by several team members
- Frequent research team meetings to: assess recruitment, discuss scheduling, compare and contrast codes, develop themes, search for negative cases, discuss contrasting ideas and explanations, generate a range of meanings, verify interpretations and conclusions with data
- Maintaining a master list of codes, themes, and meanings
- Development of focus group summaries

Confirmability (aka relative neutrality)
- Maintaining transparency about team members' individual assumptions, beliefs, and values (reducing moderator bias)
- Reviewing focus group transcripts to ensure that participants are not being led
- Clarification during the focus group process, for example, "Could you provide an example?"
- Supporting findings and conclusions with specific data
- Member checking

Transferability (aka generalizability)
- Recruiting participants from four geographically diverse sites, different program types (3- vs. 4-year), and across multiple levels of residency experience (PGY-4, -3, and -2)
- Comparing participants' characteristics and burnout profiles with national samples

analysis of the study data.[26,27] Details of the analytic process have been previously described.[20] Steps taken to increase the trustworthiness of our findings are detailed in Table 1.

RESULTS

Twenty-nine EM residents participated in four focus groups (numbers of participants ranged from seven to eight per group) that lasted 80 to 90 minutes. Characteristics of the participants have been presented elsewhere[20] and are summarized in Table 2. The proportions of male and female residents in our sample were similar to those in a 2018 to 2019 national sample of active EM residents.[28] Over half of our participants (18, 62.1%) reported high scores on the depersonalization or emotional exhaustion subscales of

Table 2
Characteristics of Study Participants

Characteristic	n (% of 29)
Age (years)	Median 30 (IQR 28–31)
Gender identity	
Male	18 (62.1)
Female	11 (37.9)
Current training level	
PGY-2	7 (24.1)
PGY-3	10 (34.5)
PGY-4	12 (41.4)
Institution	
1–Northeast	8 (27.7)
2–Southeast	7 (24.1)
3–West	7 (24.1)
4–Midwest	7 (24.1)
Total educational debt	
≤$50,000	8 (27.7)
$50,001–$100,000	3 (10.3)
$100,001–$150,000	2 (6.9)
$150,001–$200,000	4 (13.8)
$200,001–$250,000	7 (24.1)
>$250,000	5 (17.2)
Career plans	
Fellowship	10 (34.5)
Academic medical center/teaching hospital	6 (20.7)
Community-based hospital	13 (44.8)
Burnout (dichotomized)	18 (62.1)
Maslach Burnout Inventory, mean (95% CI)	Mean
Emotional exhaustion	25.0 (20.9–29.2)
Depersonalization	15.7 (12.8–18.6)
Personal accomplishment	40.1 (38.2–42.0)

the MBI as previously reported.[20] The majority (18, 62.1%) disclosed educational debts greater than $100,000, including many (12, 41.3%) with debts greater than $200,000. Just under half of our participants (13, 44.8%) planned to enter practice in a community-based hospital, with the remainder pursuing fellowship (10, 34.5%) or working in an academic center (6, 20.7%).

In our qualitative analysis, we identified five major themes that connected burnout and career choice. Those themes were: 1) residents' current burnout and the prevention of future burnout figured prominently in their career considerations, 2) residents aimed to mitigate sources of burnout through their career choices, 3) residents' view of clinical work as a burden and a burnout contributor spurred the pursuit of other interests, 4) residents incorporated faculty advice and role modeling on burnout into their career perspectives, and 5) residents weighed long-term burnout concerns with short-term financial needs. Quotations are identified by the participant's level of training at the time of the focus group. A summary of exemplar quotes by major themes is presented in Table 3.

Residents' Current Burnout and the Prevention of Future Burnout Figured Prominently in Their Career Considerations

Residents took into account many factors when planning their careers after training. While we did not ask participants to rank these factors by importance, many cited burnout as a major consideration both in the short term and in the long term when choosing their next career steps. This was the case for those residents who were experiencing burnout as well as those who were not, but who anticipated experiencing it in the future:

> Burnout really crystallized my future, at least my short-term career plans. (PGY-4)

> Awareness of burnout in the future was a key component in helping me understand what I need to do now. My career choice to do fellowship was very much for long term gains and protection from being burned out. (PGY-3).

Burnout also shaped residents' career preparation throughout training. For some, burnout was the catalyst for them to seek additional career opportunities

Table 3
Exemplar quotes by theme

Major Themes	Exemplar Quote
Burnout played an important role in residents' career choices	*"Fear of burnout is why I elected to diversify my future practice and why I chose to do fellowship." (PGY-3)*
Residents attempted to mitigate sources of burnout through career choices	*"What will protect me from burnout is working in a place where it's more collegial. People help each other out, they're nice to each other. Whereas now the biggest thing that frustrates me is the difficult communication and getting things done for patients." (PGY-3)*
Residents' view of clinical work as a burnout contributor spurred their pursuit of other interests	*"It becomes a meat market and you need to see 1.7 patients per hour, and these are the metrics you need to meet. [Just doing] that would burn me out." (PGY-2)*
Faculty advice/role modeling in relation to burnout shaped residents' career perspectives	*"It's the anticipation of burnout from mentors and decades of emergency physicians before us who didn't understand that as well as our generation does. And I think that absolutely influenced our career choices." (PGY-3)*
Residents weighed long-term burnout concerns with short-term financial needs	*"Once you're financially independent you don't have to worry about paying back a quarter of a million dollar loan. Then you can take the job that is half-time and get you the kind of lifestyle you want with the amount of burnout you want to tolerate." (PGY-3)*

outside of clinical EM. For others, burnout acted as a hindrance to engage in career building:

I definitely am researching what can I do as a side gig, because I'm burned out and cannot do this full-time for the rest of my life. There are other things I can do and I'm really trying to figure that out. (PGY-2).

There were prolonged stretches of residency when I was so burned out, the time I should have been preparing for my future—like research, establishing mentor relationships, emailing the right people—that didn't happen as much as I wanted to. (PGY-3).

Finally, burnout's influence on residents' career choices was prominent when residents were actively job seeking during their final year of training:

The questions I asked on the interview trail changed based on the burnout I've experienced in residency. I asked faculty how many people go into industry, have expert consulting, and can reduce their clinical time? Those questions would not have come up when I wasn't burned out. My decision to go into XXX fellowship switched to an avenue to get me out of medicine. I

wanted a place where I could pull the parachute. (PGY-4).

Residents Aimed to Mitigate Sources of Burnout Through Their Career Choices

Many participants recalled that having witnessed burnout or experienced the brunt of others' burnout through unprofessional behaviors was influential in their career choices. Residents who described a toxic work environment during training explained that they specifically sought jobs in work environments that would be different:

Primarily [contributing to] burnout is conflict with other residents [and services] that are specific to a teaching facility. So I'm really excited to leave teaching hospitals. (PGY-4).

There's a different attitude among pediatric specialists who have been following these patients and love them and are excited to admit them or give you close follow-up. Versus adult specialists who are incredibly burned out, overworked, and may just want this to be somebody else's problem. I would like to be in an environment where people do not see their patients as a burden and people want to take care of their patients. (PGY-2).

While some participants noted interpersonal conflicts and difficult consultant communication as the main drivers of their burnout, others attributed much of their burnout to their intolerance of clinical uncertainty and fear of litigation. This resulted in participants planning career paths that would minimize these apprehensions:

> The ED is an untenable environment to be in all the time. If you screw up, you could ruin someone's life and your own because you're going to get sued. That's a lot of pressure to be your full-time job. [I can] go inject Botox part-time. That's a cash business and nobody screams at you. (PGY-2).

> The stakes for making a mistake in our field contributes to burnout and we're feeling it a lot more now as PGY-4s where a mistake translates to, "Oh my God if I was an attending I would have been sued, my life would be over." That makes me feel terrible about myself and definitely [is not sustainable]. (PGY-4).

Residents' View of Clinical Work as a Burden and a Burnout Contributor Spurred the Pursuit of Other Interests

Almost all participants believed that a career primarily focused on the practice of EM would inevitably lead to burnout. Many sought variety in their work as a way to prevent burnout. Some participants explained that a diversity in work roles and responsibilities would contribute to their intellectual curiosity and would subsequently mitigate burnout:

> I felt strongly toward an academic career because curiosity is an important preventative for burnout. Being in a place where everyone around me is asking important questions and working to solve those [questions]. That environment is protective for me, as opposed to clock in, clock out. (PGY-4).

> I would be better at my clinical job if I am happier, more energized, and more excited to be there by balancing it with another skill set or academic passion. (PGY-3)

Other participants sought engagement in something other than the general practice of EM as a way to decrease their clinical obligations. Most explained that this was a significant motivator to pursue fellowship training:

> Burnout played into my decision to do fellowship because you can find your niche quicker. Then you get that buydown quicker and you get less time clinically. Because clinical time is what we're all alluding to as a burden. (PGY-3).

> I made my career decision based on preventing burnout. The way I foresee preventing burnout is decreasing shift burden, which you can barter with when you're at an academic place and you have a niche so you're doing something else besides clinical work. (PGY-4).

Participants who did not wish to pursue fellowship training or enter academics similarly viewed clinical shifts as a burden and as a contributor to burnout. These participants explained that their future strategy to mitigate burnout was working less:

> You can take the job that is half-time or whatever balance gets you the kind of lifestyle you want plus the amount of burnout you want to tolerate. (PGY-3)

> Because of our high burnout rate you have to have something that's going to get you a shift buydown. Whether it's working in the community and just making a lot of money and that's your buydown. Because I don't think I could be doing my job for twenty years at the same rate now. (PGY-3).

Residents Incorporated Faculty Advice and Role Modeling on Burnout Into Their Career Perspectives

Participants explained that messaging, frequently explicit, from faculty made it clear that it was important to have a career plan that included cutting back on clinical work to prevent burnout. These cues were widespread in the academic culture and trainees picked up on these signals from as early as their time in medical school:

> They're telling me, "You need something else so that when you're fifty and burned out and you

want to cut back on shifts you have something to fall back on." (PGY-3)

I distinctly remember as a medical student my mentor saying, "Hey it's all about getting your shifts bought down so you can do less shifts in the ER." I had no idea what he meant because don't you want to work in the ER more as an ER doctor? (PGY-4).

Other participants learned what they needed to do to manage burnout in their future careers through faculty role modeling, both positive and negative:

A big part of why I am not going into academics is because of the burnout I feel and the burnout I see in the faculty. I can't do this for another year. Maybe in the future I will come back to academics, but right now, this is the decision I have to make for my life. (PGY-4).

The senior attendings who are still here and had their own experiences with burnout have helped me anticipate that and understand what I need to do to protect myself from it. (PGY-3).

Residents Weighed Long-term Burnout Concerns With Short-term Financial Needs

For almost all participants, economic pressures played a large role in their career choices. Concerns about money were frequently described as contributing to burnout. Perhaps unique to this generation of residents, many pointed out their sizeable student debt as a significant factor in their career choices:

Maybe I have financial burnout because I feel like we work as much as we do for so little. The idea of taking a high-paying community job is enticing to get financial independence so you can make more lifestyle decisions in the future that will help with burnout. (PGY-3).

The difference with our generation is we've got a quarter million in debt, and you're at 8% interest with some of your loans. This is also the stage where you're trying to have kids or get a house. So I would love to go into academics but the reason that I'm not is I need to get to the point where if I get hit by a bus, my family has some money. (PGY-2).

Although financial pressures contributed to many residents' sense of burnout, participants explained that the future income associated with the practice of EM could be a tool in managing burnout:

I want to go into the community because I know I can work a reasonable amount and be able to pay off my loans. I have that freedom to decide that eight shifts a month sounds good and makes me feel the least burned out. I think I can get there faster if I do it this way. (PGY-3).

Some described having to do a calculus that weighed factors of burnout and financial freedom when choosing career paths. Often times economic needs took priority in the short term, while burnout factored in their long-term plans:

Finances, in the short-term, have more sway over what we plan on doing because we've already proven you can put up with a lot over three years. I think long term that's where burnout comes into play for career longevity. (PGY-3).

Ultimately some participants recognized that preventing burnout was not necessarily about a particular career choice but rather finding what was professionally and personally fulfilling:

I don't think one road is the road to prevent burnout, like community versus academics. There's the potential for burnout in all of those things, so it's trying to figure out what will make me happiest. (PGY-3).

DISCUSSION

It was evident from our qualitative results that burnout played a large role in residents' decision making about their next career steps. As reported previously,[20] our geographically diverse sample of EM residents from 3- and 4-year programs reported levels of burnout similar to those of other studies on EM residents.[18,29–32] Most participants made their career decisions in part after taking into account their experiences with burnout during training. Many residents sought out jobs that they perceived had less toxic or dysfunctional work environments and fewer difficult or unprofessional interactions with coworkers and consultants. Similarly, others pointed out that their intolerance of

clinical uncertainty and concerns of litigation spurred their plans to find jobs with responsibilities that would not involve the practice of clinical EM. While it is reasonable for residents to consider these factors alongside others when planning their careers, it is concerning that important job decisions were made partly in response to contributors of burnout that were unique to their training environment and that could be modified. For example, difficult or unprofessional interactions with colleagues and consultants could be addressed through organizational cultural changes at the system level[33,34] as well as communication techniques at the individual level.[35,36] Likewise, tolerance for clinical uncertainty and fear of litigation could be mitigated through specialty-wide clinical guidelines such as the Choosing Wisely campaign[37] and provider-based education in enhancing patient engagement and shared decision making.[38,39] Although these factors likely contribute to burnout for physicians at all stages of their careers, they may be especially impactful for less experienced resident physicians whose clinical experiences are limited to the unique characteristics of their training environment. While some residents may learn how to mitigate these burnout factors during training, others may not do so until later in their careers. For the latter group, it would be regrettable if their career decisions were driven in response to potentially transient burnout contributors and irrevocably altered their long-term career paths. Focused educational and career planning efforts during training to address these issues may help residents make more informed decisions about their next career steps.

The vast majority of our study participants, regardless of career paths in fellowship, academics, or community practice, viewed clinical work as a burden to be avoided and looked for ways in which they could "pull the parachute." In addition to reasons of work-type variety, intellectual engagement, or career growth, many mentioned that they chose to pursue fellowship or an academic niche to decrease their future clinical obligations. For those who planned to practice in community settings, the anticipated higher financial compensation was viewed as a way for them to work less in the future. Almost all participants in our study were already planning how they were going to cut back on clinical hours before they even started their careers as attending physicians. Many participants recalled that messaging and advice from faculty contributed to their view of clinical practice as a burden. This may have been the case because faculty and residents potentially perceive the culture within academic medical centers to assign greater value to nonclinical achievements, such as research awards or other scholarly accomplishments.[40–42] Faculty are also likely biased in their opinions about clinical work due to the fact that they chose to work in an academic setting, in which they may have significant portions of their effort devoted to nonclinical duties. Regardless of the reason, the perception of clinical work as burdensome has important ramifications for the physician workforce.[43] Prior work demonstrated the prominent role of burnout in physicians' decisions to cut back their clinical hours, plan for early retirement, or leave the profession entirely.[10] Academic medical centers and the residency programs they house may need to acknowledge this issue and design initiatives to recognize the importance, value, and rewards of high-quality clinical practice in and of itself.

Finally, educational debt frequently contributed to residents' experiences with burnout as a sense of insufficient financial reward for the work they put in. Without factoring in other financial liabilities, the majority of our participants reported significant educational debts of greater than $100,000, a figure consistent with the latest data issued by the Association of American Medical Colleges.[44] The pressures associated with this "financial burnout" affected many participants' career plans. The role of financial pressures in the career decisions of medical students and residents has been examined,[45–48] though how burnout influences these choices is less well understood. For some of our participants, the need for greater financial rewards in the near future swayed them away from fellowship or academics and into community practice. For others, achieving financial security was their mechanism of dealing with the inevitability of burnout by allowing them to cut back their clinical hours in the future. Most residents described having to do a personal calculus weighing financial interests with career goals and how burnout could best be mitigated in the long term. Through the lens of "financial burnout," it would be interesting to determine in future studies if physicians who have achieved more financial security or independence from debt would have reconsidered their career plans. In the meantime, the formal incorporation of financial planning in the education of residents may help them make better career decisions.[49]

LIMITATIONS

Similar to what we reported previously,[20] there were several limitations to our study. First, our sample consisted of only EM residents, albeit from four geographically diverse sites and from 3- and 4-year programs. Second, the study took place during winter and the timing may have influenced participants' responses. Third, we did not intend to demonstrate causality between burnout and resident career decisions. Fourth, participants were informed that the study was focused on their experiences with burnout and they may have been primed to have burnout take a salient role in their responses to focus group questions. We also did not screen for respondent biases in regard to burnout when recruiting study participants. Finally, participants may not have been fully candid in their focus group contributions given the use of EM faculty as moderators even though none of the moderators were members of program leadership.

CONCLUSION

Burnout appeared to play a large role in the career decisions of resident physicians. Residents' experiences with burnout during training spurred them to seek jobs that they perceived would have fewer burnout contributors in the work environment. Residents' perceptions of clinical work as leading inevitably to burnout also shaped many of their plans to pursue fellowship training or find a professional niche, engage in other work responsibilities, or cut back on clinical hours. Mentoring from faculty as well as enculturation from training in academic environments helped shape these perceptions. Finally, residents explained the complex calculus they had to make regarding their careers that balanced short-term financial needs with long-term burnout concerns. We highlighted some targeted areas that educators, program directors, and organization leaders can focus on to address burnout's influence on resident physicians' career plans.

References

1. Maslach C, Jackson SE, Leiter MP. Burnout Inventory Manual. 3rd ed. Palo Alto, CA: Consulting Psychologists Press, 1996.

2. Prins JT, Gazendam-Donofrio SM, Tubben BJ, van der Heijden FM, van de Wiel HB, Hoekstra-Weebers JE. Burnout in medical residents: a review. Med Educ 2007;41:788–800.

3. Dyrbye LN, Burke SE, Hardeman RR, et al. Association of clinical specialty with symptoms of burnout and career choice regret among US resident physicians. JAMA 2018;320:1114–30.

4. Dyrbye L, Shanafelt T. A narrative review on burnout experienced by medical students and residents. Med Educ 2016;50:132–49.

5. Bilimoria KY, Chung JW, Hedges LV, et al. National cluster-randomized trial of duty-hour flexibility in surgical training. N Engl J Med 2016;374:713–27.

6. Holmes EG, Connolly A, Putnam KT, et al. Taking care of our own: a multispecialty study of resident and program director perspectives on contributors to burnout and potential interventions. Acad Psychiatr 2017;41:159–66.

7. Common Program Requirements (Residency). Chicago, IL: Accreditation Council for Graduate Medical Education, 2019. Available at: https://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/CPRResidency2019.pdf. Accessed July 15, 2020.

8. National Academy of Medicine. Taking Action Against Clinician Burnout. A Systems Approach to Professional Well-being. Washington, DC: National Academies of Sciences, Engineering, and Medicine, 2019.

9. Enoch L, Chibnall JT, Schindler DL, Slavin SJ. Association of medical student burnout with residency specialty choice. Med Educ 2013;47:173–81.

10. Shanafelt TD, Mungo M, Schmitgen J, et al. Longitudinal study evaluating the association between physician burnout and changes in professional work effort. Mayo Clin Proc 2016;91:422–31.

11. Dewa CS, Jacobs P, Thanh NX, Loong D. An estimate of the cost of burnout on early retirement and reduction in clinical hours of practicing physicians in Canada. BMC Health Serv Res 2014;14:254.

12. IHS Markit Ltd. The Complexities of Physician Supply and Demand: Projections from 2017 to 2032. Washington, DC: Association of American Medical Colleges, 2019.

13. Sinsky CA, Dyrbye LN, West CP, Satele D, Tutty M, Shanafelt TD. Professional satisfaction and the career plans of US physicians. Mayo Clin Proc 2017;92:1625–35.

14. Sinsky CA. Designing and regulating wisely: removing barriers to joy in practice. Ann Intern Med 2017;166:677–8.

15. Tian L, Pu J, Liu Y, et al. Relationship between burnout and career choice regret among Chinese neurology postgraduates. BMC Med Educ 2019;19:162.

16. Burkhardt J, Kowalenko T, Meurer W. Academic career selection in American emergency medicine residents. Acad Emerg Med 2011;18:S48–53.

17. West CP, Dupras DM. General medicine vs subspecialty career plans among internal medicine residents. JAMA 2012;308:2241–7.

18. Lin M, Battaglioli N, Melamed M, Mott SE, Chung AS, Robinson DW. High prevalence of burnout among US emergency medicine residents: results from the 2017 national emergency medicine wellness survey. Ann Emerg Med 2019;74:682–90.

19. Shanafelt TD, Hasan O, Dyrbye LN, et al. Changes in burnout and satisfaction with work-life balance in physicians and the general US working population between 2011 and 2014. Mayo Clin Proc 2015;90:1600–13.

20. Lu DW, Germann CA, Nelson SW, Jauregui J, Strout TD. "Necessary compromises": a qualitative exploration of the influence of burnout on resident education. AEM Educ Train 2020;4.

21. Charmaz K. Grounded theory: objectivist and constructivist methods. In: Denzin NK, Lincoln YS, editors. Hanbook of Qualitative Research. 2nd ed. Thousand Oaks, CA: Sage Publications, Inc., 2000:509–35.

22. Mills J, Bonner A, Francis K. The development of constructivist grounded theory. Int J Qual Methods 2006;5:25–35.

23. Krueger RA, Casey MA. Focus groups: a practical guide for applied research. 5th ed. Thousand Oaks, CA: Sage Publications, Inc., 2015.

24. Dyrbye LN, West CP, Shanafelt TD. Defining burnout as a dichotomous variable. J Gen Intern Med 2009;24:440; author reply 1.

25. Sondergaard E, Ertmann RK, Reventlow S, Lykke K. Using a modified nominal group technique to develop general practice. BMC Fam Pract 2018;19:117.

26. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol 2006;3:77–101.

27. Corbin JM, Strauss AL. Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory. 4th ed. Los Angeles, CA: Sage Publications, Inc., 2015.

28. Table B3. Number of Active Residents, by Type of Medical School, GME Specialty, and Sex. 2019. Available at: https://www.aamc.org/data-reports/students-residents/interactive-data/report-residents/2019/table-b3-number-active-residents-type-medical-school-gme-specialty-and-sex. Accessed July 15, 2020.

29. Kimo Takayesu J, Ramoska EA, Clark TR, et al. Factors associated with burnout during emergency medicine residency. Acad Emerg Med 2014;21:1031–5.

30. Lu DW, Dresden S, McCloskey C, Branzetti J, Gisondi MA. Impact of burnout on self-reported patient care among emergency physicians. West J Emerg Med 2015;16:996–1001.

31. Lu DW, Dresden SM, Mark Courtney D, Salzman DH. An investigation of the relationship between emergency medicine trainee burnout and clinical performance in a high-fidelity simulation environment. AEM Educ Train 2017;1:55–9.

32. Williamson K, Lank PM, Cheema N, Hartman N, Lovell EO; Emergency Medicine Education Research Alliance (EMERA). Comparing the Maslach Burnout Inventory to other well-being instruments in emergency medicine residents. J Grad Med Educ 2018;10:532–6.

33. Hickson GB, Pichert JW, Webb LE, Gabbe SG. A complementary approach to promoting professionalism: identifying, measuring, and addressing unprofessional behaviors. Acad Med 2007;82:1040–8.

34. Sanchez LT. Disruptive behaviors among physicians. JAMA 2014;312:2209–10.

35. Aeder L, Altshuler L, Kachur E, Walker-Descartes I. Empowering trainees to promote professionalism. Clin Teach 2018;15:304–8.

36. Managing Disruptive Behavior in the Healthcare Workplace. Edmonton, Alberta: College of Physicians & Surgeons of Alberta, 2010.

37. Levinson W, Kallewaard M, Bhatia RS, et al. 'Choosing Wisely': a growing international campaign. BMJ Qual Saf 2015;24:167–74.

38. Berger Z. Navigating the unknown: shared decision-making in the face of uncertainty. J Gen Intern Med 2015;30:675–8.

39. Alam R, Cheraghi-Sohi S, Panagioti M, Esmail A, Campbell S, Panagopoulou E. Managing diagnostic uncertainty in primary care: a systematic critical review. BMC Fam Pract 2017;18:79.

40. Durso SC, Christmas C, Kravet SJ, Parsons G, Wright SM. Implications of academic medicine's failure to recognize clinical excellence. Clin Med Res 2009;7:127–33.

41. Aronoff DM. And then there were none: the consequences of academia losing clinically excellent physicians. Clin Med Res 2009;7:125–6.

42. Christmas C, Durso SC, Kravet SJ, Wright SM. Advantages and challenges of working as a clinician in an academic department of medicine: academic clinicians' perspectives. J Grad Med Educ 2010;2:478–84.

43. Salsberg ES. Is the physician shortage real? Implications for the recommendations of the institute of medicine committee on the governance and financing of graduate medical education. Acad Med 2015;90:1210–4.

44. Medical Student Education: Debt, Costs, and Loan Repayment Fact Card. Washington, DC: Association of American Medical Colleges, 2018.

45. Phillips JP, Peterson LE, Fang B, Kovar-Gough I, Phillips RL Jr. Debt and the emerging physician workforce: the relationship between educational debt and family medicine residents' practice and fellowship intentions. Acad Med 2019;94:267–73.

46. Rohlfing J, Navarro R, Maniya OZ, Hughes BD, Rogalsky DK. Medical student debt and major life choices other than specialty. Med Educ Online 2014;19:25603.

47. Phillips JP, Wilbanks DM, Salinas DF, Doberneck DM. Educational debt in the context of career planning: a qualitative exploration of medical student perceptions. Teach Learn Med 2016;28:243–51.

48. Steiner JW, Pop RB, You J, et al. Anesthesiology residents' medical school debt influence on moonlighting activities, work environment choice, and debt repayment programs: a nationwide survey. Anesth Analg 2012;115:170–5.

49. Ahmad FA, White AJ, Hiller KM, Amini R, Jeffe DB. An assessment of residents' and fellows' personal finance literacy: an unmet medical education need. Int J Med Educ 2017;8:192–204.

Supporting Information

The following supporting information is available in the online version of this paper available at http://onlinelibrary.wiley.com/doi/10.1002/aet2.10535/full

Data Supplement S1. Supplemental material.