

Tania M. Jenkins, Ph.D.
Research brief, September 2021

I. Introduction

American physicians are burned out in large numbers.¹ Physicians experience more burnout and lower job satisfaction than other workers of the same age² and similar education levels,³ even after accounting for workload.⁴ Despite having better physical health than the general population,⁵ physicians have significantly worse mental health, including higher suicide rates.⁶ The COVID-19 pandemic has exacerbated physicians' mental health challenges and 76% of healthcare workers reported burnout in September 2020 (vs. 35-54% in 2019).⁷ Physician burnout and distress contribute to preventable medical error,^{8,9} increased bias,¹⁰ and unprofessional conduct.¹¹ A healthy workforce is necessary for delivering high-quality patient care.

Although research on wellbeing in medicine has increased exponentially recently, much of it emphasizes individual-level causes and interventions. But individual-level approaches fail to address the broader structural factors that also shape physician satisfaction and wellbeing. A 2019 National Academies of Science, Engineering, and Medicine (NASEM) consensus study called for more research examining organizational and systemic factors influencing clinician burnout, but to date, no available study has comprehensively considered how these factors shape physicians' everyday experience.

To address this gap, this study used a novel socio-ecological framework (see Figure 1) adapted from NASEM's "systems model," to examine the interplay between individual, institutional, professional, and systems-level factors in shaping physicians' responses to their work conditions across the career span, starting with medical students all the way up to attending physicians.

II. Methods

Between December 2020 and August 2021, a clinic-based ethnographic study of pediatricians and trainees at "Nelligan Pediatrics Clinic" was undertaken. Nelligan Pediatrics Clinic is an academic primary care pediatrics clinic affiliated with "Nelligan Medical College" (pseudonyms are used to protect

Policy Implications

Structural factors at the institutional, professional, and societal level shape physician wellbeing & job satisfaction.

Because structural factors exacerbate one another, interventions must be holistically designed to address multiple factors simultaneously.

Policy interventions at the structural level should consider:

- 1) institutionally supporting inter-professional teams and spaces,
- 2) professionally (re)balancing service and learning in GME, and
- 3) societally empowering physicians of color.

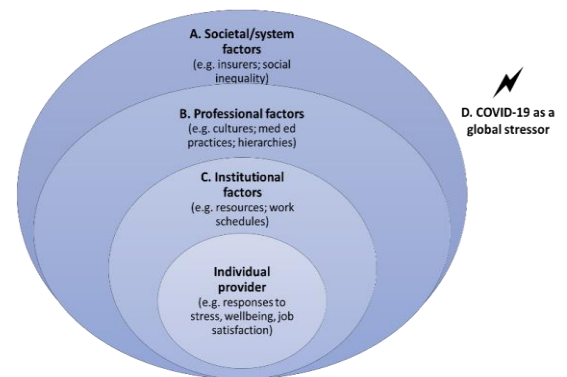


Figure 1. Socio-Ecological Model of Physician Satisfaction and Wellbeing

This work is funded through HRSA Cooperative Agreement #U81HP26495: Health Workforce Research Centers Program.

confidentiality). The clinic is located in a low socio-economic status neighborhood, with ~60% of patients insured through Medicaid. During 8 months of observation at the clinic, 65 attendings, residents, medical students, and clinic staff/administrators were interviewed. Of the interviewees, 74% identified as female and 45% identified as Black, Hispanic, Asian, or Middle Eastern. In interviews, burnout was measured among all respondents using the Maslach Burnout Inventory. Among physicians (residents, attendings, and physician-administrators), career satisfaction was also measured using the Global Satisfaction Measures Survey. Qualitative data analysis using open and focused coding¹² is underway and findings presented below may change as analyses continue.

III. Findings

Among the 94% of interviewees that completed the MBI, **63% exhibited at least 1 symptom of burnout: high emotional exhaustion, high depersonalization or low personal accomplishment.**¹³ Among medical students specifically, that figure rose to 74%. 91% of eligible physicians completed the Global Satisfaction Measures Survey. Among them, 58% view their current situation as a major source of frustration, and 39% feel that their medical career has not met their expectations. Thirteen percent (13%) would not become a physician if they could choose their career over again.

Table 1. Selected stressors

Institutional	Professional	Societal/System
<ul style="list-style-type: none"> • Centralized decision-making • Lack of transparency • Unresponsive leadership • Lack of flexibility in scheduling to accommodate life events (e.g. sickness, pregnancy) • Not feeling valued by institution • Productivity pressures 	The organization of training <ul style="list-style-type: none"> • Mismatched expectations • Balance of service and learning • “A world of judgment” “Superhero norm” <ul style="list-style-type: none"> • Push bodily needs aside • Don’t show ‘weakness’ Specialty culture <ul style="list-style-type: none"> • Emotional expectations 	<ul style="list-style-type: none"> • Social inequalities in health add complexity to visits • Addressing community needs • Patient satisfaction • Systemic racism • Rationalization of healthcare • Secondary trauma from encountering social inequality • Documentation requirements • Electronic health record erases line between work and home

Respondents identified different stressors that can be categorized as institutional, professional, or societal/system stressors (see Table 1). Salient **among trainees and junior physicians is the issue of mismatched expectations, especially regarding the amount of documentation in medicine.** Despite requiring increasing numbers of shadowing hours for admission to medical school, few trainees have a clear understanding of the day-to-day lived experience of physicians which can lead to resentment later in their careers.

Another important stressor for trainees is the balance between service and learning in Graduate Medical Education (GME). When there is too much emphasis on clinical productivity, residents feel like they are only valued for their throughput rather than as learners, which increases their cynicism. **The emphasis on clinical productivity also exacerbates a “superhero norm,” whereby trainees are encouraged to push aside their bodily needs, like going to the bathroom or eating meals, to avoid being perceived as lazy or as not doing the right thing for patients by peers and supervisors.** There is also a broad culture within medicine, starting in medical school, that discourages physicians and trainees from showing that they are struggling. Struggle implies weakness

and is compounded by parallel cultural norms within medicine of presenteeism and not ‘dumping’ additional work on over-worked colleagues, so physicians and trainees are dissuaded from taking time to care for themselves if they struggle.

The professional factors at play are compounded by institutional and system-level stressors that are present when working with a medically- and socially-complex patient population such as the one at the clinic being studied. Virtually all respondents *chose* to work with these more complex patients, but frequently feel like they are being asked by the institution to do more for underserved patients with fewer resources (like time). The patient population is thus paradoxically both a source of resilience *and* stress for these service-oriented physicians. The more complex patient population makes clinical productivity lower than colleagues at peer clinics, which increases pressure from the institution and further makes physicians and trainees feel discouraged. Productivity pressures are combined with a feeling that they are not providing the care they want to provide to this population. This is especially true for Black and Hispanic providers, many of whom want to get more involved in community organizing and advocacy (such as taking an afternoon to organize a neighborhood COVID vaccine clinic) but are discouraged from doing so because these activities do not help the institution’s bottom line.

Finally, amidst all these stressors, when pediatricians and trainees express frustration, they can get penalized. The culture of pediatrics is one that values happy, bubbly personalities and can-do attitudes, making it more noticeable (and less acceptable) when providers complain.

In sum, structural factors at the institutional, professional, and societal level work together to shape physician wellbeing and job satisfaction. ***Findings suggest that physicians and trainees effectively serve as shock absorbers, having to absorb, meet, and surpass increasingly impossible demands from institutions, health care systems, and their own profession.*** These demands and stressors do not operate in isolation – they often reinforce and exacerbate one another, like the push to make trainees work more and the underlying “superhero” norm within medicine, making them more synergistic than additive in some cases. ***This suggests that tackling one stressor at a time may be less effective than approaching them more holistically.***

Although these findings are not generalizable to other settings in the statistical sense, they are intended to be analytically generalizable,¹⁴ meaning the findings produce concepts and themes that may be applicable to other settings and can be empirically tested in future research.

◆ IV. Policy Implications

The study’s findings raise several implications for policy interventions at different structural levels:

Institutionally supporting interprofessional teams and team spaces. This study found that many providers who were excited to work with underserved patients felt under-supported by their institution in this important work. These findings suggest there may be a role for interprofessional teams composed of social workers, nurses, scribes, mental health workers, and interpreters to help support overwhelmed providers during complex visits. Team members also require space to work alongside each other; this particular clinic has separate workspaces for nurses, physicians, and other personnel. Building spaces where different providers can interact with and support one another may help make teams work more smoothly.

Professionally (re)balancing service and learning in GME. The findings suggest that the organization of training

is impacting trainees' wellbeing, particularly the balance between clinical service and learning in GME. One way to address this may be for HRSA to continue to support the training of primary care physicians (PCPs) in underserved communities so that their numbers are bolstered. A greater supply of PCPs could allow for greater institutional balance between clinical responsibilities and learning.

Societally empowering physicians of color. Numerous prior studies find that underrepresented minority physicians are often drawn to careers in medicine to serve their communities and provide primary care;¹⁵⁻¹⁷ the results of this study show, however, that physicians of color can sometimes feel disempowered or discouraged from doing community-based work or advocacy. This type of work can help build a culturally and linguistically competent health infrastructure in the community *and* may also help retain a diverse primary care workforce. Study findings suggest that HRSA and health care systems may want to expand current programs that support and fund these providers' efforts as they may be beneficial to patients and providers alike.

This project was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under Cooperative Agreement #U81HP26495, Health Workforce Research Centers Program. The information, content and conclusions are those of the authors and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

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