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Expressions of Medical Student Burnout on Reddit: An Autonetnographic Study of /r/medicalschool

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An Autonetnographic Study of /r/medicalschool

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Expressions of Medical Student Burnout on Reddit:
An Autonetnographic Study of /r/medicalschool

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Medical student burnout is currently incredibly common. Recent studies report that approximately 50 percent of students had scores indicative of burnout on the Maslach Burnout Inventory. Burnout can become chronic, and up to 73.2% of the afflicted fail to recover while they are trainees. This is significant because burnout profoundly affects the inner world of the physician and places them at a higher risk of depression, substance use disorder, and suicide; in turn, burnout impacts their professional behaviors and the quality of patient care. This dissertation explores the hypothesis that negative emotions that arise from unresolved ethical, technical, behavioral, and existential discomforts and their role in mediating burnout; this includes the discomforts experienced due to the lack of decision-making power held during medical training. I utilize an autonetnographic approach to understand how medical students on /r/medicalschool, an online news-aggregating forum, conceptualize and operationalize the term "burnout," how they cope with burnout, and what barriers and attitudes they face that perpetuate a system that fosters burnout. This autonetnography is a study of spaces and interactions on a freely accessible, anonymous public forum. Within these spaces and interactions, I explore how the social, economic, and political forces present within medical education shape the ethical affordances that

medical students have. Based on these understandings, I challenge the notion that medical student burnout is due to unresolved existential discomforts – an inability to come to terms with patients' death and suffering – but is rather due to the creation of an Existential void. Students feel lost as they question the purpose of their training because of the incongruency between the values and moral norms professed and those practiced in medicine, and they experience being objectified when reduced to quantifiable metrics, such as board scores and clinical evaluations. With this new insight and understanding into medical student burnout, I propose changes that address the root cause of student burnout – ontological insecurity caused by real-world micro- and macro-economic pressures.

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List of Abbreviations

UTMB	University of Texas Medical Branch
GSBS	Graduate School of Biomedical Science
IRL	“In real life”

Chapter 1: Introduction

On August 17, 2016, Kathryn Stascavage, a medical student at Icahn School of Medicine at Mount Sinai, committed suicide by jumping out of her apartment window, only three days into her fourth and final year. The Dean, Dr. David Muller, authored a perspective piece in the *New England Journal of Medicine* describing this experience. He and other administrators had just finished talking to the incoming first-year medical students about "well-being and self-care, the human side of medicine, and the importance of balancing social good with scientific progress and clinical excellence . . . [and reinforced] their expectations of a school that would care for them as people and teach them to do the same for their patients."[1] For him, burnout, depression, and suicide are rooted in a "culture of performance and achievement," and thus, he pledged to lead a paradigm shift that "[minimizes] the importance of MCAT scores and grade point averages in admissions, pull out of school ranking systems that are neither valid nor holistic, stop pretending that high scores on standardized exams can be equated with clinical or scientific excellence, and take other bold steps to relieve the pressure that we know is contributing at least to distress, if not to mental illness."[2]

In a follow-up news article a month later, Muller stated that Mount Sinai had changed their grading to pass/fail in the first two years to "cut down on competition," and that they will reconfigure the grading system for third and fourth year, so that instead of the top 25 percent and next 25 percent as cutoffs for "Honors" and "High Pass" grades, it

[1] David Muller, "Kathryn," New England Journal of Medicine376, no. 12 (23 March 2017): 1101. doi:10.1056/NEJMp1615141.

[2] Ibid., 1102.

would now be the top 33 percent and the next 33 percent respectively.[3] Muller stated that Mount Sinai will be working to withdraw from the *U.S. News and World Report* (USNWR) *Ranking for Medical Schools* in order to de-emphasize the importance of test scores, such as Step 1. After the first two years, medical students generally take Step 1, the first part of three exams required for licensure in the United States. This is currently the most commonly used standardized measure of medical students in the United States, and as such, is weighted heavily by residency programs and the USNWR's ranking algorithm. Muller states that Step 1, the first part of three exams required for licensure in the United States, is a "colossal waste of time" and "[they] know these students are going to be great doctors if they get a chance to evolve, rather than cramming for six months." The school also pledged to "ensure access to resources for physical health, from sleep hygiene information to nutrition to exercise."[4]

Rather than leading a paradigm shift, Icahn's implemented burnout interventions and student wellness initiatives have fallen short of its proposals. An examination of Icahn School of Medicine's webpages in 2018 speak for themselves. For the 2017-2018 school year, Icahn's matriculant median undergraduate Grade Point Average was 3.82/4.0, and the median MCAT score was 35.[5] According to Icahn School of Medicine's Student Handbook for the same year, first and second years are indeed graded on a Pass/Fail basis, but for third and fourth years, "grade cut offs are set by each clerkship director to create a goal

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[3] Lucette Lagnado, "Medical School Seeks to Make Training More Compassion-ate."https://www.wsj.com/articles/medical-school-seeks-to-make-training-more-compassionate-1490216679.

[4] Allison Bond, "Medical Student's Death Highlights High Rates of Physician Suicides." https://abcnews.go.com/Health/medical-students-death-highlights-high-rates-physician-suicides/story?id=47006198.

[5] Icahn School of Medicine at Mount Sinai, "Facts and Figures." http://icahn.mssm.edu/about/facts.

distribution of grades that is 25 percent Honors, 25 percent High Pass and 50 percent Pass"[6] and thus have not changed since Kathryn's death. Icahn is ranked #18 in Research and #39 in Primary Care in the 2019 *USNWR Rankings for Medical Schools*, indicating that it has not withdrawn from the ranking system.[7] Finally, while Icahn may have increased student access to mental health services by employing more providers, its student wellness initiative, conducted by a student organization, "IcahnBeWell," appears to be a webpage of links to various resources under six different headings: "spiritual," "emotional," "physical," "professional," "social," and "financial."[8] These link to webpages for different student associations, a meditation guide, alcoholics/narcotics anonymous, and guides on sleeping and eating adequately. In a critique of how Mount Sinai has responded to both medical student and resident suicides, an anonymous physician stated, "they say 'resources are available' without changing any of the [circumstances] that are creating the conditions that would require these resources to be available in the first place."[9] Commenters on Reddit, a popular news aggregating site/forum, are less generous, stating that Muller's article was "nothing but deflection and lip service."[10]

The pervasive problem of medical student and physician burnout, depression, and

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[6] Department of Medical Education, Student Handbook: 2017–2018 (New York, NY: Icahn School of Medicine at Mount Sinai, 2017), 90.

[7] U.S. News and World Report, "Icahn School of Medicine at Mount Sinai." https://www.usnews.com/bestgraduate-schools/top-medical-schools/icahn-school-of-medicine-at-mount-sinai-04072.; How exactly the U.S. News and World Report generates these rankings is unknown, however, it involves a combination of the application statistics of matriculating students, as well as the average Step 1 score.

[8] Icahn School of Medicine at Mount Sinai, "IcahnBeWell - Student Wellness Program."http://icahn.mssm.edu/education/students/health/be-well.

[9] Ashley Alese Edwards, "Why Do Female Physicians Keep Dying by Suicide at Mount Sinai St. Luke's Hospital?" https://www.refinery29 .com/2018/02/189624/mount-sinai-st-lukes-suicides.

[10] Anonymous, Dean of Icahn SOM on recent student suicide (NEJM) (Reddit, 2017). https://www.reddit.com/r/medicalschool/comments/60zbly/dean_of_icahn_som_on_recent_student_suicide_nejm/dfam528/.

suicide is not unique to Mount Sinai. An oft-stated statistic is that we lose 400 physicians and 150 medical students a year in the United States to suicide.[11] Additionally, male physicians are more than 40 percent likely to commit suicide than males in the general population, and female physicians are 130 percent more likely than other females.[12] Medical students are also more likely to commit suicide than their age-matched peers.[13] The latest national study on medical student suicides was conducted in 2014: the authors sent out a survey to the 133 accredited medical schools inquiring about student suicides from June 2006 to June 2011. Only ninety school representatives responded, and they only reported a total of six student suicides.[14] This indicates a lack of transparency and underreporting by administrators despite the study's reporting of aggregate data.

Many researchers have begun investigating burnout as a risk factor for suicidal ideation and consequential suicide attempts. Gernot Sonneck and Renate Wagner offer insight into the link between physician suicides and burnout:

> All doctors in medical practice carry a special burden: they are ethically required to render help to everybody who needs it and do everything possible for anybody, and that twenty-four hours a day. This puts enormous physical and psychological strain on the doctor . . . this pressure of the responsibility over life and death, which is considered one of the clinical competencies, begins already during medical training and continues into the clinical training.[15]

Sonneck and Wagner continue to hypothesize that the demands of having to keep up

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[11] Amitha Kalaichandran, "Suicide Among Physicians is a Public Health Crisis." https://www.huffingtonpost.ca/amitha-kalaichandran/physician-suicide_b_8665388.html.

[12] Claudia Center, et al., "Confronting Depression and Suicide in Physicians," *JAMA* 289, no. 23 (2003): 3161-66. doi:10.1001/jama.289.23.3161.

[13] Eva S. Schernhammer, "Taking Their Own Lives - the High Rate of Physician Suicide," *New England Journal of Medicine* 352, no. 24 (2005): 2474.

[14] Jacklyn Cheng, et al., "A National Survey of Medical Student Suicides," *Academic Psychiatry* 38, no. 5 (2014): 542–46.

[15] Gernot Sonneck and Renate Wagner, "Suicide and Burnout of Physicians," *OMEGA* 33, no. 3 (1996): 259.

with clinical knowledge are magnified when patients either die or are not fully cured. Furthermore, medicine is lonely and isolating, and physicians are subject to attacks from public opinion. For these reasons, Sonneck and Wagner claim that physicians develop burnout syndrome as a defense mechanism, and identify the symptoms and behaviors of depression, such as feeling hopeless or drug dependency, as common paths to suicide.[16] Following this argument, because the incidence of burnout amongst U.S. physicians is 42 percent, physicians are at significant risk of suicidal ideation and thus of committing suicide.[17] This hypothesized link is indeed supported by the previously mentioned data on physicians' increased risk of suicide.[18]

Burnout can become chronic, and some fail to recover while they are trainees. Tait D. Shanafelt and Liselotte N. Dyrbye's study on the chronicity of medical student burnout revealed that 73.2 percent of students surveyed remained burned out in the following year.[19] For medical students, emotional exhaustion 35-45 percent of medical students met the criteria for high emotional exhaustion, 26-38 percent for high depersonalization, and 45-56 percent had met the criteria for overall burnout. As trainees progress in their careers, the stakes are raised significantly as job demands increase and responsibility for patients becomes more direct. "Limited cross-sectional data suggest the prevalence of burnout is higher for students in more advanced years of training."[20] Residents had similar levels of emotional exhaustion but a higher

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[16] Ibid.

[17] Carol Peckham, *Medscape National Physician Burnout & Depression Report 2018* (New York, NY: Medscape, 2018). https://www.medscape.com/slideshow/2018-lifestyle-burnout-depression-6009235.

[18] Claudia Center, et al., "Confronting Depression and Suicide in Physicians," *JAMA* 289, no. 23 (2003): 3161-66. doi:10.1001/jama.289.23.3161.

[19] Liselotte N. Dyrbye, et al., "Burnout and Suicidal Ideation Among U.S. Medical Students," *Annals of Internal Medicine* 149, no. 5 (2008): 334-41. doi: 10.7326/0003^1819-149-5-200809020-00008.

[20] Liselotte N. Dyrbye and Tait D. Shanafelt, "A Narrative Review on Burnout Experienced by Medical Students and Residents," *Medical Education* 50, no. 1 (2016): 133; For more information on

prevalence of depersonalization (32-38 percent) and overall burnout (60 percent). These statistics suggest that while some recover, many remain burned out, and some become burned out. This is concerning because depersonalization, "being callous or detached toward patients, is most strongly associated with negative effects on professionalism."[21] For medical students, altruism and decreased support for social issues, such as providing care for the medically underserved and the right to healthcare for all, were also associated with burnout.[22] Furthermore, medical student burnout does affect patient care: the presence of symptoms of burnout was associated with behaviors such as being disingenuous about whether diagnostic tests had been ordered and reporting physical exam findings as normal when they were not assessed, among other self-identified unprofessional behaviors.[23]

Others extrapolate the effect of burnout on patient care from the single patient-physician relationship to the physician-society relationship, as they are concerned with burnout and its public health implications. The impact of physician suicides affect one million Americans a year, which results in both a disruption of care and a decrease in quality of care.[24] Franklin Warsh argues that we should care about the suicide of Robert Chu, a medical student who did not match to a residency position two years in a row, because "Canada invested roughly a half-million dollars – more than a decade's worth

decreased empathy and professionalism in burned-out medical students, please refer to Chantal M. L. R. Brazeau, et al., "Relationships Between Medical Student Burnout, Empathy, and Professionalism Climate," *Academic Medicine* 85, no. 10 (2010): S33-S36.

[21] Ibid., 133.

[22] Liselotte N. Dyrbye, et al., "Relationship Between Burnout and Professional Conduct and Attitudes Among U.S. Medical Students," *JAMA* 304, no. 11 (2010): 1176. doi:10.1001/jama.2010.1318.

[23] Ibid.

[24] Pamela Wible, "What I've Learned from My Tally of 757 Doctor Suicides," *The Washington Post* (2018).https://www.washingtonpost.com/national/health-science/what-ive-learned-from-my-tally-of-757-doctor-suicides/2018/01/12/b0ea9126-eb50–11e7–9f92–10a2203f6c8d_story.html?utm_term=.c471ce2553b4.

of the average family's total tax bill – to make Robert Chu a doctor, and he died before signing a single prescription,"[25] which he openly admits as "crass." Burnout is an ethical issue in the conventional sense because it "seems to affect both student professionalism and quality of patient care."[26]

Based upon my personal experiences within medical school and existing theories linking burnout to moral distress and injury in other healthcare professionals, I hypothesized that medical students experience burnout due to their position and the lack of decision-making power that they hold during their medical training. In this dissertation, I utilize an autonetnographic approach to understand how medical students on /r/medicalschool, an online news-aggregating forum, conceptualize and operationalize the term, "burnout," how they cope with burnout, and what barriers and attitudes they face which perpetuate a system that fosters burnout. Through conducting a search on /r/medicalschool for the posts directly referencing medical student burnout, I utilized inductive coding to thematically analyze the posts and comments. Rather than an ethnography, in which I would be following specific people, my autonetnography is a study of spaces and interactions on a freely accessible, anonymous public forum.

Within these spaces and interactions, I explore how the social, economic, and political forces present within medical education shape the ethical affordances that medical students have. An excessive focus on the individual's experience and risk factors for burnout, such as individual personalities and attitudes, is a dominant

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[25] Franklin Warsh, "Robert Chu's Suicide Sends a Message Medicine Cannot Ignore," *The Star* (2017).https://www.thestar.com/opinion/commentary/2017/06/20/robert-chus-suicide-sends-a-message-medicine-cannot-ignore.html.

[26] M. L. Jennings, "Medical Student Burnout: Interdisciplinary Exploration and Analysis," *Journal of Medical Humanities* 30, no. 4 (2009): 262. doi:10.1007/sl0912-009-9093-5.

underpinning of many burnout interventions, which do not speak to how people may feel that their actions are constrained by their circumstances and their environments.

CONCLUSION

Medical student and physician burnout, depression, and suicidality are currently incredibly common, and the increased utilization of social media over the last few years has resulted in increased awareness of and support for those experiencing these stigmatized mental states. As such, this present study is significant because it is timely and pertinent to the current practice of medicine. It is also the first autonetnographic study on medical student burnout. Due to the studied community's popularity, my dissertation can be likened to a large focus group in which medical students of different training levels at different institutions can openly discuss how they conceptualize burnout, identify contributing factors, as well as limitations to current burnout interventions. Ultimately, my dissertation contributes to scholarly literature on burnout, helping create a deeper understanding of the phenomena of medical student burnout, and thus, building more direct ways of addressing a deeply-rooted, systemic problem. The increase in wellness workshops in medical schools across the United States suggests that medical school administrators acknowledge that burnout needs to be addressed at the trainee level, because it is so pervasive and has deleterious effects on students' mental health and their subsequent inability to care for patients in a professional manner.

In addition, this dissertation furthers the expansion of the field of the anthropology of ethics, seeking to reframe burnout as an ethical issue utilizing the holistically expanded language as proposed in Chapter 2: Theoretical Framework.

Chapter 3 will connect the current research that constructs Reddit as a public to the self-construction of /r/medicalschool as a community that can create, circulate, and reshape the discourses around burnout online. The remaining chapters will utilize the data collected and analyzed through the autonetnographic method to situate the discourses on medical student burnout from /r/medicalschool within the social, political, and economic apparatuses surrounding academic medical centers. The discourses on /r/medicalschool present a counternarrative to the one prevalent within burnout research: it is not that medical students need to learn and practice self-care (e.g. eating healthy, sleeping regularly), but that they are unable to find the time to meet these needs due to the pressures they face within medical education. As such, this dissertation furthers the argument that burnout is not a problem that requires intervention on the individual level by bolstering one's resilience, but rather, is a problem that requires significant restructuring of the academic medical enterprise. Individualized interventions are temporary fixes that allow people to withstand their environments and complete their training; however, as my data shows, the current learning environment makes it difficult to live a life full of existential meaning.

In medicine, calling something an ethical problem often serves as a call to action - by reframing burnout within an ethical framework that attends to economic realities, this dissertation is also a political work that demands impactful actions to result from the dialogue surrounding burnout research. Because my data show that the process of professionalization and the learning environment is a major root cause of medical school burnout, my dissertation also proposes a pedagogical restructuring of medical schools and medical humanities education as one among many solutions. In the final chapter, I

will explore the potential, concrete changes and restructurings that would address how medical students are obstructed from living virtuous lives that resonate with their own values.

Chapter 2: The Language of Ethics and Its Application to Burnout

INTRODUCTION

The purpose of this dissertation is to utilize an autonetnographic method to explore how medical students conceptualize and operationalize burnout, as well as identify its causes and solutions as proposed by medical students. I begin this chapter by conducting a literature review, which defines burnout and identifies its consequences and causes in medical students. I then bring this discussion on burnout into conversation with an expanded language and conceptualization of ethics, my chosen theoretical framework. This review was concurrent with my data collection, analysis, and synthesis. The following literature review is not only limited to professional journals but also to published books and memoirs. Throughout the review, I point out gaps and assumptions in the literature.

REVIEW OF THE BURNOUT LITERATURE

Defining Burnout

Herbert J. Freudenberger was one of the first to describe the concept of burnout in print, drawing upon experiences and discussions of those involved in the free clinic movement in the late 1960s and early 1970s. Freudenberger initially used the dictionary definition of burnout to frame his discussion: "to fail, wear out, or to become exhausted by making excessive demands on energy, strength, or resources."[27] He describes the symptoms of burnout as manifesting in physical signs, such as gastrointestinal distress or headaches, and in behavioral signs, such as paranoia, irritability, inflexibility in thinking, and excessive

[27]Herbert J. Freudenberger, "Staff Burn-Out," *Journal of Social Issues* 30, no. 1 (1974): 159.

substance use. He then identifies the characteristics of individuals who are most at risk for burnout – the dedicated and the committed:

> Those of us who work in free clinics, therapeutic communities, hot lines, crisis intervention centers, women's clinics, gay centers, runaway houses, are people who are seeking to the recognized needs of people . . . and what we put up is our talents, our skills, we put in long hours with a bare minimum of financial compensation.[28]

The burned-out worker's greatest flaw is that they work too hard and care too much. They also over-identify with their patients, which has led to them mimicking their clients' issues: "the risk-taking behavior in counseling with speed freaks, psychotics, homicidal people and other paranoids sometimes borders on the lunatic."[29] There is also a need to give in excess, partially due to a "personal need to be accepted and liked."[30] Finally, burnout arises because of boredom, routinization, and the monotony of work that arises once "the excitement is over . . . the jobs we perform at the clinic are becoming less and less challenging and we are finding the people to have many similar problems - problems for which we have worked out a system of answers."[31]

Matthew J. Hoffarth attributes the widespread recognition of the burnout construct to Christina Maslach's work; while Freudenberger wrote mostly in clinical journals, Maslach wrote in both scholarly publications and popular magazines, "[expanding burnout's] relevance beyond psychoanalysis and the counter-culture . . . [turning] burnout from a relatively obscure syndrome into one with which many people could identify."[32] Maslach's early-career work with the Stanford Prison Experiment initially guided her

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[28] Ibid., 161.
[29] Ibid., 160.
[30] Ibid., 162.
[31] Ibid.
[32] Matthew J. Hoffarth, "The Making of Burnout: From Social Change to Self-Awareness in the Postwar United States, 1970–82," *History of the Human Sciences* 30, no. 5 (2017): 35.

theory on burnout: as she witnessed seemingly kind and gentle people turn into mean and tough guards once their shifts started, "the prison environment demonstrated to Maslach that situational and interpersonal stress in intimate environments could stifle anyone's humanistic inclinations."[33] In Maslach's subsequent work with health professionals, she concluded that burnout was due to chronic emotional arousal.[34]

Maslach refined the concept of burnout through studies on a broad range of professionals that serve the public. Her definition of burnout was more detailed and precise than that of Freudenberger: burnout is "a psychological syndrome that involves a prolonged response to chronic interpersonal stressors on the job. The three key dimensions of this response are an overwhelming exhaustion, feelings of cynicism and detachment from the job, and a sense of ineffectiveness and a lack of accomplishment."[35] Exhaustion, which stems from work overload and personal conflicts, is characterized by a feeling of "being overextended and depleted of one's emotional and physical resources."[36] Cynicism, which Maslach describes as a defense mechanism that arises from emotional exhaustion, is feeling detached or negatively towards their workplace and colleagues; this results in people doing just the bare minimum to fulfill their job requirements. Lastly, inefficacy describes "feelings of incompetence and a lack of achievement and productivity in work,"[37] which stems from a lack of resources as well as inadequate social support and professional development. In the best cases, people start off a job with "energy, involvement, and efficacy . . . when burnout begins, this sense of engagement begins to fade and there is a

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[33] Ibid., 37.

[34] Christina Maslach, "Burned-Out," *Human Behavior* 5, no. 9 (1976): 16–22.

[35] Christina Maslach, "Understanding Job Burnout," in *Stress and Quality of Working Life: Current Perspectives in Occupational Health*, Ana Maria Rossi, et al. (Greenwich, CT: Information Age Publishing, 2006), 37–38.

[36] Ibid., 38.

[37] Ibid.

corresponding shift from these three positive feelings to their negative counterparts. Energy turns into exhaustion, involvement turns into cynicism, and efficacy turns into ineffectiveness."[38]

The degrees to which one experiences any one of the dimensions of burnout is most commonly quantified through the Maslach Burnout Inventory (MBI), a validated questionnaire with twenty-two items. The MBI is not intended to be used as an psychiatric diagnostic tool, and experiencing symptoms of burnout should not be conflated with a mood disorder, such as anxiety, depression, or post-traumatic stress disorder.[39] It is a measure of how people experience their jobs and their workplaces; in contrast to burnout, mood disorders "pervade every aspect of life without being tied to a specific domain of life."[40] Furthermore, the MBI:

> identifies the hot issues for an organization. It shows which aspects of the organizational environment are out of sync with similar organizations or with the aspirations of staff members . . . Although managers cannot directly influence the thoughts and feelings of people throughout the organization, they can change policies on decision making, establish professional development programs for supervisors, and restructure the workload.[41]

In other words, in theory, the results of the MBI should be used to direct organizational changes to address the root causes of burnout, not individualized interventions to fix its symptoms.

The MBI, which is utilized in over 90 percent of empirical studies on burnout, is not without limitations and critiques.[42] Wilber B. Schaufeli and Toon W. Taris criticize the

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[38] Maslach and Leiter, *The Truth About Burnout*, Kindle Locations 298–99.
[39] Ibid., Location 1684.
[40] Ibid., Location 1685.
[41] Ibid., Location 1748–50.
[42] Wilmar B. Schaufeli and D. Enzmann, review of in *The Burnout Companion to Study and Practice: A Critical Analysis* (London, UK: Taylor & Francis, 1998), 71.

MBI for being “neither grounded in firm clinical observation nor based on sound theorizing. Instead, it has been developed inductively by factor-analyzing a rather arbitrary set of items.”[43] Furthermore, the MBI assesses a mixture of “an individual state (emotional exhaustion), a coping strategy (depersonalization) and a consequence (reduced personal accomplishment) – that should be studied in their own right.”[44] Alternative burnout inventories that address concerns about the construct validity of the MBI have been developed and studied. For example, the Oldenburg Burnout Inventory uses only two scales – physical, emotional, and cognitive exhaustion and disengagement – with a mix of positively and negatively worded questions.[45] The Copenhagen Burnout Inventory focuses on physical, emotional, and cognitive fatigue and makes distinctions between burnout resulting from work, clients, and personal life situations.[46] Both the Oldenburg and the Copenhagen Burnout Inventories base their questions on Arie Shirom’s conceptualization of burnout, which weighs fatigue and exhaustion more heavily than the lack of personal achievement.[47] However, despite presenting critiques that the MBI has methodological issues, can be limited in cross-cultural consistency, and is only commercially available, Schaufeli and Taris do not recommend replacing the MBI with other inventories because

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[43] Wilber B. Schaufeli, “Past Performance and Future Perspectives of Burnout Research,” *South African Journal of Industrial Psychology* 29, no. 1 (2003): 3.

[44] Wilmar B. Schaufeli and Toon W. Taris, “The Conceptualization and Measurement of Burnout: Common Ground and Worlds Apart,” *Work & Stress* 19, no. 3 (2007): 257.

[45] Jonathon R. B. Halbesleben and Evangelia Demerouti, “The Construct Validity of an Alternative Measure of Burnout: Investigating the English Translation of the Oldenburg Burnout Inventory,” *Work & Stress* 19, no. 3 (2005): 208–20.; Evangelina Demerouti, et al., “The Convergent Validity of Two Burnout Instruments,” *European Journal of Psychological Assessment* 19, no. 1 (2003): 12–23.

[46] Tage S. Kristensen, et al., “The Copenhagen Burnout Inventory: A New Tool for the Assessment of Burnout,” *Work & Stress* 19, no. 3 (2005): 192–207. Sample questions include: How often do you feel tired? How often do you think ‘I can’t take it anymore’? Are you exhausted in the morning at the thought of another day at work? Do you sometimes wonder how long you will be able to continue working with clients? Do you feel that you give more than you get back when you work with clients?

[47] Arie Shirom, “Burnout in Work Organizations,” in *International Review of Industrial and Organizational Psychology*, C.L. Cooper and I.T. Robertson (New York, NY: Wiley, 1989), 33.

they "reserve the term 'burnout' for studies in which a work-related fatigue and withdrawal is studied."[48] They remain faithful to Maslach's long-standing paradigm of burnout being a response to the work environment.

Common feelings that Maslach identifies as associated with burnout are frustration, anger, resentment, fear, loss of enthusiasm, and a sense that one is being pushed to his or her limit. Furthermore, burnout is not "an individual stress response," but should instead be framed "in terms of an individual's relational transactions in the workplace" that also attend to the individual's emotions and values underlying the work.[49] Because emotions are involved and constructed as individual reactions rather than part of a relational process, the problem of burnout is falsely attributed to personal factors instead of organizational ones. These feelings are often "seen to be subsidiary"[50] in a framework where "jobs are defined in terms of skills and outcomes."[51] However, this denies the reality that negative emotions are both characteristics and causes of burnout. Maslach describes this as a downward spiral - as people express negative emotions arising from burnout, people around them react negatively, reinforcing the burned-out individual's view that the workplace is truly hostile.

These negative emotions may be associated with clinical depression. Freudenberger first pointed to the overlap between burnout and depression: "the person looks, acts and seems depressed. He seems to keep to himself more."[52] Empirical research has established a positive correlation with symptoms of burnout and depression, as measured by various

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[48] Schaufeli and Taris, "The Conceptualization and Measurement of Burnout: Common Ground and Worlds Apart," 261.

[49] Christina Maslach, "Understanding Job Burnout," 39.

[50] Maslach and Leiter, *The Truth About Burnout*, Kindle Location 367.

[51] Ibid.

[52] Freudenberger, "Staff Burn-Out," 161.

inventories within different fields. As discussed in Chapter 1, Dyrbye and Shanafelt et al. (2010) conclude that the increased risk of burnout and suicidal ideation were independent of the presence of depressive symptoms in medical students. Additionally, using structural equational modeling, Arnold B. Bakker et al. concluded that burnout, while related to depression, is a distinct concept. “Conceptually speaking, burnout and depression are linked with lack of reciprocity in interpersonal relationships but in different spheres of life.”[53] Depression is “context-free.” The relationship of burnout to depression is yet unclear; however, two major theories have emerged:

> A common assumption has been that burnout causes mental dysfunction - that is, it precipitates negative effects in terms of mental health, such as depression, anxiety, and drops in self-esteem. An alternative argument is that burnout is not a precursor to depression but is itself a form of mental illness.[54]

Another structural equation model by David C. Glass et al. found that their data were better fitted in a model that “depicted depressive symptomatology as an outcome of burnout”[55] rather than depression as the precursor to burnout.[56] Furthermore, when evaluating the clinical validity of the MBI in assessing and treating individual patients, Wilmar B. Schaufeli et al. reported that their burned-out patients, who were undergoing psychological treatment and did not have a mood or other psychiatric disorder, had “high levels of exhaustion, elevated levels of depersonalization, but lower levels of other mental symptoms.”[57]

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[53] Arnold B. Bakker, et al., “Using Equity Theory to Examine the Difference Between Burnout and Depression,” *Anxiety, Stress & Coping* 13, no. 3 (2008): 263.

[54] Christina Maslach, “Understanding Job Burnout,” 41.

[55] Wilmar B. Schaufeli, et al., “On the Clinical Validity of the Maslach Burnout Inventory and the Burnout Measure,” *Psychology and Health* 16, no. 5 (2001): 567.

[56] David C. Glass, J. Daniel McKnight, and Heiddis Valdimarsdottir, “Depression, Burnout, and Perceptions of Control in Hospital Nurses,” *Journal of Consulting and Clinical Psychology* 61, no. 1 (1993): 147–55.

[57] Wilmar B. Schaufeli, et al., “On the Clinical Validity of the Maslach Burnout Inventory and the Burnout Measure,” 579.

Although burnout is predominantly conceptualized as work-related, burnout can "spill over" into other aspects of life, which also has an effect on mental health.[58] Some commenters believe that the previously cited 2018 Medscape survey on physician burnout actually indicates that burnout may really be depression.[59] Because burnout can be seen as separate from depression, there may be less stigma attached to admitting that one is burned out, thus making it easier to seek psychotherapy and/or pharmacotherapy to cope. A growing body of research supports the Medscape survey's hypothesis that burnout is a special form of clinical depression/adjustment disorder.[60] In a study on school teachers, Renzo Bianchi et al. report that out of 5,575 teachers, 90 percent who were identified as burned out in at least one dimension by the MBI met the diagnostic criteria for depression via the Patient Health Questionnaire (PHQ-9) or via a dedicated module for assessing atypical depression referenced by the Diagnostic and Statistical Manual of Mental Disorders (4th edition). 92 percent of teachers who were identified as both burned out in one dimension and clinically depressed scored higher than 15, which meets the threshold for recommending treatment with psychotherapy and/or pharmacotherapy.[61] Another study by Bianchi et al. (2014) utilized a high-powered cluster analysis (n = 627) with the MBI

[58] Christina Maslach, "Understanding Job Burnout," 41.

[59] Leigh Page, "Burnout Might Really Be Depression: How Do Doctors Cope?" https://www.medscape.com/viewarticle/891005.

[60] Kirsi Ahola, et al., "Relationship Between Burnout and Depressive Symptoms: A Study Using the Person-Centred Approach," *Burnout Research* 1, no. 1 (2014): 29–37; Taina Hintsa, et al., "Relationship Between Burnout and Depressive Symptoms: A Study Using the Person-Centered Approach Is There an Independent Association Between Burnout and Increased Allostatic Load? Testing the Contribution of Psychological Distress and Depression" *Journal of Health Psychology* 21, no. 8 (2014): 1576–86; Irvin S. Schonfeld and Renzo Bianchi, "Burnout and Depression: Two Entities or One?" *Journal of Clinical Psychology* 72, no. 1 (2015): 22–37; Renzo Bianchi, et al., "Comparative Symptomology of Burnout and Depression," *Journal of Health Psychology* 18, no. 6 (2013): 782–87Renzo Bianchi, et al., "Comparative Symptomology of Burnout and Depression," *Journal of Health Psychology* 18, no. 6 (2013): 782–87.

[61]Renzo Bianchi, Irvin S. Schonfeld, and Eric Laurent, "Is Burnout a Depressive Disorder? A Re-Examination with Special Focus on Atypical Depression," *International Journal of Stress Management* 21, no. 4 (2014): 307–24.

and PHQ-9 to support their previous findings that burnout in at least one dimension and depression clustered at baseline and follow-up; increased scores on the MBI were associated with increased depression scores on the PHQ-9.[62]

The distinction between clinical depression and burnout are only as clear as the instruments used to test and assess for the two. As an alternative to the MBI, Walter Wurm et al. conducted a logistical regression analysis to determine the independent correlation between depression as measured by the Major Depression Inventory (MDI) and the Hamburg Burnout Inventory (HBI) in Austrian physicians.[63] The HBI measures a number of components: "emotional exhaustion, personal accomplishment, detachment, depressive reaction to stress, helplessness, inner void, tedium, inability to unwind, overtaxing oneself, and aggressive reaction to stress."[64] In this study, 10.3 percent were diagnosed with major depression, and 50.7 percent exceeded the cut-off for burnout (n = 6351). The odds ratio of depression increased with severity of burnout: "2.99 (95% CI 2.21–4.06) for physicians with mild, 10.14 (95% CI 7.58–13.59) for physicians with moderate, 46.84 (95% CI 35.25–62.24) for physicians with severe burnout and 92.78 (95% CI 62.96–136.74) for the 3% of participants with the highest HBI sum."[65] The authors found that expanding the components of burnout beyond the classical criteria of emotional exhaustion, personal

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[62] Renzo Bianchi, Irvin S. Schonfeld, and Eric Laurent, "Is Burnout Separable from Depression in Cluster Analysis? A Longitudinal Study," *Social Psychiatry and Psychiatric Epidemiology* 50, no. 6 (2014): 1005–11.

[63] The MDI assesses self-reported mood: sadness, anhedonia, fatigue, lack of self-confidence, bad conscience, taedium vitae, difficulty concentrating, changes in activity, changes in sleep, and changes in appetite. It is a diagnostic tool and estimates the severity of depression as defined by both the DSM-IV and ICD-10. P Bech, et al., "The Sensitivity and Specificity of the Major Depression Inventory, Using the Present State Examination as the Index of Diagnostic Validity," *Journal of Affective Disorders* 66, no. 2–3 (2001): 159–64; Walter Wurm, et al., "Depression-Burnout Overlap in Physicians," *PLoS ONE* 11, no. 3 (2016): e0149913.

[64] Matthias Burisch, *The Hamburg Burnout Inventory (HBI) in Two Large International Online Samples* (Hamburg: University of Hamburg, 2007).

[65] Wurm, et al., "Depression-Burnout Overlap in Physicians," 1.

accomplishment, and depersonalization by using additional components from the HBI better fit the data: emotional exhaustion, helplessness, inner void, and tedium ($R2 = 0.85$ and Cronbach's alpha = 0.54 versus $R2 = 0.92$ and Cronbach's alpha = 0.90 respectively).[66] This suggests not only that the MBI's three dimensions of burnout are insufficient, but that major depression and burnout do overlap among Austrian physicians. However, it is important to remember that these people are suffering, regardless of how researchers want to classify the symptomology that people experience.

Christina Maslach and Michael P. Leiter (2000) construct a narrative about why burnout has become increasingly pervasive over the last few decades. Shifts in technology, economic trends, and management philosophy have changed the nature of the workplace and jobs[67] - the workplace is no longer "a safe and healthy setting in which people may fulfill fill their potential through intrinsically rewarding work for which they are given fair compensation."[68] Maslach and Leiter make the claim that institutions and organizations are more concerned with short-term stock performance, leverage debt to grow, and are then pressured to generate cash flow to repay those debts. They argue that this prioritization of financial growth results in an institution paying lip-service to its mission and vision statements, something which employees sense. People are no longer working to "make significant accomplishments, people are sacrificing their livelihoods and their aspirations for the good of the corporation,"[69] leading to a prioritization of financial values over human values.

[66] Ibid., 8–9.
[67] Maslach and Leiter, *The Truth About Burnout*, Kindle Locations 40–41.
[68] Ibid., Kindle Locations 47–48.
[69] Maslach and Leiter, *The Truth About Burnout*, Kindle Locations 55–56.

While not explicitly stated by Maslach and Leiter (2000), the causes stated – the prioritization of an organization's bottom line – can link the rise of burnout to the rise of neoliberalism, an economic philosophy that originally meant *laissez-faire* economic liberalism but is now commonly used as a pejorative to decry the free-market policies that impede the implementation of social-democratic reforms. In the case of neoliberalism's effect on New York City-based human-service non-profit agencies, as examined by Mimi Abramovitz and Jennifer Zelnick, senior staff described increased work intensity due to the "increased use of performance-based contracts, numerical caps for client visits, shorter lengths of stay in programs, billable hours, and other neoliberal productivity measures;"[70] pressures to meet demanding productivity measures resulted in a decrease in planning time, keeping abreast of new information, as well as decreased professional autonomy.[71]

In the context of neoliberal academic medical centers, cognitive laborers are squeezed for surplus labor through the generation of Relative Value Units.[72] Francesca Coin (2017), like Maslach and Leiter (2000), argues that "ethical values, material needs and social ideals [of these cognitive laborers] are increasingly at odds with the isolated entrepreneur of the neo-liberal university . . . many scholars have felt a growing conflict between their ethical ideals and the array of measured, meaningless and bureaucratized tasks that fill their lives."[73] This growing conflict, Alan D. Haight explains, is due to the current structure of utilizing a promotion track, which incentivizes workers to "accept hope

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[70] Mimi Abramovitz and Jennifer Zelnick, "Double Jeopardy: The Impact of Neoliberalism on Care Workers in the United States and South Africa" (2010), 103.

[71] Ibid., 104.

[72] Additional details on the economic pressures that physicians face while practicing can be found in the following: E. Haavi Morreim, *Balancing Act: The New Medical Ethics of Medicine's New Economies* (Boston, MA: Kluwer Academic Publishers, 1991).

[73] Francesca Coin, "On Quitting," *Ephemera* 17, no. 3 (2017): 707.

[of future promotion] as a means of payment."[74] In other words, junior professionals (e.g. associate/assistant professors, residents – all of whose contracts are renewed yearly – and early-career attendings) sign on for extra work and hours voluntarily in the hopes of being promoted. Senior professionals run a department and retirement creates much coveted promotion slots, which are few and far between. Haight argues that this creates a rivalry amongst junior professionals; until a certain threshold, this is a catalyst for diligence, but pushing past this threshold creates considerable anxiety, pessimism, and despondency, which Haight links to burnout and other fatigue-related syndromes. The firm, which may or may not be conscious of the rejection-rate Laffer curve, aims to maximize profit and thus operates past the threshold, where

> the promotion-track workers are despondent and their productivity is sub-maximal. Maximum morale conflicts with maximum profit, and the firm chooses profit . . . if the promotion-track staff were working at their best, then it would be necessary to resume hiring, continuing until promotion anxiety became so severe that it actually depressed effort and pushed productivity down to the sub-maximal level."[75]

Haight also argues that the utilization of wellness programs, a "modern version of welfare capitalism,"[76] only serves to push the rejection-rate curve to the right: at first, these wellness programs work and relax the junior professionals, increasing productivity and morale. However, the senior managers want to maximize productivity, so they hire more junior professionals, which moves the point back past threshold where young professionals are again demoralized but profits and productivity remain permanently elevated.

[74] Alan D. Haight, "Burnout, Chronic Fatigue, and Prozac in the Professions: The Iron Law of Salaries," *Review of Radical Political Economics* 33, no. 2 (2001): 189.
[75] Ibid., 193–94.
[76] Ibid., 194.

An example of the conflicts that arise from the organization's focus on the bottom line is the micromanaging of professionals by managers. In an incredibly honest assessment of his situation, John Lantos describes his difficulties as the Chief of General Pediatrics at the University of Chicago:

> I am a sort of lower-middle manager in an academic medical center. In that role, I have enormous accountability, but very little power. My administrative work is situated at the uncomfortable place where the pie-in-the-sky mission of the medical center gets translated into the nuts-and-bolts policies of actual practices . . . I am primarily evaluated by whether, at the end of the fiscal year, my division's bottom line looks better or worse than it did last year, or better or worse than a comparable division's elsewhere.[77]

Relative Value Units (RVUs) are intended to be quantifiable measures of physicians' work and services provided. They also determine physician compensation in many academic health science centers, as they are used by Medicare to determine the reimbursement for services submitted with Current Procedural Terminology (CPT) codes and Healthcare Common Procedure Coding System (HCPCS) codes.[78] Physicians must also learn on their own and from their colleagues how to optimize their CPT and HCPCS codes, or hire specialized medical billing and coding professionals, in order to maximize their reimbursement. The usage of RVUs in determining Medicare reimbursement ties physician productivity to the market forces that govern healthcare, which shapes institutional policies.

Spending time with patients and teaching students is disincentivized - the RVUs for this are much lower. Tying physician compensation to their productivity as measured in

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[77]John Lantos, "RVUs Blues: How Should Docs Get Paid?" *The Hastings Center Report* 33, no. 3 (2003): 39.

[78] National Health Policy Forum, *The Basics: Relative Value Units (RVUs)* (Washington, D.C.: The George Washington University, 2015).https://www.nhpf.org/library/the-basics/Basics_RVUs_01–12–15.pdf.

RVUs has led to some interesting consequences. For example, in Pediatrics, earwax cleaning generates as many RVUs as a follow-up visit with an intermediately-sick patient. Lantos calculates that, "if we cleared out earwax on even 10 percent of our children, I calculated, we could all get 20 percent raises."[79] Lantos and his colleagues ended up not cleaning everybody's ears, but he raises the larger point that they "do spend an inordinate amount of time documenting our fulfillment of an externally imposed set of tasks in order to meet the requirements of an externally imposed productivity plan that meets nobody's goals in order to prove to administrators and to insurers that we are doing their job."[80]

Finally, technology has also made it difficult to "clock out" - people are "are taking work home, often continuing after hours on computer equipment they have purchased themselves."[81] Not only are people working longer hours, they are also "devoting more time to tasks that are not personally rewarding, that is, that are not enjoyable and do not further their careers."[82] For example, in medicine, physicians on average spend 16.6 percent of their working hours on non-clinical, administrative tasks. For physicians that utilized an electronic medical record system, the administrative workload was even greater. Greater time spent on administrative work was correlated with lower career satisfaction.[83] As physician compensation depends on what is written in the patient's notes and on entered billing codes, physicians have a financial pressure to be extremely thorough in their note while completing this burdensome task in a timely manner.

[79] Ibid., 40.
[80] Ibid.
[81] Maslach and Leiter, *The Truth About Burnout*, Kindle Locations 80–81.
[82] Ibid., Kindle Locations 80–81.
[83] Steffie Woolhandler and David U. Himmelstein, "Administrative Work Consumes One-Sixth of U.S. Physicians' Working Hours and Lowers Their Career Satisfaction," *International Journal of Health Services* 44, no. 4 (2014): 635–42. doi:10.2190/HS.44.4.a.

The pressure to do more with a limited amount of time trickles down into medical education. Not only are the RVUs lower for teaching students, there is a general perception that teaching students decreases clinical productivity. Clinical skills, developed through experiential learning, require supervision if students are to go through all of the steps of the mantra: "see one, do one, teach one." Jeremy Ellis and Richard Alweis's literature review supports the general perception that teaching trainees often causes decreases in productivity when defined as dollar amounts, RVUs, and patient volume, as well as "increases in clinic hours, time spent rounding, and overall workday."[84] It is also possible that the effect that students have on productivity is overstated - the majority of studies show that students add thirty to sixty minutes per day. The findings that trainees cause a decrease in productivity were also not demonstrated in all the studies, and many of the studies on learner level and cost effect that were analyzed by Ellis and Alweis were conducted prior to 2000. With the advent and widespread implementation of EMR and other administrative practices, more current research on the productivity costs of training students needs to be conducted. Furthermore, as Ellis and Alweis point out, academic institutions are heterogenous in their priorities, funding and accounting structures, and other influences, which requires that any cost-utility analysis studies utilize a weighted system in nationwide comparisons.

RVUs are a narrow way of viewing physician productivity. As in Ellis and Alweis' research, productivity defined by RVUs is primarily financial. Seeing more patients per day is defined as how much money a physician can bring in – the less time physicians spend with patients and students, the more potential RVUs they can generate for their own

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[84] Jeremy Ellis and Richard Alweis, "A Review of Learner Impact on Faculty Productivity," *The American Journal of Medicine* 128, no. 1 (2015): 97.

salary and their department's bottom line. When physician productivity is narrowed down to a cost-analysis, the practice of caring for patients becomes separated from actually caring for patients and training new physicians to also care for patients.

Burnout in Medical Students

The Causes of Burnout

The environment created by the political and economic pressures of the academic health science center sets up students as burdens. If students were not viewed as such, there would not be studies attempting to quantify how students affect physician productivity as defined by time and money. The perspective created by viewing productivity in a strict cost-utility lens creates an environment in which students are prioritized lower than generating funding for the institution. Quality patient care – as measured by how cared-for patients feel and their outcomes – should come first. However, trainees witness how physicians currently see their patients, both literally in appointments and figuratively as a means of income. As I've seen while leading the Practice of Medicine classes, medical students often ask, "how do we practice humanistic medicine when we have to see so many patients and don't have enough time?" or note that they don't want to even ask questions because they don't want to disrupt the physician's workflow.

Students are placed in an environment rife with political and economic pressures. I have been asked when discussing this topic: Is it the medical school environment or the personalities of the medical students that places students at risk of burnout and psychological distress? Are we just selecting for and admitting neurotic medical students that are more prone to burnout? After all, Freudenberger presented burnout as affecting

those who cared too much about their work and could not separate themselves from it. Furthermore, Maslach suggests that:

> Burnout tends to be higher among people who have low self-esteem, an external locus of control, low levels of hardiness, and a Type A behavior style. Those who are burned-out cope with stressful events in a rather passive, defensive way, whereas active and confronting coping styles are associated with less burnout . . . studies on the Big Five personality dimensions . . . have found that burnout is linked to the dimension of neuroticism.[85]

Maslach states that neuroticism "includes trait anxiety, hostility, depression, self-consciousness, and vulnerability. People who score highly on neuroticism are emotionally unstable and prone to psychological distress."[86] This observation has directed some research into identifying personality traits that are associated with increased risk of burnout; these studies were non-specific to the medical field. In a meta-analysis, Gene Alarcon et al. (2009) calculated the correlation score between the different dimensions of the MBI (emotional exhaustion, depersonalization, and reduced personal accomplishment) to certain dispositions, including dimensions of the Five-Factor Model, a personality inventory that has scales for agreeableness, openness to change, neuroticism, conscientiousness, and extraversion. Characteristics associated with decreased risk of burnout included extraversion, high conscientiousness, decreased neuroticism, and positive outlooks on life, such as optimism and increased internal locus of control. Having a negative outlook on life was associated with increased risk of burnout. Finally, while "Type A" personalities were more likely to feel less personally accomplished, they were not more likely to experience emotional exhaustion and depersonalization.[87]

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[85] Christina Maslach, "Understanding Job Burnout," 42.
[86] Ibid.
[87] Gene Alarcon, Kevin J. Eschleman, and Nathan A. Bowling, "Relationships Between Personality Variables and Burnout: A Meta-Analysis," *Work & Stress* 23, no. 3 (2009): 244–

A later study by Brian W. Swider and Ryan D. Zimmerman (2010) further elucidated the relationship between the Five-Factor Model personality traits and burnout, as well as three different models that sequentially ordered the burnout process. Their meta-analytic path model determined a correlation between personality characteristics and burnout similar to the ones identified in Alarcon et al.'s study, as well as determining that personality traits "explain 33% of the variance in emotional exhaustion, 21% of the variance in depersonalization, and 27% of the variance in personal accomplishment."[88] It is beyond the scope of my dissertation to assess the merits and weaknesses of utilizing personality instruments such as the Big Five, but one major criticism is that its categories are too broad, heterogeneous, and lack specificity.[89]

In 2017, Soo Jin Lee et al. assessed the temperament and character of Korean medical students using C. Robert Cloninger et al.'s Temperament and Character Inventory (TCI) at the beginning of the academic year and an MBI at the end of the same year.[90] The TCI measures temperament, "automatic reactions to external stimuli involving involuntary unconscious processes"[91] and character, "influencing personal and social effectiveness by insight learning about self-concept."[92] Consistent with previous studies on the role of

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63*Relationships Between Personality Variables and Burnout: A Meta-Analysis*. doi:10.1080/02678370903282600.

[88] Brian W. Swidern and Ryan D. Zimmerman, "Born to Burnout: A Meta-Analytic Path Model of Personality, Job Burnout, and Work Outcomes," *Journal of Vocational Behavior* 76, no. 3 (2010): 499.

[89] Gregory J. Boyle, "Critique of the Five-Factor Model of Personality," in *The SAGE Handbook of Personality Theory and Assessment: Personality Theories and Models (Volume 1)*, Gregory J. Boyle, Gerard Matthews, and Donald H. Saklofske (Thousand Oaks, CA: SAGE Publications, 2008), 295–312.

[90] Soo Jin Lee, Young Jun Choi, and Han Chae, "The Effects of Personality Traits on Academic Burnout in Korean Medical Students," *Integrative Medicine Research* 6, no. 2 (2017): 207–13; C. Robert Cloninger, et al., *The Temperament and Character Inventory (TCI): A Guide to Its Development and Use* (St. Louis, MO: Center for Psychobiology of Personality, Washington University, 1994).

[91] Lee et al, "The Effects of Personality Traits on Academic Burnout in Korean Medical Students," 208.

[92] Ibid. Dimensions of temperament include: novelty seeking, harm avoidance, reward dependence, and persistence. Character dimensions include: self-directedness, cooperativeness, and self-transcendence.

temperament and character in burnout, Lee et al. identified traits related to passivity (e.g. conflict avoidance, decreased self-directedness, increased cooperativity) as predictive of burnout.[93] Many of the studies that assess the association of TCI measures with burnout were not performed in an American context; without even taking the collectivist (versus individualistic) attitudes in Korean culture into account, the pathways to undergraduate medical education, the medical curriculum, and healthcare systems are vastly different, rendering these findings interesting but ungeneralizable.

In the context of American medical education, one study in particular assessed the statistical association between Myers-Brigg Type Indicators (MBTI), General Well-Being (GWB) scores, and MBI scores in first-year medical students at one institution.94 Extroverted individuals, as compared to introverted individuals, were found to have statistically lower scores on depression, positive well-being, and self-control ($p < 0.05$).

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[93] Lee, Choi, and Chae, "The Effects of Personality Traits on Academic Burnout in Korean Medical Students," 209; A. Bulent Yazici, et al., "The Relationship Between Temperament And Character Traits And Burnout Among Nurses," *Psychology & Psychotherapy* 4, no. 5 (2014): 1–5. doi:10.4172/2161–0487.1000154; Bojana Pejušković, et al., "Burnout Syndrome Among Physicians - The Role of Personality Dimensions and Coping Strategies," *Psychiatria Danubina* 23, no. 4 (2011): 389–95; Martin Christoph Melchers, et al., "Differentiating Burnout from Depression: Personality Matters!" *Frontiers in Psychiatry* 6, no. 113 (2015): 1–10. doi:10.3389/fpsyt.2015.00113; Ralitsa D. Raycheva, et al., "The Vulnerability to Burn Out in Healthcare Personnel According to the Stoyanov-Cloninger Model: Evidence from a Pilot Study," *International Journal of Person Centered Medicine* 2, no. 3 (2012): 552–63; Nan Jiang, et al., "Correlations Between Trait Anxiety, Personality and Fatigue," *Journal of Psychosomatic Research* 55, no. 6 (2003): 493–500. doi: https://doi.org/10.1016/S0022–3999(03)00021–7Nan Jiang, et al., "Correlations Between Trait Anxiety, Personality and Fatigue," *Journal of Psychosomatic Research* 55, no. 6 (2003): 493–500. doi: https://doi.org/10.1016/S0022–3999(03)00021–7.

[94] The MBTI is a self-administered questionnaire based on Carl Jung's theory that people move through the world with the following psychological functions: sensing, feeling, thinking, intuiting. Four dichotomies are assessed: extraversion/introversion (attitude), sensing/intuition and thinking/feeling (function), and judging/perception (processing). The MBTI has been criticized for poor validity and interdependence/overlap of some categories. There is also the possibility that ones' perception of him/herself may not be congruent with how others perceive them. The Five-Factor Model (OCEAN) has largely replaced the MBTI.

The General Well-Being Inventory is a self-administrated questionnaire that assesses components of psychological health: anxiety, depression, self-control, and general health. The disadvantage of this scale is that it does not measure happiness, which is a critical component of psychological well-being that is beyond merely absence of disease/pathology.

Higher sum scores and individual subscale scores on the GWB were significantly associated with all three MBI subscales ($p < 0.01$ for emotional exhaustion, depersonalization, decreased personal achievement).[95] Unfortunately, the authors analyze the MBTI results as dichotomous, rather than treating them as scales - for example, a student was characterized as extroverted without considering the degree to which he/she was extroverted. The authors suggest administering the MBTI early in order to help students self-identify those who are at risk and to offer stress management interventions. However, these measures do not address the specific characteristics of the learning environment that make general well-being and burnout more prevalent in introverted individuals, and it is possible that the MBTI could be taken into account during admissions processes. Based on the literature presented, however, personality traits are only one of the factors, and the notion that medical students are more prone to burnout because the medical school admissions process indirectly selects for Type A students is an incomplete look into the etiology of burnout.

For Maslach, burnout is not a question of either temperament/character *or* the workplace environment, but rather, it is an interaction of the two. Her burnout model "focuses on the degree of match, or mismatch, between the individual and key aspects of his or her organizational environment. The greater the gap, or mismatch, between the person and the job, the greater the likelihood of burnout."[96] Maslach and Leiter have identified six major domains of workload, control, reward, community, fairness, and values. As Dyrbye and Shanafelt summarize, medical students have the potential to have

[95] Stephanie A. Bughi, et al., "Using a Personality Inventory to Identify Risk of Distress and Burnout Among Early Stage Medical Students," *Education for Health* 30, no. 1 (2017): 26–30.
[96] Christina Maslach, "Understanding Job Burnout," 43.

mismatches in all six domains. Stressors such as issues with "adjustment, competition, patient and family suffering [and other negative personal life events], [choosing a specialty], high stake assessments, lack of personal time, and financial concerns"[97] play a role in how students develop these mismatches. For example, feeling that the grading system is unfair is compounded by the competitiveness and inherent rankings present within the medical school curriculum.

Empirical evidence points to a poor learning environment as a stressor associated with burnout, encompassing aspects such as deprioritizing medical student teaching, "inadequate support from faculty staff, medical school staff and peers, disorganized clinical rotations, poor supervision, little variety of medical problems encountered, mistreatment, [and] grading schema,"[98] as well as cynicism from supervisors. Causes of resident burnout should also be included as a stressor associated with burnout, as third- and fourth-year students often act in the capacity of junior residents. These include "stressful relationships with supervisors, attending physician demands, insufficient autonomy, a perception that personal needs are inconsequential, and lack of timely feedback."[99]

Melanie Neumann et al. present a hypothetical model based on their systematic review, as illustrated in Figure 1.[100] In this proposed model, the aforementioned elements of the curricula and learning environment combined with the trainee's biography and personality create distress and burnout, which results in empathy decline. Certain personality types may be more responsive to the elements of the formal, informal, and

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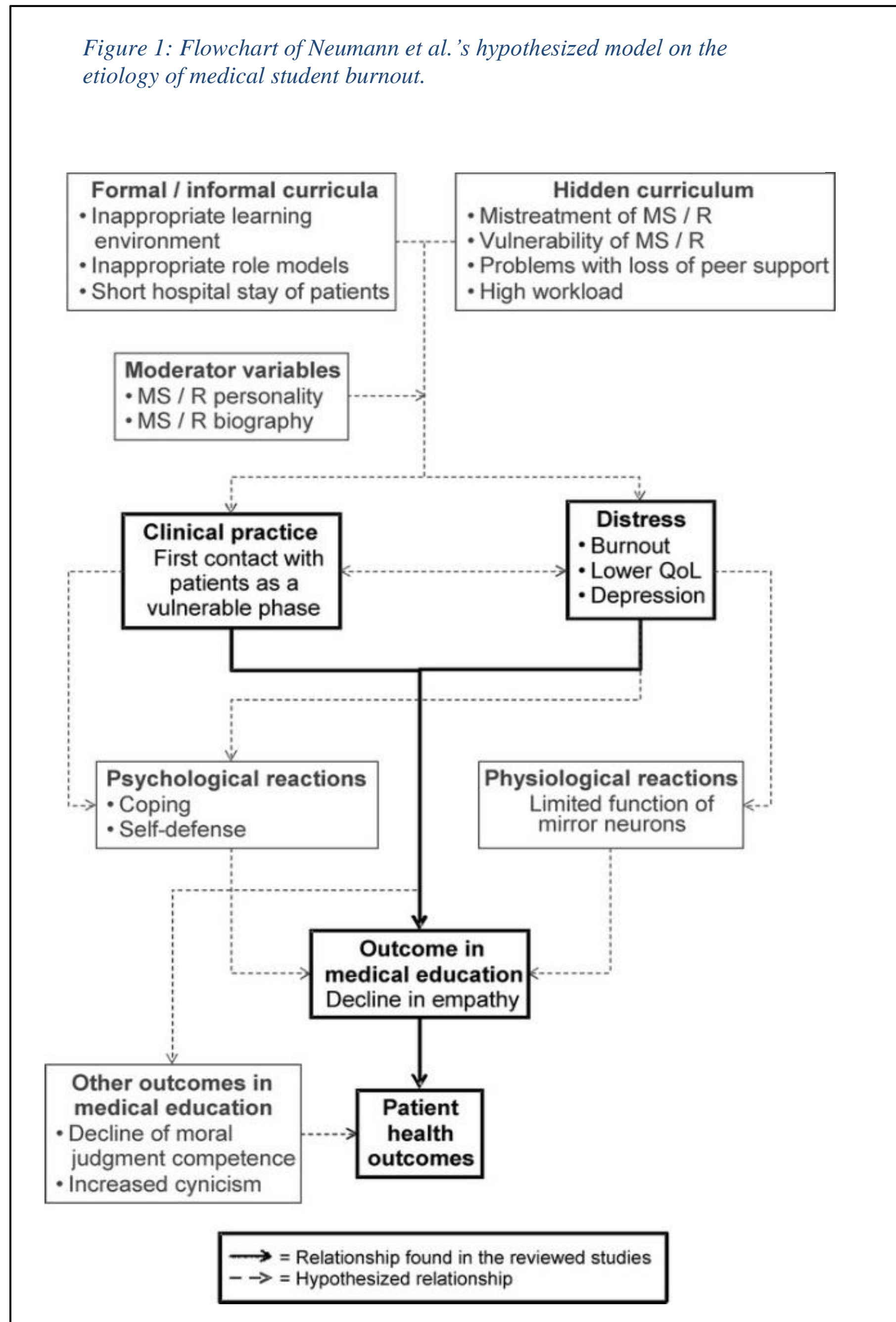
[97] Dyrbye and Shanafelt, "A Narrative Review on Burnout Experienced by Medical Students and Residents," 138.
[98] Ibid.
[99] Ibid.
[100] Melanie Neumann, et al., "Empathy Decline and Its Reasons: A Systematic Review of Studies with Medical Students and Residents," *Academic Medicine* 86, no. 8 (2011): 1000.

hidden curricula, resulting in some students to question who they are, what they are doing, and why.[101]

Figure 1: Flowchart of Neumann et al.'s hypothesized model on the etiology of medical student burnout.



[101] Ibid.

While not all students have empathy decline, it is striking that this is the overall trend as trainees move through their education. This model is supported by evidence from Shanafelt and Dyrbye et al.'s studies on medical student burnout.[102]

While it is tempting to screen for personality or biography in the admissions process, Neumann et al.'s model establishes these as "moderator" variables. Given that the symptoms of burnout and depression affect 45-56 percent of the medical student population, a more effective approach would be changing the curriculum to better suit the needs of learners within the formal and informal setting, as well as creating a hospital culture where mistreatment and abusive behavior is not tolerated. From my personal experience, medical students have a lot to study with little time and often little guidance on what to study. Often, medical students are not rewarded with recognition for their contributions to the team and may not even be seen as part of the team. Grading seems subjective and unfair – especially as students are ranked based on these clinical grades – and inter-rater reliability is perceived by medical students as low. Finally, a conflict in values may arise when students are asked to be professional but witness unprofessional behavior from their supervisors, or the converse: students may be asked to act against their own values and ethics in following directives from physicians and residents.[103]

In following directives from and observing residents and physicians, students are inculcated with the values and norms of the profession. These norms and values are

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[102] Dyrbye and Shanafelt, "A Narrative Review on Burnout Experienced by Medical Students and Residents"; Liselotte N. Dyrbye, et al., "The Learning Environment and Medical Student Burnout: A Multicentre Study," *Medical Education* 43, no. 3 (2009): 274–82; Darcy A. Reed, et al., "Relationship of Pass/Fail Grading and Curriculum Structure With Well-Being Among Preclinical Medical Students: A Multi-Institutional Study," *Academic Medicine* 86, no. 11 (2011): 1367–73. doi:10.1097/ACM.0b013e3182305d81.

[103] This is not to say that attendings and residents conduct unethical behaviors, but rather, that the medical student's values and ethics may be reasonably different than that of their supervisors.

articulated both formally and informally: through didactic lectures, modeled behavior, and social interactions. Implicit teaching of what it means to be a physician is called the "hidden curriculum." In education, the hidden curriculum is a powerful influence in shaping an institution's culture and climate and how students and educators perceive and interact with it.[104] This implicit teaching is internalized in the production of beings that follow certain social norms. Henry A. Giroux argues that power, defined as "a concrete set of practices that produce social forms through which different sets of experience and modes of subjectivities are constructed . . . [privileges] particular renderings of ideology, behavior, and the representation of everyday life,"[105] reproducing inequalities of class, gender, race and dis/ability. In the case of medical education, the acquisition of scientific knowledge imbued with the lessons of the hidden curriculum "teaches medical students the authority driven power dynamic that exists between themselves and laypersons"[106] for the promotion and maintenance of the profession's role within the practice of biomedicine. Indeed, Barret Michalec's study on pre-clinical medical students reports not only the presence of this distance between medical students and the layperson, but also the implicit messaging by faculty and administration that the students "were superior, smarter, and of more social worth than those outside of medicine."[107]

The definition of the hidden curriculum has expanded since to include "role model figures, rules and regulations, medical ethics, medical lingo and jargon, the development

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[104] David J. Wren, "School Culture: Exploring the Hidden Curriculum," *Adolescence* 34, no. 135 (1999): 593.

[105] Henry A. Giroux, "Critical Pedagogy, Cultural Politics and the Discourse of Experience," *The Journal of Education* 167, no. 2 (1985): 23.

[106] Barret Michalec, "The Pursuit of Medical Knowledge and the Potential Consequences of the Hidden Curriculum," *Health* 16, no. 3 (2011): 269.

[107] Ibid., 275.

(or loss) of professionalism as well as the hierarchy in medicine,"[108] all of which may conflict with the formal education students receive in professionalism and ethics. In an uncharacteristically positive study on the hidden curriculum, Julia Bandini et al. report that the students and faculty that participated in their focus groups are aware of the hidden curriculum, believe it to be important in shaping their professional selves, and generally spoke positively about the values modeled in medicine, namely efficiency, integrity, excellent patient care, and evidence-based medicine.[109] However, a consistent finding in the sociological research on medical education is the "loss of idealism" as medical students "move from articulating humanistic ideals upon entry to an increased pragmatism and sometimes cynicism. . . . idealism is 'side-tracked' by the demands of coping with day-to-day demands including the sheer quantity of information to digest and the need to decipher the various expectations of staff."[110]

Although not explicitly linked to burnout in the literature, the hidden curriculum and the process of professionalization into medicine may be a significant contributing force in mediating burnout, as it is a direct reflection of the institution's and medicine's culture and values. In a focus group-based qualitative study of medical students, residents, and attendings, Asif Doja et al. identified themes about the informal and hidden curricula: the "superiority" of some specialties, the reinforcement of hierarchies within medicine (both within medicine and interdisciplinarily), the passivity towards witnessing unprofessional behaviors, the positive and negative aspects of role modeling in professional development,

[108] Julia Bandini, et al., "Student and Faculty Reflections of the Hidden Curriculum: How Does the Hidden Curriculum Shape Students' Medical Training and Professionalization?" *American Journal of Hospice and Palliative Care* 34, no. 1 (2017): 58.

[109] Ibid.

[110] Alan Cribb and Sarah Bignold, "Towards the Reflexive Medical School: The Hidden Curriculum and Medical Education Research," *Studies in Higher Education* 24, no. 2 (1999): 197–98.

emotional detachment/loss of idealism, and learning different norms for interactions within a new setting.[111] The authors discovered that even pre-clinical students were able to conceptualize the identified themes of the hidden curriculum and state that it is unknown where this messaging comes from. Christopher P. Morley et al.'s survey of pre-clinical students reports differences in first- and second-year students that reflect the changes seen with the hidden curriculum: second-year students were more likely to state that income/status was a motivator rather than idealism, to prioritize lifestyle and family considerations, and to hold negative views toward primary care.[112]

Nicole Piemonte argues in *Afflicted* that medical schools do not teach students to cultivate moral selves that are willing to confront the existential issues of illness, disability, suffering, and death. The difficulties with confronting illness, disability, suffering, death, and dying, stem from the epistemology and pedagogy of medicine - the ways in which medicine knows and understands the world, and the ways in which this is taught. She argues that "one of the epistemological virtues of this [applied] science is objectivity" and that "students and doctors may come to see the adoption of an objective stance toward a patient and the patient's illness as good, noble, or right."[113] Because of this emphasis on objectivity and clinical detachment, students either do not want to or do not know how to respond to suffering patients because they cannot recognize their vulnerability as human beings or confront suffering and death. Piemonte's critique of biomedicine is congruent with Laurie E. Gordon's argument that "medical school is a process of assimilation into

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[111] Asif Doja, et al., "The Hidden and Informal Curriculum Across the Continuum of Training: A Cross-Sectional Qualitative Study," *Medical Teacher* 38, no. 4 (2016): 410–18.

[112] Christopher P. Morley, et al., "Decline of Medical Student Idealism in the First and Second Year of Medical School: A Survey of Pre-Clinical Medical Students at One Institution," *Medical Education Online* 18, no. 1 (2013): 1–11.

[113] Piemonte, *Afflicted*, 7.

the culture of objectivity,"[114] as students learn how to use their own subjectivities in serving as both "a gauge and an instrument of healing"[115] for the patient. As Alan Cribb and Sarah Bignold interpret Gordon's work, this tension between clinical objectivity and personal subjectivity and the "relative dominance of the former within the culture of the medical school . . . is the underlying cause of much of the stress and mental ill-health experienced by students."[116]

The medical school curriculum "emphasizes objectivity, rubrics, measurable or quantifiable data, and scientifically reductionistic understandings of illness or health,"[117] which, to Piemonte, seems to contradict the medical school's purported mission and vision of producing compassionate, empathetic doctors. Danielle Ofri affirms Piemonte's argument with her own narrative and experiences with medicine's epistemology:

> The often unspoken (and sometimes spoken) message in the real-life trenches of medical training is that doctors shouldn't get too emotionally involved with their patients. Emotions cloud judgment, students are told . . . Hyperefficient, technically savvy medical care is still prized over all else.[118]

Despite including a "Psychological, Social, and Biological Foundations of Behavior" section in the Medical College Admission Test which tests students on psychology, sociology, and the sociocultural determinants of health - ostensibly selecting for students that "enter medicine motivated by idealism and the desire to help others"[119] - the medical

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[114] Laurie E. Gordon, "Mental Health of Medical Students: The Culture of Objectivity in Medicine," *Pharos* 59, no. 2 (Spring 1996): 4.

[115] Ibid., 5.

[116] Cribb and Bignold, "Towards the Reflexive Medical School: The Hidden Curriculum and Medical Education Research," 200.

[117] Piemonte, *Afflicted*, 14.

[118] Danielle Ofri, *What Doctors Feel* (Boston, MA: Beacon Press, 2013), 4.

[119] Johanna Shapiro, "Walking a Mile in Their Patients' Shoes: Empathy and Othering in Medical Students' Education," *Philosophy, Ethics, and Humanities in Medicine* 3, no. 10 (2008): 4. doi:10.1186/1747–5341–3-10.

school curriculum itself makes it difficult for students to "[assume] an empathic stance toward their patients."[120]

The medical school curriculum "implicitly rewards a narrow intellectual range and a superficial focus on grades and test scores,"[121] even in the clinical years, reducing even its students down to quantifiable, passive objects to be treated with reductionistic educational interventions. As stated previously by Maslach, burnout is a symptom of a systemic problem - if the root cause of the problem stated by Piemonte, the inability of medical students to share in existential vulnerability with their patients, is due to medicine's epistemology, perhaps the very same epistemology when applied to trainees and physicians creates a culture in which one or more dimensions of burnout are prevalent. In other words, it is difficult to extend compassion for others when you yourself don't feel loved or cared for. M. L. Jennings, drawing from her own feelings of "anger, dejection, and exhaustion"[122] and clinical experiences during her fourth year of medical school, argues that:

> Unique aspects of the medical school experience may serve to cause and perpetuate burnout, specifically a technocratic medical culture that facilitates excessive detachment from patient and self. As a medical student loses connection with herself, she may have problems exercising self-care and developing a mature, well-integrated professional identity - that is, one which includes and values the unique and multidimensional person she was prior to medical school.[123]

M. L. Jennings is not alone in her experience of suffering during medical school. Thomas R. Egnew et al.'s focus-group study of 51 medical students revealed numerous sources of

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[120] Ibid.

[121] Richard B. Gunderman and Steven L. Kanter, "Perspective: 'How to Fix the Premedical Curriculum' Revisited," *Academic Medicine* 83, no. 12 (December 2008): 1160–61. doi:10.1097/ACM.0b013e31818c6515.

[122] Jennings, "Medical Student Burnout: Interdisciplinary Exploration and Analysis," 254.

[123] Ibid.

suffering: witnessing others suffer, feeling isolated from family and friends, experiencing role instability and not understanding how to contribute in new teams, and attributing poor professional performance to poor character ("if you're a bad doctor, you're a bad person"). This resulted in students experiencing feelings of emotional distress, powerlessness, disillusionment, and dehumanization. Students distracted themselves, suppressed their emotions, compartmentalized work and home life, and reframed their suffering so that it would benefit the patient ("when I suffer, it will help me understand my patients' suffering").[124]

Jennings argues that the technocratic culture combined with "medicine's principles-based ethics (emphasizing universal concepts such as autonomy and beneficence) may further serve to distance physicians from patients and themselves."[125] Learning the language of the clinic and principle-based ethics causes students to engage in "highly circumscribed, 'objective' ways of speaking and writing about patients" and themselves, which results in "[suppressing] their subjective impressions and experiences."[126] These actions are not without consequence - as Carter and Robinson argue, "submerging and denying these personal conflicts instead of realizing they are part of the human condition" results in medical students harboring "significant negative emotions of anger, despair, or helplessness, which in turn can impede their professional judgments."[127]

The commentary presented by scholars in the medical humanities makes the point that biomedicine's culture does not allow for people to express their vulnerabilities. Many

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[124] Thomas R. Egnew, et al., "The Suffering Medical Students Attribute to Their Undergraduate Medical Education," *Family Medicine* 50, no. 4 (2018): 298.

[125] Jennings, "Medical Student Burnout: Interdisciplinary Exploration and Analysis," 259.

[126] Ibid., 261.

[127] Carter and Robinson, "A Narrative Approach to the Clinical Reasoning Process in Pediatric Intensive Care: The Story of Matthew," 188.

argue that young physicians are indoctrinated into this culture through the formal, informal, and hidden curriculum during medical school. According to Philips and Dalgarno,

> Tensions can arise from this divide between professionalism and professionalization. Constructs of professionalism encompass being an ethical, compassionate and virtuous person and doing medicine in a moral and competent manner. In contrast, professionalization describes the process of entry into the profession of medicine, of identity formation via socialization and absorbing values that may be, but are not necessarily in keeping with professionalism . . . the cornerstone of professionalization is a confident, objective invincibility that may preclude, and always trumps caring and compassion.[128]

As Anna MacLeod argues, the tensions from the divide between professionalism and professionalization manifest itself in the discourses of competence that push and pull with the discourses of caring in the formation of physicians. As MacLeod interprets Foucault, "discourse is a system of knowledge or representation that legitimates relations of power and that is held in place by sets of rules and practices"[129] and create the very same objects of which they speak. In building professional identities, medical students must navigate how to negotiate between the two discourses of competence and caring. The discourses of competence center around technical knowledge, with evidence-based medicine as the gold standard, and clinical skills. She concludes that "Despite recognition of the importance of social concerns in medical education, discourses of caring are often a secondary focus. Nonetheless, participants demonstrated professional identities consistent with caring: benevolent and humble. Maintaining a position of caring, while becoming increasingly biomedically and clinically competent, is a source of anxiety for students."[130] Her

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[128] Susan P. Philips and Nancy Dalgarno, "Professionalism, Professionalization, Expertise and Compassion: A Qualitative Study of Medical Residents," *British Journal of Medicine Medical Education* 17, no. 21 (2017): 2. doi:10.1186/s12909–017–0864–9.

[129] Anna MacLeod, "Caring, Competence and Professional Identities in Medical Education," *Advances in Health Science Education* 16, no. 3 (2011): 376. doi:10.1007/s10459–010–9269–9.

[130] Ibid., 390.

participants, pre-clinical students, tended to marginalize the 'art' of medicine - attending to emotions and relationships - in favor of clinical competence.

The long-term effects of this tendency to center discourses of competence over discourses of caring can be seen in Philips and Dalgarno's study on first-year residents. The residents listened to a five-minute recording of a resident recounting the past two days on the obstetrics service. The recorded resident was clinically responsible for a series of patients who experienced complications and died, with the resident stating "I cannot go on and must go home."[131] Most participants "understood the narrator's emotional exhaustion and viewed going home early as necessary to ensure patient and personal safety"[132] and some expressed empathy by placing themselves in the narrator's shoes. However, when they did this, they expressed self-doubts about current competence and future abilities as an attending physician. All respondents stated that there was very little formal instruction on compassion fatigue, and that most of their education was done through modeling. According to one resident, "the 'macho' culture still persists. If you 'reach your limit' you are weak. I would worry that saying something like that would have professional consequences, e.g., being excluded from tough cases in the future or being given less clinical responsibilities because I couldn't handle it."[133] Furthermore, another resident expressed that "I have learned about self-care and taking care of my own emotional well-being, but it is always in the context of what to do after work or on a post-call day, thus implying that it was not OK to reach my limit before the shift is complete."[134] For as much

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[131] Philips and Dalgarno, "Professionalism, Professionalization, Expertise and Compassion: A Qualitative Study of Medical Residents," 3.

[132] Ibid.

[133] Ibid., 5.

[134] Ibid.

as medical educators preach self-care, medical training provides very little space for it. Debriefing and discussing with colleagues and attendings were acknowledged by all participants as a practice that should be done - but they also acknowledged the difficulties in getting others to participate in that discussion.

The residents in Philips and Dalgarno's study extended others more compassion than they would give themselves. They praised the narrator for having the insight and maturity to recognize their own emotional limits but feared doing the exact same action because they did not want to seem emotionally weak or incompetent.

> They had neither the time, models, nor self-confidence to oppose the dominant paradigm of professionalization and to instead merge medical expert, their perceived primary role, with the caring, comforting and self-compassion of professionalism . . . The residents in our study felt the need to sacrifice compassion for self and patients to unwavering duty. However, perhaps because they were still early in their residencies, the tendency to be empathetic kept surfacing and conflicting with their image of excellence - the invincible, dutiful doctor.[135]

This provides further support for Maslach's claim that resilience training and other individualized interventions for burnout are insufficient for addressing its root cause. It is not surprising that burnout rates are so high in medicine when its entire culture is predicated around the ability to push through any emotional turmoil and continue working.

This is true of medical students, who are also pushed to act in "regrettable" ways, as "unreasonable demands beget unreasonable actions. A system that works people 100 hours a week and more propagates a vicious circle of ethical compromises."[136] Using the third-year medical students as guides, Chris Feudtner and Dimitri Christakis asked medical students about their committed misbehaviors and how they felt about their behavior:

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[135] Ibid., 6.

[136] Edward M. Hundert, Frederic Hafferty, and Dimitri Christakis, "Characteristics of the Informal Curriculum and Trainees' Ethical Choices," *Academic Medicine* 71, no. 6 (1996): 632.

- Have you ever done anything you thought was improper for fear of a poor evaluation? [40% responded "yes"]
- Have you ever done anything you thought was wrong or improper to fit in with the team? [40% responded "yes"]
- Have you ever purposefully misled a patient? [53% responded "yes"]
- Have you ever felt like an accomplice to unethical behavior? [32% responded "yes"]
- Have you ever felt bad or guilty about something you have done on the wards? [67% responded "yes"]
- Have you had occasions to rethink your ethical principles? [67% responded "yes"]
- Have some of your ethical principles been eroded or lost? [62% responded "yes"]
- Are you displeased with your ethical development? [38% responded "yes"][137]

Christakis points out that the discordance between the last two questions reveal that "medical education simultaneously promulgates a decline in ethical standards and the acceptance of lower ones."[138] Furthermore, the kinds of cases that students brought to Christakis and Feudtner's attention changed over the course of the year: "falsifying records in the name of expediency was no longer an issue to most students by the end of their third year; for many, this had become an adaptive strategy with which they could live."[139] The five goals common to all medical students: "to learn medicine, to be part of a team, to care for patients, to perform well, and to get good grades"[140] can often conflict with students' values. Based on the results from Christakis and Feudtner's survey, it would seem that the informal curriculum shapes the hierarchy of goals; being a team player, performing well to get good evaluations, and getting good grades supersedes ethical action.

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[137] Ibid., 631.
[138] Ibid.
[139] Ibid., 632.
[140] Ibid.

A dimension of the hidden and informal curriculum that has not been fully explored is the role of more senior medical students in teaching and perpetuating it to more junior students. This dissertation is unique in that it studies the interactions and knowledge communicated between senior students who have experienced clinical rotations versus more junior pre-clinical students. The literature surrounding the hidden curriculum assumes that it is only taught by attendings and residents to medical students, and very little has been studied on how medical students teach each other about the culture of medicine. As a more senior student who has completed the first three years of medical school, I myself have experienced deference from younger students when asked about different aspects of medical education and have provided unsolicited advice of my own on how to survive the wards. Edward M. Hundert describes the informal curriculum at work in Harvard's Big Brother, Big Sister-esque peer-support program. A majority of entering students experienced the following scenario:

> The entering student said to the second-year student adviser, "Boy, I'm really anxious about starting this gross anatomy business and dealing with these cadavers and dissections," and the second-year student, thinking he or she was being friendly and helpful, responded, "Oh don't worry about it. Are you kidding? Anatomy is the easiest course of the year at Harvard. Wait until you get to biochemistry and physiology!"[141]

Hundert likens this process to how victims of other traumas become abusers themselves, explaining how student treatment is still pervasive despite those trainees pledging to never abuse their power once they are residents or attendings. Empathic dialogue is not possible if one is not willing to reconnect and sit with difficult emotions and feelings; he argues that

[141] Ibid., 628.

students will only undergo this difficult process if it was "important to his or her self-perception of what it means to be a good medical student."[142]

In summary, aspects of the formal, informal, and hidden curriculum create an environment that results in some students burning out. Given that almost half of medical students experience general burnout, there are two possible explanations which are not mutually exclusive: the medical school admissions process selects for personality types that are more susceptible to burnout, and the social, political, and economic influences in medical education create an environment in which 62% of students feel as though their ethical principles have been eroded or lost.

THE CONSEQUENCES OF BURNOUT IN MEDICAL STUDENTS

Maslach states that "of primary concern to any organization should be the poor quality of work that a burned-out employee can produce."[143] Burnout causes employees to be less effective as they become concerned with getting through the day rather than "performing at their best," resulting in them making "more errors, [becoming] less thorough, and [having] less creativity for solving problems."[144] For physicians who experience burnout, patients are directly harmed. Tait D. Shanafelt et al. reports a correlation between distress and perceived medical errors, which include "technical mistakes made during surgery or errors in judgment that lead to an inappropriate operation or delayed diagnosis:"[145]

> Each one point increase in depersonalization, emotional exhaustion, and mental [quality of life] score was associated with a 5% to 11% higher likelihood of

[142] Ibid., 629.
[143] Christina Maslach, "Understanding Job Burnout," 40.
[144] Ibid.
[145] Tait D. Shanafelt, et al., "Burnout and Medical Errors Among American Surgeons," *Annals of Surgery* 251, no. 6 (2010): 997–98.

> reporting a major medical error . . . a surgeon with a depersonalization score of 12 is more than twice as likely to report having made a major medical error in the last 3 months as a surgeon with a score of 2.[146]

Burnout and depression were independently associated with having made a perceived medical error, but due to the methodology, the causal direction could not be determined from this study. Furthermore, for surgeons, greater than 70 percent of errors were attributed to individual factors, while only 15 percent were attributed to systems issues. Shanafelt et al. also report that "hours worked per week, the number of nights on call per week, practice setting, or the method by which surgeons were compensated"[147] had no independent association with medical errors.

The results reported by Shanafelt et al. (2010) are consistent with their previous findings on perceived medical errors in Internal Medicine residents: in a multivariate analysis controlling for numerous confounding factors, reported self-perceived error was independently associated with depression as identified by a 2-item screen, significant scores on all three dimensions of the MBI, and a lower quality of life.[148] Like the attending surgeons, controlling for the work environment – "type of clinical rotation, self-reported satisfaction with work-life balance, occurrence of a major negative life event . . . occurrence of a major positive life event, and preferred coping strategies"[149] – had no effect on the independently associated correlation with medical errors and resident well-being.

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[146] Ibid., 997.

[147] Ibid., 998.

[148] Colin P. West, et al., "Association of Perceived Medical Errors with Resident Distress and Empathy: A Prospective Longitudinal Study," *Journal of the American Medical Association* 296, no. 9 (2006): 1071–78. The two questions for the depression screen were: "During the past month, have you often been bothered by feeling down, depressed, or hopeless?" and "During the past month, have you often been bothered by little interest or pleasure in doing things?" Answering yes to either question is a positive screen for depression. Ibid., 1073.

[149] Colin P. West, et al., "Association of Perceived Medical Errors with Resident Distress and Empathy: A Prospective Longitudinal Study," 1075.

Furthermore, there was no significant correlation between empathy scores and self-perceived medical errors. In contrast to Shanafelt et al.'s (2006) findings, Amy M. Fahrenkompf et al.'s study on Pediatric residents found that burnout was not correlated with an increased number of errors per month. However, depressed residents made 6.2 times more medical errors than their non-depressed peers.[150] In both studies, nearly all residents with depression also experienced burnout, and the authors indicate that further studies need to be conducted to see the direction of the causal relationship. These findings, which indicate an overlap with depression and burnout, is consistent with the previously mentioned literature on Iranian teachers.[151]

Tait D. Shanafelt and Liselotte N. Dyrbye's literature review on medical student burnout emphasizes the importance of studying burnout in both medical students and residents because of its effects on professionalism and patient care. Limited cross-sectional data demonstrates an increase in the prevalence of burnout with increased level of training. [152] This is concerning because depersonalization, "being callous or detached toward patients, is most strongly associated with negative effects on professionalism;"[153] as

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[150] This scale is 94% specific and 95% sensitive in screening for a major depressive episode. Lee Baer, et al., "Development of a Brief Screening Instrument: The HANDS," *Psychotherapy and Psychosomatics* 69, no. 1 (2000): 35–41. doi: https://doi.org/10.1159/000012364Lee Baer, et al., "Development of a Brief Screening Instrument: The HANDS," *Psychotherapy and Psychosomatics* 69, no. 1 (2000): 35–41. doi: https://doi.org/10.1159/000012364.

[151] Renzo Bianchi, Irvin S. Schonfeld, and Eric Laurent, "Is Burnout a Depressive Disorder? A Re-Examination with Special Focus on Atypical Depression," *International Journal of Stress Management* 21, no. 4 (2014): 307–24. Renzo Bianchi, Irvin S. Schonfeld, and Eric Laurent, "Is Burnout Separable from Depression in Cluster Analysis? A Longitudinal Study," *Social Psychiatry and Psychiatric Epidemiology* 50, no. 6 (2014): 1005–11.

[152] Dyrbye and Shanafelt, "A Narrative Review on Burnout Experienced by Medical Students and Residents," 133; For more information on decreased empathy and professionalism in burned-out medical students, please refer to Brazeau, et al., "Relationships Between Medical Student Burnout, Empathy, and Professionalism Climate.".

[153] Dyrbye and Shanafelt, "A Narrative Review on Burnout Experienced by Medical Students and Residents," 133.

trainees progress in their careers, the stakes for the patient are raised significantly as the responsibility for the patient becomes more direct and job demands increase.

For medical students, professional burnout, rather than personal distress (as measured by quality of life scores and a depression screen), is associated with lapses in professionalism, which may result in adverse outcomes for their patients.[154] The behaviors and attitudes that Dyrbye and Shanafelt et al. (2010) assessed were self-reported, and encompassed topics such as cheating and dishonesty, attitudes toward the pharmaceutical industry, and a physician's responsibility to society. Higher emotional exhaustion and depersonalization scores were associated with cheating/dishonest behaviors, such as "reported a laboratory test or x-ray as pending when not sure it was ordered or knew it had not been," "ever reported result as normal when you knew it had been inadvertently omitted from the physical examination," "ever said you ordered a test when you actually had not," and the catch-all category, "endorsed 1 or more unprofessional behaviors."[155] The responses in this study are consistent with the previously-mentioned Feudtner and Christakis survey of specific misbehaviors on the wards.[156] Burnout was also associated with holding fewer altruistic views, such as concern about the issues facing the medically underserved, healthcare as a right for all, and wanting to personally take care of the medically underserved, as well as feeling empowered to address the problem on a larger scale.[157]

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[154] Dyrbye, et al., "Relationship Between Burnout and Professional Conduct and Attitudes Among U.S. Medical Students."

[155] Ibid., 1176.

[156] Hundert, Hafferty, and Christakis, "Characteristics of the Informal Curriculum and Trainees' Ethical Choices."

[157] Dyrbye, et al., "Relationship Between Burnout and Professional Conduct and Attitudes Among U.S. Medical Students," 1176.

Dyrbye and Shanafelt et al. take care to differentiate between professional distress (burnout) and personal distress (depression and lower quality of life) based on the predominant construct that burnout is primarily work-related. Although there was a statistically significant relationship between lower mental/physical quality of life scores and a few cheating/dishonest behaviors, the authors conclude that this association is unlikely to be clinically significant, as the mean differences were small. More recently, Dyrbye et al. (2008) explore the relationship of burnout and mental quality of life in medical students. The authors used established instruments to measure burnout and quality of life, while also assessing for symptoms of depression and suicidal ideation. 49.6 percent of those who responded (1069 students) scored significantly for three-dimensional burnout. met the criteria for burnout. 25.1 percent had ever considered suicide, and 11.2 percent had considered suicide in the last year. Furthermore, the mean mental-quality-of-life score was more than one half standard deviation below their age-matched peers and the general population of the U.S.[158] Students that had high scores on any measure of burnout were two to three times more likely to have reported a history of suicidal ideation, and students with depression were 6.5 times more likely to report having experienced suicidal ideations.[159] These findings suggest that it is possible to be depressed but not burned out.[160] It is perfectly plausible that a student would be depressed from personal life events outside of work but find satisfaction from their studies. Indeed, the authors conclude that there is strong evidence that burnout causes suicidal ideation. Furthermore, in the longitudinal

[158] Dyrbye, et al., "Burnout and Suicidal Ideation Among U.S. Medical Students," 336.
[159] Ibid., 337.
[160] Bakker's structural equational modeling distinguishes between burnout and depression, constructing them as having a similar cause (lack of reciprocity in interpersonal relationships) but within the discrete spheres of work and life respectively. Glass et al's structural equation model best fit data that suggested depressive symptoms as consequence/outcome of burnout.

study, there was some evidence that suicidality is reversible - students who recovered from burnout were less likely to experience suicidal ideation than students who continued to have chronic burnout. A major limitation of this specific study is that they did not differentiate between first-, second-, third-, and fourth-year medical students. This is significant because the job stressors facing pre-clinical students is markedly different than those facing clinical students, who often act in the capacity of junior interns. In a subsequent study, Dyrbye et al. report that for first- and second-year medical students, "dissatisfaction with the learning environment and the perceived level of support provided by faculty"[161] had the strongest association with increased risk of burnout. For third- and fourth-year students, "dissatisfaction with the overall learning environment, clerkship organisation and having a cynical resident had the strongest association with burnout."[162]

The hypothesized spill-over effect from burnout in the workplace to general depression is seen in medical students who do not perform acts of self-care and who develop substance use disorders. Dyrbye and Shanafelt et al. have reported extensively on burnout in medical students, looking at the association between "healthy" and "unhealthy" behaviors, such as exercise and substance use disorder respectively, in addition the home and learning environments. Exercise, either aerobic or resistance training, consistent with the Center of Disease Control (CDC) guidelines (at least seventy-five minutes of vigorous-intensity exercise or one hundred and fifty minutes of moderate-intensity exercise a week) was associated with lower probability of experiencing burnout and also having a higher

[161] Dyrbye, et al., "The Learning Environment and Medical Student Burnout: A Multicentre Study," 280.

[162] Ibid.

quality of life.[163] Substance use disorder with alcohol dependence was associated with burnout when controlling for factors such as age, sex, year in medical school relationship status, quality of life, recent suicidal ideation, and fatigue. Furthermore, increased risk of substance use disorder was also associated with younger age, being single, or having > $50,000 in educational debt.[164] Finally, personally experiencing illness within the last year was also associated with burnout.[165]

SUMMARY OF BURNOUT

Studying burnout in medical students is important because it has profound implications for the individual's capacity to deliver adequate medical care to patients, both current and future. Dyrbye and Shanafelt list the potential ramifications of burnout amongst trainees:

> Decreased empathy, cheating/dishonest behaviours, dishonesty regarding patient care, problems identifying and managing conflicts of interest, decreased altruistic professional values, inappropriate prescribing behaviors, decreased personal accountability regarding impaired colleagues, dropping out of medical school, influence on specialty choice, suboptimal patient care, medical errors, decreased knowledge.[166]

Chantal M. L. R. Brazeau et al.'s study demonstrated that higher burnout was significantly negatively correlated with professionalism climate scores, a rating system designed to assess how frequently the participating medical students saw certain behaviors performed by peers, residents, and faculty. As they could not establish a causal relationship, they

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[163] Liselotte N. Dyrbye, Daniel Satele, and Tait D. Shanafelt, " healthy Exercise Habits Are Associated with Lower Risk of Burnout and Higher Quality of Life Among U.S. Medical Students," *Academic Medicine* 92, no. 7 (2017): 1006–11. doi:10.1097/ACM.0000000000001540.

[164] Eric R. Jackson, et al., "Burnout and Alcohol Abuse/Dependence Among U.S. Medical Students," *Academic Medicine* 91, no. 9 (2016): 1251–56.

[165] Liselotte N. Dyrbye, et al., "Personal Life Events and Medical Student Burnout: A Multicenter Study," *Academic Medicine* 81, no. 4 (2006): 374–84.

[166] Dyrbye and Shanafelt, "A Narrative Review on Burnout Experienced by Medical Students and Residents," 136.

hypothesize that this could be due to several reasons: 1) burnout results in decreased professionalism, 2) decreased professionalism results in burnout, and 3) burned-out students may be more cynical and view other people's actions in a negative light. In addition, empathy scores were positively correlated with professional behaviors in peers, residents, and faculty; again, as a causal relationship could not be determined, it is unclear whether empathic students could influence the professionalism of a team, or whether professional teams cultivate empathy.

Jodie Eckleberry-Hunt et al. describe the many limitations with burnout research. In summary, there is currently an overestimation error in some of the published research, as it is unclear whether the authors use the "correct" definition of burnout as per the MBI – having both high depersonalization and emotional exhaustion – or are technically incorrect by identifying burnout as either high depersonalization or high emotional exhaustion exclusively. The cutoff scores used by the authors may also be different than the ones recommended on the MBI.[167] Furthermore, while Maslach advocates asking, "Are you burned out?" this relies on a presumption of a shared understanding of what burnout is.[168] This is further complicated by the fact that Maslach and colleagues state that the participants should not know that the MBI is being used to assess for burnout to prevent their answers from being unduly affected; it is unclear from reading the methods section of the previously-mentioned studies if or how researchers have prevented their participants from knowing that they are being assessed for burnout.[169] Finally, the MBI by itself does

[167] Jodie Eckleberry-Hunt, Heather Kirkpatrick, and Thomas Barbera, "The Problems with Burnout Research," *Academic Medicine* 93, no. 3 (2018): 367–70. doi:10.1097/ACM.0000000000001890.

[168] Christina Maslach, "Meeting the Challenge of Burnout," in *Provost's Lecture Series* (Galveston, TX: UTMB Health Media Services, 2018).https://youtu.be/1qzEGufbe3g.

[169] Christina Maslach, et al., *Maslach Burnout Inventory* (Palo Alto, CA: Consulting Psychologists Press, 1986).

not take confounding factors into consideration - it draws a distinction between the "personal self" and the "professional self" by not asking about life events, financial concerns, or stressors at home.

The Language of Ethics

The Current Problem with the Framing of Clinical Ethics

A literature review on the ethics of burnout reveals a narrow framework and stylization of ethics: the articles designate burnout as an ethical issue because it affects the care and clinical outcome of the patient. For example, physician burnout has been described as a "public health crisis." Excellent clinical care, when defined as treating the patient as a whole person rather than a set of pathologies, is not the focus of the "calls to action" as put forth by framing it within a language of public health. Thomas Bodenheimer and Christine Sinsky have advocated for the adoption of the Quadruple Aim of medicine – "improving patient experience, population health, healthcare utilization and costs, and the work life of healthcare providers"[170] As summarized by a blog post written by several Chief Executive Officers of healthcare institutions, the Quadruple Aim "recognizes that a healthy, energized, engaged, and resilient physician workforce is essential to achieving national health goals of higher quality, more affordable care and better health for the populations we serve." [171] In 2019, Harvard Global Health Institute again declared burnout a public

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[170] Thomas Bodenheimer and Christine Sinsky, "From Triple to Quadruple Aim: Care of the Patient Requires Care of the Provider," *Annals of Family Medicine* 12, no. 6 (2014): 573.

[171] John Noseworthy, et al., "Physician Burnout is a Public Health Crisis: A Message to Our Fellow Health Care CEOs." https://www.healthaffairs.org/do/10.1377/hblog20170328.059397/full/.

health issue as "the true impact of burnout is the impact it will have on the health and well-being of the American public."[172]

Although the Global Health Institute report acknowledges that the primary issue is physicians' mental health and well-being, the majority of their call to action is centered around having a "high functioning healthcare system."[173] The framing of burnout as a public health issue is also reflected in Harvard University's press release: "By 2025, the U.S. Department of Health and Human Services predicts that there will be a nationwide shortage of nearly 90,000 physicians, many driven away from medicine or out of practice because of the effects of burnout. Further complicating matters is the cost an employer must incur to recruit and replace a physician, estimated at between $500,000 and $1,000,000."[174] The Harvard Global Health Institute's framing of burnout as a public health issue while acknowledging the contribution of "moral injury" is reflective of a narrow circumscription of ethics. The narrow circumscription of ethics is articulated by Thomas Osborne: "within medicine, the notion of ethics is taken to connote a concern for the best interests of the *patient*. The doctor, faced with an array of choices as to action, must resort to the ethics of the profession in order to minister to the needs of the patient."[175] Osborne's proposed framing of ethics focuses on the physician as an ethical construction, no longer configuring the patient as something to be acted upon.

> By ethics here, I simply mean those practices, ideals, norms and techniques through which agents seek to 'stylise' their attributes such as to make themselves coherent

[172] Ashish K. Jha, et al., *A Crisis in Health Care: A Call to Action on Physician Burnout* (Cambridge, MA: Harvard Global Health Institute, 2019), 1. https://cdn1.sph.harvard.edu/wp-content/uploads/sites/21/2019/01/PhysicianBurnoutReport2018FINAL.pdf.

[173] Ibid., 1.

[174] Harvard University T.H. Chan School of Public Health, "Leading Health Care Organizations Declare Physician Burnout as 'Public Health Crisis'." https://www.hsph.harvard.edu/news/press-releases/leading-health-care-organizations-declare-physician-burnout-as-public-health-crisis/

[175] Thomas Osborne, "Power and Persons: On Ethical Stylisation and Person-Centred Medicine," *Sociology of Health & Illness* 16, no. 4 (1994): 516.

> subjects of conduct . . . [indicating] the mode of personal existence that is required for certain forms of action and conduct to have meaning.[176]

A wider definition of medical ethics would then encompass how the physician interacts with others, how the physician imagines him/herself, and how those practices and techniques are congruent or incongruent with the norms and ideals of the physician's current position across the place-time-culture axis.

The definitions of ethics as practices, ideals, norms, and techniques are articulated by the authors of *The Four Lectures on Ethics,* Michael Lambek, Veena Das, Webb Keane, and Didier Fassin; for these authors, who examine ethics through an anthropological lens, ethics is interpersonal and in the everyday. In these lectures, Lambek, Das, Keane, Keane, and Fassin introduce their examples of everyday ethics and utilize their own positionality and experiences to highlight how ethics is context-dependent, sometimes spontaneous, and ultimately mediated between people. 177 As such, they argue that the way that ethics have been widely taken up are problematic:

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[176] Ibid., 517.

[177] Michael Lambek discusses the meaning of freedom on New Hampshire's license plates – "Live free or die." The context of "live free" have changed over time (American Revolutionary War (fighting for the nation's independence), African Americans escaping the South during the Civil War (escape from slavery to freedom), Cold War (free markets), and the military involvement in Vietnam). This declaration, however, is insufficient in describing how people react to the slogans.

Veena Das uses the story of Manju, the mother of a man who married a young woman who had an affair and ran away with the dowry. When the young woman was disowned by the man and her parents, she returned to Manju with her daughter in her arms. Manju invited her into the family again because she did not want the baby or the mother to live a life of prostitution. She felt an "existential pressure" to care for the young woman, seeing her destitute on her doorstep, feeling called to this other person.

Webb Keane describes the Sumbanese marriage system as distinctly ethical because there are external obligations to create alliances through marriage. Marrying for love, against the rules, comes at social cost; because of this, he argues that the limits are created through social interactions, based on a notion of what "good" people do. In another example, when Sinhalese were hunting Tamils, a Tamil man was sitting on the bus next to a Sinhalese woman. When a mob boarded the bus, she held his hand without speaking and continued holding it until they were at a safe location. The act was spontaneous and idiosyncratic, conducted because she felt called to act.

Didier Fassin uses military intervention in Libya as an example of how obligation, sentiment, and interest intertwine, and ethics meets politics. In another example, he discusses the Charlie Hebdo attacks in France and the ethical positions of free speech and radical secularism intersect with respect for all citizens. This is

> Laws and codes of ethical practices multiply in the domains of medicine as well as research and determine purified norms and ideals with little consideration for how things actually are . . . it is clear that the value of such language has been eroded, for one does not know or trust that the ethical enunciations are tethered to any serious concern for those whose lives are sought to be 'improved' by these ethical projects.[178]

Their analysis does not seek to answer questions about whether ethics is defined by a culture or within all of us intrinsically. It does not seek to answer questions or settle debates about moral philosophy; the questions explored by studying ethics anthropologically are not "what is ethics" or "what is the right thing to do," but rather what is at stake when discussing collective and ethical issues, "how ethical questions emerge, are debated and resolved – or left unresolved," and mapping the social, political, and economic landscape to evaluate "how things actually are."

I view burnout as a facet of ethical life instead of a public health crisis. When physicians and trainees are taught that the ideal is to treat "patients as persons" and to attend and care for them by connecting to the common essence that makes them human, the reason for it is not – and should not be – to ensure that the patients are then able to contribute to a "healthy, energized, engaged, and resilient workforce." Why would caring for physicians be any different? Why not care for the whole physician experiencing life as it is, rather than creating a false dichotomy between their "work" and "home" life? Because I frame burnout as an issue of ethics, I address where the ethical issues arise, what is at stake, and how

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not isolated from the historical and political contexts of the time. He also argues that the political context of the time is reflective of the greater public's ethics.

[178]Michael Lambek, et al., "Preface," in *Four Lectures on Ethics: Anthropological Perspectives*, Michael Lambek, et al. (Kindle Edition: HAU Books, 2015), 2.

discourses on /r/medicalschool debate and attempt to resolve leading an ethical life that avoids or resolves burnout.[179]

The stakes, the discussion of ethical issues, and the social, political, and economic landscape has been discussed widely for burnout in physicians. For example, David Rothenberger, a physician-researcher on burnout, reflects on witnessing his colleague's existential suffering – the despair, guilt, and isolation that follows after an unforeseeable complication or medical error, the isolation of physicians in rural communities, and the diminishment of trainees over issues that they have little to no control over.[180] These issues are often relegated to the domain of "personal conflicts," or political, and thus, unrelated to ethical patient care. The Harvard Global Health Institute report succinctly summarizes the dimensions of ethical life in physician burnout:

> The day-to-day demands of their profession are at odds with their professional commitment to healing and providing care. The demoralizing misalignment of the physician's values and his or her ability to meet his or her patient's needs, due to conditions beyond the physician's control, such as poverty, lack of insurance authorization, or unreasonably short appointment times, has been termed "moral injury."[181]

There is an increased recognition of the structural issues that create an environment conducive to burnout amongst physicians. In the case of medical students, the social, economic, and political pressures on medical students due to their learning environment have not been explicitly linked to burnout.

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[179] I have my own position on type of physician I want to be and how I want to practice medicine. My work recognizes that others will have vastly different goals and ideals that they aspire to, which are rooted in their own particular histories, biographies, and settings. I do not take up the task of defining for others what "good" physicians are, but rather, I examine how these efforts to become the "good" physician during the medical students' training process are fruitful or frustrated.

[180] Rothenberger, "Physician Burnout and Well-Being," *Diseases of the Colon & Rectum* 60, no. 6 (2017): 567. doi:10.1097/DCR.0000000000000844.

[181] Jha et al., *A Crisis in Health Care,* 3.

Webb Keane introduces the concept of first, second, and third person ethics – the first person is psychological motivations for acting ethically, the second person is interpersonal relationships and interactions that either follow or do not follow ethical rules of engagement, and the third person is objective, abstract principles. The concept of ethical affordances, "any aspect of people's experiences and perceptions that they might draw on in the process of making ethical evaluations and decisions,"[182] further expands the language of ethics as it demonstrates potentiality – there may be certain rules, principles, codes of conduct, but the autonomous self decides how to interact with them and other autonomous selves. "In making sense of what is going on, people are not simply involved in a quest for meaning. They are forming judgments and allocating responsibility. When people try to claim or deny responsibility for their actions, they often do so by defining those actions in ways that will get others to assess them in certain ways and not others. They have stakes in what is going on."[183] It is in these interactions that ethical actions are performed (or not). An ethical response requires an appreciation of another person's independent existence, acknowledging that he or she too has his or her own "intentions, goals, desires, and values, much as I do, but ones that are not my own."[184] We cannot assume that the intentions, goals, desires, and values of others are the same as our own, or even are the same as what we perceive their 'culture' to be. In other words, ethical conflicts are not only a result of a conflict in values which can be ascribed to a particular culture.

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[182] Webb Keane, "Varieties of Ethical Stance," in *Four Lectures on Ethics: Anthropological Perspectives*, Michael Lambek, et al. (Kindle Edition: HAU Books, 2015). https://haubooks.org/viewbook/four-lectures-on-ethics/06_ch03, 139.

[183] Ibid.

[184] Webb Keane, *Ethical Life: Its Natural and Social Histories* (Kindle Edition: Princeton University Press, 2015), 83.

The presented solution for the narrowness of ethics in clinical medicine by Osborne and Webb Keane in particular is to attend to how doctors "fashion themselves as embodiments of particular styles of authority, to subject themselves to forms of ethical 'work' (*ascesis*) in the constitution of particular styles of medical expertise."[185] The concept that ethics is action rooted in affordances and interpersonal relations has been written about by many philosophers and sociologists. I choose to adapt Webb Keane's articulation because the framing makes sense to me: it neatly labels the different dimensions of ethics into the first-, second-, and third-person and allows me the space to thoroughly discuss all these dimensions.

Our lives are ethically informed as life involves interactions and working with and against the norms of a particular setting. A more holistic voicing of ethical perspectives, such as the first- and second-person, which refers to the personal virtues and interpersonal interactions that people embody and experience, will bring ethically challenging situations outside of the traditional physician-patient encounter to the forefront. When only abstract principles, the third-person dimension of ethics, are explicitly addressed and attended to, the physician artificially narrows the scope of ethics and the practice of moral agency. Michele Carter and Sally Robinson argue that in turn, "submerging and denying these personal conflicts instead of realizing they are part of the human condition [may result in practitioners] harboring significant negative emotions of anger, despair, or helplessness, which in turn can impede their professional judgments."[186]

[185] Osborne, "Power and Persons: On Ethical Stylisation and Person-Centred Medicine," 517.

[186] Carter and Robinson, "A Narrative Approach to the Clinical Reasoning Process in Pediatric Intensive Care," 188.

David Barnard argues that physician discomfort comes from ethical, technical, behavioral, and existential issues.[187] As defined by Barnard, ethical discomfort arises from questions of competing values or moral norms, and technical discomfort is knowing precedent in cases but being uncertain as to whether the particular scenario in question fits that heuristic. Behavioral discomfort is the discordance felt when one is unable to act upon what one has decided rationally is the "right thing to do," and existential discomfort is the tension felt when one tries to resolve or make sense of the pain, suffering, and death encountered in clinical practice. All of these discomforts weigh heavily on the medical student but may not be voiced or addressed in mundane cases that are not elevated to the status of "ethical dilemmas." They may even be suppressed so that one is able to continue working, both for the short and long term. I argue that all of these physician discomforts do fall within the domain of ethics if ethics is conceived as how one should behave and interact with others based on the particular setting. In the definitions that Barnard presents, only values and norms are described as ethical discomforts; however, he notes that there is discomfort in resolving ideals and norms of a particular setting – time, place, and culture – with how one should act, and what the "right thing to do" is.

The subjugation of first- and second-person dimensions of ethics does not occur only because physicians deny and shy away from existential suffering. This artificially narrow conception of ethics is a learned heuristic - one that medical students have had to adopt in order to test well on the ethics questions presented in Step 1 and subsequent licensing/credentialing exams. In this-isnt-nesseria.com's comic, Figure 2, this inculcation

[187]David Barnard, "Love and Death: Existential Dimensions of Physicians' Difficulties with Moral Problems," *Journal of Medicine and Philosophy* 13, no. 4 (1988).

into the dominant medical ethics framework is captured well.[188] In this comic, two medical students are discussing Philippa Foot's trolley problem. The classic trolley problem is a series of hypothetical scenarios that center around a runaway trolley barreling down the railroad tracks.[189] Five people are tied onto the tracks and unable to move. The reader is standing next to a lever; when pulled, the trolley will switch to a different set of tracks, which has only one person tied up on it. The reader can choose to do nothing, which will kill five people, or pull the lever, which will kill one. The hypothetical scenario and variations thereof call on the reader to act, and then to justify that action.

One major critique of the trolley problem is that "the ideal [answer] is based on the assumption that there is a rational solution revealed in the consequences of each choice; the discussion is provoked by the ways people's actual gut feelings deviate from that solution. In short, the time frame is narrow, the social focus is on the individual actor, and the basic contrast is between rational and irrational decisions."[190] In other words, limiting the discussion of ethical decision-making to only "crises" fails to be inclusive of all of the ways that people can lead or not lead ethical lives. The implied message of this webcomic is that the correct answer on the test matters more than the actual reasoning process itself, or even the emotive aspects of actively killing one person or passively killing three. When

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[188] This-isnt-nesseria is a medical student who draws comics. He/she first started posting the comics on Reddit (/r/medicine and /r/medicalschool) and continues to do so. Interestingly, the author chooses to remain anonymous – "I don't sign my name to my work because I'm worried about the ever looming specter of professionalism… and I've got a lot of loans to pay off and non-transferable skills."

[189] Philippa Foot, "The Problem of Abortion and the Doctrine of the Double Effect," *Oxford Review*, no. 5 (1967): 5–15.

[190] Keane, *Ethical Life: Its Natural and Social Histories*, 7.

the student is told, “No, I think you’re missing the point,” he responds, “Is this even in First Aid?” – i.e., is this even a testable item on Step 1, so does it even matter?

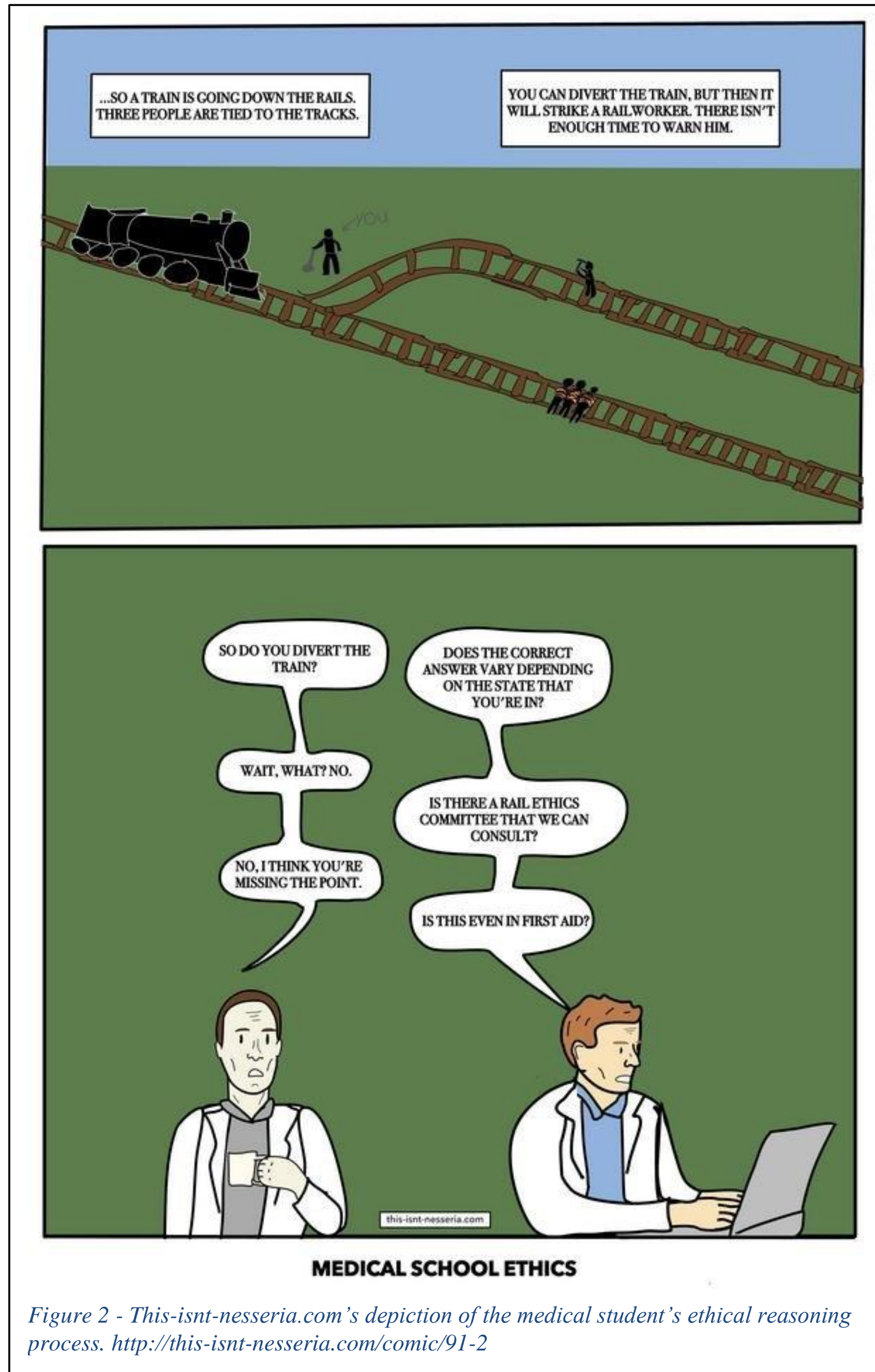

Figure 2 - This-isnt-nesseria.com’s depiction of the medical student’s ethical reasoning process. http://this-isnt-nesseria.com/comic/91-2

The student does not even engage with the potential actions presented or how this is/is not in line with what sort of ethical life he wants to lead.[191]

It becomes apparent that a dichotomy exists as far as the purpose of undergraduate medical ethics education: is the purpose of medical ethics education to produce the "basic core traits of character such as honesty, integrity, and dedication"[192] or is it to provide students with the skill set necessary to critically examine and reflect on their own values that guide their approach to ethical discomforts? However, the theoretical debate about the purpose of medical ethics education - the dichotomy between virtue and skill - is prematurely considered, especially as medical ethics curricula, including topics covered and total classroom hours, varies significantly from school to school.[193] Furthermore, the frequency and quality of discussions regarding ethics depends heavily on the superordinates that a student encounters. Regardless of the amount or quality of lessons in medical ethics, students must prepare themselves to answer ethics questions on their licensing exams. For this purpose, they turn to casebooks.

The ethical crises and problems presented in casebooks such as "The Ethics of Surgical Practice" narrowly circumscribe the scope of ethics to the third-person perspective of ethics. For example, in *The Ethics of Surgical Practice*, James W. Jones et al. make it a point to say that:

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[191] First Aid for the USMLE Step 1 2018 placed the Ethics section within the "Public Health Sciences" chapter. The authors provide definitions for autonomy, beneficence, nonmaleficence, and justice, as well as providing examples of ethical situations (a patient wants a treatment that is not covered by insurance) and an "appropriate response" (discuss all treatment options and do not limit or deny care based on time or financial expenses). While useful as heuristics for trainees who have little experience within a clinical setting, First Aid is fairly prescriptive in its recommendations, and one can only hope that additional conversations are happening outside of standardized test prep.

[192] Jerome W. Freeman and Ann L. Wilson, "Virtue and Longitudinal Ethics Education in Medical School," *South Dakota Journal of Medicine* 47, no. 12 (1994): 427.

[193] Rachael E. Eckles, et al., "Medical Ethics Education: Where Are We? Where Are We Going? A Review," *Academic Medicine* 80, no. 12 (2005): 1143–52.

> Ethics in surgery requires adherence to the discipline of using ethical concepts clearly and consistently and organizing appeals to those concepts into coherent arguments. The result is to create reliable ethical guides to the clinical judgment, scientific thinking, decision making, and behavior or surgeons. Ethics in surgery is thus not an 'ivory tower' enterprise but a deliberately and intensely practical tool designed to improve patient care, innovation, and research."[194]

In this case book, the authors outline what they believe are professional virtues and ethical principles, present a clinical scenario, and allow the reader to choose from options A through E. The answer choices force the reader to answer the normative question, "what would you do" in a hypothetical scenario where the reader cannot further dialogue with the patient and patient's family about what their wishes are.[195]

For example, the reader is asked to imagine that they are the only vascular surgeon within seventy miles. A Jehovah's Witness patient presents with a ruptured aortic aneurysm that requires immediate repair. In previous conversations with that patient prior to an elective surgery, he stated that he was a Jehovah's Witness and that the denomination does not accept blood transfusions. The surgeon has a policy of not operating on Jehovah's Witnesses because of the potential need to transfuse, and thus, the inability to perform a basic life-saving procedure. The wife, who is not a Jehovah's Witness, asks that the surgery be performed and for the patient to not be told if transfusion is given. The choices presented are:

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[194] James W. Jones, et al., *The Ethics of Surgical Practice: Cases, Dilemmas, and Resolutions, 1st Edition* (New York, NY: Oxford University Press, 2008), 11.

[195] Surgery is not the only specialty that publishes prescriptive casebooks; I utilize "The Ethics of Surgical Practice" as an example because I find the task of surgeons to be fascinating as I tend to gravitate towards studying issues that have solutions to more pragmatic issues. The ethical questions raised in the clinical practice of surgery tend to be more practical in nature, and this casebook in particular is very prescriptive in declaring which actions are or are not ethically permissible. Prescriptive casebooks such as this one is a hallmark of "ivory tower ethics," in part due to the very visible and rigid hierarchy within surgical training. Furthermore, as Charles Bosk argues, there are unique particularities to surgical practice, as "the surgeon's interventions are most visible and his therapeutic expectations are most specific. These features intimately link the surgeon's action to the patient's condition." Charles L. Bosk, *Forgive and Remember, 2nd Edition* (Chicago, IL: University of Chicago Press, 2003), 29.

(A) Transfer the patient to another competent surgeon at the nearest available center.
(B) Treat the patient according to the wife's wishes.
(C) Treat the patient doing everything possible to avoid transfusion, but transfuse the patient if survival depends on it, and tell him when he recovers.
(D) Treat the patient and allow an anesthesiologist who is willing to comply with the wife's request to be responsible for transfusion therapy.
(E) Treat the patient and comply with his prior refusal of blood transfusion, regardless of associated risk.[196]

The authors state that "the strongest ethical argument can be made for (E),"[197] and then walks the reader through why the other choices are less correct. According to the authors, (A) is not feasible in an emergency situation but would be in an elective or non-emergent case, (C) places the values of the surgeon over the values of the patient, (B) complying with the wishes of the next-of-kin is unethical because the wife is not practicing surrogated judgment and thinking about the patient's wishes, and (D) is unethical because it requires a surrogate decision-maker, who is also then placing his values over those of the patient. Finally, the authors close the case by stating, "Although a lower percentage of seriously ill patients survive surgery under the conditions imposed by the Jehovah's Witness faith, competent surgeons usually bring them through their operations satisfactorily, and surgical case should not be considered futile."[198]

The authors assume that resolving ethical discomforts are rational, logical, and can be reasoned through. What are the authors leaving out in an attempt to teach surgeons what the "right thing to do" is? Given that the patient's preferences for blood transfusions were stated in an earlier discussion on an elective surgery, why does the surgeon not re-evaluate at this point in time to see whether the patient would also refuse blood transfusion for this

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[196] Ibid., 35.
[197] Ibid.
[198] Ibid., 36.

critical situation? The severity of the condition may have an influence on the patient's willingness to have blood transfused – from a layman's perspective, an elective surgery may be perceived as lower risk, and thus, the likelihood of needing a blood transfusion is lower and easier to reject. The authors also state that substituted judgment is not reflective of what is really wanted in 70 percent of cases. Why do the authors assume that substituted judgment is unethical, when people from other biographies and histories may not place the same weight on patient autonomy as they do on familial decision making?

While ethicists and clinicians expect families and surrogate decision-makers to practice "rational" substituted judgment, this type of ethic severs the interpersonal ties, connections, and tensions between the physician and the family, the family and the patient, and the patient and physician. Elizabeth K. Vig et al.'s qualitative study provides depth into what is presented as a straight-forward, logical decision, discussing the issues that arise, what is at stake, and how real families deal with these very real ethical situations. 66 percent of surrogates planned to make decisions for their loved ones based on what they believe the patient would want, despite the limitation of not having in-depth conversations about specific types of care that would be wanted. Furthermore, surrogate treatment choices are often based on the surrogate's own values and preferences, which at face value, seems wrong and selfish. However:

> A deeper look at what these surrogates said does not indicate rampant disregard for patient preferences, but instead illustrates that surrogates find it difficult to isolate their own perspectives when making life-and-death decisions. Even the surrogates who planned to base decisions on their own needs, for example, explained that they did so because they cared too much for loved ones and anticipated having trouble making life-and-death decisions.[199]

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[199] Elizabeth K. Vig, et al., "Beyond Substituted Judgment: How Surrogates Navigate End-of-Life Decision Making," *Journal of the American Geriatrics Society* 54, no. 1 (2006): 1692.

A perfectly rational ideal is that surrogates would do as their loved ones would want – however, their study reveals that surrogates make decisions based on their "gut intuition," shared values, and life experiences because these conversations tend to be vague. Understanding surrogate decision-making using this qualitative lens re-contextualizes the patient and moves towards understanding how people really act when faced with real-life ethical tensions.

I use this casebook as an example of when authors construct the patient as an object and the physician as the only moral agent. "When only the professionals (but not the patients) are moral agents, the ethical position dictated by the medical narrative is beneficence, the commitment to promoting the patient's well-being as defined by the professional . . . since an objectivist epistemology is basic to both the medical and social narratives of . . . health, beneficence is not only justified; it is their logical corollary."[200] Ethics based on abstract principles denies the embodiment of the people involved and fails to establish the person at the center of his or her own health. It takes away the moral agency of the patient; during an ethical 'dilemma,' when physicians are weighing their choices between being beneficent and possibly paternalistic with balancing patient autonomy, the patient's wishes are often a consideration in what to do next, not a focal point of conversation. Beneficence is intended to benefit the patient; however, the way it is often applied is through the lens of the physician - what the physician perceives to be for the good of the patient and which dominant principles should guide decision making.

The focus on abstract principles guiding decision making is marked in *The Ethics of Surgical Practice* and others like it. The authors discuss all the answer choices, eliminate

[200]Sally Gadow, "Whose Body? Whose Story?" *Soundings* 77, no. 3–4 (Fall-Winter 1994): 301.

them one by one, and then declare the remaining answer choice to be the most ethically sound. For some answer choices, they acknowledge the reader's discomfort in picking that choice but nonetheless assure the reader that the choice they designated is certainly the most ethically principled of them all. By proclaiming and explicitly stating that certain choices are unethical, the authors claim moral authority and continue to perpetuate ethics as an 'ivory tower' practice. As an example, Birgitta Mackiewicz, the book's reviewer for the *Journal of the American College of Surgeons,* praises the authors' "use of the virtues and understanding of professionalism . . . to take a candid look at what might be an attractive means of resolving a case, but a means that falls short of the professional responsibilities and ethical tradition of surgeons."[201] However, where that definition of professional responsibilities and ethical tradition arises from is a question left unexamined.

There has been a tremendous amount of movement in the world, and physicians must interact with a broad range of patients and other professionals. Even in North America, people embody different approaches to the self when it comes to illness and health. Ideas on "virtues, values, moral psychology, normative ethics, and good human lives" stratify not only by geopolitical borders, but also by regions of a country, relative socioeconomic status, and even by degrees of melanin in one's skin (both interracially and intraracially). Renee Fox has critiqued bioethics for having an upper middle-class WASP ethos held by the philosophers, theologians, jurists, physicians, and public policy officials in the field. The basic values of American bioethics, Fox claims, are individualism, autonomy, individual rights and privacy, veracity, justice (cost containment), beneficence,

[201]Mackiewicz, "The Ethics of Surgical Practice: Cases, Dilemmas, and Resolutions, 1st Edition," e1.

and nonmaleficence.[202] Paternalism is frowned upon because it interferes with individual liberties. White cultural construction of bioethics risks "[reproduces] white privilege and supremacy in our own cultural practice"[203] by avoiding race-based issues. In other words, the virtues and principles espoused by casebooks such as the "Ethics of Surgical Practice" are problematic because they originate from a White Anglo-Saxon Protestant (WASP) high culture that dominated the majority of the twentieth century. American bioethics imagines the self as an autonomous, rational individual, and thus, physician-patient relationships are founded on informed consent; not everyone operates with these embodied values but they are still taught to frame their ethical problems as such. As the WASP ethos operates in a race- and power-evasive manner, physicians that are non-White or middle-class have also adopted and perpetuated this, even if it may feel to them like fitting a square peg into a round hole.

Fox suggests a remedy to fix bioethics' WASP ethos – greater disciplinary diversity in the field of bioethics. However, Myser claims that this is not enough: because American bioethics reflects a WASP, middle-class ethos, if we are truly to be inclusive in bioethics and not merely providing minority spaces, researchers must problematize "White dominance and normativity and the White-Other dualism when they study and describe the beliefs and practices of other ethnic groups."[204] "'Cultural differences' associated with research subjects in minoritized spaces – in or outside of the United States – are represented as 'obstacles,' 'difficulties,' and or 'challenges' for 'us' in the majority space of dominant

[202]Renee Fox, "The Evolution of American Bioethics," in *Social Science Perspectives on Medical Ethics* (Boston, MA: Kluwer Academic Publishers, 1990), 201–17.

[203] Catherine Myser, "Differences from Somewhere: The Normativity of Whiteness in Bioethics in the United States," *American Journal of Bioethics* 3, no. 2 (2003): 3.

[204] Ibid., 5.

United States bioethics and healthcare culture, requiring 'translation' or 'interpretation' by social scientists and others operating in (and ironically maintaining) that majority space."[205] For example, in the care of the Jehovah's Witness presented in the casebook, the lack of consent to a blood transfusion is framed as a problem that requires a "work around" for the surgeon to solve.

In its current state, the language of American bioethics – autonomy, beneficence, nonmaleficence, informed consent, justice – works for predominantly White, upper middle-class bioethicists and healthcare professionals to discuss amongst themselves what ethics is and what it looks like.[206] While the current language of bioethics allows people to discuss ethical issues in a common language with relatively clearly defined and widely understood terminology, trying to fit all situations into its linguistical rules can be stifling and limiting. This language desperately needs expansion if we are to include people of different races, classes, genders, sexual orientations, religions, and disability in the conversation as well.

Expanding the Culture of Ethics

Alasdair MacIntyre's main argument in *After Virtue* is that virtues are practiced "within some particular community with its own specific institutional forms"[207] - what is virtuous in one setting may not be virtuous in another, as they are specific to social and cultural milieus. Furthermore, *eudaimonia* - the "state of being well and doing well in being well" or "blessedness, happiness, prosperity"[208] - is the *telos*, and virtues will help one

[205] Ibid., 8.
[206] Fox, "The Evolution of American Bioethics."
[207] Alasdair MacIntyre, *After Virtue: A Study in Moral Theory, 3rd Edition* (Notre Dame, IN: University of Notre Dame Press, 2007), 59.
[208] Ibid., 148.

achieve it. For MacIntyre, this *telos* is not individually defined, but constructed through social relations. Demonstrating the range of *telos* and "moral taste buds," Jonathan Haidt et al.'s study compares the emotional affects of two socioeconomic classes within three cities (Porto Alegre, Brazil, Recife, Brazil, and Philadelphia, USA) that represented different degrees of "westernization" - six groups in total.[209] The stories involved the actors committing harmless but potentially offensive acts, such as burning a flag. The authors found that adult Philadelphians of high socioeconomic status "exhibited a harm-based morality limited to the ethics of morality"[210] - as long as the actions didn't harm anyone, they were permissible. In contrast, adult Brazilians and persons of lower socioeconomic status moralized stories that invoked feelings of disgust or disrespect and also made more references to the ethics of community. The authors conclude that "some models of moral judgment may not travel well outside of the populations on which they were developed," and that "the relationships among moral judgment, harm, and affective reactions may be culturally variable."[211]

Owen Flanagan, in the *Geography of Morals*, agrees with Haidt et al.'s study, asserting that "most work in empirical moral psychology has been done on WEIRD people (Western Educated Industrialized Rich Democratic)" which is "possibly the most unrepresentative group imaginable."[212] Flanagan draws upon Alasdair MacIntyre's argument that virtues, what I argue is the first-person aspect of ethics, are "internal to particular practices and traditions, and emerge in particular relations among particular

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[209]Jonathan Haidt, Silvia Helena Koller, and Maria G. Dias, "Affect, Culture, and Morality, or Is It Wrong to Eat Your Dog?" *Journal of Personality and Social Psychology* 65, no. 4 (1993): 613–28.

[210] Ibid., 625.

[211] Ibid.

[212]Owen J. Flanagan, *The Geography of Morals: Varieties of Moral Possibility* (New York, NY: Oxford University Press, 2016), 3.

people at a particular place and time."[213] For example, some North Americans think that "anger and indignation are sometimes morally required; [Tibetan] Buddhists and Stoics say anger and indignation are always immoral."[214] Some parents in North America do not want to circumcise their male newborn because they find the practice to be outdated, unnecessary, and potentially traumatic. The same procedure for the Maasai of Kenya and Tanzania is not about hygiene but about group formation.[215] Finally, in his primary example of non-WEIRD viewpoints, Flanagan presents the Buddhist No-Self to expand our imagination of what selves are, in contrast to the Western conception of self - autonomous, rational, self-determining. The No-Self is a self that exists only as it relates to other selves, and are "metaphysically selfless and, according to the tradition, ought to work to be maximally unselfish in thought and action."[216] This is a reflection of Chinese and Japanese metaphysics, epistemology, and aesthetics, which "[gives] relational fields priority over individual objects."[217]

Works in comparative moral psychology and philosophy run the risk of perpetuating "White dominance and normativity, and White-Other dualism" in bioethics if written with the intention of teaching to translate/convert the Other's ethics to better suit the WASP ethos. However, Flanagan takes care to expand the language of ethics beyond the cultural boundaries set forth by the White-Other dualism, and tries to move beyond a simple statement of "North Americans believe this, while Others believe that," by framing

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[213] Ibid., 4.
[214] Ibid., 133.
[215] Ibid., 135.
[216] Ibid., 227.
[217] Ibid.

it within the first-, second-, and third-person dimensions of ethics as proposed by the authors of *The Four Lectures on Ethics:*

> I have not once tried to say what the moral domain is. Partly this is because I don't know, and partly because its boundaries are fluid . . . What I did say is that most of the moral problems I face and that people I know face are not like trolley problems. They are not dilemmas and they are not emergencies. Most pertain to personal friendship, to civic friendship, to work for social justice, to being honest and reliable, to living up to one's own standards, and to creating conditions in which youth develop into good persons, with the capacities and sensitivities that will serve them well in the moral project. The moral project takes place primarily in domains of life where there are no laws or written policies to structure action, but in which much of the work on goodness, decency, character, and meaning take place . . . The zone of ethics and morals, then, is the zone of normativity, where there is no public legislation or written policy.[218]

Flanagan's work is significant because it builds upon the work of Lambek, Das, Keane, and Fassin in expanding the conception of the moral domain. Furthermore, it critiques the dominance of WASP/WEIRD ontology in bioethics and moral philosophy, providing concrete examples demonstrating the range of moral norms, metaphysics, epistemology, and aesthetics. It moves us away from the abstract critiques by Myser and Fox that bioethics has a WASP ethos, and closer to an understanding of the potentials of an expanded language and framing of ethics.

Other works in the field of comparative moral philosophy and psychology build upon Lambek, Das, Keane, and Fassin's imagining of ethics by demonstrating its everyday situatedness in the lived experience. Cheryl Mattingly, in *Moral Laboratories*, tells the stories of African American parents of children with serious chronic illnesses. She describes her participants as autonomous individuals who must constantly negotiate how to best care for themselves and their children, which is a "complex reasoning task that engenders ongoing moral deliberations, evaluations, and experiments in how to live . . . the

[218] Ibid., 257.

work of care, in other words, demands the work of cultivating virtues to be, for example, a 'good enough' parent."[219]

Mattingly's use of the word 'virtue' is an intentional callback to the neo-Aristotelian/virtue ethics as advanced by Alasdair MacIntyre. In MacIntyre's interpretation of Aristotelian ethics, rules arise from virtues, which are specific to a *telos* - an objective or an end. For example, a "good" watch keeps time accurately, "rather than, say, to throw at the cat. The presupposition of this use of 'good' is that every type of item which it is appropriate to call good or bad - including persons or actions - has, as a matter of fact, some given specific purpose or function."[220]This is in contrast to post-Enlightenment philosophy, which did the opposite: virtues arose from abstract/so-called "universal" principles.[221] Kierkegaard, Kant, Diderot, Hume, Smith and other post-Enlightenment philosophers "characterize some feature or features of human nature; and the rules of morality would then be explained and justified as being those rules which a being possessing just such a human nature could be expected to accept."[222]

Mattingly tries to use the stories of her participants to demonstrate first-person neo-Aristotelian ethics: one mother "doesn't just want her son to be physically safe; she wants him to thrive - she wants to create a good and happy life for him. Her concern reflects a basic tenet of virtue ethics. The good life for humans is not merely about surviving but concerns flourishing."[223] Mattingly argues that the virtue that this one mother - and other parents in her study - espouses is the virtue of the "Superstrong Black Mother":

[219] Cheryl Mattingly, *Moral Laboratories: Family Peril and the Struggle for a Good Life* (Kindle Edition: University of California Press, 2014), 5.
[220]Alasdair MacIntyre, *After Virtue: A Study in Moral Theory, 3rd Edition* (Notre Dame, IN: University of Notre Dame Press, 2007).
[221] Ibid.
[222] Ibid., 51.
[223] Mattingly, *Moral Laboratories*, 9.

> This ideal type centers upon the primary task of care for and protecting others, especially one's children. These qualities and virtues include being "self-reliant and resourceful," "assertive," "self-sacrificing," and, above all, as the name implies, "strong." . . . Although not all of these characteristics may seem to be virtues, scholars of African American experience have argued their historical necessity from slavery onward and note that they continue to be essential attributes for black women living within a contemporary and still racist America.[224]

Mattingly situates the virtue of the "Superstrong Black Mother" within a specific historical and cultural context, which is crucial to a neo-Aristotelian/MacIntyrian understanding of virtue ethics. The *telos* is also socially defined - "good" mothers take care of and protect their children.

Her approach in *Moral Laboratories* is not holistic, as she focuses heavily on the first-person and second-person dimensions of ethics and does not step back to really examine why being a "Superstrong Black Mother" is a necessary virtue in raising a chronically ill child in America. I am not sure if these are truly neo-Aristotelian virtues in the sense that they promote human flourishing because they seem more like survival skills. Mattingly presents the actions and motivations of her participants as if they are autonomous, individual actors, but her presentation reflects her own WASP/WEIRD ontology. For example, Dotty, one of the mothers in her study, had to "to postpone her own dreams of going back to school, and she has deferred her desire to explore romantic relationships or, as she has put it bluntly, to 'have a life.'"[225] to take care of her daughter who has sickle cell anemia. Even though she wanted to be a doctor, Dotty has had to recalibrate her goals based on her financial and social circumstances, aiming instead to someday obtain a bachelor's degree in Nursing. Because she is a single mother and her daughter is in and out of the hospital, even this may not be entirely possible. "She has

[224] Ibid., 6.
[225] Ibid., 100.

signed up for night classes again and again, and even moved back in with her mother to help care for Betsy, in order to try to realize this dream"[226]

Part of taking care of her daughter also involved learning about the disease and learning how to interact with the physicians so that she can get "needed attention from clinicians. This has sometimes meant following their instructions but it has also meant being willing to question and challenge their advice . . . she has had to become skilled at challenging clinicians when she believes them to be wrong, doing so in a way that doesn't make them so defensive they dismiss and ignore her."[227]

Rather than delving into the social, political, and economic issues that prevent Dotty from going back to school or the circumstances that made her a single mother, Mattingly focuses on how Dotty has learned to be more assertive with physicians when discussing her daughter's care. However, "Dotty's very clinical knowledge and adeptness is an indication of a tragic incommensurability at the heart of her effort to create a "good life" for herself and her daughter."[228] The tragic incommensurability described by Mattingly here is that because Dotty is the "Superstrong Black Mother" who is clinically competent, she has also become alienated from Betsy, "[becoming] more and more blinded to her daughter's plight as just another little girl."[229] Dotty sometimes "forgets" that Betsy is her child and not her patient. Dotty has also difficulty reconciling how to parent:

> I have to be able to switch from being, you know, "let's get this handled' to . . . 'she needs me now" type deal . . . How do you turn off, you detach from it and say, you know, "I'm gonna detach from this whole situation and try to get this done, get this resolved so she can get good care." And how do I [also] be that mommy that has to, you know, sit there and put your arms around the child and hold them?[230]

[226] Ibid., 104.
[227] Ibid., 99.
[228] Ibid., 110.
[229] Ibid., 110.
[230] Ibid., 112.

The ongoing moral tragedy, Mattingly continues, is that Dotty's social history that "has valorized a specific form of moral strength and tenacity in the face of adversity and provided powerful ideas for what a good mother should look like . . . we might ask if her tragedy is absolutely necessary."[231]

Without considering the social, political, and economic issues at hand, claiming the creation of a 'good life' based on virtues and interpersonal relations alone feels privileged and empty. For Mattingly, the tragedy is the objectification of her daughter, not that Dotty feels that she has no life of her own, has to work, take care of her daughter as a single parent, while attending school, or returning to live with her mother with whom she has a fraught relationship. Mattingly raises the issues around these social, political, and economic issues briefly but does not take them up to task herself:

> [Dotty] can ask what it is about our society that her situation reveals and what could be done to change it. What does her dilemma reveal about societal racism and the lack of funding and research support for a "black" disease like sickle cell anemia? What does it teach about the lack of financial support for parents like her, who have to take on such an enormous part of the care of her child? About the flaws in the health care system? About the racially inflected stigmatization of children like her daughter who receive heavy doses of opiates in pain crises and are looked upon by some clinical staff as drug addicts, or "med seeking," as they say in the clinical world?[232]

Mattingly states that there is structural violence, oppression, and racism that create the possibility of moral failure – whether it is to protect either own moral hearts or their children. She leaves Dotty (and the reader) to answer the questions and fill in the blanks. Considering that she is studying African-American families who have children with chronic illnesses, her analysis without taking social histories into greater consideration

[231] Ibid., 119.
[232] Ibid., 121.

seems shallow: she doesn't mention the history of racism in American medicine, current race-based disparities in access and quality of care, or even what valorizing the virtue of the "Superstrong Black Mother" does. In an interview, L'Heureux Lewis-McCoy explains that the factors that contribute to the need to be a "Superstrong Black Mother" – limited economic opportunities, social resources, and discrimination – can become diminished; "if we think Black women are strong, then there's no reason to make the world more fair for them."[233]

In a 2012 paper, Mattingly contrasts and compares the first-person that she presents with the poststructuralist virtue ethics lens that I view the users on /r/medicalschool in.[234] I raise questions about Mattingly's representation of her participants and the unspoken assumptions about what frustrates her participant's efforts to live a good life. For Mattingly, this is not a flaw within her research but a different conceptual perspective: she articulates a first-person, "humanistic" virtue ethics, while I have come to virtue ethics from a post-structuralist perspective inspired by Foucault. Mattingly's points of overlap between the two perspectives is summarized below:

1) Both are post-Enlightenment frameworks that eschew ethical-life action or decision-making as following a set of universal rules, procedures, or reasoning processes.
2) The ethical is interpersonal, shaped by social context and by the personal and social histories people are embedded in.

[233] Public Radio East, "'Strong' Black Woman? 'Smart' Asian Man? The Downside to Positive Stereotypes." http://publicradioeast.org/post/strong-black-woman-smart-asian-man-downside-positive-stereotypes.
[234] Cheryl Mattingly, "Two Virtue Ethics and the Anthropology of Morality," *Anthropological Theory* 12, no. 2 (2012): 161–84.

3) Virtues are cultivated by the self through every day practices and actions.

She argues that moral subjectivity – and the first-person aspects of ethics – need to be further attended to. Her narrative approach in *Moral Laboratories* follows multiple families and how "chronic and disabling illnesses challenge questions about what a good life may be, how 'healing dramas' shape this vision of the good life, and how clinician, patients, and families make judgments about the best good in the circumstances where they must act."[235] The first-person framework, focusing on the "I" and "we," allows for examination into how individual humans 'self-interpret' how to become and live as moral beings, which may be extrapolated to a similar collective.

Mattingly contrasts the first-person to the post-structuralist virtue ethics. A post-structuralist virtue ethics asks, "What kind of an 'I' is created in particular historical and cultural conditions? That is, what kinds of subjects are produced? What are the normative technologies at work shaping subjectivities?"[236] In short, ethical subjectivity is formed by the shared discourses, practices, and structures. For postmodernists, these external forces and structures define agency more than the pursuit and efforts of "particular individuals in particular circumstances."[237] She gives the post-structuralist perspective short shrift by stating that it treats practical, everyday ethical life as a "tacit enactment or reproduction of cultural norms . . . The moral, in other words, tends to be treated as a codified system embedded in an established habitus, and the ethical, by contrast, can include experiences and practices of transgression and critique of moral codes."[238] As an example of post-

[235] Ibid., 171.
[236] Ibid., 173.
[237] Ibid., 175.
[238] Ibid., 177.

structuralist ethics that attends to the first-, second-, and third-perspectives of ethics, I turn to Stephen J. Collier and Andrew Lakoff's book chapter, "Regimes of Living."

Social, Political, and Economic Dimensions of Ethics

Like Lambek, Das, Keane, and Fassin, Stephen J. Lakoff and Andrew Collier also refer to ethical problems as questions of 'how should one live': "[involving] a certain kind of practice ('how'), a notion of the subject of ethical reflection ('one'), and questions of norms or values ('should') related to a certain form of life in a given domain of living."[239] In this definition, ethical questions are framed with an attention to the first-, second-, and third-person dimensions, engaging with techniques, practices, and rationality. Their approach focuses on the "*doing* of everyday life." Lakoff and Collier concede the point made by some moral philosophers that contemporary ethics is inadequate and incoherent for the project they want to undertake, which is describing the techniques, subjects, and norms that background the question of 'how should we live.'

Unlike Mattingly, Lakoff and Collier do not "limit discussion of contemporary 'ethical' problems to the self-forming individual or to the quest to find a rational form of acting with respect to the good."[240] By introducing the concept of "the regime of living," the normative, technical, and political elements of ethical problems are placed in conversation with each other, Lakoff and Collier provide an alternative perspective on questions of ethics. They recognize that ethical practices and rationalities are not made within an ahistorical and apolitical vacuum.

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[239] Stephen J. Collier and Andrew Lakoff, "On Regimes of Living," in *Global Assemblages: Technology, Politics, and Ethics as Anthropological Problems*, eds. Aihwa Ong and Stephen J. Collier (Malden, MA: Blackwell Publishing, 2008), 29.

[240] Ibid., 29.

Lakoff and Collier reference Lawrence Cohen's chapter, "Operability, Bioavailability, and Exception," which discusses the regulation of the organ trade in India, as an example of a regime of living.[241] The Transplantation of Human Organs Act made a distinction between sold and 'gifted' organs and labeled only familial 'gifts' as ethical. However, "Authorization Committees" could allow for exceptions to this rule to be made. These exceptions became commonplace. "The 'ethics of exception,' thus, is a regime of living forged through a specific relationship between state practice, biomedicine, transplant doctors, and the committees that regulate them . . . these sellers may act 'out of love,' felt not for the recipient of the organ but for the beneficiary of money gained from its sale."[242] Furthermore, all thirty of the donors that Cohen interviewed had undergone previous sterilization surgeries, which were "connected to state-based developmental strategies that sought to control population growth among the 'lower classes,' whose 'unruly' passions could not, it was presumed, be tamed by other means."[243]

These regimes of living demonstrate a need to talk about ethics beyond the interpersonal, everyday ethics; this lifts the question of ethics out of the framework of one single actor (the donor) but places it into a context where multiple actors and forces are closely intertwined with each other.

> In contrast to classical ethics, the operation of regimes of living does not necessarily involve an individual's capacity for insightful understanding; and the "life" in question is not necessarily that of a reasoning citizen. Rather, the life at stake in a given regime of living may be collective as well as individual; and the problems of "ordinary life" – mutual existence for the sake of sheer life and biological life itself – are central to regimes of living.[244]

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[241]Lawrence Cohen, "Operability, Bioavailability, and Exception," in *Global Assemblages: Technology, Politics, and Ethics as Anthropological Problems*, Aihwa Ong and Stephen J. Collier (Malden, MA: Blackwell Publishing, 2008), 79–90. doi: https://doi.org/10.1002/9780470696569.ch2.

[242] Collier and Lakoff, "On Regimes of Living," 32–33.

[243] Ibid., 33.

[244] Ibid.

The first-, second-, and third-person dimensions of ethics, when divorced from the contextual features of the regimes of living, fail to consider how global these sociopolitical assemblages are – they are not attached to a social or cultural context. In the case of organ trafficking in India, technological change has made organs increasingly mobile and abstract – donors from the Global South interface with buyers from the Global North, all facilitated by doctors and brokers.

The regimes of living as advanced by Lakoff and Collier address Mattingly's problematic analysis of her "Superstrong Black Mothers" - the lack of attention to "practices, local histories, and contexts, and to actors' own understandings of what they are doing."[245] One striking oversight in Mattingly's work, for example, is the lack of attention to the history of racism in medicine and its explicit biases or the implicit biases present in both individual physicians and the institution of medicine as a whole.[246]

Mattingly ends her paper by claiming that first-person virtue ethics is superior, as it focuses on the "*doing* of ordinary life," which contradicts the commonality she pointed out earlier in her paper. Contrasting the two approaches so heavily ignores the possibility that both approaches can be taken to the same subject/topic and provide richer insights into the anthropological questions of how people live: What do people say they do? What do people actually do? What factors influence the choices that they perceive as available to them, what choices do they actually have available, and how do people make decisions and act on them? While to some, the first-person and post-structuralist virtue ethics seem

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[245] Ibid., 34.

[246] John Hoberman, *Black and Blue: The Origins and Consequences of Medical Racism* (London, England: University of California Press, 2012).

irreconcilable, I switch between lenses in the presentation and analysis of my dissertation because structures and norms are closely intertwined with every day practice.

I do not see a clear delineation between the first-person, neo-Aristotelian virtue ethics and the Foucauldian, post-structuralist ethics; I find them complementary. Keane et al.'s approach is also flexible as it allows for the discussion of both "ethical dilemmas" and the everyday interactions that invite us to act and interact with the ethical affordances of our time, place, and cultural milieu. I choose to utilize Keane et al.'s framework and the language of ethics extensively because it provides a clear language that establishes leading ethical lives as practiced actions within every day interactions.

CONCLUSION

As Webb Keane asserts in the *Four Lectures on Ethics*, "changes in ethical life depend on social conditions that will sustain them."[247] Furthermore, Keane also states that "people's ethical projects take up the affordances available to them,"[248] indicating that the freedom of choosing an action/how to behave in an interaction is framed by their social conditions; their individual agency can be constrained.

It is because of this theoretical stance that I examine the social conditions that cultivate and sustain burnout in medical students as described by the students, which is presently not fully described in the literature. My dissertation, as an autonetnography, speaks to the lived experience of medical students and seeks to understand the role of social conditions rather than examining individual psychologies. It will also focus more on predominant discourses around medical student burnout rather than following the stories

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[247] Keane, "Varieties of Ethical Stance," 156.
[248] Ibid., 155.

of individual users. The following chapter will describe the history of Reddit, /r/medicalschool, and how this website serves as a public space for medical students to discuss a wide range of topics, one of which is burnout. This will contextualize Chapter 3: Methodology, as well as provide a theoretical foundation on which I analyze /r/medicalschool as a community.

Chapter 3: Methodology

INTRODUCTION

Reddit's History and Contextualization

Reddit is a social news aggregator, a web content rating system, and a discussion board rolled into one website. Reddit describes itself as the "front page of the internet," where it "creates and catalyzes culture – a single comment can spark a global movement:"[249] Reddit also states that it is "home to thousands of communities, endless conversation, and authentic human connection. Whether you're into breaking news, sports, TV fan theories, or a never-ending stream of the internet's cutest animals, there's a community on Reddit for you."[250] Appendix A is a screen capture of the "front page of the Internet."

First founded in 2005 by Alexis Ohanian and Steve Huffman, Reddit began expanding when acquired by Condé Nast in 2006 and later became a subsidiary of Advance Publications, Condé Nast's parent company, in September 2011. In 2012, Reddit re-incorporated as an independent entity; Advance Publications is the largest shareholder.[251] Reddit's rise in popularity is largely attributed to the "Digg Migration" – users of Digg, a formerly popular social news aggregator, coordinated a "Quit Digg Day" on August 30, 2010 after a redesign of the website removed many of the key features, such as voting, favorites, and subcategories, and changed its sorting algorithm

[249] Reddit, "Press."www.redditinc.com/press.
[250] Reddit, "About."www.redditinc.com.
[251] Reddit, "Reddit Myth Busters." https://redditblog.com/2013/08/06/reddit-myth-busters/#independent-reddit-inc.

to a “follow” model much like that of Twitter.[252]

As of February 2017, Reddit was ranked the third most visited website in the United States and the sixth in the world, with the U.S. representing 58.8% of its user base and the U.K. following with 7.5%.[253] As of November 2017, Reddit has over 330 million active users per month, over 138,000 active communities ("subreddits"), and 14 billion average screen views per month.[254] /r/medicalschool had 72,610 subscribers in April 2018 and 110,804 subscribers in January 2019, and has around 1,000 to 1,400 users browsing the site at any given time. When posts (texts, links, images, gifs, or videos) are submitted, they appear in a subreddit for users to vote for or against ("upvote" and "downvote" respectively), with the default sorting of each subreddit showing newer posts with higher upvotes. “hot” posts – ones that gain a large number of upvotes quickly – appear on the home page (Appendix A).

All subreddits function within this upvote/downvote system as well as a sorting algorithm which determines the order and visibility of posts. /r/medicalschool is one of Reddit's many subreddits. Users can comment on the posts and respond to each other in a comment tree; these comments can also be up or downvoted (Appendix B). The intention of the up/downvote is to promote conversations that are relevant to the discussion and downvote those that are not; however, in practice, they are used to create a consensus. Each vote counts toward a "total score;" "Top" parent posts and child comments have higher visibility. The total number of karma can serve as an indication

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[252] Caroline McCarthy, “Changing the Rules of the Digg Game,” *CNet News* (2010).https://www.cnet.com/news/changing-the-rules-of-the-digg-game; Caroline McCarthy, “Angry Digg Users Flood Home Page with Reddit Links,” *CNet News* (2010).news.cnet.com/8301–13577_3–20015042–36.html?part=rss&subj=news&tag=2547–1_3–0-20

[253] Alexa, "Reddit.Com Traffic Statistics." https://www.alexa.com/siteinfo/reddit.com.

[254] Reddit, "About."www.redditinc.com.

of how widespread or popular an idea is. Child comments can also generate additional discussion.

On /r/medicalschool, each post is on its own webpage, serving as an ongoing space of encounter for discourse. The comments on /r/medicalschool are organized by context of interaction – multiple conversations can be occurring at any given time by any user; these can be sorted by time, number of upvotes, and number of upvotes/hour. With the upvote/downvote system, all registered users can participate in shaping the conversations surrounding the topic. Furthermore, participation in this system does not require users to explicitly state their position as the only means of engagement.

The sum of up/downvotes is called "karma" and is tied to specific usernames. Their karma total can be found on the user's overview page which includes post history. Although karma is a virtual number, it profoundly affects how people conduct themselves online. Annika Richterich likens this process to econometrisation:

> "[users] have to have to acquaint themselves with . . . often unstable ranking logics, audience preferences and communication habits . . .in order to achieve and maximise feedback - or rather, gratification, they adjust their social media participation to an assumed audience and to the structure provided by the respective platform." [255]

The majority of participation and labor are uncompensated and do not provide any sort of benefit for the user, other than virtual fame or notoriety. However, users can be gifted "gold," a premium subscription plan that costs $3.99 a month; it provides users with

[255] Annika Richterich, "'Karma, Precious Karma!': 'Karmawhoring' on Reddit and the Front Page's Econometrisation," *Journal of Peer Production* 4, no. 1 (2014): 4.

benefits such as turning off ads, changing the appearance of reddit through themes, creating a custom alien avatar, highlighting comments, and keeping track of which links/posts they have already visited.[283] Users can also be "tipped" cryptocurrency, such as bitcoin or dogecoin. One of the main criticisms of the karma system is that it incentivizes "users [addressing] the lowest common denominator and usually extend already popular topics . . .[inhibiting] the innovative potential of contributions."[256]

/r/medicalschool, like the rest of Reddit, is an optionally anonymous space, and users are free to disclose as much or as little information about themselves as they would like. However, it may be possible to deduce the identity behind a username through scouring post histories for unintentionally revealing information, especially if that person is an active contributor.257 It is also possible to create a "throwaway" account, a new account made for the purpose of posting anonymously on one post or topic, after which it is abandoned. A single individual can create as many accounts as they would like, as Reddit does not require an email address to register. Reddit does not require registration to view content, and thus, there is no expectation that the information shared is private or privileged to special insiders. Posts and comments from Reddit have often been used to create articles for other websites and news articles, often without censoring the poster's username within screenshots or direct quotes. As such, anyone can search the direct quote in full, find the source, and click through the user's history to see their posting and commenting activity.

The extent to which people participate is highly variable: these spaces are "an

[256] Ibid., 6.
[257] For example, someone searching through my history may be able to deduce my identity because I have linked my public Instagram on some posts, disclosed that I am an MD-PhD student and also an actively competing bodybuilder.

expression of an ongoing negotiation between individuals. Online cultural and community identities are adopted by people, sometimes temporarily, and often to varying extents."[283] Some users are frequent posters and are well known, while others "lurk" and limit their interactions to reading and up/downvoting. For example, I have been a Reddit user since 2007 and have cycled through two major usernames. On the first, I was mostly a "lurker," subscribing to subreddits for posting cute animals and humorous memes (/r/AdviceAnimals). Since becoming a medical student and adopting a new username, I began posting almost daily on /r/bodybuilding, a hobby of mine, and I visit /r/medicalschool at least once a day. I am not a well-known presence on /r/medicalschool as I do not post frequently enough to be noticed, but I will occasionally chime in with information or advice when I can give it with the intention of being helpful. However, I am a frequent participant in the space as I upvote and downvote content consistently, which affects how the content is rated and visible due to Reddit's sorting algorithm.

As people take on multiple identities on the web, immersion is key. Like in traditional ethnographies, the fully-immersed experience in netnography allows one to hear the stories, understand shared meanings and concepts, and come out of the other side with a deeper understanding of the topic at hand. By maintaining a presence on multiple social medias and thus, a multidimensional online identity, I engaged not with a specific field site, but an experientially based knowing that derives its knowledge from connections with both cultural agents and cultural artifacts.

NETNOGRAPHY

Netnographies were originally conceptualized by Robert Kozinets as "a qualitative research methodology that adapts ethnographic research techniques to study the cultures and communities that are emerging through computer-mediated communications."[258] In Kozinets early work, he proposed that netnography would be useful for studying pure and derived virtual cultures and communities and for listening to online conversations about general topics and consumer groups; early netnographies were used in marketing and consumer research.[259]

Concisely put, netnographies are the application of the ethnographic method to computer-mediated communications; it is also reflective of the theory of ethnography; as seen in Kozinets' work, netnographies have also undergone a critical turn in response to ethnography's crisis of representation and the rejection of the norms of objectivity of the researcher, generalizable validity, and the truth.[260] The concept of cultures and community have been problematized because they are not "reified, holistic, discrete, internally integrated and ontologically secure things-in-themselves."[261] Kozinets now advocates for a more fluid perspective on online culture and community which focuses more on "consocial identify and interaction . . . [revolving] around incidents, events,

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[258]Robert V. Kozinets, "The Field Behind the Screen: Using Netnography for Marketing Research in Online Communities," *Journal of Marketing Research* 39, no. 1 (2002): 61–72.

[259]Robert V. Kozinets, *Netnography: The Marketer's Secret Weapon* (Mountain View, CA: NetBase Solutions, Inc., 2010). https://preventviolentextremism.info/sites/default/files/White%20Paper%20%E2%80%93%20Netnography-%20The%20Marketer%E2%80%99s%20Secret%20Weapon.pdf.
For a more comprehensive history on netnographic methods, please refer to Emy Loanzon, et al., "Netnography: Evolution, Trends, and Implications as a Fuzzy Front End Tool," in *2013 Proceedings of PICMET '13* (Institute of Electrical and Electronics Engineers, 2013), 1572-1593.

[260] George E. Marcus and Michael M.J. Fischer, "A Crisis of Representation in the Human Sciences," in *Anthropology as Cultural Critique*, George E. Marcus and Michael M.J. Fischer (Chicago, IL: University of Chicago Press, 1986), 1–16.

[261] Robert V. Kozinets, *Netnography: Redefined* (Thousand Oaks, CA: SAGE Publications, 2015), 10.

activities, places, rituals, acts, circumstances and people."[262] Being consocial means forming relationships that are contingent upon a particular setting or activity – it is "first and foremost by reference to what is held in common by members rather than in oppositional categories between insiders and outsiders."[263] Studies that approach netnographies with this epistemology study engagement with computer-mediated communications, such as cultural politics, vernacular cultures, and prosaics.[264]

Netnographies contend with three different forms of materiality: "the materiality of technology and the digital infrastructure itself, the materiality of digital content itself, and the materiality of the digital as context."[265] As I am not situated in a physical field site for a specific amount of time, ethnographic engagement becomes "an experientially based knowing" of partial, situated knowledges because of its temporal and spatial dislocation.[266] I can "step into" the field and leave whenever; in this sense, I function more like an archaeologist, piecing together how people interacted with the material, with each other, and with the website itself. Because the primary currency of netnographies is material artifacts, and that often, the authors or creators of the materials cannot or will not be interviewed or probed for further questioning, the focus is on better

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[262] Ibid., 11.

[263] Vered Amit and Nigel Rapport, *The Trouble with Community: Anthropological Reflections on Movement, Identity and Collectivity* (London, UK: Pluto Press, 2002), 59.

[264] E. Gabriella Coleman, "Ethnographic Approaches to Digital Media," *Annual Review of Anthropology* 39, no. 1 (2010): 488.
Cultural politics refer to how identities and representations, such as race, class, gender, religion, and other identity markers, are shaped by engagement with virtual spaces. Vernacular cultures refer to the norms, languages, and performative acts that occur within particular virtual settings. Prosaics refer to how computer mediated communications and media reflect and shape the life outside of the virtual world (economic, political, and cultural practices). Robert V. Kozinets, *Netnography: Redefined* (Thousand Oaks, CA: SAGE Publications, 2015), 25.

[265] Daniel Miller and Heather A. Horst, "The Digital and the Human: A Prospectus for Digital Anthropology," in *Digital Anthropology*, Daniel Miller Heather A. Horst (London, UK: Bloomsbury, 2012), 25.

[266] Robert V. Kozinets, *Netnography: Redefined* (Thousand Oaks, CA: SAGE Publications, 2015), 82.

understanding a topic, rather than a certain community.

Cultural Artifacts and Consociality

/r/medicalschool - and Reddit as a whole - tends to favor visual media over text, evidenced by the proportion of posts that are text based versus visual media based. Most of the visual media are memes in the form of image macros, images that have text captioning or referencing the subject of the image. Richard Dawkins first coined the word meme in *The Selfish Gene* to describe "units of cultural transmission, or a unit of *imitation*,"[267] akin to how genes propagate themselves. Internet memes, as defined by Patrick Davison, is "a piece of culture, typically a joke, which gains influence through online transmission."[268] Memes, unlike genes that replicate through physical mechanisms, replicate through "mental processes of observing and learning."[269]

Bradley E. Wiggins and G. Bret Bowers develop memes as a genre:

> "Messages transmitted by consumers-producers for discursive purposes. Specifically, the term "discursive" asserts repetition of subject or thematic matter from within an established meme. As an allusion to our genre description of memes, a successful Internet meme implies a modified narrative." [270]

They also differentiate between viral media and memes: individual memes are dynamic as they are shaped and molded by people participating in the digital culture, which may go viral, but viral media is not necessarily dynamic (e.g. Psy's Gangnam Style).[271] An

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[267] Richard Dawkins, *The Selfish Gene, 2nd Ed.* (New York, NY: Oxford University Press, 1989), 192.

[268] Patrick Davison, "The Language of Internet Memes," in *The Social Media Reader,* Michael Mandiberg (New York, NY: New York University Press, 2012), 122.

[269] Ibid., 121.

[270] Bradley E. Wiggins and G. Bret Bowers, “Memes as Genre: A Structural Analysis of the Memescape,” *New Media & Society* 17, no. 11 (2014): 1892. doi:10.1177/1461444814535194.

[271] This is especially true if an “influencer” or celebrity shares the digital content. These digital artifacts are more likely to be popular if they are easily relatable and humorous to an audience and does not require insider knowledge of the topic. Prior to social media, “going viral” happened through forwarded e-mail chains. Rebecca Crosby, “What Makes a Meme Go Viral?” https://studybreaks.com/culture/viral-meme/.

image, meme, video, etc. becomes viral when it becomes quickly and widely spread through different forms of social media, like a virus, because it takes just several clicks to post, reshare, and send to others on one's social media platform (and many people use multiple). One of the main reasons why memes in the image macros are so popular is because anyone can make them even without using image manipulation programs, due to websites like https://memegenerator.net/, which allow anyone to caption an image of their choice. Furthermore, image quality is not a concern, only the content; many popular image macros are created by drawing on a template meme with Microsoft Paint, which requires little technical skill.

Figure 3 - Example of a 'template' meme (left) that has been edited (right). /r/memeeconomy is a subreddit dedicated to creating and sharing new meme templates for other users to appropriate for their own means/message. Based on the stock market, /r/memeeconomy allows users to invest memepoints, which are similar to karma.
u/H1D3H0, "Just Made This Format, Have I Struck Gold?" https://www.reddit.com/r/MemeEconomy/comments/8lc19o/just_made_this_format_have_i_struck_gold/.

A growing body of literature indicates that memes are not simple forms of humor, but rather, a "form of subversive communication in a participatory media culture."[272] In other words, anyone can make a meme by juxtaposing an image to text and get their point across, often using the visual "pop as a launching point to the

[272] Heidi E. Huntington, "Subversive Memes: Internet Memes as a Form of Visual Rhetoric," *Selected Papers of Internet Research* 14, no. 0 (2013): 1.

political."[273] Memes, as forms of social text, are "a form of cultural capital, as a realization of speech act force, as a mode of naturalizing and familiarizing social realities, as an instrument of authority, and as the medium (and the measure of) of political debate."[274] From a Foucauldian discourse theory framework, memes are constructed truths and are discourses/conversations at an individual level; these arise from societal discourse, overarching social practices and norms.[275] The recursive nature of memes - micro discourses interacting and shaped by the macro discourses - means that these cultural artifacts are exemplars of mediated cultural participation.

Other theorists have linked Internet communications - memes included - as part of folklore, the "unofficial or vernacular culture in modern society, as opposed to the culture of those at the centers of social, political, and economic power: the corporation, the government agency, the university, the museum."[293] While medicine itself can be construed as a center of power, medical students themselves have a folklore, or a common vernacular, that is passed down in the form of memes and image macros. The folklore in this case is a disseminated narrative about the process of going through medical school, with fourth-years as the wise elders telling the story. Memes have the "folkloric process of repetition and variation . . . often identified by emergent patterns of widely disseminated, visually oriented vernacular expression."[276] "Identities are forged, confirmed, and celebrated in large part through shared expressive culture . . .

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[273] Ryan M. Milner, "The World Made Meme: Discourse and Identity in Participatory Media" (University of Kansas, 2012), 305. https://kuscholarworks.ku.edu/handle/l 808/10256.

[274] W. F. Hanks, "Text and Textuality," *Annual Review of Anthropology'* 18, no. 0 (1989): 119.

[275] Milner, "The World Made Meme: Discourse and Identity in Participatory Media," 16; Michel Foucault, *The Archaeology of Knowledge and The Discourse on Language,* A. M. Sheridan Smith (New York, NY: Pantheon Books, 1972)

[276] Trevor J. Blank, "Pattern in the Virtual Folk Culture of Computer-Mediated Communication," in *Folk Culture in the Digital Age: The Emergent Dynamics of Human Interaction,* Trevor J. Blank (Logan, UT: Utah State University Press, 2012), 8.

the digital realm allows an individual to have a corporeal, local experience as well as a virtual social life."[277] It is within this virtual social life that medical students across the country come to an understanding of what being a medical student *is*.

As the meme is both a form of communication and identity expression, it is important to pay attention to what sorts of memes are broadly taken up or rejected. As an example, Noam Gal et al. analyze "It Gets Better," a viral video in which two presenters share their experiences with bullying as gay teenagers and then assure the viewer that life "gets better;" they also analyze the videos that were created and uploaded in reaction. In the two hundred reaction videos that they analyzed, Gal et al. discovered a general cohesiveness in message, as many Youtubers agreed with the general message of "It Gets Better," relaying their own stories of how they faced bullying but now no longer experience it. Even without a formal gatekeeper, an "unintentional hegemonic effect" was created within a digital, "participatory" space. However, there were spaces of resistance - the video "Reteaching Gender and Sexuality," uploaded by a queer-education organization, use "rhetorical choices [that] both acknowledge the existing constitutive narration and resist it," making explicit, direct references to the script from the original video. The creators of this video use "the discursive norm as a ground for subversion."[299] Other authors have found that memes, using irony, humor, and mocking, encouraged identification with or against specific forms of discourse.[278]

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[277] Tok Thompson, "Netizens, Revolutionaries, and the Inalienable Right to the Internet," in *Folk Culture in the Digital Age: The Emergent Dynamics of Human Interaction,* Trevor J. Blank (Logan, UT: Utah State University Press, 2012), 57.

[278] Corey B. Davis, Mark Glantz, and David R. Novak, "'You Can't Run Your SUV on Cute. Let's Go!': Internet Memes as Delegitimizing Discourse," *Environmental Communication* 10, no. 1 (2015): 62-83.

Indeed, while the process of meme-making appears to be participatory, fully understanding a meme requires insider knowledge and memes may be downvoted by /r/medicalschool users if they do not demonstrate enough insider knowledge or express counter-hegemonic opinions. On a vote-based website like Reddit, researchers empirically demonstrated strong evidence of group decision-making and " herding effects," otherwise known as group-think.[279] Thematically analyzing popular upvoted memes and comments related to the medical student experience and burnout elucidated what the general cohesive messages are in medical education; this messaging occurs not only via the actions and words by attendings, administrators, and residents, but also by the medical students themselves. Furthermore, analyzing the "controversial" memes and comments revealed which forms of rhetoric were too subversive for the mainstream medical student population. Although social influence bias means that some perspectives are marginalized while others are privileged, the social aggregating function of Reddit also means that understanding medical students as a group will occur without having to interview individuals.

Autonetnographic Framework

An analysis of material culture centered around the medical student experience and burnout will give ethnographic description to the interactions of the first-, second-, and third-person dimensions of ethics that create an environment conducive to burnout. Material culture refers to "artifacts" - evidence that "endures physically and thus can be

[279] Lev Muchnik, Sinan Aral, and Sean J. Taylor, "Social Influence Bias: A Randomized Experiment," *Science* 341, no. 6146 (2013): 647-51. doi: 10.1126/science. 1240466.

separated across space and time from its author, producer, or user."[280] The analyzed data were gathered through literature review and posts on a popular, online medical student community - /r/medicalschool on Reddit. Comparing and contrasting the literature to the anonymous posts on these spaces of discourse shed light on the difference between what people say they do and what people actually do.

As I am also a medical student who is an active participant-observer on Reddit, I conducted an auto-netnography, a portmanteau of the methods of autoethnography and netnography. An autoethnography "[connects] 'the persona' with 'the social'"[281] by "utilizing a researcher's autobiographical experiences as primary data to analyze and interpret the sociocultural meanings of such experiences."[282] The self (auto), culture (ethno) and method (graphy) are combined and balanced. This method rejects the "subject/object split"[283] as the boundaries between the researcher and the researched blur; it acknowledges that the self cannot be removed from sociocultural environments, which is common experience shared by the researched.[284]

The main advantage of conducting an autoethnography is that, because of its reflexive nature, the researcher is a part of consocial bonds, familiar with the interactions, and is also shaped by the technological affordances within these digital spaces. As such, the researcher has "subjugated knowledge"- "privileged information could be something hidden, not easily discovered, or missing in the existent

[280] Ian Hodder, "The Interpretation of Documents and Material Culture," in *SAGE Biographical Research, Volume 1*, John Goodwin (Thousand Oaks, CA: SAGE, 2012), 171.

[281] Heewon Chang, "Autoethnography in Health Research," *Qualitative Health Research* 26, no. 4 (2016): 444.

[282] Ibid.

[283] Kenneth J. Gergen, "Pursuing Excellence in Qualitative Inquiry," *Qualitative Psychology* 1, no. 1 (2014): 53. doi:10.1037/qup0000002.

[284] Norman K. Denzin, "Interpretive Autoethnography," in *Handbook of Autoethnography*, Tony E. Adams Stacy Holman Jones, Carolyn Ellis (Walnut Creek, CA: Left Coast Press, 2014), 123–42.

literature."[285] Rooted in postmodern epistemologies that embrace the constructed nature of experience, autoethnographies can be problematic when the researcher's subjectivity is not adequately counterbalanced by the subjectivity of the many studied. Furthermore, when steeped in theory, the narrative of the self, as a product of social phenomena and the subjectivity of others around, speaks to social experience and is not self-indulgent.[286]

Autoethnography has "exploded" as a genre: on Google Scholar, a search of "autoethnography" from 2005-2016 yields 16,200 results, while a search from 2016 to 2018 yields 10,400. Carolyn Ellis' *Final Negotiations* (1995) was one of the first autoethnographies to engage deeply with health research - " her gripping illness narrative struck a chord with readers who learned about her relationship with and care of her partner dying of a cancer."[287] Heewon Chang identifies the motivations for conducting an autoethnography: "to tell the subjugated knowledge as a unique and important but previously untold, often oppressively silenced, story,"[288] "build camaraderie through sharing often stigmatized stories so that those who quietly suffer from them could find their voices in the published works,"[289] and to "report on the disrupting effect of illness in life."[290]

In my case, my subjugated knowledge is a result of completing the first three years of medical school and having the opportunity to dissect and analyze my lived experience during my graduate studies. I have also experienced both burnout and mental illness during my third year of medical school, which motivated me to write about my

[285]Chang, "Autoethnography in Health Research," 445.
[286]Andrew C. Sparkes, "Autoethnography and Narratives of Self: Reflections on Criteria in Action," *Sociology of Sport Journal* 17, no. 1 (2000): 21–43.
[287] Ibid., 446.
[288] Ibid.
[289] Ibid., 447.
[290] Ibid., 446.

experience.[291] I came to realize that I had internalized ableist stereotypes of mental illness during my graduate school studies, realized how incredibly harmful this was to others and myself. Through my work, I hope to contribute to the destigmatization of mental illness and burnout in medicine because I know that I am not alone. In order to distinguish my project as an autoethnography rather than an illness narrative, I aim to meet the standards Chang sets for a quality autoethnography: using only authentic and trustworthy data, clearly demonstrating my methodology, being ethical with the presentation of my data, analyzing and interpreting my personal narrative to speak to the broader sociocultural context, and engaging with existing literature.

My autonetnography is rooted in a "praxis of care" as advanced by Merel Visse and Alistair Niemeijer. "A praxis of care entails attention for relationality, affectivity and acknowledgement of political dimensions, such as asymmetry in power." Caring in this context does not mean affection or "consensus harmony,"[292] but rather, a relational engagement rooted in understandings of the sociopolitical context, much like the holistically expanded language of ethics. As such, my autonetnography emphasizes "the particular: what, how and why does a particular individual care for"[293] in a dialogical, hermeneutic relationship that does not disentangle my "self" from the selves of the medical students I am studying.[294] In this sense, I am fully acknowledging my

[291] Ye Kyung Song, "The Medical Student Manifesto," *Pedagogy and Theatre of the Oppressed Journal* 2, no. 7 (2017): 1–17. https://scholarworks.uni.edu/ptoj/vol2/iss1/7.

[292] Merel Visse and Alistair Niemeijer, "Autoethnography as a Praxis of Care - the Promises and Pitfalls of Autoethnography as a Commitment to Care," *Qualitative Research Journal* 16, no. 3 (2016): 301.

[293] Ibid., 304; Visse and Niemeijer, "Autoethnography as a Praxis of Care - the Promises and Pitfalls of Autoethnography as a Commitment to Care," 305.

[294] Hans-Georg Gadamer, *Truth and Method* (New York, NY: Seabury Press, 1975); Charles Taylor, "The Dialogical Self," in *The Dialogical Self*, in *Rethinking Knowledge: Reflections Across the Disciplines*, Robert F. Goodman and Walter R. Fisher (Albany, NY: State University of New York Press, 1995), 57–66.

involvement in the construction of and understandings derived from my research, and do not claim to have knowledge of an absolute, objective truth.[295]

METHODOLOGY

In order to collect qualitative data, I utilized Reddit's search function to find posts/comments that explicitly mention "burnout" or its grammatical variations. I included all posts prior to July 1, 2018 as this marks the end of summer/transition period for most medical students in the United States - the first-years have completed elective time, the second-years are wrapping up Step 1 studying, third-years have finished their last rotation for the month, and the fourth-years are about to start residency. For all I coded the original post, responses replying to the original post, as well as continuous layers of dialogue, as I found that users expressed more experiences and emotions within the back-and-forth conversations with others.

During my initial coding, I noticed a paucity in students who described their experiences as a clinical student in depth to truly understand the unresolved discomforts that they experienced. I then went back to the field and searched for "clinic" and "vent." Finally, I utilized /r/medicalschool's sorting function to identify the top posts of all time and selected the posts that resonated with the established codes. From the "burnout" search, I coded and analyzed 357 posts and their comments (Appendix C). I also coded and analyzed 10 posts "top posts of all time" that applied to burnout and illustrated the identified themes. I also provide context by stating the origin of the image macro, the discussion generated from the post, and its intended meaning.

[295] Ibid.

The webpages were downloaded using NVivo, a qualitative analysis software, and converted into PDFs which could be easily searched, coded and analyzed thematically using an inductive approach. The screenshots of the webpages included time stamps as well as the net score of upvotes/downvotes for each post and comment. The data were also managed through NVivo, which helped map relationships between codes and themes, which would otherwise remain hidden in the data, observing both frequency and association of themes. I used an inductive approach to my coding, allowing new questions and themes to emerge as I read and analyzed more posts and comments. As these relationships emerged, I investigated the data further by going back to recode. Based on the emerging relationships between coding nodes, I established themes from the coded data.[296] Because I aimed to understand the lived experiences of a stigmatized mental state from the vantage point of someone that has or is experiencing it, I did not use a predetermined set of codes based on the burnout literature.[297]

In the case that the posts were image macros, gifs, or videos, I utilized Davison's framework, which states that Internet memes can be analyzed on three levels: the manifestation, the behavior, and the ideal. The manifestation refers to what objects are in

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[296] Coding is attaching labels – either words or phrases – to excerpts of individual transcripts and preserving the fidelity of the text. Creating themes arises from grouping codes and subthemes together. For example, I coded specialties that were mentioned (e.g. Surgery, Ob-Gyn, Family Medicine), which were then analyzed and organized into larger themes and subthemes, such as "Learning Environment" or "Feeling Inadequate and Powerless." Carl Auerbach and Louise B. Silverstein, *Qualitative Data: An Introduction to Coding and Analysis* (New York, NY: New York University Press, 2003).

[297] In contrast, other studies on medical student burnout and well-being were deductive in their data collection and coding, using *a priori* categories based on previous literature. For example, Dyrbye et al's study, "The learning environment and medical student burnout: a multicenter study" utilized a questionnaire with Likert scales (5-point scale) which utilized Williams et al's conceptual framework on burnout (workplace conditions and doctor characteristics). Liselotte N. Dyrbye, et al., "The Learning Environment and Medical Student Burnout: A Multicentre Study," *Medical Education* 43, no. 3 (2009): 274–82.; Eric S. Williams, et al., "Physician, Practice, and Patient Characteristics Related to Primary Care Physician Physical and Mental Health: Results from the Physician Worklife Study," *Health Services Research* 37, no. 1 (2002): 119–41.

the image macro and how they are spatially oriented. The behavior refers to how the meme in its present form came to be - for example, a meme could be original content by the uploader or could have been digitally altered to fit a scenario. The ideal is the meaning/significance the meme intends to convey. Davison's framework compliments that of Sarah Pink, who argues that in visual anthropology, "a researcher should attend not only to the internal 'meanings' of an image, but also to how the image was produced and how it is made meaningful by its viewers."[298] Additionally, according to Gillian Rose, "critical" visual anthropology situates the artifact "in terms of the cultural significance, social practices and effects of its viewing, and reflects on the specificity of that viewing by various audiences."[299] As such, I contextualize visual data for readers by explaining the origins of the image and the intended meanings. While many of the meanings within memes may be easily recognizable by people who are not active participants within /r/medicalschool, some in-group insights may be lost, as some posts call back to running jokes and conversations within the group's "lore" or history.

Although participants were anonymous and could not be easily identified by their username alone, I ensured confidentiality by paraphrasing or quoting in a way that obscures the source webpages, so that individual usernames could not be identified. I have asked external readers to ensure that the meaning and content of the comments and posts remain the same when paraphrased. Finally, within the text of this dissertation, I cite the authors of the text using the format: (approximate amount of karma; type of text).

[298] Sarah Pink, "Interdisciplinary Agendas in Visual Research: Re-Situating Visual Anthropology," *Visual Studies* 18, no. 2 (2003): 186.

[299] Gillian Rose, *Visual Methodologies: An Introduction to the Interpretation of Visual Materials* (Thousand Oaks, CA: SAGE, 2001), 5.

Reflexivity

I have been a redditor since 2007 and I have first-hand experience as to the site's evolution and rise in popularity. Over the last seven years, I have been an active participant in online communities of medical students - posting frequently and making friends online from Student Doctor Network when we were medical school applicants and moving with them to Reddit's /r/medicalschool during our time as medical students (and theirs as residents). Since the move, I do not know anyone's usernames and only know them by their real names through our Facebook group chat, which has been running for seven years.

My interpretation and coding of posts and comments on /r/medicalschool are largely shaped by my personal experiences as a third-year medical student who has completed all of the third-year and fourth-year clerkships with shelf exams. In order to mitigate post/comment selection bias, I utilized Reddit's search function to find posts/comments that explicitly mentioned "burnout" and its grammatical variations and coded every single post/comment. This resulted in the coding of 352 posts, and many more comments.

I have personally experienced burnout during my third-year of medical school, largely due to my inability to confront and resolve existential discomforts with seeing patients suffer. I avoided coming to terms with my own mortality, limiting my contact with patients who were close to death. These experiences are why I hypothesized that unresolved ethical, technical, behavioral, and existential discomforts result in burnout.

Maslach and others point to the environment as a factor in burnout. As far as my learning environment, I rarely experienced rude, abusive behavior from attendings and residents - the least constructive feedback/most hurtful comment was being told that my

presentation was “painful” to listen to in front of my team. I thoroughly enjoyed rotations during which I felt useful and like an integral part of the team, even if I lacked sleep or free time. I liked most of my classmates and the learning environment but chose to spend most of my time studying at home alone. I never experienced overt sexism or racism but have witnessed some ableism, which tends to be pervasive in the culture of biomedicine as a whole. I aim to be fair in my critique of the grading and assessment schema in medical school, which I feel is reasonable as my professional goals are not impeded by my performance: I performed well on Step 1, Step 2, and my clinical clerkships. However, I am sympathetic to those who have had different experiences and recognize that my performance came at a cost to my mental and physical health.

In my critique of medical education and the academic medicine enterprise, I base it from the experiences of other burned-out American medical students from across the country so that my study resonates with the lived experiences of others. My hypothesis is derived from my own experiences and interactions with other medical students online over a period of several years. I am biased against arguments that burnout should be further studied because of its cost to taxpayers or decreased revenues and productivity because I believe that these conversations only contribute to the dehumanization of physicians and trainees. To me, it emphasizes that the general public only cares about physicians’ and trainees’ well-being if it impacts them directly, rather than being concerned about their personal flourishing as humans and leading virtuous lives. However, as I examine the social, political, and economic apparatuses that create the structure of the medical school, it becomes evident that this perspective cannot and should not be ignored.

An autoethnographic framework called performance (auto)ethnography explicitly attends to the issues surrounding marginalized voices. Norman K. Denzin presents his conceptualization of a "radical performative social science" as one that connects "reflexive autoethnography with critical pedagogy and critical race theory . . . it will necessarily treat political acts as pedagogical and performative, as acts that open new spaces for social citizenship and democratic dialogue, as acts that create critical race consciousness."[300]

Performance is not limited to just the theatrical arts: it is "an interpretive event involving actors, purposes, scripts, stories, stages and interactions"[301] in which "play gender, [heighten] their constructed identity, performing slightly or radically different selves in different situations."[302] In other words, my study will not only look at the performed - the creation of text posts and memes - but will also look at the performance itself, in examining how people create their identities online. Within the scope of my project, performance autoethnography examines how medical students online, "through communicative action, create and continue to create themselves within the American experience."[303] Experiences are relayed online as performance acts, a form of representation. Performance ethnography contends that the representation of these experiences is largely shaped by the unique histories and events of the individual, "moral beings, already present in the world, ahead of themselves, occupied and preoccupied with everyday doings and emotional practices, defined in and through their presence."[303]

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[300] *Norman K. Denzin,* Performance Ethnography, Critical Pedagogy, and the Politics of Culture *(Thousand Oaks, CA: SAGE, 2003), 5.*

[301] Ibid., 9.

[302] Richard Schechner, *Performance Theory* (New York, NY: Routledge, 1988), 361.

[303] David W. Worley, "Is Critical Performative Pedagogy Practical?" in *The Future of Performance Studies: Visions and Revisions*, Sheron J. Dailey (Washington, D.C.: National Communication Association, 1998), 32.

In combining performance theory with critical pedagogy, this project will go beyond exploring the importance of the hidden curriculum and its effects on medical students. This pedagogical approach seeks to understand " how teachers and students sustain, resist, or accommodate those languages, ideologies, social processes, and myths that position them within existing relations of power and dependency."[304] It will raise questions of how "educational, ethnographic, and performing bodies are disciplined and ideologically trained in the classroom and in society at large,"[305] for the ultimate purpose of creating a "critical, collaborative, performance pedagogy centered on the primacy of experience, the concept of voice, and the importance of turning classrooms into democratic public spheres."[306] Furthermore, as a critical performance autonetnography, my project will situate the medical student experience within a socio-historical context to understand how "power and ideology shape self, desire, and human consciousness in concrete institutional and interactional sites"[307] for the purpose of driving social transformation and pedagogical change.

In line with critical performative autoethnography, I aim to view both students and teachers as transformative individuals; this approach acknowledges the agency of both teacher and student, "[signifying] a form of labor in which thinking and acting are inextricably related,"[308] rather than treating either as passive individuals that are acted upon by the hidden curriculum. It is with a dialogical approach that I examine how unresolved discomforts contribute to medical student burnout, aiming to understand how medical

[304] Giroux, "Critical Pedagogy, Cultural Politics and the Discourse of Experience," 35.
[305] *Denzin,* Performance Ethnography, Critical Pedagogy, and the Politics of Culture, *31.*
[306] Ibid.
[307] Ibid., 33.
[308] Giroux, "Critical Pedagogy, Cultural Politics and the Discourse of Experience," 35.
[308] Sarah Pink, "Interdisciplinary Agendas in Visual Research: Re-Situating Visual Anthropology," *Visual Studies* 18, no. 2 (2003): 186.

students themselves want to change their social situations to mitigate burnout. As such, in addition to the discourse analysis conducted on data gathered from r/medicalschool, I also bring different works on burnout from a variety of different disciplines into conversation with each other. Critical evaluation on the burnout literature will serve as a grounding point for my discourse analysis, as I bring in medical student experiences and discourses into conversation with published research on burnout.

Ethical Considerations

This study was screened by the University of Texas Medical Branch's Institutional Review Board and declared exempt. I chose to study /r/medicalschool because the users are anonymous and can create "throwaway" accounts to discuss sensitive topics and identifying users often requires a deep trawl of their post history. While the posts may skew negative, as they do with many online spaces of support, the anonymity allows for medical students to openly voice their frustrations and experiences with medical education.[309]

As a news aggregator site, /r/medicalschool has a built-in function where users can assess how popular a post or comment is. Users can also choose to participate on a minimal level and note their approval/disapproval of a post or comment through the upvote/downvote function while staying anonymous. If the comments and posts were associated with a still-existing account (posts/comments stay archived even if a user deletes their account), I paraphrased their words and used an external reader to ensure that I stayed faithful to the spirit of the text to protect the user's privacy.

[309] Richard M. Smedley and Neil S. Coulson, "A Practical Guide to Analysing Online Support Forums," *Qualitative Research in Psychology* (2018): 3.

Qualitative inquiry on optionally anonymous forms of social media depend heavily on the context of the platform. For example, the ethical considerations change depending on whether the data is public or private. To determine whether data is public or private, the researcher should examine whether access is restricted by either requiring registration, a password, or membership.[310] In the case of Reddit, the data on publicly accessible subreddits are considered public record as it does not require registration to view posts and comments. Furthermore, the webpages are indexed and cached by search engines, meaning that anyone can search for posts and discussions on /r/medicalschool.

It is recommended that researchers consult the website/platform's privacy policy and terms of service user agreement to assess the users' expectation of privacy. Even if ones not read the privacy policy or terms of service, it becomes readily apparent upon browsing Reddit that their posts are generally visible to anyone and may be reproduced without their express permission. Reddit's user agreement also states that while users retain the rights to submitted user content, submitting content also grants Reddit a "royalty-free, perpetual, irrevocable, non-exclusive, unrestricted, worldwide license to reproduce, prepare derivative works, distribute copies, perform, or publicly display your user content in any medium and for any purpose, including commercial purposes, and to authorize others to do so."[311]

Furthermore, Reddit allows other websites to embed public content using provided embed tools and to access public data through the Reddit application programming interface, a mechanism in which all content and associated metadata can be "pulled" from

[310] Caitlin Byrne, "Anonymous Social Media and Qualitative Inquiry: Methodological Considerations and Implications for Using Yik Yak as a Qualitative Data Source," *Qualitative Inquiry* 23, no. 10 (2017): 804.

[311] Reddit Inc., "Reddit User Agreement." https://www.reddit.com/help/useragreement/.

the site and subsequently utilized for third-party research or display in apps. In cases like this when the expectation of user privacy is low and the terms of service/privacy policy do not protect users, Caitlin Byrne states that it is ethically permissible to utilize data on online anonymous social media platforms without obtaining consent from users.[312]

However, I recognize that these posts and comments are made by real people, and that user content around burnout and associated mental statuses can lead to severe, real world repercussions if identities are revealed. I personally have linked my real-life identity and social media presence to my Reddit account; however, I do not post anything I would not say in public/in-real-life. However, I recognize that everyone has different levels of anonymity they would like to preserve. I respect that by paraphrasing titles of posts and other user content, as well as removing usernames. Instead of attributing content to specific users, I attribute quotes and content by citing the net number of associated karma. I used Google search to ensure that the paraphrased quotes could not be traced to their origin, a practice supported by qualitative researchers who study online communities.[313]

I intentionally chose not to disclose my presence as a researcher. Creating a new account and posting as a researcher with no associated karma is viewed with suspicion as 1) my identity cannot be verified and 2) research participants do not want to be misrepresented by researchers that are not familiar with the community. I chose not to fully participate in the community by posting or commenting. As a result, I did not post to elicit responses that would have supplemented by data collection and analysis of existing posts, which limited my ability to collect targeted data. I chose not to disclose my presence as a

[312] Byrne, "Anonymous Social Media and Qualitative Inquiry."

[313] Lynne D. Roberts, "Ethical Issues in Conducting Qualitative Research in Online Communities," *Qualitative Research in Psychology* 12, no. 3 (2015): 314–25.

researcher within /r/medicalschool to minimize the impact of my participation on the conversations occurring within the community. Furthermore, as burnout and associated mental states are stigmatized, I was concerned that disclosure of my presence would cause users to refrain from posting on these sensitive topics. By not actively generating data as a researcher using my real username, I did not draw attention to my own post and comment history, which gave me the affordance to protect my own anonymity within the /r/medicalschool community.

As /r/medicalschool is a public, anonymous site, I waived the need for informed consent. I also did not browse post histories to collect personal, biographic information, as removing this information from the site, analyzing it, then storing it without permission violates users' abilities to control who accesses what information.[314] Preserving online anonymity and respecting user privacy was paramount; the risk of obtaining informed consent (and thus tying their username to their real-life identity or other biographical markers) was greater than the protection that anonymity offers when discussing a stigmatized topic, such as mental illness and burnout. Some users utilize throwaway accounts to seek advice on sensitive topics, users want to remain anonymous. Finally, there is no expectation that this data is accessed only by medical students. There have been several "Ask Me Anything" posts monitored by residency Program Directors; users are

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[314] Michael Zimmer, "'But the Data is Already Public': On the Ethics of Research in Facebook," *Ethics of Information Technology* 12, no. 1 (2010): 313–25. There are tools online that analyze the posting history of reddit users (e.g. redective.com, snoopsnoo.com) that pull all the content associated with a username from Reddit. For example, from my post history alone, snoopsnoo.com has guessed that I am a female from Houston, I like medicine, fitness, and running, and I am a bikini competitor and stress shopper. These are all eerily accurate. Additional information reported is the breakdown of karma per subreddit, per post, and per comment, as well as how "active" I am (based on when I post) across time of day and day of the week. Even though I personally do not like that my data is being analyzed by an algorithm and publicly accessible, I did consent to this by commenting and posting on Reddit.

aware that anyone, program directors and administrators included, are able to view their posting history.[315]

Limitations and Delimitations

One of the major limitations of my research is my decision to remain anonymous as a researcher and participating only in upvoting/downvoting. Kozinets suggests that researchers make a web-page for every netnography so that others can 'audit' and trace back the data in order to deter fabrication. On this website, researchers can artistically express their own subjectivity, provide full disclosure of their research, and give something back, inspiring "a sense of communitas, or at least consociality." For example, in Noah Springer's study on publics and counterpublics on Reddit, he utilized an account specifically for his research and created his own subreddit to archive his research, crosslinking posts and comments. While he was the only one allowed to submit posts to his subreddit, other users could interact by commenting and upvoting.[316] This provided another layer of participatory data that my project lacks.

The study is also limited by the anonymity and privacy of the participants on /r/medicalschool. Without creating a survey or poll, the anonymous nature of the site

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[315] /u/DrMorrish, "I Am Dr. Don Morrish, a Former Residency Program Director and I've Reviewed Thousands of ERAS® Applications. AMA." https://www.reddit.com/r/medicalschool/comments/2c9lww/i_am_dr_don_morrish_a_former_residency_program/; /u/AdamKellogg_EM, "I Am an Associate Program Director in Emergency Medicine and Member of the CORD-EM Medical Student Advising Task Force, AMA." https://www.reddit.com/r/medicalschool/comments/5cx22b/i_am_an_associate_program_director_in_emergency/. I have first-hand experience with running into program directors who have deduced my identity online on a different forum, just by my posted stats on the "what are my chances" subforum. When I arrived at his program for my interview, he called me by my username and disclosed his in return. He has been an active member on that particular forum, providing anonymous advice to applicants. We have mutually agreed to not reveal our online identities to others.

[316] Jerome Noah Springer, "Publics and Counterpublics on the Front Page of the Internet: The Cultural Practices, Technological Affordances, Hybrid Economics and Politics of Reddit's Public Sphere" (Denver, CO: University of Colorado, 2015).

precludes data collection on demographic information for specific subreddits. Demographic details such as gender, race, class, religion, and level of training may be revealed through a detailed search of their post history. Some users may choose to "flair" themselves, marking what level of training they are in and sometimes what country they are from. The majority of students are American medical students (both allopathic and osteopathic), evidenced by the creation of a separate subreddit for international/foreign medical students. To date, there has not been a demographic survey conducted for the subreddit as a whole. Furthermore, verifying user data and the veracity of the events recounted in their posts/comments is nearly impossible. The only verifiable information about /r/medicalschool is that it was established on December 11, 2009 (Reddit itself was established on June 23, 2005) and that as of June 2018, it has about 77,000 subscribers and 1200 people online at any given time.

Surveys on the general user base on Reddit reveal that users are more likely to be White, young (18-29 years old) males, have a college degree or are in college, are heavy internet users and self-identify as liberal at a greater rate than the general public.[317] As such, users generally assume that posts and comments are authored by White males. While critical issues surrounding race, gender, class, and religion, are explored on other subreddits such as /r/BlackPeopleTwitter, which features popular tweets by Black Twitter users, due to the lack of demographic data, it is difficult to ascertain the closeness of the popular viewpoints expressed on /r/medicalschool to medical students in general. /r/medicalschool

[317]Michael Barihel, et al., "Seven-in-Ten Reddit Users Get News on the Site." http://www.journalism.org/2016/02/25/reddit-news-users-more-likely-to-be-male-young-and-digital-in-their-news-preferences/.

is unlikely to be representative of the medical student population, and this selection bias reduces the generalizability of my study.

One of the study's strengths is that I collect and analyze data from an anonymous online social media platform on which users can freely express their thoughts and create a community around a shared experience despite being geographically dispersed. While there may be concerns that a study conducted on the internet excludes those of lower socioeconomic status, 96% to 98% of college graduates use the internet.[318] Reddit is the fifth most-visited site in the United States, and /r/medicalschool is one of the largest communities about the American medical school experience with over 70,000 users. Studying subreddits is a novel way of conducting both quantitative and qualitative research, which provides key insights into public perception, opinions, attitudes, lore, and personal experiences related to a topic.

My study draws upon the methodology of Shaina J. Sowles et al.'s research on /r/QuitCannabis, a subreddit for people who are attempting to end their cannabis use.[319] Sowles et al. coded posts for criteria meeting cannabis use disorder (DSM-V), when the subreddit was mentioned as a positive resource, in either support or preventing relapse, for discussing methods on how to quit, as well as environmental/social barriers to quitting. In their results, they report the number of posts that meet the individual diagnostic criterion for cannabis use disorder, as well as provide example quotes from their coding. The themes they identified were: seeking support and advice from the

[318]Pew Research Center, "Internet/Broadband Fact Sheet ." http://www.pewinternet.org/fact-sheet/internet-broadband/.

[319] Shaina J. Sowles, et al., "'I Feel Like I've Hit the Bottom and Have No Idea What to Do': Supportive Social Networking on Reddit for Individuals with a Desire to Quit Cannabis Use," *Substance Abuse* 38, no. 4 (2017): 477–82.

community, looking forward to the future and quitting, finding the community supportive, identifying barriers to quitting, methods to quit, and admitting that cannabis use was a form of self-medication.

Compared to traditional, nationally distributed surveys and questionnaires, searching for posts on “burnout” was inexpensive and the project's time to completion depended heavily on the data analysis and reporting, rather than with data collection. Additionally, as in Sowles et al.’s study, using freeform qualitative data allowed for a deeper understanding how the target population perceives and conceives burnout. These data better highlight the issues that are important to /r/medicalschool and why proposed interventions for burnout may fail/succeed.

Methodological and conceptual challenges arise when collecting and analyzing activity on social media platforms. Zeynep Tufekci outlines the challenges with utilizing social media data: Twitter, the most studied social media platform, has a selection bias because only 20% of U.S. adults use it, different demographic or social groups may interact differently online than in real life, hashtags that are used in data scraping and analysis denote a user's clear intention of self-selection, and understanding the sub-population that saw the content and chose not to interact with it is rarely done. For example, "a retweet is information exposure and/or reaction; however, after that, its meaning could range from affirmation to denunciation to sarcasm to approval to disgust."[320]

In the context of my study, there may be a sampling bias as medical students may

[320] Zeynep Tufekci, "Big Questions for Social Media Big Data: Representativeness, Validity and Other Methodological Pitfalls," in *Proceedings of the Eighth International AAAI Conference on Weblogs and Social Media* (2014), 510. https://www.aaai.org/ocs/index.php/ICWSM/ICWSM14/paper/viewFile/8062/8151.

interact with each other differently online rather than in real life, due to the masking of sociodemographic characteristics. Furthermore, my study has a sampling error because my initial search was limited to explicit mentions of "burnout" or its grammatical variations in the post or comment. I was able to include more posts and comments into my dataset when I returned to the field and analyzed the top posts of all time on /r/medicalschool. Finally, as previously mentioned, the majority of Redditors are young White males, which may not be wholly representative of medical student demographics. However, Reddit is a useful platform because preliminary studies show that a significant portion of U.S young adults utilize it: 42% of Internet users between the ages of 18-24 and 45% of Internet users between the ages of 25-34 use Reddit.[321] The age ranges mentioned are inclusive of the ages of the majority of medical students.

Reddit faces the same problems that other social media platforms do: the demographics and characteristics of users who choose not to interact with the post/comment are largely unknown. However, the user interactions are much simpler on Reddit than on others - the only functions are upvoting, downvoting, posting, commenting, private messaging, and gilding (giving gold membership). On Twitter, for example, "more likes, retweets, and username mentions seems positive, but it could also mean that a tweet's popularity by the number of retweets and username mentions may not always be positive."[322] Inferences and interpretations of user interactions could be flawed if there is not a deep understanding of how the platform works and more

[321] we are Flint, Social 2018 main findings, 44. https://www.statista.com/statistics/261766/share-of-us-internet-users-who-use-reddit-by-age-group/https://weareflint.co.uk/main-findings-social-media-demographics-uk-usa-2018 This study utilized an online survey and has a low n for a study of this type (2007 in the U.S.). However, it is the only study that does calculate the percentage of people in the U.S. that uses Reddit and breaks it down by demographics. This is significant because different age groups prefer to use different platforms.

[322] Tufekci, "Big Questions for Social Media Big Data," 505.

affordances to interact with the content on the platform. This study is strengthened because I have been an active Redditor for several years and am familiar with its technological affordances.

It is possible that because of Reddit's karma system and resulting econometrisation and the performative aspect of internet mediated communications, users embellish or exaggerate their negative experiences during medical school. Even if users who claim to know the posting user "in real life" and corroborate the story, it is difficult to ascertain whether it is the posting user's alternate account. For these reasons, I have chosen to focus on general sentiments and why comments are up/downvoted. While anonymous social media platforms do skew towards expressing negative sentiments, a recent survey asking students to discuss if they are happy with their medical school reveals that the majority of responses were positive and stated that they were relatively happy with the learning environment.

The econometrisation of karma also results in the disincentivized from creating posts/comments that differ from the opinions and perceptions of the “hive mind." The aggregation of collective judgment is biased by social influence, as evidenced by Lev Muchnik et al.'s experiment in which the administrators of the site would arbitrarily upvote/downvote/pass over the first comment of 100,000 posts.[323] They found strong evidence of social group-think bias as the experimentally initially upvoted comments had inflated subsequent scores, while experimentally downvoted comments experienced a "correction effect," in which subsequent users were more likely to respond positively. Furthermore, friendship/recognizability of the user predicted the likelihood that a user

[323] Muchnik et al, "Social Influence Bias: A Randomized Experiment."

would upvote their comment; the inverse, disliking a particular user, was also true. As such, Reddit has been criticized (both by users and outside sources) for perpetuating an echo chamber; this may be compounded by the fact that repeat commenters (who are more likely to be recognized by their username) drive the conversation on Reddit and are a minority (in a case study, 25% left three or more comments, which is consistent with earlier research on other sites).

In summary, the collection and analysis of activity on social media platforms needs more methodological theory to substantiate its results. The presence of selection and sampling bias means that one must be cautious in extrapolating the study's findings to all medical students. However, this limitation is less pronounced in novel, initial studies as follow up studies will further clarify the lived experiences of the studied group. The lived experiences of medical students with burnout are oft not voiced elsewhere because of the stigmatization of mental afflictions and difficulties in navigating the power hierarchy present in medicine. For example, my medical school class' Facebook page rarely discussed emotions and complaints were related to the curriculum and grading system.

I limited my study to "burnout" specifically, coding for depression and anxiety when either the posting user or other users identified the poster as having experienced both. Depression and burnout have shared symptomology, but it is possible to be depressed without being burned out.[323] There is also considerable debate as to whether burnout and depression are actually the same entity, and burnout is a socially acceptable form of expressing and experiencing depression within the medical community. I avoided diagnosing people as having burnout,

depression, or anxiety, as I am not qualified to do so and also to avoid imposing my own understandings of these illnesses. However, I do identify statements as suggestive of certain symptomologies (e.g. "I feel jaded/cynical" as an expression of depersonalization). Determining whether burnout and depression are the same or different entity is beyond the scope of my study; rather, I attend to how the stigma against burnout and mental illness is experienced and expressed by medical students on /r/medicalschool. Furthermore, because I circumscribed my data based on a topic rather than following specific users, my data is more of a bricolage of medical student experiences on burnout, rather than providing detailed accounts and experiences of several individuals.

I also did not have the option of following up and asking clarifying questions because I analyzed existing posts only. I have attempted to stay faithful to the spirit of the words by paying attention to the context of the conversation and requesting secondary readers to look at the anonymized posts/comments. The content analysis is inherently biased – I was the only coder, and my interpretations of posts/comments are largely shaped by my background as someone that has experienced burnout and mental illness – as well as the associated stigma, microaggressions because of my outward appearance as an Asian female, and my discomforts with entering a field that is predominantly populated with those of a higher socioeconomic class (75% enter and 25% leave medical school with no educational debt).[324]

[324] Association of American Medical Colleges, *Medical Student Education: Debts, Costs, and Loan Repayment Fact Card,* Julie Fresne, et al. (Washington, D.C.: Association of American Medical Colleges, 2017), 1. https://members.aamc.org/iweb/upload/2017%20Debt%20Fact%20Card.pdf.

A significant amount of self-reflection occurred during both data collection and interpretation, as I utilized my personal narrative to compare and contrast other users' experiences in medical school. To some degree, it becomes difficult to separate my voice from the quoted voices, which I address through revealing my own emotions toward the content within the footnotes. Furthermore, I engaged with existing literature to support or challenge my interpretations of other users' subjectivities, with the goal of speaking to the social experience of burnout in medical students.

Despite these challenges, my study is significant because it bridges the fields of ethics and the social sciences by analyzing medical student burnout within the expanded language of ethics. It attends to how social, political, and economic factors affect how people live and interact with others in the world, the perceived meaning of their lives, and the choices that they can see to find and realize that meaning. The following chapter will describe Reddit as a public and how the interactions within the /r/medicalschool space contribute to discussions on medical student burnout.

Chapter 4: /r/medicalschool as a Public Sphere

INTRODUCTION

The purpose of this dissertation is to understand how medical students on /r/medicalschool conceptualize and operationalize the term "burnout," how they cope with burnout, and what barriers and attitudes they face that perpetuate a system that fosters burnout. As such, it is important to understand the context in which this dialogue is generated, reflective of lived experiences, and also shape the IRL situations of the users of /r/medicalschool. Because /r/medicalschool is an optionally anonymous space and Reddit's demographic as a whole tends to skew towards white males (67% of Reddit users are male and 70% are White), this study contributes to understandings of how medical students utilize /r/medicalschool rather than creating results that are generalizable to all U.S. medical students.[325] To explain /r/medicalschool's dialogical flow, I turn to Jürgen Habermas' theory of the public sphere, Michael Warner's extension of Habermasian theory to publics, and previous research on Reddit. This chapter will also present the thematic vernacular discourses around burnout.

For the purposes of streamlining the representation of data and preserving anonymity, I will reference posts and comments by the number of upvotes they have. Because of the significant growth of the subreddit over the last two years, the absolute

[325]According to the Pew Research Center report (2016), 67% of general Reddit users are male and 70% of users are White. Only 7% of general Reddit users are Black. In contrast, 52% of U.S. matriculating medical students for the 2017-2018 academic year are male and 50% of students are White, and 7% of students are Black. Michael Barthel, et al., "Seven-in-Ten Reddit Users Get News on the Site." http://www.journalism.org/2016/02/25/reddit-news-users-more-likely-to-be-male-young-and-digital-in-their-news-preferences/; Association of American Medical Colleges, *Table A-9: Matriculants to U.S. Medical Schools by Selected Combinations of Race/Ethnicity and Sex, 2014–2015 Through 2017–2018*, FACTS: Applicants, Matriculants, Enrollment, Graduates, MD-PhD, and Residency Applicants Data (Washington, D.C.: Association of American Medical Colleges, 2018). https://www.aamc.org/download/321474/data/factstablea9.pdf

number of upvotes per post/comment can vary significantly (top posts and comments in 2016 received a maximum of 300 upvotes with a much smaller range, while top posts/comments in 2018 can receive 1000-14,000), so posts cannot be readily compared to each other. However, if we treat each post with a prompt as a small focus group, the absolute number and relative number of karma within a thread does gain significance. While a weighting system to standardize the amount of karma to allow for cross-post comparison would be useful, the amount of karma a particular post or comment gets depends on a number of factors: the number of subscribed users, the sorting algorithm of the "front page" of Reddit, the time of day a post was uploaded, and the amount of time between the uploading of a post and posting of comments.[326] Such a weighting system is beyond the scope of my technical abilities at this time; further research that does prompt /r/medicalschool users to respond within a small window of time will allow for better inter-post comparison.

REDDIT AS A PUBLIC

In *The Structural Transformation of the Public Sphere* which first defines the public sphere, Habermas traces its historical-sociological development. He defines the public sphere as "the sphere of private people come together as a public . . . to engage [public authorities] in a debate over the general rules governing relations in the basically privatized but publicly relevant sphere of commodity exchange and social labor."[327] The private,

[326] The absolute number of karma on a post or comment can be compared if data gathering and analysis is limited to posts and comments uploaded within a short time period during which the user base is relatively stable.

[327] Jürgen Habermas, *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*, First MIT Press paperback, Thomas Burger and Frederick Lawrence (Cambridge, MA: MIT Press, 1991), 27.

individual people that gathered within eighteenth-century British coffee shops or French salons "communicated through critical debate in the world of letters, about experiences of their own subjectivity or . . . as owners of commodities communicated through rational-critical debate in the political realm, concerning the regulation of the private sphere."[328] Habermas argues that these eighteen-century bourgeois public spheres restructured as the public transformed from culture-debating to culture-consuming due to mass media; for example, the penny press "paid for the maximization of its sales with the depoliticization of its content - by eliminating political news and political editorials on such moral topics as intemperance and gambling."[329] Mass media controlled the flow of communication by shaping the direction of public discourse and also limited who could participate.

Moving away from characterizing the public sphere as specific communities, Gerard Houser proposed focusing on the rhetoric of public spheres.[330] Individuals interested in a topic, and thus engaged in consociality, form a public that interacts through common meanings and cultural norms.[331] A rhetorical public is vernacular discourse-based which has norms that allow individuals to relate to each other and discussion is based on how it resonates with that particular public.[332] Nancy Fraser argues that there are "subaltern

[328] Habermas, *The Structural Transformation of the Public Sphere*, 55–56. Habermas also characterizes the public sphere: they 1) disregard status, 2) discuss problems of common concern deserving critical attention by the public, and 3) are inclusive of all private people as long as they owned property and were educated (bourgeois). These characteristics have been problematized and expanded as the eighteenth-century public sphere (and arguably still today) as it 1) excluded women and excludes marginalized groups, 2) disregarding status is actually a way of preserving the norms of the dominant group, and 3) there are fluid boundaries between 'private' and 'public' issues of concern. For more essays on this, please refer to Craig Calhoun and Thomas McCarthy, *Habermas and the Public Sphere* (Cambridge, MA: MIT Press, 1992).

[329] Habermas, *The Structural Transformation of the Public Sphere*, 169.

[330] Gerard Hauser, *Vernacular Voices: The Rhetoric of Publics and Public Spheres* (Columbia, SC: University of South Carolina, 1999).

[331] Ibid., 69.

[332] Gerard Hauser's characterizations of the norms of the rhetorical public sphere do not avoid the pitfalls of the Habermasian public sphere. The norms of Hauser's public sphere are that 1) outsiders can participate, 2) publics actively engage others and the issue, 3) norms and contextualized language are used

publics" which create "parallel discursive arenas where members of subordinated social groups invent and circulate counter discourses to formulate oppositional interpretations of their identities, interests, and needs."[333]

Building upon counterpublics, Michael Warner expands the Habermasian public sphere to include those that are non-rational-critical; unlike Houser who characterizes the public as one that takes action and interacts with outsiders on self-identified issues of importance, Warner states that public spheres include *a* public, a "concrete audience, crowd witnessing itself in visible space, as with a theatrical public. Such a public also has a sense of totality, bounded by the event or by the shared physical space."[334] Rather than critical-rational debate, a public is "poetic world making" as "the public is thought to exist empirically and to require persuasion rather than poesis. Public circulation is understood as rational discussion writ large."[335]

Examples of Publics and Counterpublics on Reddit

Reddit describes itself as the site of thousands of communities within which there is "authentic human connection." Using an autonetnographic approach, Noah Springer uses /r/KotakuInAction and /u/GamerGhazi as case studies as to what these communities look like, how they function, and the circulation of discourse between these virtual humans in a public sphere. [336] /r/KotakuInAction was the primary subreddit for discussing #GamerGate,

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to relate their experiences, 4) the public is believable and exists to itself and others, and 5) there is a tolerance for other opinions. Please see

[333] Nancy Fraser, "Rethinking the Public Sphere," in *Habermas and the Public Sphere*, Craig Calhoun and Thomas McCarthy (Cambridge, MA: MIT Press, 1992), 123.

[334] Michael Warner, *Publics and Counterpublics*, Gerard Hauser and Thomas McCarthy (New York, NY: Zone Books, 2005), 66.

[335] Ibid., 114-115.

[336] Jerome Noah Springer, "Publics and Counterpublics on the Front Page of the Internet: The Cultural Practices, Technological Affordances, Hybrid Economics and Politics of Reddit's Public Sphere" (Denver, CO: University of Colorado, 2015).

a controversy Springer describes as “allegations of corruption in the video game industry and collusion between game reviewers and developers”[337] but others describe as a culture war over issues of sexism and lack of cultural diversity as related to the normative social identity of gamers as young, heterosexual males.[338] /r/GamerGhazi formed as a counterpublic, stating that GamerGate was a “fake scandal used by certain elements of the video game industry to impede to advancement of progressive, feminist politics within their community.”[339] According to Springer. primary discourses on /r/KotakuInAction discuss “ethics in gaming journalism” and “social justice warriors.”[340] While discourses on /r/GamerGhazi

> see potentials for video games to improve representations of women and encourage empathy for others, the discourse attacking SJWs [in /r/KotakuInAction] frames their work as morally authoritative elitism that tricks people into believing their cause through idealistic rhetoric and unfounded claims about the effects of video games on gamers . . . discourse surrounding SJWs on [/r/KotakuInAction] often focuses on how video game critics are attempting to censor creative expression by pressuring developers to diversity their representations of gender and race.[341]

Alternative discourse on /r/GamerGhazi “construct members of the GamerGate public as reactionary white males whose formerly exclusive domain of video games is being invaded by women.”[342]

Springer presents another example of counterpublics and alternative discourse is the formation of meta-subreddits opposing the discourse predominant in /r/TheRedPill.

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[337] Ibid., 178.

[338] Caitlin Dewey, “The Only Guide to Gamergate You Will Ever Need to Read.” https://www.washingtonpost.com/news/the-intersect/wp/2014/10/14/the-only-guide-to-gamergate-you-will-ever-need-to-read/. Please refer to the following for the full, detailed history of GamerGate: u/squirrelrampage, “A Comprehensive Timeline of Gamergate (with Sources).” https://www.reddit.com/r/GamerGhazi/wiki/timeline.

[339] Springer, “Publics and Counterpublics on the Front Page of the Internet,” 179.

[340] Ibid., 187.

[341] Ibid., 193.

[342] Ibid., 196.

/r/TheRedPill, which had over 100,000 subscribers in 2015, circulates discourse that feminism is displacing the power of men from the world:

> Our culture has become a feminist culture. A president cannot be elected today without succumbing to the feminist narrative and paying them tribute. How many times has Obama given credit for his manhood to his wife? How many times has the debate hinged on women's pay gap - which is a myth that gets lip service because if you don't, you're a misogynist! . . . I am here to say, for better or for worse, the frame around public discourse is a feminist frame, and we've lost our identity because of it.[343]

Meta-subreddits such as /r/TheBluePill, /r/ShitRedditSays, and r/AgainstHateSubreddits formed in order to discuss the conversations on /r/TheRedPill. In /r/TheBluePill's Wiki introduction, the moderators have self-tagged the subreddit as "against hate speech" and parodies the language and norms of the /r/TheRedPill and its posts.[344]

/R/MEDICALSCHOOL AS A PUBLIC

Figure 4, posted in /r/2meirl4meirl, illustrates one of the motivations behind users who actively post and comment (24,000+ post).[345] In the final panel, the protagonist - representing the Reddit user - is comforted in an embrace by a few upvotes, putting the personified Problems, Stress, and Pain into the background. The most upvoted comment reassures the poster, "You are not alone, my dude" (750+ comment), and a reply suggests that only six upvotes is not indicative of a post or comment's failure: "It's like making a

[343] /u/pk_atheist, "Almost a Hundred Subscribers! Welcome Newcomers." https://www.reddit.com/r/GamerGhazi/wiki/timeline.

[344] /u/SaltyChristian, "Introduction." https://www.reddit.com/r/TheBluePill/wiki/introduction

[345] /r/2meirl4meirl is a "subreddit for memes that hit too close to home . . . if it doesn't make you laugh and feel sad at the same time, don't post it here. This is a place for people who use self-deprecating humor as a coping mechanism." u/OrdoOrdo, "2meirl4meirl."

great joke and only fifteen upvote. But you know those chosen few found it funny and you feel special" (770+ comment, received gold).

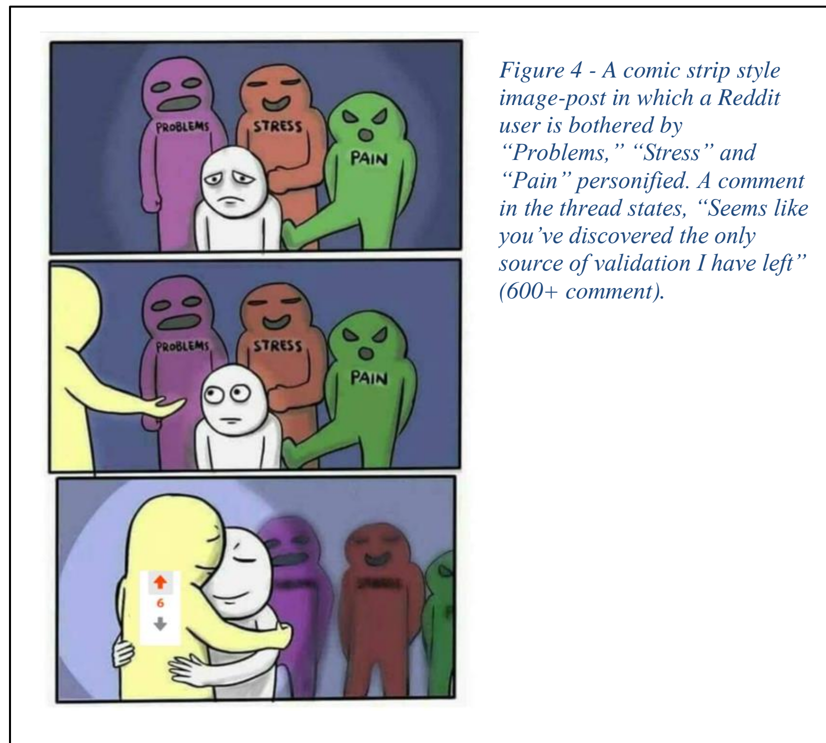

Figure 4 - A comic strip style image-post in which a Reddit user is bothered by "Problems," "Stress" and "Pain" personified. A comment in the thread states, "Seems like you've discovered the only source of validation I have left" (600+ comment).

Like this post from /r/2meirl4meirl, the anonymous nature of /r/medicalschool created a safe space where medical students from across the country could build a community around their shared experience. While most community forums do tend to skew towards fostering negative opinions, the users of /r/medicalschool sought validation on their experiences, asking whether anyone else felt burned out, how other students dealt with burnout, and sharing their general experiences through posts and memes. "You are not alone," and "I feel this way too" were common responses to posts seeking help.

Interactions were largely mediated by the popularity of certain opinions at a certain period of time in the subreddit's history. There was once a time when memes and other humorous posts were heavily downvoted (and thus, discouraged), but low-effort, clever

posts now make up the majority of the subreddit's top posts. As a result of the anonymous but assumed-as-White-male identity of /r/medicalschool, users allowed themselves to be vulnerable and more emotive in this space because of the reduced risk of facing repercussions for expressing opinions that could negatively impact their future career. Many of the upvoted comments and posts were cynical and critical of medical education as a whole, but there were also many posts prompting users to think of what they were grateful for, what they loved about medicine, and what changes they would like to make. Users also generally believed that medical students in real life were too outwardly positive and inauthentic in their interactions, which contributed to their feelings of isolation and alienation. Because there were no avatars or real-life identity markers attached to these usernames, users generally interacted with each other in ways that generally ignored race and socioeconomic class. However, if users had self-identified with a flair that is perceived to be "lower" in rank, such as a first- or second-year, or an Osteopathic or Caribbean medical student, were limited in the range of opinions they could voice without being downvoted.[346]

/r/medicalschool is one online space where students across schools and years in training can connect and share in their experiences. The subreddit continues to grow daily - since June 2018, 7,000 new users have subscribed to the subreddit. Users subscribe to /r/medicalschool because of the value that it brings to their life - providing a space where students can freely give advice, commiserate with each other, and give words of encouragement when needed. Kozinets claims that the anonymity and "the feeling of freedom in Internet communications combine with people's strong needs to connect, share,

[346] Flair appears next to the username on a post or comment. On /r/medicalschool, the flair designates what year of training they are in. In the case of international students, it also designates where they are from.

as well as find information and emotional support from other people who can understand them."[347] In support of Kozinets' claim, De Choudhury and De's study on various mental health subreddits reports "disinhibition in light of the dissociative anonymity that Reddit's throwaway accounts provide. Apart from promoting open conversations, such anonymity surprisingly is found to gather feedback that is more involving and emotionally engaging."[348] This anonymity, evidenced by users who used a throwaway to post exactly once, does not take away from the quality of support they receive. Despite the lack of monetary compensation in responding to posts requesting emotional support, "the feedback manifested in the comments [are] of surprisingly high quality, and ranges from emotional and instrumental, to high information and prescriptive advice."[349]

Self-disclosing burnout and seeking social support were behaviors also observed on /r/medicalschool. Medical students post extensively about their emotional/mental health issues on /r/medicalschool, seeking advice and support from people who are also going through similar experiences. As emotional/mental illness is heavily stigmatized and revealing them to people "in real life" (IRL) may come with unintended consequences, both perceived and real, these online spaces are the one of the few places that medical students can reveal what they really do and what they really think. However, a study on Whisper, a similarly public, optionally-anonymous social media platforms reveals that posts communicate more negative emotions, such as anger and sadness, than social media

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[347] Kozinets, *Netnography: Redefined*, 89.

[348] Munmun De Choudhury and Sushovan De, "Mental Health Discourse on Reddit: Self-Disclosure, Social Support, and Anonymity," in *Proceedings of the Eighth International AAAI Conference on Weblogs and Social Media* (Association for the Advancement of Artificial Intelligence, 2014), 71.

[349] Ibid., 79.

platforms that have attached in-real-life identities.[350] Furthermore, 56.81% of posts were confessions, conveying feelings of guilt, shame, or embarrassment. These posts were written with a more informal language and revealed more personal emotions, characterized as the high presence of first-person pronouns. While /r/medicalschool does have many posts that convey negative emotions, many of the posts and comments are intended to be humorous.

Like the posts on Whisper, the posts on /r/medicalschool discuss the personal difficulties that medical students face, ranging from topics such as studying efficiently and maintaining a work-life balance. These are discussed through image macros, posts that provide advice, and posts that ask for advice and commiseration. The majority of posts are image macros that are created with the intention of bringing levity to the difficulties medical students face. As one commenter states, "Reddit is a sounding board. The point is to share experiences, thoughts, and feelings, and getting opinions from other people who also 'get' it. Medical school is a unique experience and venting to people outside of it just isn't the same" (1+ comment).

Most of the posts and comments related to burnout on /r/medicalschool share strategies for avoiding and alleviating symptoms of burnout and provide a safe space for medical students to discuss stigmatized and difficult problems, creating a sense of community and a shared experience. Within many posts, the sentiment, "Are you me? I feel this way too," or "You are not alone" followed by a personal anecdote expressed a vulnerability that medical students may not feel comfortable sharing in real life. Often,

[350] Denzil Correa, et al., "The Many Shades of Anonymity: Characterizing Anonymous Social Media Content," Ninth International AAAI Conference on Web and Social Media (Oxford University, 2015). https://www.aaai.org/ocs/index.php/ICWSM/ICWSM15/paper/view/10596/10490.

encouragement was given to those who posted about feeling burned out: "You are a good person, and you will do well as long as you believe" (30+ comment), and an uplifting messages after revealing personal difficulties with burnout, such as," You will succeed, just keep your head up and keep swimming" (75+ comment).

Shaina J. Sowels et al.'s qualitative study on /r/QuitCannabis, a subreddit dedicated to helping people stop smoking cannabis, describes similar themes as reported in this present study: seeking advice and support from the subreddit, users motivate and support others, and users discuss the environmental or social barriers that facilitated their psychological problem.[351] When applied to /r/medicalschool, users asked other users how to alleviate their symptoms of burnout, how to study more efficiently, how to get better grades on the wards, and how to navigate the personal politics present within a healthcare team on the wards. The majority of solutions that users recommended for burnout involved taking care of basic needs, such as eating healthfully, sleeping well, exercising, and showering regularly. Others advised posters to remain resilient and focus on an end goal, such as getting to fourth year, getting to residency, and/or becoming an attending. It is important to note that the better received comments did not mention resilience explicitly but described it by its definition. Encouragement was often along the lines of "stay strong, you'll get through this." Users also outlined all the difficulties that they faced in alleviating their symptoms of burnout: unhelpful administration, lack of time and access to care, which involves both self-care and psychological/psychiatric help.

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[351] Shaina J. Sowles, et al., "'I Feel Like I've Hit the Bottom and Have No Idea What to Do': Supportive Social Networking on Reddit for Individuals with a Desire to Quit Cannabis Use," *Substance Abuse* 38, no. 4 (2017): 477–82.

Tully O'Neill's study on /r/rapecounseling also found similar themes: the primary motivators for participating in an online community was for advice and support, as well as storytelling, an emerging framework in which to consider online discourse.[352] It has been suggested that survivors of sexual violence disclose their stories online because they want to have their stories heard, as telling their stories in different spaces may result in negative reactions, such as not being believed, having their experience questioned and invalidated, or even being blamed for someone else's actions. O'Neill's study found that Reddit was a platform for storytelling, resulting in the user feeling heard and validated in their experience. Storytelling "[allows] for a less 'prescriptive narrative . . . to emerge . . . [constructing] a new way of speaking and witnessing that goes beyond the frameworks through which [trauma is] normatively articulated."[353] Each individual post on a subreddit "becomes part of a collective counter-narrative."[354]

While her study focuses on victim-survivors of sexual violence, I found parallels between her results and mine: people go to online spaces to discuss and bear witness to stigmatized issues - issues that are poorly understood by those who have not experienced it. There is a sense of comfort in feeling heard and knowing that one is not alone. Within /r/medicalschool, the individual posts and comments form a counter-narrative to the literature on burnout. The narrative within the literature is that medical students need to learn how to take better care of themselves; the counter-narrative is that medical students know how to take care of themselves but simply lack the energy and time, and often fail to meet basic physiological needs, such as getting adequate sleep. These counternarratives are

[352] Tully O'Neill, "'Today I Speak': Exploring How Victim-Survivors Use Reddit," *International Journal for Crime, Justice and Social Democracy* 7, no. 1 (2018): 44–59.
[353] Ibid., 48.
[354] Ibid., 54.

presented in text posts and comments, as well as visually through the creation and sharing of memes.

Prior to 2018, posts and comments on burnout were text-based in nature due to the existence of the community's fourth rule: "Keep memes to a minimum. We welcome personal submissions and well-written concerns or stories, but please present them in a more intelligent fashion."[355] However, this rule was more strictly enforced with the general increase in proliferation of visual cultural artifacts on Reddit in early 2018, with the note that memes and gallows humor could be unprofessional. This ban resulted in a community-wide discussion on what the memes do for the community and how the community uses them (830+ post). The poster writes,

> Humor nurtures community. It allows us to express what's wrong in a way that takes the edge off that is relatable to others. Some of the best discussions I've had were in the comments of meme posts. Limiting posts to "well-written concerns or stories . . . in a more intelligent fashion" is boring, pretentious, and not engaging to the community at large (830+ post).

The presence of memes and humor became a self-defined characteristic of /r/medicalschool that differentiated it from other online medical student communities, such as Student Doctor Network. As one commenter states, "Memes should be curated but if we don't have memes and humor, /r/medicalschool is just a more sexually frustrated Student Doctor Network. And also, lower-achieving" (310+ comment). One of the running jokes on /r/medicalschool about Student Doctor Network is that they are the students that this commenter complains about: "I'm used to being around hundreds of perfect robots that study a hundred hours a week, work out every day, have zero mental health issues, and are

[355] /u/medditmod, "Should Rule 4: Keeping Memes to a Minimum Be Enforced More Strictly?" https://www.reddit.com/r/medicalschool/comments/7lg6d3/should_rule_4_keeping_memes_to_a_minimum_be/?sort=confidence.

a stick-up-the-ass version of professional all the time. I want to know that other humans in medicine can appreciate a good meme or low-class humor" (440+ comment).

Additionally, a commenter points out that "humor is a mature ego self-defense mechanism" (370+ comment), to which a user comments, "THIS IS HIGH YIELD! Psych high yield!!!" (190+ comment). The debate over appropriateness of utilizing humor in medicine, especially if it veers on dark or "gallows" humor, is beyond the scope of this dissertation but has been addressed in other works.[356] Nicole Piemonte makes the argument that the utilization of humor is symptomatic of an inability to "attend fully to the complexity and profundity of the lived experiences of illness, suffering, and death."[357] However, my study, in addition to studies in other communities reveal that it is not an inability to attend to the existential discomforts arising from the exigencies of clinical medicine.

Although often seen as inappropriate, the utilization of humor can facilitate individual and collective empowerment, especially within the context of illness. Zsofia Demjén's studied UK-based cancer forum for patients was also based in an online environment, which provided affordances that fostered the discussion of "frightening, sensitive, embarrassing and/or taboo experiences; potentially reducing the psychological impact of their experiences" and also empowering them in a "context where people can feel powerless; and building a sense of cohesive, supportive community, thereby reducing potential feelings of isolation."[358] As in the cancer forum, users of /r/medicalschool utilized

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[356] Nicole M. Piemonte, "Last Laughs: Gallows Humor and Medical Education," *Journal of Medical Humanities* 36, no. 4 (2015): 375–90; John Launer, "Humour in Healthcare," *Postgraduate Medical Journal* 92, no. 1093 (2016): 691–92; Katie Watson, "Gallows Humor in Medicine," *The Hastings Center Report* 41, no. 5 (2011): 37–45

[357] Piemonte, "Last Laughs," 375.

[358] Zsofia Demjén, "Laughing at Cancer: Humour, Empowerment, Solidarity and Coping Online" (2016), 18.

humor to laugh at their selves and their situation, as well as discussing a taboo topic. I argue that it is not running away or masking vulnerabilities but embracing them as part of their condition. It is a rejection of the always perfect and always professional medical student. Being able to mock the perfectly professional medical student provides a sense of collective relief, which is sorely needed for these users.

Compared to the humor and community shared on Reddit and Student Doctor Network due to the anonymity afforded, my medical school class's Facebook group was much more serious in tone, with the majority of questions asking, " has anyone else taken this course" or "When do we register for this milestone?" Only frustrations over administrative tasks, such as logging seen clinical cases into a website for clerkship coordinators (New Innovations) or the lack of communication over when grades would be released or when to register for things, were ever voiced. The sarcastic humor was directed outwards at others, rather than inwards at their own emotions or feelings. Despite being friendly with my classmates, I really did not feel like I "fit in." This is perhaps why I was and still am so drawn to the community found on /r/medicalschool - I wanted to laugh about my own situation and my reaction to it, rather than laughing at and complaining about other people. /r/medicalschool is also the only community that I have found that delves into existential questions while also providing practical advice on how to succeed academically.

A Public Discourse on Burnout

So far in this chapter, I have discussed publics within Reddit and how the consocialities seen in studies on other subreddits also extend to /r/medicalschool. The following section will describe the vernacular discourse surrounding burnout. How does

/r/medicalschool conceptualize and operationalize the term "burnout?" How do they cope with burnout and feel about others' suggestions to cope with burnout? What barriers do they face that perpetuate a system that fosters burnout? Based on the coding clusters generated through an inductive method, I organized my findings into three themes. As I coded, I realized that my initial categories were too broad, which resulted in the creation of subthemes, as shown below.

Summary of Themes

1. Characteristics of burnout in medical students
2. Medical student stressors related to burnout
    a. Demands and work expectations
    b. Learning environment and abusive behavior
    c. Feeling inadequate and powerless
3. Barriers to burnout solutions
    a. Denial that burnout is a serious problem
    b. Prioritizing work and grades over mental wellness
    c. Solutions that are perceived to contribute to burnout, and thus, are ineffective.

Theme 1: Characteristics of Burnout in Medical Students

The primary and overriding finding of this study is that medical students readily expressed experiencing burnout. However, students disagreed on what "burnout" really means. A 40+ comment agreed that burnout is "depression in the workplace setting due to working too much," and 30+ comment points out that "research has established that depression and occupational burnout have little to no symptomatic difference," but that "expressing that one is burned out is way more socially acceptable than admitting being depressed." Other students with <5 upvotes state that they have personally used the term burnout to refer to "workplace related frustration," and that to them, "burnout is a combination of depression, anxiety, and adjustment disorder" based on anecdotal and personal experiences.

Medical students of all training levels, regardless of the amount of patient interaction, are susceptible to burnout, evidenced by the range of posts from first-, second-, third-, and fourth-years discussing burnout and asking if anyone else experiences it. A 500+ post (95% upvoted) is titled "For the first time during medical school, I'm sleeping and eating well, exercising on a regular basis, and also not feeling like total shit." The content of the post reads: "APRIL FOOLS! None of these are true," with a link to a gif of a man smiling, then pointing at the camera. The static text "GOTCHA!" is centered at the bottom of the gif.[359] One of the comments (20+ upvotes) suggests, "you have the power to change three of those things, which will help with the fourth in turn," and the original poster (40+ upvotes) quips back, "That's not empathetic! For all you know, I work four jobs to feed my children and live in a food desert! You should think twice before telling a patient that!!" While humorous in nature, this comment reflects the emotional exhaustion and cynicism that medical students experience with seeing patients of low socioeconomic status and the patient's inability to change their structural circumstances. The original post also points to how pervasive burnout is during all four years of training, as the poster is a fourth-year. A 10+ comment in another post states, "I love how posts [in this subreddit] talk about first-year burnout, then second-year burnout, third-year burnout, and fourth-year burnout. Really all of medical school is characterized by burnout."

In line with Maslach's conception of burnout, medical students expressed experiencing all three dimensions of burnout: depersonalization (cynicism), emotional

[359] This gif was derived from a screen capture of a scene from" Tim and Eric Awesome Show, Great Job!," a satirical sketch comedy show on Adult Swim. The gif, "Spaghetti," is from a scene where the character, Spaghett, surprises two men in an office by jumping out from behind a potted plant. The origins of this gif are not obscure, as a few users commented on its origins and stated that they upvoted it as a result.

exhaustion, and reduced personal accomplishment. While the students did not explicitly use the phrases “depersonalization,” “emotional exhaustion,” and “reduced personal accomplishment,” I interpreted certain posts and comments as fitting those heuristic categories. For example, feeling jaded was indicative of depersonalization, being “too tired to care anymore” was emotional exhaustion, and feeling like an imposter was decreased personal accomplishment.

Depersonalization was often expressed as feeling jaded, cynical, or disappointed. A 200+ post with 88% upvotes reflects on the student's experience – while the student began to love clinical medicine because it provided assistance that could change the trajectory of the patient's life, the student reports “feeling jaded to my fellow medical students and the superordinate physicians because of their lack of compassion . . . I cried on the subway ride back home from work when I thought about how a patient was treated by one of the doctors on the service.” A 120+ post (90% upvoted) questions how anyone can even like or enjoy medical school, expressing that “I've completely lost sight of why I even started in the first place.” Another common way of expressing depersonalization was stating, “I wouldn't do it again, and I'm not even a struggling student. It's just not what I thought it would be (5+ comment).”

This depersonalization at work has profound effects on a student's interpersonal interactions with patients. A 150+ post (92% upvoted) laments that s/he has turned into a “classist, condescending monster” that feels like "these patients are a waste of healthcare resources and taxpayer dollars," but wishes to rekindle his/her sympathy so that s/he can take good care of them. A 10+ post (82% upvoted) echoes these sentiments, asking other users how help “patients who don't care about your advice, patients who

like arguing, patients who want to try alternative therapies, patients who are racist and disrespectful," even while jaded; a commenter responds, "Patients pay me for advice, and I don't care if they use it or not. They don't value their own life, so I don't value theirs either (5+ comment)."

Redditors also reported exhaustion associated with burnout, both physical and emotional. As articulated by a student, "burnout for me is being presented with a legitimate issue and not having any empathetic reserve to care: when you get a call about a patient who is in pain and your immediate thought is, 'too bad,' or you keep wishing that the patient on pressors will just die already so you can stop writing notes on them every day (45+ comment)." For some, this emotional exhaustion is not directed towards the patient but for interactions outside of the clinical setting: "I'm so tired and I've seen too much by the end of the day that I can't muster up the energy to be more than mildly annoyed by perceived slights (3+ comment);" "I just saw some dude die and told a young woman with kids that she has invasive ovarian cancer – what do I care if a pizza delivery guy gave me attitude or if my train was fifteen minutes late? (2+ comment)."

In some cases, feeling physically exhausted led to emotional exhaustion. A 90+ comment recalls feeling envious of the patient on the table "because at least nobody was yelling at them and they got to sleep for a little bit." Another student prayed to "get appendicitis or some other benign disease (25+ comment)" so that they could take 2-3 days off. The 45+ comment that previously described the emotional exhaustion dimension of burnout states "sometimes all it takes is a good night's sleep to try and rebound from burnout (45+ comment)."

A diminished sense of personal accomplishment was expressed by many Redditors as feelings of inadequacy (54 posts), most frequently about their fund of knowledge. “My sense of personal accomplishment comes from my confidence in my knowledge. So, when it inevitably took a rotation for my knowledge to reach a solid level (which is expected and normal), I felt insecure and stupid throughout the year (10+ comment).” In another post prompting users “how do you stay efficient?” a commenter writes, “crippling anxiety that if I'm not productive, my efforts were all a waste of time and I'll never amount to anything (40+ comment).” Some users report feeling a sense of diminished personal accomplishment when patients refuse to see them (45+ comment, 15+ comment). “It makes me feel like a kid when patients refuse to see me – I feel like I don't know anything (15+ comment).” Many redditors also endorse feelings of uselessness during clinical rotations, exemplified by this 85+ post (96% upvoted): “I feel completely useless except on the rare occasions I get to present a patient in clinic or get to retract or drive the camera a little in the operating room . . . I get up early and leave late with nothing to show for it. I feel like the dumbest third-year (85+ post).” In further support of this, a separate post titled “Feeling lost and detached during third year – is this normal?” states that “everything I do is useless, redundant, and I don't learn anything (50+ post, 93% upvoted).”

Redditors also described symptoms of depression, such as low mood, anhedonia, and difficulty sleeping. A 100+ comment describes the user's inability to study, no matter how close the exam was or how underprepared they were. Another user (40+ post, 96% upvoted) reports “I feel angry when I go to school and have to interact with classmates; when I do, I am passive aggressive. I can't focus and I have suicidal

ideations a day or two before the exam." Several users reported having intrusive thoughts, such as "driving into oncoming traffic on their way home (20+ comment)." Irritability outside of the educational setting was also commonly reported: a 30+ post (79% upvoted) asks whether they are alone in that medical school has made them more short tempered; within that post, a 20+ comment references a time when their friend had a heart-to-heart with them about "being pissed off almost all of the time and complaining about everything," and several lower karma comments also report that they have experienced a decline in patience for people.

Some posters also describe being unaware of their burnout until it was pointed out to them by either a friend or family member or even online by other Redditors (20 posts). In a 45+ post (91% upvoted) where the poster expresses frustration at being slow on the wards and feeling like a failure and imposter, a commenter admits that "I could have written this exact post a few months ago when I was severely depressed. Every day was a struggle (5+ comment)." Another poster discusses his/her lack of interest in medicine when s/he decided to stop pretending like they were interested in every single field (100+ comment, 96% upvoted), to which three commenters point out that it sounds like burnout or depression, "especially given how much fake enthusiasm you've had to display (5+ comment)." The original poster agreed that their guess was probably correct.

Fear of future burnout was also a predominant sub-theme (61 posts). Numerous posts discussed how to prevent burnout while studying for Step 1 (11 posts) or other exams (2 posts). Notably, 5 posts (12 total comments) discussed preventing burnout during extended dedicated Step 1 time, giving personal examples of how they approached studying. The fear of future burnout was also significant in medical student

discussions on selecting a specialty (20 posts). When posters asked users to comment on which specialty they should pick, burnout was commonly listed as a con for Surgery and other surgical subspecialties (12 posts) and Emergency Medicine (EM) (10 posts) due to lifestyle, defined as less hours during the work week and more time and energy to pursue activities outside of work. "Working brutal hours in residency, studying and writing research papers in the evenings when you come home, and trying to start a family seem overwhelming and terrifying after getting burned out on rotations" (5+ comment).

Theme 2: Medical Student Stressors that Contribute to Burnout

Student experiences will vary depending on the institution and the educators they interact with. Despite the wide potential variances in experiences, the following findings hold resonance with enough students to receive a significant number of upvotes. In a post titled, "Because maybe you've felt like this too during medical school," the poster summarizes their experience in a letter to future patients of theirs:

> I moved out of state for the first time for medical school, far away from my family and friends and everything I knew, so that I could become your doctor. I spent countless nights studying into the hours of the early morning learning about intricate cellular pathways, trying to keep them all straight. The month before my first board exam, I holed up alone in my room with my books, white board, and markers. Sometimes I would lose track of time and fall asleep on my study materials, only to wake up and do it again.
>
> When friends invited me out to do the things I used to enjoy doing, I would decline, choosing instead to spend time with my First Aid for the USMLE Step 1 Book and the USMLE World Question Bank. After less than two weeks to rest, I started my clinical rotations. I was excited about being able to practice the things I learned in textbooks and apply them to healing patients. It was fascinating to see so many of the things I read about embodied in people, but I also realized that these conditions were embodied in people and could change the entire trajectory of their lives.
>
> I saw my residents work hard and staying late even if they were doing everything right, and come back early the next day, just to do it all over again. I often worked hard too, only to get a lower grade than, for example, a classmate who played League of Legends during the weekend like the attending, due to the subjective

> nature of the grading. (95+ post, 79% upvoted)

This was affirmed by another poster who stated, “This is the exact process that every single medical student goes through. We're all pursuing something greater and giving up bits of ourselves to do it, to accomplish something that others simply can't” (20+ comment).[360] This post summarizes many of the major stressors that abet burnout that I identified from the data: adjusting to a new stage in life and studying for exams in general for first-years, studying for Step 1 for second-years, and clinical rotations for third- and fourth-years. This post also includes the overarching themes regardless of year: 1) demands and work expectations (including lack of time and energy), 2) unsupportive learning environment, and 3) feelings of inadequacy/incompetence.

DEMANDS AND WORK EXPECTATIONS

Posters on /r/medicalschool describe the pre-clinical years as demanding and exhausting: “The material and knowledge you have to know in medicine isn't particularly difficult like electrical engineering, it's the sheer amount of knowledge that proves to be a challenge. It always changes, so something you learned five years ago may be totally wrong” (5+ comment). For first-year students, the transition can be difficult, as medical school is unlike their undergraduate studies:

> I've always wanted to be a physician, but I hate medical school because this is not being a physician. This is just endless memorization, exams that destroy your confidence, nights where I stay up studying, as I just try and scrape by . . . I worked hard during undergrad, but I still managed to have a life and hobbies I enjoyed. I am at the bottom of my class, and I'm not used to this. In undergrad,

[360] In contrast, another commenter states "You knew what you were signing up for – that's why medical schools require you to do some shadowing. Get over yourself (45+ comment), but several posters defend the original poster within different comment threads. One of those replies condemns this attitude, stating, "You are the worst. Don't minimize the struggle and anguish someone might be experiencing because 'other people have it worse.' We can't control the environment we were born and raised in, but everyone struggles, regardless of whether they are rich or poor" (20+ points).

> I used to study to get good grades. Now, I just study to scrape by with a pass. (45+ post, 88% upvoted).

Many users advise changes in study methods to either prevent or reverse burnout, such as the Pomodoro method (intervals of 25 minutes of studying followed by 5-minute breaks) or changing to more active learning methods. Others, such as the following commenter, recommend reframing how to approach the material: "When I first started medical school, I wanted to focus my efforts on high-yield facts because that's what everyone was talking about. But medical school doesn't work that way - you're learning the fundamentals that everything else builds off of. There is no such thing as high-yield in the beginning – everything is high-yield, and you really have to focus on everything initially" (220+ post, 89% upvoted).

The impulse to master this knowledge is an incredible stressor that has caused many pre-clinical students to burnout: “I do the same thing every day: wake up, try and study as much as possible while minimizing down time and distractions, go to sleep, wake up again, and do it all over again. If I take a day off, I feel like shit because I feel like I should be studying for end-of-block exams or for Step 1. It never goes away” (110+ post, 93% upvoted). Step 1 garners the most attention for causing burnout, as evidenced by the post, “Studying for Step 1 when my friend warns me not to burnout too early,” (450+ post, 97% upvoted) which links to an image macro/meme (Figure 5) that reads, “That's my secret, I'm always burnt out.” Bruce Banner states that he is “always angry” and thus, ready to fight. He also says it with an air of resignation – this anger is part of his identity and it is

something that he has learned to live with. By changing the word "anger" to "burnout," this image macro conveys the same sentiments: burnout has become a part of their identity, and much like Bruce Banner, they are reluctant to do so. However, the resignation to being burned out and out of control reflects a belief that this mental state can be productive in accomplishing a task, even if it is a negative emotion that many people strive to avoid.

Figure 5 – An image macro created from a screen capture from the motion picture, "The Avengers" (2010). The character, the Incredible Hulk's alter ego, Dr. Bruce Banner, turns to the camera and says, "That's my secret - I'm always angry" before transforming and fighting in the Battle of New York, the movie's "Final Battle."

The comments also reveal that studying also contributes to burnout even in later stages of training: "I don't know how I studied for Step 1 for six weeks. I've been studying for one week for Step 2 and I'm already feeling the burnout" (35+ comment); "I'm on my sub-internship, which is arguably the most important rotation of medical school, and I can't bring myself to study because I'm so burnt out" (5+ comment). One poster asks if other people feels self-loathing for not knowing things,

> even when people say it's not expected of me to know it. I feel incompetent, and that my level of self-esteem is so inappropriately low that I'm not setting boundaries and feel desperate to please my superordinates, going above and beyond and consequently over-working myself. For example, I've worked a 26-

> hour call and was assisting in the OR for at least 10 of those hours. I wanted to stay longer and impress my bosses, but I also had to be back in the hospital the next day at 5:30 A.M. for rounds . . . I'm burnt out. (25+ post, 89% upvoted)

I selected this particular post because it resonates with my personal experience: I've gone above and beyond, covering an extra weekend on a particular surgical service to help out the intern coming into the service (the attending had a very specific way of rounding, which required significant time pre-rounding) and logging over 80+ hours and often staying past 5 P.M., which I thought would put me in the good graces of the attendings for a better evaluation and more privileges in the operating room, such as suturing and beginning the surgery by starting the incision.

Because every clerkship at every institution weighs the shelf exam and subjective evaluations differently and has different cut-offs for the Honors, High Pass, and Pass grades, the subjective, evaluation-based grading system in third- and fourth-year was a significant stressor associated with burnout. In a self-declared rant, a poster states, “I am so tired of evaluations. 1/3 of the people will just not like me for whatever reason, even if I diagnose patients accurately, read up conditions, act pleasant. They might not like my voice or think I'm too soft- or loud-spoken. Even if I ask for feedback from the attending, they tell me that I'm doing great, but then shit on my evals at the end” (20+ post, 100% upvoted). Others, in a post asking whether other third-years also feel burnt out (80+ post, 96% upvoted), mention the inconsistency of grading: “No matter what I do, I always get 'great student, great team-player,' but a 85% on the final grade” (10+ comment); “I'm so tired of working hard and stressing out just to get a random grade at the end. I got Honors in two rotations where I did absolutely nothing, and only High Passes in rotations I busted my butt in” (10+ points).

A post, “I hate third-year, but not because of the hours” discusses the stress of the grading system in depth and provides a different perspective:

> Most people complain about the long hours and having to wake up at 4 A.M. for surgery; this doesn't bother me since I can just go to bed early. I just really underestimated how stressful it is to have your grades - and thus, your entire future - depend on subjective evaluations from a few people. I hate that I feel like all of the work I've done with learning the material for the shelf and learning clinical skills is for naught if I get average or poor evaluations, since our evaluations are 40% of the grade and the shelf is only 30%. Does anyone else feel like this? (45+ post, 91% upvoted).

A commenter affirms the stress of being constantly evaluated in third- and fourth-year. “In first and second year, you could drift off in lecture for an hour and no one would care, but if you take an unscheduled break for more than a few minutes or you don't act ridiculously interested in the rotation, it can ruin your evaluation and hurt your entire rotation grade” (20+ comment). As a suggestion, another poster recommends, “Just be nice and make friends with literally everyone. I don't know any clinical knowledge, but I got great evaluations because all of my attendings liked me. I always tried to be positive. Most attendings don't care about what you know, they just want you to give a shit and not be a pain in the ass to be around” (40+ comment).

Despite being challenged by the demands and expectations in all four years of medical school, most students graduate and match. Figure 6 characterizes this adaptation while speaking to the general learning environment. The commenters, using a narrative style similar to the one used in nature videos, elaborate on their experience: “Watch as the student doctor moves about aimlessly and blindly. It wonders why it went into the depths of the abyss” (160+ comment); “What's this? The student has a symbiotic relationship with another creature of the hospital, the resident. The resident brings life and sustains life in these crushing depths, spewing forth an endless, but nourishing, source of scut work - the

only source of energy a third-year medical student needs to sustain its existence" (40+ comment).

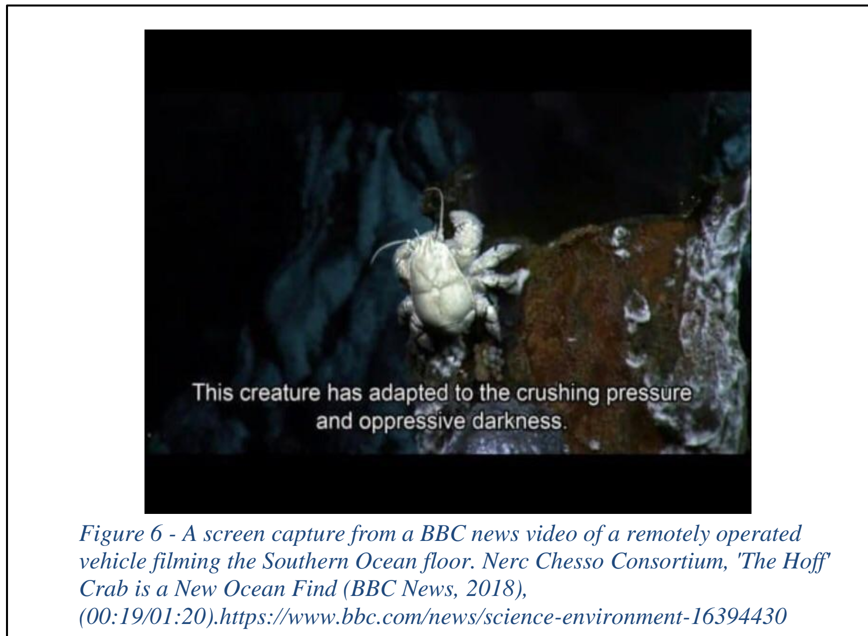

Figure 6 - A screen capture from a BBC news video of a remotely operated vehicle filming the Southern Ocean floor. Nerc Chesso Consortium, 'The Hoff' Crab is a New Ocean Find (BBC News, 2018), (00:19/01:20).https://www.bbc.com/news/science-environment-16394430

By utilizing the language of a nature documentary, the medical student becomes a curiosity or an object to be observed and spoken about/for. It reflects the objectification and alienation from the outside world that medical students feel. Finally, by stating that scut work is the only source of energy a medical student needs, the commenter is alluding to the denial of self-care needed in order to create a professional identity centered around work, especially within a power hierarchy.

Learning Environment

The most commonly cited problem with the learning environment for pre-clinical students was the discrepancy between the material taught in class and the material they were tested on. Figure 7 is a meme that parodies the disconnect between tested and taught material (1200+ post, 98% upvoted). The "long slides are packed full of minutiae" (230+ comment) because "most professors don't know how to teach all of the concepts in a

digestible way. Only UWorld has managed to capture how to write questions that test over concepts instead of minutiae" (120+ comment).

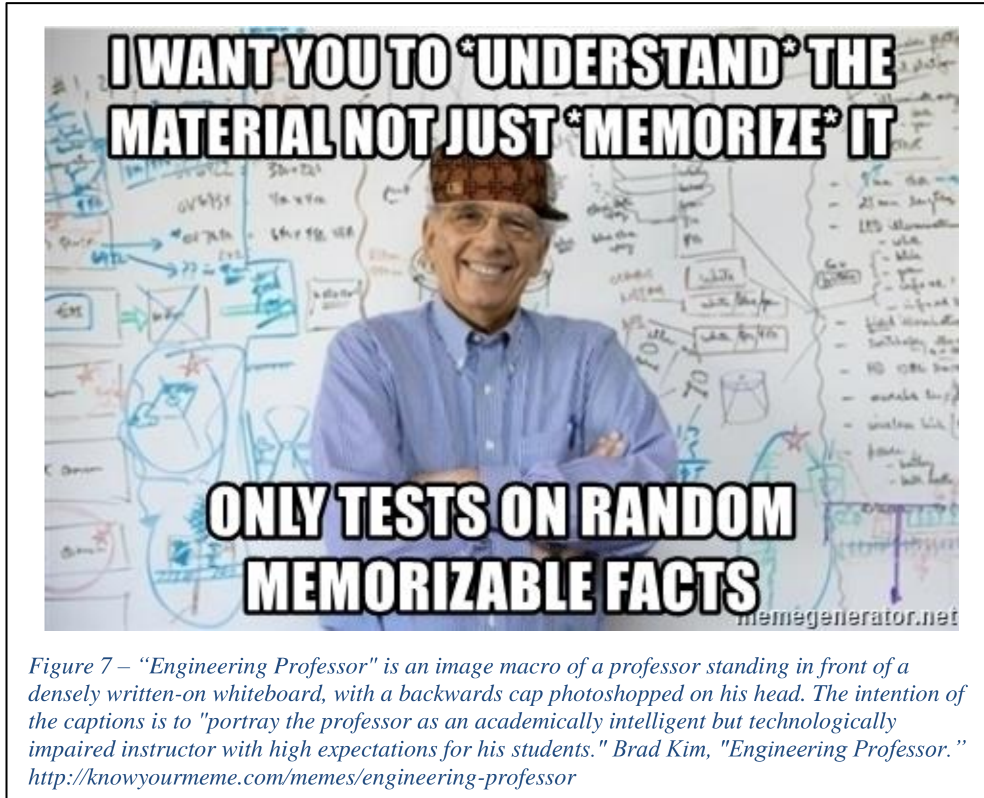

Figure 7 – "Engineering Professor" is an image macro of a professor standing in front of a densely written-on whiteboard, with a backwards cap photoshopped on his head. The intention of the captions is to "portray the professor as an academically intelligent but technologically impaired instructor with high expectations for his students." Brad Kim, "Engineering Professor." http://knowyourmeme.com/memes/engineering-professor

Even if excellent clinicians lectured, this did not necessarily result in good classes: "The first time we talked about anemia, the course directors brought in the most renowned hematologist to teach. 60% of the time, he talked about the history of anemia, skipped the main and important concepts because 'you can read that on your own,' and then spends the other 35% of the class discussing his research: identifying new genes related to the most rare form of anemia" (45+ comment).

Part of the problem, one commenter points out, is that "teaching towards the boards" is used pejoratively, and that institutions attempt to create the illusion that they are producing "better doctors." This is misguided:

> Board exams are made by hundreds of educators/physicians across the country, based on learning objectives and standards that have been reviewed tested

> rigorously, and modified over several decades. This curriculum isn't arbitrary, it's what they collectively believe is important for students to understand so that they can succeed in the real world. They know better than a random Ph.D. from your school that only knows how to lecture with a million PowerPoint slides. There's no alternative to assessing us, so schools might as well embrace it. (25+ comment)

Medical students are also frustrated by the perceived lack of support from administrators who seem to not understand that teaching to their boards is necessary for producing "the best doctors possible." Figure 8 (600+ post, 97% upvoted) and its comments further illustrate the problem in the pre-clinical learning environment as perceived by /r/medicalschool users. The message intended to be transmitted by this meme is that medical school administrators, represented by the character Patrick Star, follow the logical reasoning for teaching medical students to the exams, but claim that it's "not my problem." As Adam Downer explains in the "Know Your Meme" encyclopedia entry, the format's intended message is to convey that the solution seems obvious and makes sense to medical students. However, despite the logical and compelling reasons presented for helping students effectively prepare for the boards, the presented logic is ineffective in changing medical education. Patrick's character often serves as comic relief in the series, due to his character: "Patrick's portrayal is pleasant, overweight, lazy, unmannerly, naive, and generally ignorant. He lives under a [literal] rock . . . in some episodes, Patrick has trouble with even the most rudimentary tasks and displays little common sense or intelligence."[361] This portrayal is intentional, and the meaning is widely understood, even if not explicitly stated in that particular post.

[361]Encyclopedia SpongeBobia, "Patrick Star." http://spongebob.wikia.com/wiki/Patrick_Star.

Figure 8 - "Patrick Star's Wallet." Image macro made from screencaps of the Spongebob Squarepants episode "Mermaid Man and Barnacle Boy III." (2010). In this scene, Patrick Star "attempts to teach a lesson about morality to the villainous Man Ray. In the scene, Man Ray role-plays giving back Patrick's lost wallet. However, Patrick denies [that] the wallet is his, despite Man Ray's logical reasoning." Adam Downer, "Patrick Star's Wallet." http://knowyourmeme.com/memes/patrick-stars-wallet.

The comments on this post give examples of how ineffective and instructor-centered the learning environment can be: "'Watch me read through forty of the two hundred PowerPoint slides I prepared – you can go over the rest on your own'" (175+ comment). When administrators ask for feedback and students provide ideas on how to rearrange the curriculum to better prepare them for Step 1, the response from administrators is interpreted as, "Yeah, that's great and all, but we're not going to do that. Instead we'll add irrelevant things that you didn't ask for" (130+ comment), or "hiring suicide prevention specialists" (80+ comments) and "bringing in stress relief puppies twice a year to the library twice a year for the students' mental health" (55+ comments).

The learning environment changes drastically on the wards. Medical students rotate through different teams, even during the same clerkship. Students must learn how

to work on these new teams, being mindful of the power dynamics, as well as study for the shelf exams taken at the end of the rotation.[362] As previously mentioned within the section, “Demands and Work Expectations,” evaluations are largely subjective. A commenter advises new third-years: “Generally, not being annoying is more important than being smart for good evaluations” (530+ comment). Another commenter expands upon what is considered “annoying”: “being overly casual with attendings and residents and not seeing the boundaries that exist, asking dumb questions at inappropriate times, not being self-directed enough and needing constant instruction on what to do next, or saying awkward things” (85+ comment).

Obtaining good grades and evaluations, given by residents and attendings, is important for being a competitive applicant in residency applications, regardless of specialty. As one commenter points out, “while third- and fourth-years are working 12-13-hour days, they also need to somehow study for a shelf exam. Zero of the material is covered during the work day” (25+ comment). This was in response to a post where the poster was asked by the intern to collect labs for all of the patients on the service before rounds at 6:00 A.M. and he was seeking advice on whether he could refuse the intern's request: “I don't want to be a bad student, but I don't see the educational value in me waking up at 3:30 A.M. to do something that should already be automated, since we have an electronic medical record. I'm paying tuition for an educational experience, and no one has taught me anything so far” (65+ post, 88% upvoted).

Indeed, many of the stressors that lead to burnout in third- and fourth-year

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[362]As described by Charles Bosk in *Forgive and Remember* (1979, 2003), these power dynamics are established through various rituals and interactions that reinforce the hierarchy within a service and legitimate the attendings' authority. Charles L. Bosk, *Forgive and Remember, 2nd Edition* (Chicago, IL: University of Chicago Press, 2003)

students are correlated to the learning environment. In the aforementioned post, the original poster is cautioned against directly saying no because of the risk that it will "make your rotation an even worse experience for the next couple of weeks" (60+ comment). Instead, commenters suggest the following solutions: "Say, 'Of course! When do you want to meet?'" (85+ comment), "Mention that you probably won't be able to help out since lab results won't be back that early, which is a 'soft' no" (20+ comment), "If I were in your shoes, I'd suck it up and do it, hoping that someone higher up will notice your hard work" (60+ comment).[363] In response to an intern providing an alternative perspective, a more senior resident (as indicated by their flair) reminds them, "You know med students are there to learn. Remember back in your clerkships where you had to show up at 6 A.M., leave 14 hours later, eat something, prepare a presentation that no one will listen to, do some UWorld blocks, and repeat? You were paying a lot of money to do that – it's great when a student wants to help, but it shouldn't be their responsibility" (45+ comment).

A common concern raised by clinical students is the need to act overly interested on a rotation in order to receive good evaluations. One commenter, in response to a poster describing his difficulties adjusting to the wards ("Third year is killing me," 85+ post, 96% upvoted), commiserates and explains how he survived third year: "I've realized the best way to get through third year is to stop giving a shit while projecting the attitude that you do. If the surgeon yells at you for not retracting hard enough,

[363]A current intern chimes in to say, "If I'm asking you to do something like this, *please for the love of God, help me.* Waking up early sucks, and making the list sucks, but waking up earlier, making the list alone, and having your student show up ten minutes before rounds to ask you 'if they can help with anything' is soul-crushing" (45+ comment). Another commenter responds, "If you expect an intern to care about your third- or fourth-year schedule, they don't. They're just trying not to drown, and shouldn't be there for your education" (-5 comment). While the core message is the same – "residents are in need of support" – the delivery of the message clearly impacted the amount of karma each comment received.

pretend and say that you'll 'try harder next time,' but just laugh it off in your head knowing you don't care at all what this douchebag says" (8+ comment). One poster asks whether other people are in his same boat: "I just got destroyed by the clerkship director for being 'uninterested.' I showed up when I was supposed to, I did everything I was asked to do, and the specialty I am going into is the complete opposite of this required rotation (lots of OR time). One of his concerns he had was that I directly asked to go get breakfast between pre-rounding and rounds. He said, 'let's make something clear: students don't ask, medical students are *dismissed* for breakfast when the attending feels like it'" (295+ post, 96% upvoted).

Comments to that post relay stories of how students had to ask permission to take care of basic needs: "my attending told me yesterday that he wants me to ask permission to go use the bathroom. I only have this rotation left and I've matched already. I'm an adult, and I shouldn't have to ask to use the restroom" (345+ comment), and "We had a student ask me, the attending, to leave rounds to get lunch. We were joking around and pretended to be mad at the student. He then pulls out his glucometer and shows us a glucose of 35" (100+ comment).

As one commenter points out, this sort of behavior depends on the institution and attending – "some are assholes who think that they own you to the point of dehumanization. Some go on a power trip because they want to exert control over something in their lives, which is quickly circling down the drain of depression. Others want to externalize their own emotional stresses on others" (45+ points). Another commenter agrees that having to ask to take care of basic human functions is dehumanizing: "Everyone loves paying 40k+ in tuition each year just so you can be

given permission by your attending, who you're paying to teach you, to dismiss you for lunch like you're in elementary school again. What a dehumanizing demand" (70+ comment).

Most notably, the learning environments on Surgery and surgical subspecialty (32 posts) and Obstetrics and Gynecology (Ob-Gyn, 21 posts) rotations had the most complaints. The reactions and reprimands from superordinates were disproportionate to the offenses committed: "I had perfect attendance for the entirety of a Surgery rotation which was two months long. On the last day, I had a 6-7 A.M. lecture and decided to skip Grand Rounds at 7-8 A.M. I figured no one would notice, but the intern did and reamed me about how it was unacceptable and that I should have texted the team to let them know exactly where I was at all times. I also got bad evals from him" (60+ comment). Students also reported overt racism and sexism from superordinates. "I am Kenyan, and during surgery, the surgeon made clicking sounds at me in the OR and asked me to translate what he said. He got mad at me when I told him he hadn't spoken any language specifically" (250+ comment).

In the same thread, a commenter states, "Gyn killed a part of my soul. I thought I was horrible at suturing because they would scream at me for the smallest mistakes and rip the instruments from my hands. On my next rotation, Surgery, the resident took the time to let me try it on my own for a few minutes, and I discovered I wasn't too bad at it after all. By the end of the rotation, I sutured up all sorts of incisions. I haven't been treated that poorly since I was bullied in middle school" (30+ comment). This was in response to another comment which states, "I was screamed at by a senior resident for showing up to a surgery that I was assigned by the clerkship to see, and I was forbidden

from scrubbing in. I was then yelled at for standing next to a step stool at the edge of the room because my attending *might* have wanted the step at some point in the future. #obgyn" (190+ comment).

Another post, asking for commiseration or advice on how to survive their Ob-Gyn rotation, garnered eight comments that described their negative experiences on the rotation (20+ post, 84% upvoted). "The rotation was malignant, and I was yelled at and publicly humiliated . . . I felt like the team wouldn't care if I killed myself because of the mistreatment I faced on the rotation" (30+ comment), "worst experience of my life" (20+ comment); "this was my first rotation and it made me question for the first time if I should be a doctor. I wondered if this was what the rest of third year would be like and if I wanted to continue in this career if this was what I signed up for" (15+ comment).

Medical students also described being demeaned in other specialties, but these were not as common. The top comment in a post asking, "What has been your most dehumanizing experience on the wards?" (160+ post, 96% upvoted), is about a student who is given a new patient who was admitted overnight to the inpatient oncology service to follow when he arrived for in the morning, who he was supposed to present to the team in an hour. This was in addition to the two patients he was already following. After presenting, the attending states, "Your presentations have been B level at best. Your presentations are also too long, so I'm timing you – you have five minutes" (230+ comment). After five minutes, the attending stopped him and then pimped the student about the mechanism and three most common side effects of the experimental monoclonal antibody the patient was on. The student wasn't able to answer, and the attending "started yelling at full volume about how I need to take more responsibility

for my patients and how he expected more effort. This was in the hallway in front of our giant team (a fellow, resident, intern, fourth-year student, pharmacist, pharmacy students, and the care coordinator) and multiple patients and families" (230+ comment).

In another example, a student who was applying Psychiatry was on an Emergency Medicine rotation and the attending,

> giggling as she pulls me out of the room where I'm suturing a patient, walks me to the psych holding area and tells me that she has a special medical student job. She's holding a bucket filled with soapy water and introduces me to the patient, who came in with blisters on her feet. The attending wanted me to wash her feet. I do so, getting down my knees, while the attending and residents laugh at me. This was all because I was honest and said I was going into psych, which the attending said psych was a waste of medical training.[364] (280+ comment)

The student is removed from a patient care activity where s/he is learning valuable clinical skills and is instead instructed to perform a task that arguably has zero educational value. By doing so, the attending explicitly reinforces the power differential between students and attendings, as well as the "superiority" of some specialties over others. The poster also states that this treatment was because they were honest about what specialty they were interested in; other students often pretend to be interested. Tales like this caution other students to also pretend as if they are interested in becoming that type of specialist.

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[364] Within the same post, a commenter was heavily downvoted because they defended the diminishment of medical students by attendings: "To those who feel dehumanized because their presentations were interrupted, ignored, or shot down, realize that many attendings do this on purpose. Do you really think your attending relies on you and your presentation to know the patient? They're trying to help you become more proficient at extracting pertinent information and thus, become a better clinician. Third year sucks and it might seem like your faculty don't care, but you working harder is going to make you a better clinician in the long run. Some people, like myself, feel more motivated to improve myself when I'm shit on in the moment" (-70 comment). A user replies, "This is why hazing isn't dead in medical education" (85+ comment).

Not being interested in a specialty also contributes to medical student burnout. In a post asking, “Are any other third-years also completely burnt out right now?” (80+ post, 96% upvoted), had thirteen comments from different users, all with a positive karma count, stating how much they dislike a rotation they were on. Contributing factors were having zero interest in the specialty with long hours (40+ comment), difficulties with assimilating into the team due to a difference in personality/humor (10+ comment), and involvement in patient care/boredom: “Labor and Delivery is the worst rotation I've ever been on. I'm sitting here, being useless for twelve hours a day, and essentially just shadowing a resident who refuses to acknowledge my existence” (135+ post, 98% upvoted), “I'm on my last Labor and Delivery night. I've seen zero patients and haven't even met the attendings” (110+ comment). Figure 9, a post with 1800+ upvotes (96% upvoted) typifies this experience.

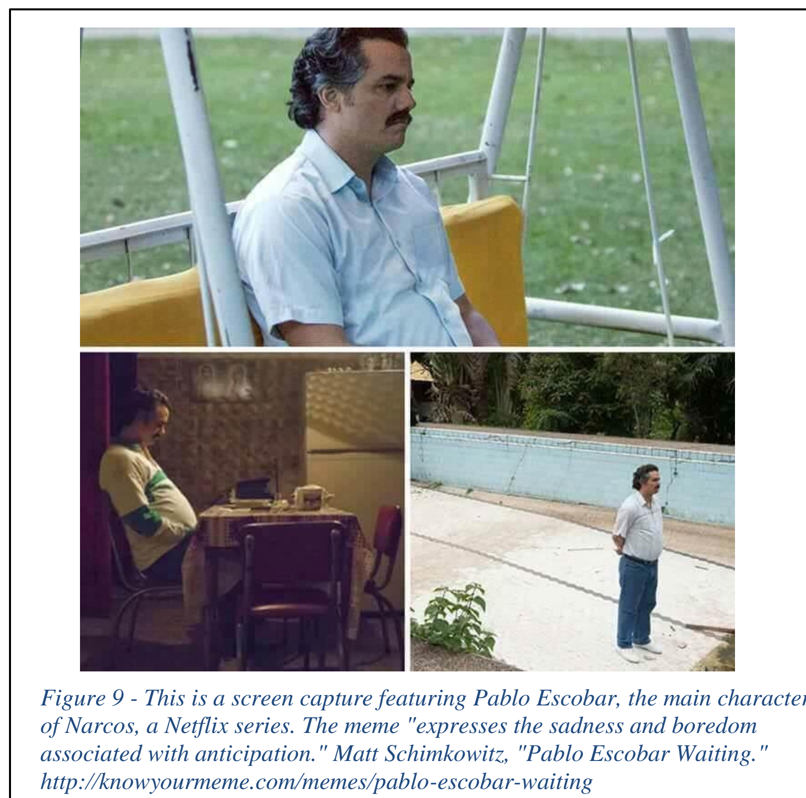

Figure 9 - This is a screen capture featuring Pablo Escobar, the main character of Narcos, a Netflix series. The meme "expresses the sadness and boredom associated with anticipation." Matt Schimkowitz, "Pablo Escobar Waiting." http://knowyourmeme.com/memes/pablo-escobar-waiting

This lack of involvement in patient care on Ob-Gyn was common for male students (100+ comment). However, another student offers his experience as a counterexample within the discussion: “I was never asked to leave a room or not perform an exam, even as a male. My residents made it clear that I was part of the team, letting me see the patient and interview them so that she would be comfortable with me examining her. This is all down to how they treat you as a member of the team” (50+ comment). This comment suggests that there is nothing inherently wrong with any rotation, but that superordinates on the team can make or break a rotation.

As previously mentioned, students feel pressured to feign interest in the specialty so that their grades are unaffected. Students also feel the effects of the power dynamic within the team because of the evaluation system. A student describes this dynamic during his Ob-Gyn rotation:

> On the first day of my rotation, the resident and I are walking to the patient's room, the very first one I would see on this rotation, and she asks me if I want to take her gynecologic history. I responded, “I’ve never seen a gynecologic history before, can I observe for the first patient and then try for the next one?” Although she said, “sure, that's perfectly reasonable,” the resident wrote on her evaluation that “student was unwilling and unable to take a gynecologic history.”
> On gynecologic oncology, I had to use the bathroom urgently in the OR as the resident and attending were discussing a difficult dissection on a robot-assisted hysterectomy. When the resident asked where I went when I came back, I answered that I had to use the restroom urgently and that I didn't want to interrupt their conversation. She stated in her evaluation, “Student needs to be more professional, as they left the OR without asking for permission and openly discussed using the bathroom.” . . . The only male resident in the program asked me to retract during the vaginal hysterectomy instead of watching, to which I replied “Of course. I won't be able to see anything, but I know it's an important role so I'm happy to help.” On the evaluation, he stated that “When asked to retract, the student said, ‘If I won't be able to see anything, at least I'll be doing something,’ which was dismissive and rude.” (10+ comment)

Within this example, comments that the student (and other users, judging by the positive karma count) believed to be reasonable actions and requests that were both misinterpreted

and used against the student within their evaluations. The student's actions, which were perceived as missteps, affected his clerkship grade.

Students were able to endure difficult rotations because they assured themselves that "if I could survive Ob-Gyn, I can survive anything" (15+ comment), "I reminded myself that no rotation lasts forever" (3+ points), "one day this will be a distant memory, and those shitty personalities won't be your problem" (5+ points), and "just take the Kimmy Schmidt approach - you can do anything for ten seconds. When those ten seconds are up, start over, and you can get through those ten seconds too: (20+ points).[365]

In summary, students counsel each other to deal with the often-abusive learning environment on the wards by "developing a thick skin and letting things roll off your back. Try to keep improving, but don't over-think things: when an attending is scolding you, just smile and nod like an enthusiastic child and thank them for the feedback. This is part of the game" (45+ comment). As evidenced in the following section, the way the learning environment is structured results in feelings of powerlessness and uselessness, which also contributes to medical student burnout.

FEELING INADEQUATE AND POWERLESS

Despite the difference in the context of learning environments, students, regardless of the point of training they are in, report feeling useless or inadequate, which can be summarized by the psychological pattern of "imposter syndrome." Imposter syndrome, which is rooted in a comparison of the self to others, gains significance

[365] Kimmy Schmidt is the main character on the Netflix series, *Unbreakable Kimmy Schmidt.* The character, and three other women, was kidnapped and trapped in an underground bunker for fifteen years by a Reverend who convinced them that the apocalypse had already passed and that they were the sole survivors. Despite performing difficult manual labor and having little entertainment to pass the time, Kimmy was able to endure her situation by relying on this mental trick.

within the context of the learning environment. As medical school culminates in a final ranking of students against each other, even at schools that are truly unranked Pass/Fail for the first two years, the feelings of imposter syndrome further compound to the burnout experienced from the excessive demands and work expectations. In a post by a first year asking, “when does it start feeling like you're good enough?” (10+ post, 100% upvoted, the top comment is from a fourth-year student who matched at their top choice: “I still don't feel like I'm good enough . . . it's hard to believe in yourself when it's constantly pointed out that you're not good enough” (35+ comment). As one user points out, feeling like an imposter is common because “the purpose of medical school isn't to learn everything in medicine, it's to build a foundation upon which you can continue learning over the course of your entire career. You will feel inadequate and lost every day because you're surrounded by people who have extensive experience: the Ph.D.’s encountered in the first two years and the clinicians in the last two have upwards of a decade's worth of experience on you” (10+ comment).

The anxiety associated with imposter syndrome is sometimes seen to be productive in the sense that “it keeps you driven and wanting to pursue excellence; you keep growing as a student because of this attitude” (3+ comment), but it can also be counterproductive:

> I blame my own intrinsic incompetence and stupidity. I use my anxiety to double down and study harder, purposefully feeding into my own anxiety to keep going. This just makes it harder to think and act in my best interest - I forget things, I have trouble stringing sentences together, and I become impulsive . . . after soul searching, I realized that if I wasn't anxious and constantly comparing myself to my classmates who seem to be effortlessly perfect, I would have been kinder to myself and taken the time to understand, instead of just reacting. This helped my insecurities and feeling like a failure go away. (10+ post, 84% upvoted)

Students in the pre-clinical years report feeling useless or inadequate, most often in the

context of having to develop a knowledge base and comparing their efforts and performance to those of their classmates. A poster who took a leave of absence due to depression describes studying in the library for twelve hours, and “studying more than any other person I knew. Even in second year, I hadn't ‘found my footing’ and couldn't understand how the other students managed to ace exams that I was barely passing” (130+ post, 94% upvoted). Another poster who had a history of anxiety during their undergraduate career discusses the difficulty in trying not to burnout again in a more stressful environment: “I’m doing just well enough to pass my classes, but I see my classmates do much better. I'm just treading water at this point” (8+ post, 100% upvoted).

The third- and fourth-year experience, as described by a commenter, can be summarized as, “Welcome to third year, where the rules are made up and the points mean everything” (65+ comment), which illustrates how severely the power dynamics affect evaluations. Because of the power differential inherent on the wards as well as their developing clinical knowledge base, students often feel useless or powerless in a number of arenas. Lack of involvement in patient care despite a willingness to participate, as previously mentioned, is one example:

> I don't have my own patients to follow, no one asks me to write a note - I do so voluntarily and sent them to my superordinates to get feedback, but after the first few days, I stopped because I got the sense that I was being annoying. Rarely, people will ask me to interpret radiology studies. I do round on a few patients of my own in the morning, but that feels useless because the resident will round without me very quickly and write notes of their own without reviewing mine. Every hour I spend there, I could be studying for the shelf, but I'm just shadowing a team for more than ten hours a day. (10+ post, 77% upvoted).

Another poster who wanted to apply to Internal Medicine describes feeling frustrated

because he was ignored by his superordinates all week and “essentially shadowing on my Medicine rotation. I asked for my own patients, but my job is to just get the ‘sign out’ from the night team, pre-rounding and presenting them to the team. After rounds are over, I just sit in the call room until the attending notices that I'm still there and dismisses me. I've even offered to do scutwork and they've declined” (40+ post, 94% upvoted). Another poster, in describing why he's burned out, discusses his frustration at feeling useless on the wards: “the residents give me tasks to do but they're not helpful to anyone and is just a way to fill my time. I'm doing a mediocre job and not really contributing - my notes don't count, I can't order anything, or make any decisions” (15+ post, 100% upvoted). This ties in directly with expressions of decreased personal achievement.

The evaluation system further compounds the anxiety associated with essentially shadowing and waiting for hours to go home every day, as the aforementioned poster wanted to Honor this rotation due to his interest in applying for Internal Medicine. Figure 10, posted under the title, “Third-year students waiting to be dismissed (colorized)” (750+ post, 94% upvoted) is an image which embodies this experience. The captioning of this image as colorized (which users see before clicking on the link to the photo) is a callback to the “old-school” photos that were taken in black and white. This caption speaks to the timeless nature of waiting to be dismissed as a medical student.

Figure 10 - A photo of three skeleton models sitting on a bench in front of jack-o-lanterns.

Explicitly mentioned in a post, "Anyone in New York want to discuss burnout?" as contributing factor to their burnout was having to stand around waiting for superordinates to be dismissed, as well as the inefficiencies of medical education and demands of the learning environment (10+ comment). Within this discussion post, another user summarizes why he burned out:

> I realized how stupid and wasteful our medical education was. I wouldn't mind being at the hospital if I was actually learning something useful or relevant on rounds or on the wards. But usually, you do nothing, and your goal is to not get in the way. When you do ask a question or for them to teach you, they just tell you "go home and read about it and tell us tomorrow." After three years, I don't feel comfortable doing even the most basic patient care tasks, like putting in an IV or adequate wound care. My physical exams are laughable, and I learned so much more from studying on my own using UWorld and First Aid than I did from my professors during the first two years - and I paid almost $100,000 for that. The idea of my time and effort being useless burns me out more than the long hours and studying ever could. (20+ comment)

A reply to the commenter attributes his experience to the "end result of the overall context

of medical education. Research grant money trumps everything and for clinicians, teaching takes a backseat to just getting through the day. Medical students are glorified observers and data gatherers, and learning - i.e. doing, on real patients - happens in residency when some attendings utilize you as a cheap labor force" (3+ comment).

In some cases, the feelings of powerlessness and uselessness refer to the medical student's inability to care for the patient in a way they find meaningful. For example, a poster asks for advice because he finds himself hating a specialty that he always dreamed of going into:

> I hate everything about medicine. I hate doing rushed History & Physicals on patients, only to present the patient on rounds and no one cares. I hate having to document everything. I hate that the goal of this service is to keep patients alive so we can discharge them, just so we can continue admitting people. I hate that no one wants to focus on the underlying problems that these patients have. I hate watching physicians interact with patients because of their atrocious people skills. On other rotations, I could find aspects of it that I enjoyed, but I can't do this at all. (60+ post, 90% upvoted)

The previously cited 150+ post (92% upvoted) which states that s/he has turned into a "classist, condescending monster" expresses frustration at his inner-city patients' behavior: "they're usually non-compliant and don't understand their disease or their medications, and I don't get the point of trying anymore." A commenter, who also experienced similar feelings during his intern year, reframes the role of the physician for the poster in a way that is empowering:

> My role is to provide advice and information, as well as access to resources, in order to help people address their problems. I can only explain what their options are and the likely consequences of their actions. My job isn't to fix people. It's to give them the resources to fix themselves, to the best of their ability. If they make decisions that you view as a poor choice after understanding the consequences, that's none of your business - they are free individuals with different priorities than you. (220+ comment)

The resident clarifies further down in the comments – care about your patients, but "don't

get invested in their outcomes and take it as an affront to your ego if a patient is doing poorly" (35+ comment). Imagining the role of the physician as a coach, rather than solely responsible for the patient's health, helped the commenter resolve their existential discomforts with seeing patients whose health continues to decline.

Not only do students feel as if they have very little control over which learning environment they are placed in, they also feel powerless to change it. In the previously mentioned 150+ post about becoming a "classist, condescending monster," a commenter notes that his cynicism reflects "predominantly class/race/socioeconomic issues over which you have no control, and not medical ones. It's bullshit that people think it's the task of junior physicians to solve all of the problems with American society - the same ones that people have been fucking up for centuries" (20+ comment). On a smaller scale, students feel unable to change their immediate learning environment on the wards. Figure 11 is an image post titled "Please provide end-of-rotation feedback to improve the clerkship; this will be shared with your residents and attendings" (215+ post, 96% upvoted), which speaks to the inability of medical students to be honest about their experience, and thus, unable to change their learning environment for the better.

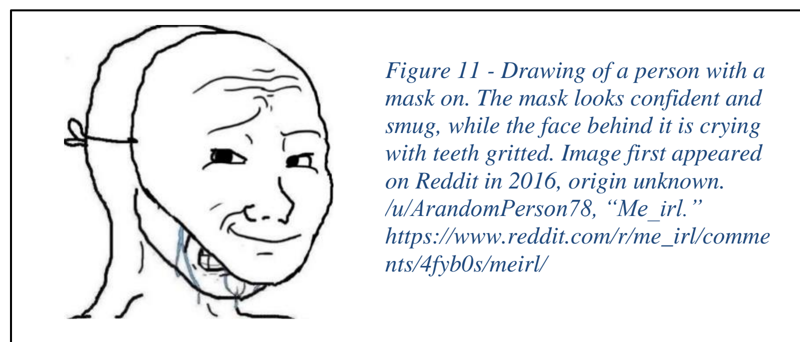

Figure 11 - Drawing of a person with a mask on. The mask looks confident and smug, while the face behind it is crying with teeth gritted. Image first appeared on Reddit in 2016, origin unknown. /u/ArandomPerson78, "Me_irl." https://www.reddit.com/r/me_irl/comments/4fyb0s/meirl/

Some students are distrustful of the feedback process, quipping, "Your comments are anonymous as long as they're positive" (60+ comment), "they want you to think that your feedback is anonymous" (90+ comment), "even legitimate constructive criticism can land

you into hot water" (25+ comment), and the suggestion, "don't trust the Man" (10+ comment) when a user reveals that "since the feedback is anonymous, I just pour my jaded heart and soul into them" (75+ comment). Another student suggests providing feedback based on the teaching methods and not the personality of the instructor (15+ comment), but another commenter points out that if the teacher's personality is truly incompatible with their ability to teach, such as abusive behavior, then consistent feedback is required to get them removed/excused from future teaching obligations (5+ comment). The comments here suggest that fear of retaliation and inability to change either their present situation or the future situation for other students leads to distress. These feelings are regardless of whether the feedback is actually handled anonymously at their particular institution.[366]

In summary, the demands and work expectations, learning environment, and feelings of inadequacy and powerlessness are experienced in different ways by individual medical students, as illustrated by the various narratives that I have gathered from users on /r/medicalschool. The three stressors I have identified have been explicitly talked about in discussion posts on burnout. The subthemes have significant overlap but can be summarized as follows: the evaluation schema (scores on board exams and academic transcript) utilized to create class rankings places an enormous pressure on medical students to compete with each other. The amount of basic science and clinical knowledge that students are expected to know is growing, and students are expected to be 'on' all of the time and make no mistakes if they are to try and keep all of their options open when applying for residency. Furthermore, the learning

[366] In all honesty, I personally do not trust that my course or instructor feedback is anonymous in any sense. As a result, I mark straight down the middle of the Likert score chart and provide scant written feedback. I realize now that being silent means that I could not make an impact on the curriculum or the learning environment, and that I should have provided constructive feedback.

environment is perceived as unsupportive, as student learning is not prioritized: students end up self-studying despite paying tens of thousands of dollars for an education, as well as being possibly hazed by superordinates.

Theme 3: Barriers to Burnout Solutions

Medical students face considerable difficulties in relieving symptoms of burnout on both an individual and systemic level. The major subthemes identified were: i) denial that burnout was a significant issue and ii) wanting to continue in the pursuit of a career in medicine/prioritizing their work and studies.

DENIAL

Attitudes that deny the severity and pervasiveness of burnout was identified as a hurdle that students had to overcome. This attitude occurs at multiple levels - fellow students/users on /r/medicalschool, superordinates, and administrators - manifesting as a recommendation to "be more resilient" or "have more grit," which receives considerable resistance when it is explicitly mentioned. On a post in /r/medicine linking to an article on doctor burnout in 2018 (1400+ post, 96% upvoted on /r/medicine; 130+ post, 100% upvoted on /r/medicalschool), this comment was posted both on subreddits, which critiques the concept of resilience and the approaches taken by hospital administrators:

> I fucking hate the term burnout almost as much as I hate the word "resilience." These are all just ways for admin to take the world's most gritty, resilient people, who waded through a decade of bullshit to be here and work harder than almost anybody on the planet, and tell us that the reason we're unhappy is that we just don't know how to bend over far enough. We have to be more resilient, or in other words try harder to cup the balls while we're fellating the giant dick of physician disempowerment. It's not that they've taken medicine out of the hands of the people who are actually trained in it and put it in the hands of MBAs and nursing supervisors, it's apparently that we just aren't opening wide enough to swallow all the shit. I don't know how they can talk about resilience training with a straight

> face to a room full of people who tolerate more shit than anybody else would, and I don't know why on earth anyone thinks the solution to this whole mess is to create more fucking mandatory lectures and modules on how to be more resilient, full of a bunch of non-science, pop pseudopsych aphorisms and bullshit. (8300 upvotes and 4 gold on /r/medicine, 100+ upvotes on /r/medicalschool)

A commenter on /r/medicalschool reiterates a point made in the linked article: “the wording of burnout is intentional. It takes away the blame from shitty hospital administrators and puts it on us. In their heads, we're the reason why we're overworked and it's not their fault at all. We're essentially in an abusive relationship where we're gaslighted” (40+ comment).[367]

The attitudes towards physician well-being and happiness are changing over time as the dialogue around burnout gains more momentum and attention. The success of posts and comments around attitudes denying the seriousness and prevalence of burnout as measured by total karma is difficult as the subreddit’s public grew significantly from 2015 to 2018. For example, on a post in 2017 by a resident that expresses feelings of gratitude and feeling fulfilled while “getting crushed on an overnight call, sleeping for a few hours, and then rounding on my patients in pre-op while studying for boards and writing case reports,” (1270+ post, 92% upvoted), a user comments that “It's so refreshing to see a post that steers away from the 'woe is me' narrative so pervasive on the sub. Thanks for posting” (555+ comment). In the same post, another user questions his narrative by stating, “If you like to work so much that you don't mind only sleeping for a few hours, then good for you. I just don't know why we have to glorify working so hard and not getting enough sleep.

[367] Gaslighting is a manipulation tactic that makes the target question their own memory, thought processes, and perception by denying, misdirecting, and contradicting their previous statements and actions. By sowing “seeds of doubt” and disorienting the target, the target becomes more dependent on the perpetrator. Theodore L. Dorpat, *Gaslighting, the Double Whammy, Interrogation, and Other Methods of Covert Control in Psychotherapy and Psychoanalysis* (Ann Arbor, MI: The University of Michigan, 1996)

The 'woe is me' posts exist for a reason – why don't we try and do something instead of glorifying the few workaholics in medicine? Other people don't have a choice to balance work and life because of this" (10+ post).

A post entitled "Medical students are the biggest pansies," posted in 2014 received 430+ upvotes (82% upvoted), but posts/comments with similar sentiments from 2016 onward were downvoted. In the 2014 post, the poster states, "It's dedicated Step prep time for second years, and I've seen more memes and 'woe is me' posts to last a lifetime. I think it's time we stop complaining about a life dream that we're pursuing – a well-compensated and very respectable field. Please stop making us look like whiny babies that can't handle something we willingly chose to do" (430+ post, 82% upvoted). Another post from 2013 in which a student is sharing his experience with the difficulties he faced (95+ post, 79% upvoted), a user comments, "You knew what you were signing up for – no one cares that you're making sacrifices to see these patients. If you didn't know, you should have shadowed more – admissions offices require shadowing for a reason. If you felt that medicine was truly altruistic, you wouldn't have posted this. You're just victimizing yourself. I apologize if my words aren't empathetic" (50+ comment).

In contrast, the aforementioned 2018 post received no comments that denied the existence of burnout or diminished the experiences of others. Furthermore, a comment in a 2017 post, "Is burnout a distinct illness and should it be included in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5)" (30+ post, 89% upvoted) expressed, "I'm amazed how soft people are. What is becoming of our profession?" was downvoted at least eight times (-8 comment). In a 2016 post asking students to describe experiences being humiliated on rotations (15+ post, 78% upvoted), at least twenty-two people downvoted

the comment, “If you liked the trick ‘It's not embarrassing or humiliating if you don't get embarrassed,’ try my quick reference – ‘How About We All Get The Fuck Over Ourselves,’ which tells you how to quit playing the victim and listening to your feelings” (-22 comment).

Similar sentiments were downvoted in a link to a recent Humans of New York post (370+ post, 99% upvoted) which describes a resident physician's experience with the toxic culture of medicine that drove two of his friends to commit suicide: “It blows my mind how weak-willed medical students are nowadays – it's just constant bitching and moaning and trying to get less hours, less responsibility, more pay, and more respect” (-2 comment), “this generation is a bunch of pansies” (-2 comment), “Being happy and well-rested in residency isn't the point – you need to learn and competently care for patients on your own” (-15 comment), “You can't become a competent doctor in a 40 hour work week. You need that experience – if it were easy, everyone would do it” (-7 comment). A counter-argument to the points raised by the downvoted commenters was presented by a commenter stating, “This belief is old-school, flawed, and is rooted in machismo. There's no evidence suggesting that 28-hour shifts are necessary to provide good patient care. In the airline industry, they put work-hour restrictions on pilots, which has made the industry much safer” (40+ comment).[368]

One commenter in a thread arguing that medicine does not care about you as an individual (755+ post, 95% upvoted) states, “medicine idealizes compassionate care, but

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[368] My writings also reflect this shift in attitudes toward burnout. In 2015, I wrote an article in which a reviewer asked me if I wanted to portray medical students in the light that I did – “whiny and entitled,” to which I replied, “They are.” This was right after my third year of medical school as I was working on self-care and reducing burnout. As my friend sympathized with me, “medical school beats the milk of human kindness out of you;” this was my experience. In 2019, I have a different vantage point after my graduate studies, and I am much more sympathetic to the medical students’ experiences.

ironically, it is anything but to trainees. Once you're a trainee, you're expected to be stoic – no matter what happens in your life, you're expected to perform up to standard" (120+ comment). The inability for many students, residents, and attendings to resist machismo culture is evidenced by the numerous suggestions to practice self-care and compassion by acknowledging their vulnerability in order to relieve symptoms of burnout (71 posts), reminding users that 'physicians are humans too.'

PRIORITIZING WORK/STUDIES

The subtheme of prioritizing work and studies refers to both the active actions students take to achieve their goals in medicine and also the passive, avoidant actions students take to continue pursuing their goals in medicine; both of these forms of actions contribute to both the onset and persistence of burnout. The culture of medicine, evident within the literature and /r/medicalschool posts/comments, results in the stigmatization of burnout and depression while simultaneously glorifying self-neglect. A psychiatrist commenting in /r/medicine argues that "It's called 'burnout' because we are living up to the ideal of the medical Ubermensch and there's a twisted nobility in over-exerting yourself to the point of psychological damage. See, I worked so hard I *burned out.* No puny human limitations from me" (4000+ comment). Another user points out that "it doesn't help that William Halsted, one of the major influences on the structure of residency programs was a cocaine fiend who expected his residents to match his coke infused schedule, and then every other hospital copied his model" (785+ comment).

An example of the mindset that leads students to prioritize their studies over life outside of medical school is demonstrated in a post by a first-year student that cautions other Redditors to not take advice from older medical students (50+ points, 64%

upvoted) which was controversial. In the post, his roommates (fourth-year students) were advising him to make time for hobbies, find a good work-life balance, and prioritize loved ones above school, to which he warns matriculating students, “Take into account *who* is giving you the advice – nearly everyone who did so was going into primary care. When I met a fourth year that was applying Dermatology, their advice was vastly different; you have to spend every waking moment working your ass off for the next three years” (50+ post, 64% upvoted). This post was controversial – several users questioned why the poster considered his roommates' advice to be poor: “Dear God. This post assumes that living a balanced life is mutually exclusive to being a competitive student. Based on the posts and comments on this subreddit recently, I think everyone would benefit from dialing it back a little; lives depend on it” (33+ comment); “I'm confused, what was the shitty advice? Just because someone wants to do Family Medicine doesn't mean you should discount their advice - she's top 3% of the class. You can also have time for hobbies – case in point, I'm on this subreddit a lot and I'm doing Dermatology” (45+ comment); “Call me a shitty student but I do think friends and family are more important than Dermatology” (90+ comment). What is striking is that the poster is falsely equivocating competitiveness of the specialty’s residency applications with the amount of effort required to be a top student. In this poster’s mind, Family Medicine applicants can afford to prioritize self-care and finding a sustainable work-life balance because they do not have to “spend every waking moment” to become a competitive applicant, unlike Dermatology applicants.

Another example of prioritizing studying over life outside of medical school is illustrated by the advice given on a very popular post:

When I first started medical school, I wanted to maintain the lifestyle that I had

> before. I didn't want to be burned out only by focusing on studying. But I didn't change my routine from undergrad and didn't study enough, so I did worse than I wanted to on my first two tests. Your main job should be to gain proficiency and doing well on your tests.
> Once you've mastered your study system, then you can start adding back all of the things that make you and the activities that improve your life so that you can prevent burnout. (220+ post, 89% upvoted)

Because of the softer phrasing of the advice given – "prioritize studying until you adapt" versus "prioritize studying for your entire medical school career" – this post was not as controversial as the one mentioned in the previous paragraph and had no comments questioning its soundness.

Some students have a difficult time admitting to themselves that they are depressed/anxious/burned out. 20 posts were coded under "other people noticing a problem," where commenters comment to the original poster sentiments such as, "could this be burnout?" or "sounds like you are currently depressed." This is because of the associated stigma and negative feelings that one feels about being labeled as such, despite how common psychiatric illnesses are in both the general population and within medicine. According to a user citing an in-house study on one medical school's class, 75% of the class is on prescribed psychiatric medication (anxiolytic, antidepressant, or stimulant) (25+ comment).

In support of the perception that negative mental states are stigmatized and perceived as signs of weakness, posters turn to Reddit to ask variations of the question, "Is anyone else feeling burned out/depressed/anxious?" or asking if their experience is "normal," seeking both validation and support from the community (20 posts). Some commenters will simply state, "I feel this way too," and in turn, others share their experiences. For example, on a post entitled "Feeling extremely burnt out. /r/medicalschool always makes me feel better" (35+ post, 87% upvoted), the most upvoted comment states,

"When people like you make threads like these, it reminds me that I'm not alone and gives me the strength to carry on. Honestly, I sometimes wonder if y'all make threads like these to help people like me feel better" (25+ comment).

Examples of passive, avoidant behaviors that students exhibit in order to continue pursuing their career involve not seeking psychiatric care, taking a leave of absence, or asking administrators for help. 44 posts coded under the node "seeking psychiatric help" were posters asking for advice/commiseration on how to deal with their burnout and commenters suggesting that they see a therapist or a psychiatrist. The top comment on a post entitled "How to push through and keep studying while depressed" (5+ post, 75% upvoted) suggests developing positive self-talk strategies to get the poster through the short-term crises and seeing a therapist for long-term health (10+ comment).

Some users report prioritizing their studies over their mental health, whether it is due to a desire to avoid side effects or a reluctancy to take a day of absence. In a post asking other users if they have started taking depression or anxiety medication during school, the poster states having trouble with burnout/depression/anxiety and that he's becoming more withdrawn and quieter, which is "dangerous on rotations."

> Whenever someone makes a post about this, the top comment is always "See a therapist!" but anyone that's been through this knows it's not that simple. My school schedule has been so busy lately that I haven't been able to keep up with appointments. I'm afraid that starting an SSRI or something will hinder my ability to concentrate and my grades would fall; I think a certain amount of anxiety is necessary to keep working. (15+ post, 100% upvoted)

Commenters described their experiences on an anxiolytic/anti-depressant, which provides further evidence that some students do indeed fear the side effects. One was:

> I started an SSRI during my second year and my grades did drop because I suddenly wasn't anxious anymore. I felt better than ever, but sometimes, I wonder if my grades would have been better off if I had been off the medication, continuing to have weekly breakdowns and suicidal ideations for just one more year. I think probably so, but I probably wouldn't be here if it were for the

> medications. I wish I had taken medications earlier when the stakes weren't so high. Your school doesn't care: if you have good grades, you're going to be a good doctor even if you're wishing to be dead, and if your grades drop because you're not fantasizing about driving your car into the highway median, then too bad. Your health isn't a priority to them (1+ comment).

Posts asking for advice are not limited to describing the inability to seek and receive mental health support. Another post seeking advice describes how the pressure of grades, debt, excessive work hours, and subjective evaluations have "driven me into madness," questioning whether he is a weak person, if this is normal for medical students, or if this is a severe case of burnout. "It feels like full blown psychosis. I can't study at all, and I find myself isolating myself more and more because I can't function normally in social situations anymore. I wish I could see a psychiatrist, but our rotations don't give us the time to do so" (20+ post, 95% upvoted). A commenter suggests that:

> It's time to take a step back - a process is clearly compromising your mental health to the point of psychosis. School doesn't matter now. Your grades don't matter. You need to regain stability in your mental health. Schedule an appointment with a psychiatrist and take a sick day. You need to figure something out before you go into residency and your responsibilities and stress skyrocket. (10+ comment)

As mentioned previously, mental illness and burnout is stigmatized, and students are reluctant to seek professional help. Medical students (as well as residents and attendings) believe that admitting burnout, depression, or anxiety and seeking psychiatric help or taking time away from medicine for it has real repercussions in one's ability to practice medicine. This perception, true or not, results in a reluctance to seek help. For example, a post entitled "I probably need therapy, but I don't want it to affect my future career. Advice?" (10+ post, 87% upvoted) reveals that the poster is unsure whether he/she should or can trust the school's wellness clinic. Five out of eight

commenters recommended seeing a therapist/psychiatrist outside of the school's associated providers so that the school will not know about it. The other three assure the poster that HIPAA prevents the on-campus wellness clinic from disclosing health information to the school and that it would be safe.

Students are also concerned with the consequences of taking a Leave of Absence (LOA) to address their mental health issues. A poster asking for advice on whether he/she should take a leave of absence states,

> I finally admitted to myself that I needed help after trying different things to combat my depression and anxiety - working out and changing my study habits. I feel like a LOA is really needed for me to concentrate on my mental health, as I know if I continue on in my education as is, I will burn out to the point where I won't be able to graduate. My grades are currently good, and I want to preserve my competitiveness for residency. I am also hesitant to reveal to administration about the specific conditions I have because I am aware that if this information is included in my permanent record, it could negatively affect my future career. (5+ post, 73% upvoted)

Commenters suggested taking a research year instead, which would allow for the poster to focus on mental health while adding value to his residency applications (5+ comment, 1+ comment), and not giving into pressure to “justify” taking the LOA and revealing the conditions to the administration (3+ comment, 1+ comment). Unpopular suggestions were to continue school and not take a LOA if he can continue passing his classes (0 upvotes) and talking to the dean (>-2 comment).

While the suggestion to not take a LOA was downvoted, the commenter reveals more about why he thinks taking a LOA is ill-advised: “DO NOT take a year off if you don't have to. This will look bad on your residency application. You'll have to justify the LOA to your school and explain it at every single residency and fellowship interview. You'll also have to disclose it to the state board when you apply for your license.” This commenter

also states that people are downvoting his advice “because they somehow want it to be untrue. There's still a huge stigma against mental health in medicine, and doctors have to disclose private medical information for licensure, but that's the current situation” (1+ comment).

The predominant fear of repercussions from seeking help – either from health professionals or from medical school administration – is echoed in the post, “Should I report depression to my medical school administration?” (15+ post, 86% upvoted). The poster states that he/she has seen previous posts when the poster asks if he/she should seek help, with many of the responses being personal anecdotes or expressing reservations about disclosure. An anecdote by a commenter illustrates why students are so hesitant to disclose:

> My roommate's friend was doing the military match. He was prescribed antidepressants last year, and filled out the medical paperwork for the military, disclosing that he was taking an SSRI. He was honorably discharged for it, and this created a lot of problems for him when he had to do the regular Match. He had to SOAP into a preliminary year somewhere and has to pay back the $2000 monthly stipend and the other loans the military was covering (40+ comment).

Indeed, all of the comments say to not disclose as “mental health is stigmatized, and you don't want to have a reputation going into residency. There's no benefit and all drawback” (95+ comment), “many of the older physicians in charge may stigmatize mental illness, and this could affect your contract in residency as it's renewed health conditions but are hesitant to do so for mental illness, which is so prevalent” (5+ comment). As a psychiatrist on /r/medicine argues, the term ‘burnout’ is really coding for DSM-V psychiatric illnesses because of this stigmatization: “It's called ‘burnout’ because depression means that the medical boards might deny you a license to practice the profession you've sacrificed years of your life for” (4000+ comment). Implicit in these warnings to not disclose is the fear that their medical training will be wasted and that they will face difficulties when seeking

jobs (residency applications and state board licensure), making it difficult for them to pay back their loans.

INEFFECTIVE SOLUTIONS

The result of this denial, misunderstanding, and stigmatization of burnout, depression, and anxiety is interventions that are negatively perceived by users. As shown in the data, users of /r/medicalschool want to address the system-level failures to support trainees and attendings in dealing with burnout/depression/anxiety. Ineffective interventions as perceived by users on /r/medicalschool and /r/medicine include wellness lectures, resilience trainings, and any other mandatory session done in the name of improving mental wellness. Figure 12 is an actual photo of a campaign at one academic medical center which exemplifies this (950+ post, 97% upvoted on /r/medicalschool; 1400+ post, 98% upvoted on /r/medicine).

Figure 12 – Stylized image of woman in scrubs wearing colorful, mismatched socks. She is sitting on the floor, holding her head in her hands while statistics on mental illness in physicians float above her.

The hashtag invites the viewer to engage with the topic on social media, while the statistics make the viewer aware of the significance of the problem. However, no solutions are posed, other than the call to action: "Wear odd socks on June 1." The design of the poster is aesthetically appealing due to its usage of a stylized image and in-vogue fonts, which indicates a level of thought and care in promoting #CrazySocks4Docs.

The #CrazySocks4Docs campaign was met with derision and disdain on /r/medicine and /r/medical school. The top comment in /r/medicine succinctly criticizes this campaign and others like it:

> How about we make it possible to get psychiatric help without having your ability to be licensed called into question?
> Or how about we make it easier for docs to access supportive counselling in a truly confidential manner?
> Or how about we look at our training structures and work hours and see how they might be contributing to burnout and mental illness?
> Or, you know, ASK DOCTORS what we need instead of using bullshit like mandatory stress strategy du jour, training sessions and stupid campaigns like odd socks to draw attention to an issue we are all acutely and painfully aware of. [For fuck's sake], it's not like doctors aren't aware of what we need to have a better time of things. Real support. Real responses from administrators to the very real and valid concerns we deal with. Not fluffy bunny resilience session, check-box-on-a-form nonsense. (970+ comment)

The users on /r/medicine parodied the administration's proposed solutions to burnout, which they viewed as tone-deaf: "We hear you. We understand and want to support you. As such, Crazy Socks for Docs will run for the entire month of June. Sincerely, your C.E.O." (935+ comment); "Addendum: it is now hospital policy that all clinical staff wear mismatched socks to emphasize the interprofessionalism we are cultivating at this institution. We're all in this together" (155+ comment); "Addendum #2: We will be implementing a mismatched sock metric in order to monitor the success of this program. Audits will be routinely performed to ensure quality control" (110+

comment). This pushback against the #CrazySocksForDocs campaign speak to the neoliberalization of the academic health science center, as patient care becomes reduced down to statistics, such as quality control. The irony of using an illustration of a woman in scrubs still looking despondent while wearing the crazy socks was evidently lost on the organizers of the #CrazySocksForDocs campaign.

Administrators receive the brunt of criticism on /r/medicalschool within text and image macro posts, which are often memes. The memes do not generate as many comments as posts asking for advice/commiseration/stories and links to articles do. Despite the lack of discussion and explanation into what the images mean, there is a communal sort of understanding as to the significance of the images even if one is not fully aware of the context from which the image was lifted, as evidenced by the karma count and percent upvoted. For those in the know, the memes speak for themselves.

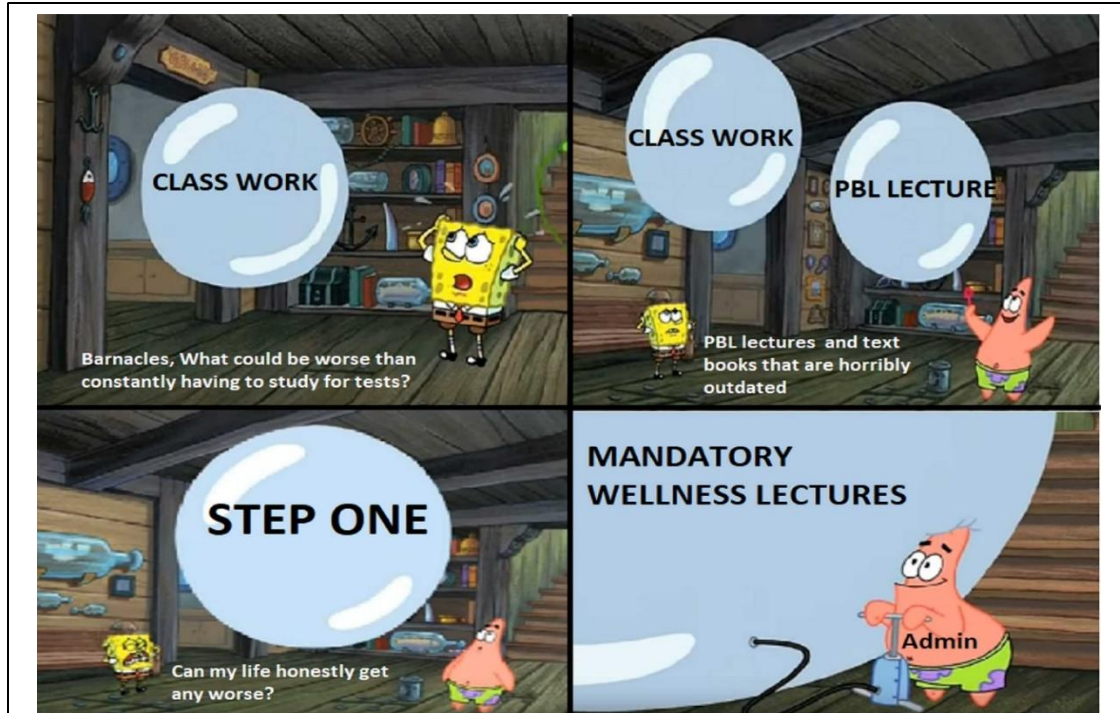

Figure 13 - A series of screen-captures from the Spongebob Squarepants episode "Wet Painters." In the episode, Spongebob and Patrick are tasked with painting Mr. Krabs' house, who tells them that the paint is permanent. Spongebob accidentally creates a large paint bubble, and Patrick blows his own. The paint bubbles merge, and Patrick inflates the bubble further, only compounding the problem.

For example, Figure 13 is a series of edited screen-captures from an episode of *SpongeBob SquarePants,* posted as "Administrators always help" (580+ post, 98% upvoted). Given the context of the episode, the poster of the meme intends to construct Patrick/Admin as inadvertently contributing to SpongeBob's problems as he tries to paint the house carefully, which could be a metaphor for becoming a good, compassionate doctor, or at the very least, completing medical school without being affected by burnout.

As previously stated, Patrick wants to help – but is unable to do so because of his lack of self-awareness. This portrayal of administrators is intentional, and the meaning is widely understood, even if not explicitly stated in that particular post. This is evidenced by a comment in a posted gif of Peyton Manning mimicking his brain exploding from his head with his hands, titled "When you're too burned out to do the things that you already don't have the time to do, but you have to sit through another mandatory lecture on burnout" (190+ post, 97% upvoted):

> This is another great example of how higher-ups, both in the hospital and medical school, are completely out of touch with the realities of burnout. The end goal isn't to improve our wellness, but it's to cover their ass when a student or resident commits suicide. They want to be able to say, "We prioritize the wellbeing of our employees by doing mandatory wellness education." (40+ comment)

In summary, Patrick's naivety and out-of-touchness is characterized as fitting of administrators by students on /r/medicalschool. Administrators are met with suspicion, as their actions are viewed as being motivated by public-relations efforts, which have an impact on the financial goals of the institution.

The reality as constructed by /r/medicalschool is that students and residents know how to mitigate burnout but simply do not have the time to do the activities that help.

The previous commenter continues on to state,

> We know that spending time outside of the hospital doing the things we like, such as hobbies, and doing the things we should be doing, such as exercising regularly and eating healthfully, are important. How do we facilitate this? By giving you an hour lecture on it, ultimately ensuring that you have to spend one more hour in the hospital instead of finishing your notes and getting out on time. I do like it when they bring in therapy dogs for us to play with though, even if it means staying late. (40+ comment)

For first- and second-years, the advice from others who have avoided the symptoms of burnout speaks to this reality: "Treat [medical school] like a job. Get up, go to work, come home and study for a set amount of time. Eat clean, have hobbies, sleep regularly, exercise, make time to see friends" (175+ comment). For those in clinical years, this suggestion is not as useful: "You won't have much time for friends or hobbies on busier rotations. You can pick having adequate amounts of two of the three: sleep, studying, socialization. The key to happiness when in clinics is to be a borderline, hypomanic sociopath who puts work above family, friends, and fun" (55+ comment).

Not only is burnout due to a lack of time and energy because of work expectations and demands, the discourse on /r/medicalschool's does state that it is also due to the *culture* of medicine and the hidden curriculum:

> Medical school brainwashes you to put medicine on a pedestal and to think being miserable is an acceptable norm. We are verbally abused by superordinates, we work long hours, ignore our loved ones, and try to outdo our peers. Most of the time, it is under the guise that we want to help people, but really, these actions are fueled by the desire to be better than the next guy. I'm not burned out and I like medicine generally, but this aspect bothers me. (155+ post, 87% upvoted)

There was some pushback in the comments however, stating that the poster should "speak for himself. I won't be the best out there, but I'm okay with that. I'm going to help people to the best of my ability" (35+ comment), "I second this. I refuse to sacrifice my social life and I simply can't relate to the competition that the original poster talks about" (20+

comment), and “I made sure my required activities were done while on Surgery. I told my intern I was done and then *I just left at 5 P.M.* instead of trying to impress the residents by staying late . . . Sadly the very NOTION of that is horrifying to some people” (20+ comment). However, while these commenters may have resisted the predominant culture of medicine, they fail to realize that this *is* the predominant culture and that others may have trouble doing so. The comments are important however, because it 1) shows that medical students are not uniform in their beliefs and 2) it is seen to be the fault of individuals when they work too hard.

The culture of medicine is contextualized within the current politico-economic climate by an attending in the same post, stating that medical school does not break someone as much as practicing medicine does (15+ comment). He continues onto describe what exactly that is:

> 1) Turf wars to fight over the remaining few patients that don't cost you money.
> 2) Administrators dictate what you can do, instead of the clinical judgement you've learned in your training.
> 3) Productivity metrics that drive clinical decision-making, putting how many patients you can see in a day and how cheaply you can treat them over patient outcomes.
> 4) Patient satisfaction metrics are directly tied to reimbursement, regardless of whether the causes of their happiness are within your control (such as long wait times because the hospital doesn't have enough staff).
> 5) Physicians are perceived by the general public to be rich and thus, a societal villain, regardless of how incredibly in debt we are, and how we don't enter the real workforce for at least seven years, work the equivalent of two full-time jobs, and have a tremendous amount of legal liability. We're just able to make ends meet financially despite this. I could continue, but of course, I have to get back to work. (35+ comment)

For medical students, this political and economic climate does impact their educational experience: “one year of medical school tuition is probably how much [the older physicians'] house cost” (5+ comment), and students are “brainwashed to believe that

purchasing necessary medical equipment is acceptable, but spending the same amount of money on yourself is irresponsible” (3+ comment). In a deleted comment thread, it can be inferred that a commenter criticized his classmate's fiscal irresponsibility by buying a Go-Pro, to which another commenter, an attending, states, “Your classmate is at least in his late twenties, intelligent, and hard-working. Why shouldn't he be able to buy one if he wants one? It's because he's, at the moment, an indentured servant, and utilizing a system of indentured servitude in exchange for a medical education is indeed making misery an acceptable norm” (1+ comment).

What becomes evident through reading the discourse on /r/medicalschool is that medicine not only engrains and fosters a competitive attitude, but it also promotes a need for delayed gratification in order to continue in a career in which you are in training and out of the workforce for a decade or longer. Utilizing the actual term “resilience” in the spirit of delayed gratification (‘it gets better’) nets downvotes, however, the advice to keep pushing on is not, and often incredibly popular, despite stating the same thing. “We'll get through it because we have to” (25+ comment), “I use the demeaning experiences on surgery as fuel to keep my fire burning. I look back at previous ‘failures’ and think, ‘Wow. I really am resilient,’ and realize that you'll be stronger for suffering through medical school” (10+ comment), “Get through this one day at a time. Focus on the smallest thing that you find enjoyable, and look forward to when this is over” (30+ comment), “Just wait until you're an attending - life gets even better and I love my job” (15+ comment), and “five years of getting shit on during a General Surgery residency really isn't that bad if you get to operate for the rest of your life, especially since you're getting trained while being shit on” (3+ comment). The

message to “be resilient” versus calling oneself resilient are taken up by users on /r/medicalschool differently. Being told to be resilient is perceived to be identifying a lack in the advised, whereas calling oneself resilient is considered as identifying a character strength.

While I have presented views on the culture of medicine and the system at academic medical centers as predominantly negative, damaging, and contributory to burnout, the tone of /r/medicalschool can be positive and encouraging, and there is resistance to the pessimistic view that I and other users of /r/medicalschool agree with as evidenced by posts that describe gratitude and awe at being a doctor. In a post by a resident that describes one day on the wards, he states that “being a doctor is really cool, and I can't imagine being this fulfilled by doing anything else” (1270+ post, 92% upvoted), and a commenter replies, “Thank you for posting something positive here that doesn't perpetuate the ‘woe is me’ narrative so common to this subreddit” (550+ comment), and another states, “I almost felt a glimmer of hope and a vague sense of purpose in my life” (50+ comment). Furthermore, despite the popularity of memes that criticize administrators, a 2017 survey on /r/medicalschool asking users across all years of medical school about the climate of their medical school, 104 responded ‘no’, 51 responded ‘sometimes,’ and 197 responded ‘yes’ to the question, “Is your administration responsive to the requests of students?,” and 237 out of 354 responded with a positive sentiment to the question, “How do you describe the ‘vibe’ from your peers?"[369]

Additionally, while not as predominant as the negative anecdotes “complaining”

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[369]Anonymous, Reddit School Survey 2017. https://docs.google.com/spreadsheets/d/1scEZEX-45RLuVwwW7KLZf0ZIjUS53rkuqKvsRgZVwlM/edit#gid=24260861.

on /r/medicalschool, there are users who feel peer-pressured to air grievances when talking with other medical students ("Being pressured into complaining about school," 30+ post, 72% upvoted). While negative experiences are certainly common and serves as the dominant narrative within /r/medicalschool, positive posts and comments speak to the varied range of individual experiences, depending on who the medical student is surrounded by, both socially and professionally.

CONCLUSION

The data I gathered from the users participating on /r/medicalschool speaks to the lived experience of burnout, as users described how they experienced burnout, what stressors contributed to it, and the barriers they faced in trying to resolve their burnout. It also reveals the predominant vernacular discourses within /r/medicalschool. The data also present counter-narratives that indicate that users on /r/medicalschool are not homogenous in their beliefs, despite the demographic of Reddit being predominantly White and male.

The predominant discourse in Theme 1 is that the risk of burnout is always present, no matter the year of training. There is always another hurdle to overcome, whether that is with the amount of material required to learn, another licensing exam, the grading criteria, or residency applications. Reassurances that the stressors mediating burnout will be relieved once one does a rotation or specializes in a field that they are actually interested ("it gets better once you get to fourth year") in conflict with the notion that the risk burnout only increases as one progresses in their training. This is particularly true for competitive specialties that require students to complete rotations at different institutions.

The discourse around administrators appears in Theme 2 and Theme 3, where they are largely scapegoated for exploiting physicians for their labor, not changing the

curriculum to facilitate the medical students' goals to score well on board exams (which is argued as a necessity), as well as providing ineffective solutions to burnout that serve only to check bureaucratic boxes, such as providing mandatory wellness lectures. Another predominant thread that arises in Theme 3 is the perception that residents, attendings, and administrators are out of touch with the current realities of medical education and the socioeconomic factors that are involved.

The predominant discourse in Theme 2 is that users feel useless and inadequate within their learning environment despite being idealistic and wanting to learn. It is an expression of the feelings of objectification of students throughout their entire medical school career causes students to reform their selves in the process of professionalization. The students as persons does not matter – only their scores matter to themselves, their colleagues, and the administration. Theme 3 expresses problems with the learning environment and the medical students' inability to change it. Because of the power differential in the learning environment, medical students cede their moral authority for the sake of their grades. As a result, they experience the tension between the values of the institution and their selves, which results in existential crises – not of the pain and suffering ilk, but a quest to answer the question: "what am I doing with my life and why?" The following chapter will discuss this existential crisis in detail. I will also delve further into the medical student's ability to live an ethical life within a learning environment that fosters burnout.

Chapter 5: The Ethical Dimensions of Burnout

INTRODUCTION

It is with an attention to the global, sociopolitical apparatuses that I turn my attention to the first-, second-, and third-person dimensions of ethics as taught in the scope of medical education in the United States. Situating medical education within academic medical centers reveals a "web of dynamic relationships, university and teaching hospital values and organizational structures, financial incentives, and regulations sometimes overlap and at other times diverge."[370] For example, in the 1980s and 1990s, teaching hospitals responded to rising healthcare costs by streamlining costs - the tension between teaching students and patient care became more pronounced.[371] During this same time period, revenues for medical schools increased due to the "influx of Medicare revenues and funding for biomedical research from the [National Institutes of Health]."[372] As teaching students has been shown to decrease physician productivity as measured by various metrics, such as patients seen per day or RVUs generated, teaching medical students is highly disincentivized in the current academic medical center model.[373] "A common refrain of university medical faculty members is 'I don't get paid to teach,' . . . It

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[370] Molly Cooke, David M. Irby, and Bridget C. O'Brien, *Educating Physicians: A Call for Reform of Medical School and Residency*, The Carnegie Foundation for the Advancement of Teaching: Preparation for the Professions (Stanford, CA: Jossey-Bass, 2010), 164; Molly Cooke defines academic medical centers as "institutions that have an allopathic medical school, faculty practice plan, and affiliated or owned teaching hospital(s)."

[371] Kenneth M. Ludmerer, *Time to Heal: American Medical Education from the Turn of the Century to the Era of Managed Care* (New York, NY: Oxford University Press, 1999).

[372] Cooke, Irby, and O'Brien, *Educating Physicians: A Call for Reform of Medical School and Residency*, 172.

[373] Jeremy Ellis and Richard Alweis, "A Review of Learner Impact on Faculty Productivity," *American Journal of Medicine* 128, no. 1 (2015): 96–101. doi:10.1016/j.amjmed.2014.09.013.

is unusual for faculty members to be paid directly to teach; it is assumed that each faculty member will contribute time to teaching as a volunteer."[374]

Because the focus of physician productivity revolves around the number of patients seen and RVUs generated, Christina Maslach's example of an organization where the mission statement, "[providing] customer service of the highest quality"[375] does not match the actual goal, "[providing] the bare minimum of service to keep costs down,"[376] is applicable. This is also true of her explanation of why burnout became so prevalent; the shifts in technology, economic trends, and management philosophy led to organizations prioritizing financial values over human values. It becomes clear that the underlying value of organizations is economic in nature. She states that "no attention will be paid to conflicts on the job, or work overload, or other job-person mismatches until their link to increased costs or lowered profits is understood."[377]

In a lecture at the University of Texas Medical Branch, Maslach has identified a mismatch in values as an aspect of burnout that requires more research, and has stated that it is unknown whether one dimension of job-person mismatch is carries more weight than others.[378] While she presents this value conflict as a facet equivalent to the other dimensions of burnout – workload, reward, community, and fairness – values actually encompass all of these other dimensions, and the other dimensions of burnout are a reflection of the organization's true values, rather than the stated mission and vision. This is evident in her own case studies – clarifying both an organization's and individual's

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[374] Ibid., 182.
[375] Ibid., Kindle Location 212.
[376] Ibid.
[377] Ibid., Kindle Location 1397.
[378] Christina Maslach, "Meeting the Challenge of Burnout," in *Provost's Lecture Series* (Galveston, TX: UTMB Health Media Services, 2018).https://youtu.be/1qzEGufbe3g

values resulted in building a community at work through shared decision-making, promoting fairness through restructuring a salary system at a university so that it was commensurate with expertise, and reducing organizational value conflict by allowing employees to speak to how their practice was affected by two competing values, customer service and cost control.[379]

The majority of research on burnout in physician trainees has been primarily on identifying independently-associated personal behaviors and demographic factors with increased risk of burnout.[380] To date, there has not been a study explicitly linking medical student burnout to the existential or ethical discomfort due to the environment created by the social, political, and economic realities of American medical education. This dissonance, I argue, falls within Maslach's conceptualization of the values dimension – the "mismatch between the requirements of the job and our personal principles,"[381] or a "discrepancy between the lofty mission statement . . . and the actual company goal."[382] When narrowly conceived, a mismatch in values may seem as if it is only when people are asked to do something at work that they view as unethical, or when the mission statement of an organization do not match its practice. Maslach argues that human values are important and should be prioritized in the workplace "because it is the right thing to do"[383]

[379] Maslach and Leiter, *The Truth About Burnout: How Organizations Cause Personal Stress and What to Do About It*, Kindle Location 1535.

[380] Dyrbye, et al., "Burnout and Suicidal Ideation Among U.S. Medical Students"; Dyrbye, Satele, and Shanafelt, " healthy Exercise Habits Are Associated with Lower Risk of Burnout and Higher Quality of Life Among U.S. Medical Students"; Dyrbye, et al., "The Learning Environment and Medical Student Burnout: A Multicentre Study"; Dyrbye, et al., "Personal Life Events and Medical Student Burnout: A Multicenter Study"; Dyrbye and Shanafelt, "A Narrative Review on Burnout Experienced by Medical Students and Residents."

[381] Maslach and Leiter, *The Truth About Burnout*, Kindle Location 213.

[382] Ibid.

[383] Ibid., Kindle Location 1400.

and it "makes sense," as "valuing people and what they can achieve"[384] allows people and organizations to synergize and "accomplish something of importance."[385] Colin P. West's recommendations to resolve the mismatch in values specific to the healthcare setting are for individuals to identify their values and what matters most to them, as well as "[integrating] personal and professional life."[386] For organizations, he recommends "[promoting] values of the organization"[387] and having a "congruence between values and expectations."[388]

While medical students do not have to deal directly with the burden of generating enough RVUs, writing detailed clinic notes, and never really being "off the clock" as an attending, medical school generates its own stressors based on similar shifts in technology, economic trends, and management philosophy. Medical science has advanced by leaps and bounds, and medical educators debate on what topics to what depth are necessary. As a concrete example, *First Aid for the Boards, 3rd ed.* (1993) was 136 pages. *First Aid for the USMLE Step 1, 28th ed.* (2018) is a staggering 816 pages, covering 1300+ topics; the content covered by the board exams is difficult to organize and coordinate in lectures in a way that engages learners authentically.[389] In addition, the curriculum guides how students will behave. Because first- and second-year medical students are often passive observers in clinical settings and assessments focus heavily on knowledge acquisition, students

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[384] Ibid., Kindle Location 1403.

[385] Ibid., Kindle Locations 1406–7.

[386] Colin P. West, "Addressing the Key Drivers of Burnout: Exploring Solutions in Education and Training," Beyond Resiliency Training: Physician Burnout Symposium (Houston, TX, 2017), 24.https://custom.cvent.com/7CE3E9B0A2B74F1CAEBF3C055A2E2A6C/files/c506e98f93ee4626aea2ad2a1504a70e.pdf.

[387] Ibid., 25.

[388] Ibid.

[389] Cooke et al, *Educating Physicians*, 78.

prioritize theoretical knowledge over experiential knowledge.[390] Even the Problem-Based Learning model focuses more on "formal knowledge acquisition and clinical reasoning than on patient care skills and professional formation."[391]

Jodie Eckleberry-Hunt et al. also questions the utility of the MBI in pre-clinical medical students: "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?"[392] The expanded understanding of values that Shanafelt and Noseworthy put forth explains this: it is not necessarily the actions of a student being incongruent with their held values, or a lack of understanding of their own values or their institution's values. In a review article, Shanafelt and Dyrbye point to the culture and values of the learning environment as key to driving burnout in medical students, regardless of their level of clinical involvement, as there was no association between workload and burnout, both in pre-clinical years and on the wards.[393] Furthermore, "dissatisfaction with the overall learning environment, poor clerkship organization and working with cynical residents,"[394] as well as experiencing mistreatment and overt racism were associated with burnout.[395] Additional drivers, as suggested by Dyrbye and Shanafelt, are increasing competition for residency spots, increase in necessary knowledge base and competencies

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[390] Ibid., 79.

[391] Ibid., 81.

[392] Eckleberry-Hunt, Kirkpatrick, and Barbera, "The Problems with Burnout Research," 368.

[393] Dyrbye and Shanafelt, "A Narrative Review on Burnout Experienced by Medical Students and Residents," 137.

[394] Ibid., 138.

[395] Liselotte N. Dyrbye, et al., "Race, Ethnicity, and Medical Student Well-Being in the United States," *Archives of Internal Medicine* 167, no. 19 (2007): 2103–9.; Alyssa F Cook, et al., "The Prevalence of Medical Student Mistreatment and Its Association with Burnout," *Academic Medicine* 89, no. 5 (2014): 749–54. doi:doi:10.1097/ACM.0000000000000204Alyssa F Cook, et al., "The Prevalence of Medical Student Mistreatment and Its Association with Burnout," *Academic Medicine* 89, no. 5 (2014): 749–54. doi:doi:10.1097/ACM.0000000000000204

("curricomegaly"), and a changing healthcare system "experiencing dramatic environmental and cultural shift."[396] This suggests that for medical students, the problem of burnout is rooted in at least an institution's culture and values, not only in biomedicine's culture and value of objectivity. My data further supports this claim.

In this chapter, I argue that the characterization of the symptoms of burnout and the stressors that medical students experience are existential in nature, extending David Barnard's argument that physician discomfort arises from ethical, technical, behavioral, and existential issues.[397] However, drawing upon the theoretical framework as presented in Chapter 2 – first-, second-, and third-person ethics, I will refer to all four of Barnard's discomforts as ethical affordances – dealing with questions on how to interact with others as well as living an authentic life.

The philosophical tradition of Existentialism addresses the discomforts as described by Barnard, which could be characterized as examples of the groundlessness of the world, but also the ability to live authentically - choosing to act in the right way in pursuit of self-making. In essence, I will attend to how virtuous practice and interactions of medical students are mediated by the social, political, and economic context of the medical school situated within an academic medical center by contextualize the findings in the previous chapter - characteristics of burnout, medical student stressors that contribute to burnout, and barriers to solutions.

Before the terms "existentialism" and "humanism" are introduced into this chapter,

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[396] Dyrbye and Shanafelt, "A Narrative Review on Burnout Experienced by Medical Students and Residents," 139; The authors do not state what exactly the environmental and cultural shift is.

[397] David Barnard, "Love and Death: Existential Dimensions of Physicians' Difficulties with Moral Problems," *Journal of Medicine and Philosophy* 13, no. 4 (1988): 393-409. doi:10.1093/jmp/13.4.393.

it is necessary to define what exactly those terms signify within this dissertation as both of these terms have multiple meanings depending on the context. For example, humanism in medicine colloquially means "keeping healthcare human [by requiring] the persistent and determined efforts of professionals dedicated to maintain the human connection in modern medicine."[398] Within the nomination packet for the Arnold P. Gold Humanism in Medicine Award, it asks that students provide "specific examples of humanism and compassion" when nominating a faculty member – indicating that humanism here falls under the same umbrella as being compassionate.[399] At the same time, this definition also implies that humanism is recognizing and connecting to the human essence of others.[400]

Colloquially, existentialism has been used to mean "the mundane and mere existence of institutions and ideals,"[401] or often conflated and limited to existential nihilism – "sometimes I'm hit with a random reminder of my existential meaninglessness – that nothing matters and that we're all going to die."[402] Jean Paul Sartre addresses this within his 1945 lecture, "Existentialism is a Humanism":

> [Existentialism] has been reproached as an invitation to people to dwell in quietism of despair. For if every way to a solution is barred, one would have to regard any action in this world as entirely ineffective, and one would arrive finally at a

[398] Arnold P. Gold Foundation, "The Arnold P. Gold Foundation is Dedicated to Keeping Healthcare Human." https://www.gold-foundation.org/about-us/.

[399] Association of American Medical Colleges, "Arnold P. Gold Humanism in Medicine Award Selection Criteria and Instructions."
https://www.aamc.org/members/osr/humanism/124826/selection_criteria.html.

[400] The definition of humanism which has origins in the Renaissance is the heart of existentialism given by Walter Kaufman: "The refusal to belong to any school of thought, the repudiation of the adequacy of any body of beliefs whatever, and especially of systems, and a marked dissatisfaction with traditional philosophy as superficial, academic, and remote from life." Walter Kaufmann, "Kaufmann: Existentialism from Dostoevsky to Sartre," in *Existentialism from Dostoevsky to Sartre*, Walter Kaufmann ed. (Digital: Pickle Partners Publishing), Kindle Location 125.

[401] Robert Zaretsky, "Our Real 'Existential Crisis' is Bigger Than Trump's Presidency."
http://www.zocalopublicsquare.org/2017/06/02/real-existential-crisis-bigger-trumps-presidency/ideas/nexus/.

[402] Bryan Ye, "Existential Nihilism: Finding Meaning in a Meaningless World."
https://fityourself.club/existential-nihilism-finding-meaning-in-a-meaningless-world-68f280306842.

> contemplative philosophy. Moreover, since contemplation is a luxury, this would be only another bourgeois philosophy.[403]

As he goes on to explain, the core of existentialism is that "*existence* comes before *essence*:" "Man first of all exists, encounters himself, surges up in the world – and defines himself afterwards. If man as the existentialist sees him is not definable, it is because to begin with he is nothing. He will not be anything until later, and then he will be what he makes of himself."[404] Humans create and shape their own identity and values: for example, human beings are not intrinsically good or evil in essence, but the actions that they choose define them. These actions are *choices*. To Sartre and other existentialists, this is the freedom that all human beings have: "an ethic of action and self-commitment."[405]

Michael Lambek draws heavily upon the Existentialists' philosophical position. Lambek explicitly states that "the Existential condition of human freedom [is] the basis for ethics"[406] and refers to the "existence precedes essence" argument when stating his position on ethical life:

> We are not programmed to be good or to distinguish good from bad according to universal criteria. But ethical discrimination is immanent to human speech and action, to interaction and intersubjectivity, to the social. And it is immanent to the existential condition of human thrownness, to our life in the world. Immanent, in sum, to the human 'condition' rather than to human nature.'"[407]

Indeed, twentieth-century writer Simone De Beauvoir wrote that "psychological or empirical ethics [managed] to establish themselves only by introducing surreptitiously

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403 Jean Paul Sartre, "Existentialism is a Humanism," in *Existentialism from Dostoevsky to Sartre*, Walter Kaufmann (Pickle Partners Publishing, 1945), 210.

404 Ibid., Kindle Location 5171.

405 Ibid., Kindle Location 5375.

406 Michael Lambek, "Living as If It Mattered," in *Four Lectures on Ethics: Anthropological Perspectives*, Michael Lambek, et al. (Kindle Edition: HAU Books, 2015), 29. https://haubooks.org/viewbook/four-lectures-on-ethics.

407 Ibid., 16.

some flaw within the manthing which they have first defined."[408] If essence – human nature – was to precede existence, "the notion of having-to-be would have no meaning. One does not offer an ethics to a God. It is impossible to propose to man if one defines him as nature, as something given,"[409] If humans were not "free" to choose their own actions, there would not be Ethical discomforts, and questions of what is right or good would be moot.

EXISTENTIALISM AND BURNOUT

The epigraph to *The Ethics of Ambiguity* by Simone de Beauvoir reads: "Life in itself is neither good nor evil, it is the place of good and evil, according to what you make of it. [Montaigne]"[410] de Beauvoir believes that humans should accept "ambiguity of his being," which is fundamental because humans do not have an intrinsic, innate essence. "It is in the knowledge of the genuine conditions of our life that we must draw our strength to live and our reason for acting."[411]

It is within this ambiguity that man must search for meaning. Self-transcendence, as defined and conceptualized by Viktor L. E. Frankl, is the idea that the human experience is directed to something outside of oneself, whether that is fulfilling a meaning or another human through love. The human experience is finding and achieving personal meaning through choice and helping others find theirs through reflection.[412] For example, M.L. Jennings, who has herself experienced burnout as a medical student states, "burnout (and especially depersonalization) is likely to impair a student's ability to reflect and learn from

[408] Simone de Beauvoir, *The Ethics of Ambiguity*, Bernard Frechtman (New York, NY: Open Road Integrated Media, 1947), Kindle Location 59.
[409] Ibid.
[410] Ibid., Kindle Location 23.
[411] Ibid., Kindle Location 51.
[412]Viktor E. Frankl, *Man's Search for Meaning, 5th Edition* (Boston, MA: Beacon Press, 2006).

past mistakes, care about her patients, and develop a mature, integrated professional identity."[413] Her reflections reveal her conception of virtuous practice and the standards that she holds herself to; the virtues that each particular individual values is specific to their specific time, place, and identity.

According to Alfried Längle, who frames burnout from a Logotherapeutic perspective, some people have a "reductionistic, merely task-oriented life philosophy" due to the "deficiency in the personal-existential fundamental motivations. The person in this situation longs for a fulfilled life but has no orientation in the most basic existential premises."[414] He explains that burnout is a "*deficit in existential meaning.* Existential meaning is characterized by a sense of inner fulfillment."[415] Existential meaning and inner fulfillment for Längle comes from the "service of a project or a cause," not "*subjective* aims, such as career, influence, income, recognition, social acceptance, obligations or objective constraints," and those who undertake an activity disingenuously by "not [being] motivated by the substance or value of the work" are prone to burnout.[416] In the terminology used by de Beauvoir, attempting to achieve the previously mentioned subjective aims – the attempt of man to "solve" ambiguity – results in burnout.

Furthermore, the personal aims, motivations and attitudes are present before the onset of burnout: "in this case, a person feels he or she needs a specific aim in order to have

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[413] Jennings, "Medical Student Burnout: Interdisciplinary Exploration and Analysis," 262.

[413] Freudenberger, "Staff Burn-Out,"159.

[414] Saeed T. Barzoki, et al., "The Role of Existential Aspects in Predicting Mental Health and Burnout," *Iranian Journal of Psychiatry* 13, no. 1 (2018): 42.

[415] Logotherapy draws upon Søren Kierkegaard's philosophy on the nature of human existence - humans must find meaning in life, creating our own essence and discovering one's purpose in a world in which we are not created for a specified purpose. Alfried Längle, "Burnout - Existential Meaning and Possibilities of Prevention," *European Psychotherapy* 4, no. 1 (2003): 111.

[416] Alfried Längle, "Burnout - Existential Meaning and Possibilities of Prevention," *European Psychotherapy* 4, no. 1 (2003): 112.

a valuable and worthwhile life. Paradoxically, such an attitude will inadvertently miss what is valuable and worthwhile . . . such an attitude will not lead to a meaningful experience but only to the achievement of aims. These aims remain lifeless because they lack an inner consent or relation."[417]

A study on Iranian teachers by Barzoki et al. empirically correlated existential aspects with mental health and burnout, utilizing the MBI, General Health Questionnaire, and Existence Scale.[418] The Existence Scale, designed by Längle et al, is "based on an exploration of the personal and existential realities of human beings," which the authors choose to operationalize through self-assessment of "self-distance," "self-transcendence," "freedom," and "responsibility."[419] Self-distance is a person's ability to realize their facticity as defined by Jean-Paul Sartre and Simone de Beauvoir: the facts of one's being that limits human freedom, such as physical limits, expectations of others, and politics; self-transcendence is understanding one's goals and possibilities (the future); freedom is the awareness of choices and choosing one; responsibility is the commitment to act in accordance with the chosen option. Barzoki et al. report that all four of the subscales (self-distance, self-transcendence, freedom and responsibility) were correlated with burnout and mental health in teachers. [420] Tomic et al. established a significant correlation between

[417] Ibid., 117.

[418] Saeed T. Barzoki, et al., "The Role of Existential Aspects in Predicting Mental Health and Burnout," *Iranian Journal of Psychiatry* 13, no. 1 (2018): 40–45.

[419] Alfried Längle, Christine Orgler, and Michael Kundi, "The Existence Scale: A New Approach to Assess the Ability to Find Personal Meaning in Life and to Reach Existential Fulfillment," *European Psychotherapy* 4, no. 1 (2003): 136.

[420] Barzoki et al., "The Role of Existential Aspects in Predicting Mental Health and Burnout," 43. Because the data were analyzed using a stepwise multiple variable logistic regression, the researchers were unable to identify a causative direction between the subscales of the Existence Scale and mental health. Additionally, the authors also state that self-distance is not significant because it is a personality factor that was measured by another study using a different inventory (Trier Personality Inventory). The usage of the Trier Personality Inventory and its components is not mentioned within the methodology of Barzoki et al's study. As such, I will treat the results as all four of the existential meaning subscales to be significantly correlated with burnout.

burnout (MBI) and existential meaning (Existence Scale) in Dutch teachers and principals, and Nindl et al. established this correlation in Austrian teachers.[421]

Maria Armon et al.'s qualitative study connects burnout to a lack of existential meaning through a hermeneutic lens, interpreting the lived experiences of 18 Swedish adults who suffer(ed) from burnout.[422] They report that:

> The person with burnout seems to form his/her life as a project to be accomplished; the motif of which is the idea that this is what is expected by his/her surroundings . . . the person afflicted by burnout loves his or her work and feels happy with it, but basically this contentment rests on the expected confirmation of performance given from others.[423]

The point made by Armon et al. seems to be articulating Längle's argument that subjective aims are insufficient in creating existential meaning.

Ernest Becker argued that creating existential meaning was a way for people deal with their anxiety around their own death and mortality.[424] As summarized by Ayala Pines:

> In order to be able to deny death, people need to feel heroic, to know that their lives are meaningful, that they matter. In previous eras, religion was the commonly chosen hero system. Today, for many [sic] religion is no longer adequate. For people who rejected the religious answer to the existential quest, one of the frequently chosen alternative [sic].[425]

Because work is many people's "chosen hero system" and thus, a significant way of creating meaning in their lives, Ayala M. Pines also claims people who do not feel like their

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[421] Welko Tomic and Elvira Tomic, "Existential Fulfillment and Burnout Among Principals and Teachers," *Journal of Beliefs and Values* 29, no. 1 (2008): 11–27.; Anton Nindl, et al., "The Relationship Between Existential Fulfillment and Burnout: An Empirical Study from an Existential-Analytical Perspective (n = 105)," *European Psychotherapy* 4, no. 1 (2003): 145-149.

[422] Maria Arman, Anne-Sofie Hammarqvist, and Arne Rehnsfeldt, "Burnout as an Existential Deficiency - Lived Experiences of Burnout Sufferers," *Scandinavian Journal of Caring Sciences* 25, no. 2 (2011): 294–302.

[423] Ibid., 298.

[424] Ernest Becker, *The Denial of Death* (New York, NY: Free Press, 1973).

[425] Ayala M. Pines, "The Changing Psychological Contract at Work and Employee Burnout," *Journal of Health and Human Services Administration* 25, no. 1 (2002): 14.

lives and contributions at work are meaningful, important, or relevant are more prone to burnout.[426] She continues:

> When the choice of a career involves such significant issues, it is clear why people enter it with high hopes and expectations, ego involvement, and passion. The greatest passion is typically located where some unresolved childhood issue ("metaphoric wound") lies, fueled by the hope of healing the early wound. Success helps heal childhood wounds. But when people feel that they have failed, when the work repeats the childhood trauma rather than heal it, the result is burnout. [427]

In order to understand why people choose particular fields in order to create and find existential significance, she compares managers from Israel and America.

She analyzes her results with the premise that life in Israel is more stressful than in the U.S. due to increased "economic, political, and social uncertainties . . . while the quality of life and standard are lower."[428] Furthermore, while Israelis receive lower pay with less buying power, the work week is shorter, and the employee benefits are better. When comparing 66 Israel managers to 66 American managers, she reports that the mean burnout score was lower with Israeli managers and that they had a greater sense of existential significance.[429] This was despite the findings that life and work stresses were higher in Israeli managers. As in the theory of burnout proposed by Maslach stated in Chapter 2, the stresses that caused burnout can be summarized as follows: insufficient inability to "make an impact," inadequate financial and staffing, administrative/political pressure and interference, insufficient rewards and recognition, inability to advance in their careers, and inability to "do things the way they should be done . . . in practically every case, the cause

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[426]Ayala M. Pines, "Burnout," in *Handbook of Stress: Theoretical and Clinical Aspects (2nd Ed.)*, edited by Leo Goldberger and Shlomo Breznitz (New York, NY: The Free Press, 1993), 386–402.
[427] Ibid., 15.
[428] Ibid., 16.
[429] How these scores and means were measured are not stated within the methodology of her paper.

of burnout can be seen as representing frustrated goals and expectations."[430] As similar findings have been reported in other Israel-American comparisons of other professionals, she concludes that burnout is the result of the lack of existential meaning.[431]

THE SEARCH FOR MEANING IN /R/MEDICALSCHOOL

According to Thomas R. Cole et al., "Under today's stressful conditions of practice, physicians, nurses, allied health professionals, biomedical scientists, and students all find themselves at risk for becoming alienated or separated from the ideals that drew them to healthcare in the first place. These conditions lead to high rates of burnout, depression, impairment, and even suicide."[432] M.L. Jennings, as stated in the literature review, argues that the alienation and separation of ideals in medical students occurs because of the culture of medicine's adherence to the Cartesian dualism, which separates the 'mind' from the 'body', and its positivistic paradigm. This quest for objectivity in the larger culture of medicine not only objectifies patients; it also objectifies practitioners and students alike, "[facilitating] excessive detachment from patient and self."[433]

This objectification is experienced by students as a pressure to perform well. Students are acutely aware of the fact that quantitative metrics, such as pre-clinical grades, Step 1 scores and clerkship grades, are heavily utilized in internal rankings by their medical school and also in residency applications and the construction of rank lists by program directors. As Imogen Thomson writes:

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[430] Ibid., 20.

[431] Dalia Etzion and Ayala M. Pines, "Sex and Culture in Burnout and Coping Among Human Service Professionals: A Social Psychological Perspective," *Journal of Cross-Cultural Psychology* 17, no. 2 (1986): 191–209.; Victor Savicki, *Burnout Across Thirteen Cultures: Stress and Coping in Child and Youth Care Workers* (Westport, CT: Praeger, 2002).

[432] Thomas R. Cole, Nathan S. Carlin, and Ronald A. Carson, *Medical Humanities: An Introduction* (New York, NY: Cambridge University Press, 2014), 16.

[433] Ibid.

> The quintessential “good” medical student isn’t difficult to picture. Her dedication borders on obsession and pays dividends in the form of excellent marks, supervisor praise, and the knowledge that she is responsible for raising the bar out of reach of the rest . . . Success in medical school is almost wholly defined by exam results, and there are no bonus marks for being well rounded . . . the desire to ascend back to the pointy end of [the bell curve] is readily appreciable. Unfortunately, the qualities that facilitate this, and those that are valued throughout medical school by the culture or curriculum, are also those that predispose us to burnout and a poor work-life balance.[434]

As demonstrated by the data, students frequently place academic performance over their well-being due to internal and external pressures. What is impacted is not only their well-being in the sense of mental health, but also in moral and character development.

The qualities cultivated by the pursuit of academic excellence may not foster the qualities relevant to practicing as a virtuous doctor; for Thomson, those are patience, empathy, and communication skills. In a focus group based study on a first-year class of U.S. medical students by Ralph A. Gillies et al, students identified the following actions and qualities when asked, “When you think of ‘a good doctor’, what examples immediately come to mind?”: good interpersonal skills, partnering with patients, passion and enthusiasm, going beyond the call of duty, competence, and decisive leadership within the context of a healthcare provider team. [435] “The students in this sample described a good doctor as a committed, smart, decisive leader who enthusiastically partners with patients to address health problems. These attributes are also to be grounded with good people skills.”[436]

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[434]Imogen Thomson, “Do ‘Good’ Medical Students Really Make Good Doctors?” *Academic Medicine* 92, no. 6 (2017): 735.

[435]Ralph.A Gillies, et al., “Why a Medical Career and What Makes a Good Doctor? Beliefs of Incoming United States Medical Students,” *Education for Health* 22, no. 3 (2009): 331–43.

[436] Ibid., 340.

Many point to the medical school admissions process as contributing to the production of physicians that are not patient-centered, objectivist, and unable to be vulnerable and face the existential uncertainties related with death, suffering, and pain. Gunderman and Kanter argue that the espoused ideal of physicians as compassionate, patient-centered, and deep-thinking is "belied by a selection process and a four-year curriculum that 'implicitly reward a narrow intellectual range and a superficial focus on grades and test scores [that is] counterproductive in preparing them for the real world of the practice of medicine'"[437]

As such, medical educators have called for a more " holistic" admissions process: Gail Geller suggests implementing a quantitative scale of the applicant's tolerance for ambiguity, as a greater tolerance for ambiguity is associated with a biopsychosocial worldview rather than a biomedical one.[438] Fiona Patterson et al. recommend integrating text-based situational judgement tests to assess nonacademic attributes required to be a successful practitioner.[439] Sarah S. Conrad et al. suggest taking demographic characteristics such as race, ethnicity, or geographic background into account in addition to academic metrics and Douglas Grbic et al. suggest taking socioeconomic status into account in order to better address racial and geographic healthcare disparities by including more diverse perspectives that are more reflective of the general population.[440]

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[437] Richard B. Gunderman and Steven L. Kanter, "Perspective: 'How to Fix the Premedical Curriculum' Revisited," *Academic Medicine* 83, no. 12 (December 2008): 1161. doi:10.1097/ACM.0b013e31818c6515.

[438] Gail Geller, "Tolerance for Ambiguity," *Academic Medicine* 88, no. 5 (2013): 581–84.

[439] Fiona Patterson, et al., "The Predictive Validity of a Text-Based Situational Judgment Test in Undergraduate Medical and Dental School Admissions," *Academic Medicine* 92, no. 9 (2017): 1250–53.

[440] Sarah S. Conrad, Amy N. Addams, and Geoffrey H. Young, " holistic Review in Medical School Admissions and Selection: A Strategic, Mission-Driven Response to Shifting Societal Needs," *Academic Medicine* 91, no. 11 (1472–74 2016).; Douglas Grbic, David J. Jones, and Steven T. Case, "The Role of Socioeconomic Status in Medical School Admissions: Validation of a Socioeconomic Indicator for Use in Medical School Admissions," *Academic Medicine* 90, no. 7 (2015): 953–60

However, changing the admissions process to accept students that are purportedly more capable of dealing with Barnard's existential discomforts is only one piece of the puzzle; William F. May argues that the admissions process is only the first step in the formation of medical professionals that are not equipped to provide ideal care: "The criteria for admission to medical school, the grading system that prevails there, the system for the placement of graduates in residencies, and eventual job references – all these hurdles and pressure points combine to emphasize the preeminent place of technical performance in the formation and career of the professional."[441] Indeed, this has been evidenced within the data presented in the themes identified in Chapter 4. Students are placed under pressures during all four years of medical school: adjusting to a new environment in which they are compared to other formerly high achieving undergraduates, preparing for a high-stakes standardized exam, adjusting again to a new, high-stakes environment in which grades are highly subjective and students are at the bottom of the medical hierarchy, and finally, applying for residency.

Over the seven years that I have been a medical student and also actively involved with teaching medical students in the mandatory Humanities, Ethics, and Professionalism course and undergraduates in the Introduction for Medical Humanities course during their summer internship, I have noticed that a frequently asked question is "how can we practice medicine in the ways that you are suggesting when you only get fifteen minutes maximum with a patient?" This suggests to me that most students have an ideal that they aspire to be and are seeking ways to practice and uphold that ideal despite all of the pressures they currently and will face. Unfortunately, numerous studies show empathy decline over the

[441]William F. May, *The Physician's Covenant: Images of the Healer in Medical Ethics, 2nd Ed.* (Louisville, KY: Westminster John Knox Press, 2000), 98.

four years of medical school, and the data collected from students on Reddit provide insights into how and why students experience depersonalization and emotional exhaustion.

"It's just not what I expected" was a commonly encountered phrase even though almost all of these students have had shadowing and clinical experiences as a requisite to being admitted into medical school. For example, in a study by Jennifer Y. Wang et al. on an undergraduate shadowing and mentorship program, shadowing experiences in clinic increased undergraduate students' understanding of how physicians interact with patients in the clinic, what physicians do to fulfill their responsibilities, and what physicians do in an academic environment. Furthermore, in the aggregate, students became more committed to pursuing a career in medicine, as more students responded they would like to be a clinician and that they would enjoy the entailed duties of a physician.[442]

As shown in the data I collected, the majority of medical students do want to be "good" doctors. In numerous posts and comments, students lamented their inability to practice medicine as they imagined and idealized. I was unable to find posts or comments that identified specifically what that looked like, so I turn to a previous study that asked 95 medical students and 85 patients to characterize what features good doctors have. If we assume that entering medical students share the same values as patients or lay-persons, the top three characteristics identified were approachability (46%), a marker of interpersonal skills, clinical ability (39%), then knowledge (33%), with listening skills as the fourth (32%). Medical students identified clinical ability (69%), knowledge (36%), and

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[442]Jennifer Y. Wang, et al., "Is a Career in Medicine the Right Choice? The Impact of a Physician Shadowing Program on Undergraduate Premedical Students," *Academic Medicine* 90, no. 5 (2015): 629–33.

appreciating limitations (33%) as the most important features of a physician. In contrast, approachability was selected as a top-three characteristic by 13% of students and listening skills was only selected by 8% of students.[443]

In support of my assumption that pre-medical students reflect the attitudes of the lay-population/patients, in-class discussions and pre-class reflective exercises during sessions I led for a pre-medical student summer preparation workshop, revealed similar common themes: entering into a dialogue with the patients and understanding their point of view to provide patient-centered care, reflexive listening skills, being approachable and cultivating trust within the patient-physician relationship, as well as caring and compassion. Some students also reflected on their desire to help others as a motivating factor for pursuing medicine as a career.

Before students enter medical school, they are lay-persons and may even have been patients themselves. As such, when they enter, they hold the expectations that doctors have certain traits and behave in certain ways. Figure 14, compiled by Ronan O'Donnabhain and N. Deborah Friedman in a literature review, summarizes the characteristics and behaviors of a good doctor from the patient's perspective. These characteristics and behaviors are explicitly voiced first- and second-person ethics as in the expanded ethical framework discussed within Chapter 2. These aspirations can be frustrated, which arguably results in burnout. As O'Donnabhain and Friedman state, hospital leadership and executives

> may define a good doctor differently. They place emphasis on coordination and continuity of patient care, and the ability to meet key performance indicators critical to the flow of patients through hospitals . . . the bureaucracy and politics of modern healthcare means that doctors and hospitals are judged based on waiting times in

[443]Moh'd Abu-Hilal, et al., "What Makes a Good Doctor in the 21st Century? A Qualitative," *British Journal of Hospital Medicine* 67, no. 7 (2006): 375–77.

emergency departments, on outpatient waiting lists for procedures, on length of stay, on readmission rates, and on adverse events . . . unfortunately for patients, these metrics do not always correlated with better care, or better outcomes, and they do not necessarily promote the creation of better doctors.[444]

Table 1 Traits and behaviours of good doctors

Traits of a good doctor	Behaviours of a good doctor
Strong interpersonal skills	Remains current with knowledge and evidence base in their field
Compassionate	Fosters trust
Good listener	Good communication skills
Empathic	Displays leadership
Honest	Patient centred
Humble	Motivates and supports colleagues
Strong moral character	Contributes to scientific understanding of disease
Responsive	
Persistence	
Clinically sound	
Humane	

Figure 14 - Table from Ronan O'Donnabhain and N. Deborah Friedman, "What Makes a Good Doctor?" which explains the traits of a good doctor from a patient/lay-person's perspective.

As evidenced within the data collected on /r/medicalschool and described by O'Donnabhain and Friedman, the previously described "political pressure points" affect the nature of caring within the context of the patient-physician relationship.

The pressures felt by academic physicians and residents trickle down to medical students and do negatively affect their learning environment. It would seem that students enter optimistic and excited about their future career but become cynical and experience a decrease in empathy during their training, which has been proven through multiple evidence-based studies.[445] This effect is pronounced during the third year due to the

[444] Ronan O'Donnabhain and N. Deborah Friedman, "What Makes a Good Doctor?" *Internal Medicine Journal* 48, no. 7 (0879–82 2018): 881.

[445] Mohammedreza Hojat, et al., "An Empirical Study of Decline in Empathy in Medical School," *Medical Education* 38, no. 9 (2004): 934–41.; Bruce W. Newton, et al., "Is There Hardening of the Heart During Medical School?" *Academic Medicine* 83, no. 3 (2008): 244–49; Melanie Neumann, et al.,

hypothesized “lack of role models, a high volume of materials to learn, time pressure, and patient and environmental factors . . . gradual over-reliance on computer-based diagnostic and therapeutic technology.”[446] The lack of role models, volume of requisite knowledge, lack of time and energy, and the unproductive learning environment is supported by the data on /r/medicalschool.

Furthermore, Hojat et al. point to medical educations’ implicit curriculum: the “false idea that empathy is outside the realm of evidence-based medicine and, thus, has no importance in the education of physicians-in-training or in the practice of medicine [and that] modern medical education promotes physicians’ emotional detachment, affective distance, and clinical neutrality as emphasized through a focus on the science of medicine and a benign neglect of the art of patient care.”[447]

As a solution to the inherent problems in this ontology of medicine, Piemonte suggests curricular change within the premedical curriculum, one in which spaces are provided for “critical discussion and contemplation” so that students, teachers and clinical mentors “ have real conversations and offer one another the chance to speak and learn and grow”[448] via the tradition of the medical humanities to broaden applicants’ perspectives and better prepare them for the real-world practice of medicine.

This has promise to be beneficial as Ian Ashman and Caroline Gibson present R.D. Laing’s framework of ontological insecurity to explain burnout/depression/anxiety in the context of the workplace, and thus, the learning environment. While speaking originally

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“Empathy Decline and Its Reasons: A Systematic Review of Studies with Medical Students and Residents,” *Academic Medicine* 86, no. 8 (2011): 996–1009

[446] Mohammedreza Hojat, et al., “The Devil is in the Third Year: A Longitudinal Study of Erosion of Empathy in Medical School,” *Academic Medicine* 84, no. 9 (2009): 1188.

[447] Ibid., 1189.

[448] Piemonte, *Afflicted*, 153.

about schizophrenia, Laing makes the argument that mental illness is not from physiological imbalances but "from existential choices that are made in the face of what he calls *ontological insecurity* . . . an insecurity of being – literally a matter of life and death."[449] The insecurity of being is the fear of losing one's self; Ashman and Gibson argue that "if we all suffer a degree of ontological insecurity, then specific organizational policies and activities that impinge upon individual existential identity have the potential to exacerbate mental health problems among all employees."[450] These practices "challenge the existential identity of employees and [shift] them towards the desired 'model of man;'" when parodied, this model of man is a "sadomasochistic Faustian altruistic child-like automaton prostitute with feelings of inferiority" due to his lack of autonomy and control over their work, the commodification of his labor, and the willingness to be disciplined by those with higher formal status.[451]

A significant theme I identified was that students feel powerless and inadequate during all four years of their training. The learning environment was often abusive and attendings were poor role-models in showing patients compassion or practicing patient-centered care. This comes into direct conflict with the motivations that many students have for pursuing medicine. The first-year students in Gillies et al.'s study described their reasons: the satisfaction derived from financial security, elevated societal status, continuing to learn medical science, forming relationships with patients, making an impact of people's lives (and as a result, feeling fulfilled), and having the power and influence to impact lives

[449] Ian Ashman and Caroline Gibson, "Existential Identity, Ontological Insecurity and Mental Well-Being in the Workplace," *Lancashire Business School Working Papers* 1, no. 3 (2010): 6. http://clok.uclan.ac.uk/7574/1/7574_AshmanGibson_ExistentialIdentity_EtextID295_.pdf.

[450] Ibid., 7.

[451] Ibid., 8.

and the healthcare system. In other words, as the authors differentiate, these motivations for pursuing medicine are both "self-related (e.g., passion for knowledge, preference to be the agent of change) as well as extrinsically or other-related (e.g., positively impact on individuals and humanity, establishment of personal relationships)."[452]

When framing burnout from a Logotherapeutic perspective, acting in pursuit of social status, financial security, or even markers of scholastic achievement, a few of the motivations for pursuing medicine provided by the undergraduates surveyed in Gillies et al.'s study, results in a life that lacks fulfillment and emotional reward (which contribute to existential meaning), existential stress, and a predisposition to burnout.

The hypothesis that a lack of inner consent/relation is associated with a lack of existential fulfillment and purpose and burnout can be extrapolated to medical students as well. This is supported by a post in which a student opines, "Medical school is a microcosm in which people are brainwashed to think that misery is the norm. We are verbally abused, work long hours, ignore our loved ones, compete with our peers, get paid shit, risk physical harm to ourselves under the guise of wanting to help people, but most of the time it's because we want to feel superior" (150+ post, 87% upvoted).

The solution posed by a commenter suggests continuing to develop and cultivate the self: "Medical training will change you, but you have to try not to sway too far into the abyss. You'll have to develop your personality. Ultimately, it's up to you to decide what kind of person you want to be" (10+ comment). Another user cites a PBS documentary which followed Harvard medical students longitudinally and the story one physician told: "he was basically waiting for things to get better after going through medical school,

[452] Ralph.A Gillies, et al., "Why a Medical Career and What Makes a Good Doctor? Beliefs of Incoming United States Medical Students," *Education for Health* 22, no. 3 (2009): 338.

residency, and his job as an attending, but he realized that it would never happen. He had to choose to be happy and that waking up one day after having achieved another step in his training wasn't going to be the magical fix-all he thought it would be. He had to actively seek out happiness by learning to enjoy the path, rather than relying on delayed gratification and for his perfect life to materialize" (10+ comment).

While advice such as "it'll get better in fourth year" was common, which is reflective of this mentality of delayed gratification towards some sort of end goal, another form of advice was presented when users asked others how they were unaffected by or recovered from burnout:

> halfway during my third year, I decided to stop playing "the game" and putting up with the bullshit and condescension of superordinates that were more burnt out than me. I decided to stop caring so much about my evaluations and grades and focused on two purposes: 1) learning as much as possible, and 2) providing the best care possible to patients. These goals provided me motivation, gave me a sense of accomplishment at the end of the day, and they were the things most within my control. Unsurprisingly, my grades and mental well-being improved.
> (10+ comment).

Students were also able to continue their education despite the challenges they faced by finding a sense of purpose through focusing on patient care:

> Despite all of the negative thoughts I have poured into this post and the general feelings of uncertainty I have entering my fourth year; I feel privileged to be here. Yes, medical school is hard and residency is even harder, but when I meet all of you amazing people, I am reminded of why I went into this field: to help others recover from illness, to teach them about the disease process, and in return, to be taught aspects of the human condition. When I talk to you about your troubles, I know that I've made the right decision. (95+ post, 79% upvoted)

Furthermore, some users recognized that they could fight their feelings of apathy and find meaning even within their limited role on the healthcare team:

> You won't know as much as your superiors, but you have the luxury of being able to spend a significant amount of time with a single patient. That could really make a difference for that person; for example, I recently picked up on a deep vein

> thrombosis that would have otherwise missed because of overlying bilateral leg edema. (15+ comment)

These example statements by users of /r/medicalschool support the argument that burnout can be avoided or alleviated if one is able to find meaning in their work outside of motivators such as money, grades, and power.

An additional source of powerlessness and "feeling trapped" results from the inability to determine or significantly influence the quality of their education or the learning environment. Gordon C. Winston, an economist, frames higher education as operating within a "trust market" - applicants are not fully informed about what the quality of their education will be, and "won't and can't know what they have bought until it is far too late to do anything about it . . . it is an uncertain investment."[453] In other words, premedical students may have an idea about what practicing medicine is like due to their shadowing, however, they may not be fully aware of what medical school actually entails.[454] Students that choose to pursue higher education take a financial risk on a leap of faith that spending X amount of money to receive a degree will result in a job, or financial stability. Medical students described feeling "locked in" because of this "leap of faith" as a source of existential anxiety:

> I actually enjoy medical school for the most part and I've had enough experience working in other jobs to appreciate that medicine can be a sweet gig, but I really miss not knowing what I was going to be doing in the immediate future and having your future being wide open. People talk a lot about depression and feeling jaded. but I imagine a lot of that is due to feeling trapped. Even if it's your dream job, if you feel like you're locked in, you'll always have some form of anxiety. (65+ post, 94% upvoted)

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[453]Gordon C. Winston, "Subsidies, Hierarchy, and Peers: The Awkward Economics of Higher Education," *The Journal of Economic Perspectives* 13, no. 1 (1999): 15.

[454] I am embarrassed to state that I experienced this first-hand. I truly believed that the MCAT was the only standardized test that I would ever have to take. This illusion was shattered quickly during Orientation when we were told about the importance of Step 1on the very first day. I also believed that all that mattered was passing and I had no idea how much studying I was in for. I knew that I would be studying, but I had very little idea as to how many other pressures I would face.

A commenter commiserates, stating that "I don't have any answers for you, but I can relate. No matter what you do though, you'll always run into the same question because you either make decisions or life makes them for you. Medicine is scary because it feels final - you're training for a solid decade, taking on debt, and building yourself into an identity that can swallow you whole. The upper-middle class lifestyle can creep up on your and job security can trap you if you let it" (15+ comment).

Financial Pressures

Students learn over the course of their training that financial security is difficult to achieve due to the seemingly insurmountable amount of educational debt, relationships are hard to form within the artificially fast-paced environment of the clinical encounter, and patients have different motivations driving the trajectory of their health that can be difficult to understand. Furthermore, students describe themselves and their future selves as "cogs in the machine," powerless to be the agent of change in a healthcare system that treats them as expendable agents of labor. The sunk cost fallacy is deeply ingrained within the psyches of medical students and physicians. In counseling another poster that stated that s/he was burned out and wanted to drop out of school, a commenter states, "if you don't want to be a doctor, preclinical coursework is the best possible time to walk away. You won't be able to in a year or two as you'll be in the debt trap by that time. If you do want to be a doctor eventually, finish Step 1 then take time off to recover from burnout" (8+ comment). Other commenters debate on the utility of finishing the degree requirements for a M.D. if they are burned out:

> Even if you don't go into medicine, having an M.D. opens many doors, and it's not a sunk cost fallacy to finish the degree. It's a good investment" (13+ comment), "It may not open 'many doors,' but at least having a degree explains the lack of

> employment for the last four years and nothing to show for it. It's a badge of dedication rather than nothing at all. (10+ comment)

Furthermore, many of the comments addressing burnout describe working in medicine just long enough to make enough money to retire on and switch to a more fulfilling career. In the aforementioned post, a commenter points out that "medicine doesn't have to be a permanent thing. Once you pay back your loans, you will be making enough to save aggressively and have 'fuck you' money to fall back on. You don't have to be locked in for the rest of your life if you don't want to" (45+ comment).[455]

For some, reaching this level of financial independence from a career in medicine is a goal so that one can set their own terms of employment and/or find ways of fulfilling themselves. For one commenter, the goal was to work in low-cost/no-cost clinics, joining Médecins Sans Frontières, and participating in policy work without being concerned about money (3+ comment). Another commenter points out that "one of the best ways of fighting burnout is to be able to work on your own terms, whether that is setting your own hours, doing research, or teaching. Financial independence gives you the freedom to make these choices . . . there are other careers with six-figure incomes that require a less strenuous education path; don't pick medicine if financial independence is your primary goal in life" (5+ comment). This is another indication that money is not a way of fulfilling an existential void, as users stated that they wanted enough money to do the things that they wanted to do in life – to have control over their lives.

[455] "Fuck you" money, as described by a commenter, is having a level of financial independence in which one has enough money saved to no longer need to work. It does not mean retiring early, necessarily, but being in a position to do so whenever one wants. A significant facet of having "fuck you" money is getting rid of student loans and other financial burdens so that one's financial situation becomes more flexible (15+ comment).

Medical students, residents, and young attendings are shackled to their debt which contributes to this sense of powerlessness and inability to find true existential meaning in their lives. This debt guides whether students quit to pursue more fulfilling careers, what specialties students apply to, as well as how they end up practicing as attending physicians. In a post that asked users, "Those of you who have wanted to drop out, what made you hold on?," a commenter quips back, "not having rich parents to pay back what I owe" (35+ comment), and other users comment on how other professions have it worse in terms of levels of physical exertion, mental stimulation, fulfillment, and financial compensation (20+ comment, 10+ comment, 5+ comment). In another post, a commenter states, "after the first week of medical school, I knew I didn't want to do it. I wrote myself a note saying, "Try it for one month before you quit," and then realized I was already $20,000 in the hole. So here I am, a couple of weeks away from finishing my third-year" (35+ comment). In an additional example, a post asking, "Does anyone else feel as if their life will fall apart all of a sudden?" (30+ post, 90% upvoted), a commenter replies, "Yes; it's directly correlated with the amount of money in my bank account" (10+ comment).

Feeling stuck in the pursuit of medicine as a career and experiencing burnout as a result is rooted in a grim economic reality for those who do not have financial security prior to starting medical school. According to October 2017 data presented by the Association of American Medical Colleges, 75% of the 2017 class had educational debt (mean: $190,694, median: $192,000). Median tuition and fees for the 1st year class of 2017-2018 was $36,937/year for public and $59,605/year for private medical schools. Median cost of attendance for four years for the Class of 2018 was $243,902 for public and $322,767 for private schools. Sample repayment options provided, for both of the Pay As

You Earn and Revised Pay as You Earn programs, assume a $185,000 year starting salary as an attending; for three years during residency, the monthly payment is $310 to $360, and for seventeen to eighteen years post-residency, the monthly payment is $1,500 to $2,300; both figures are based upon the direct-unsubsidized interest rate of 6.00% and the Direct PLUS interest rate of 7.00%.[456]

To ground the numbers within medical students' lived experiences, students find themselves putting expenses on credit cards. A commenter states his experience:

> My medical school is limiting the amount of loans we can take out to cut down on educational debt. The only problem is, now we don't get enough money to live in the city. That extra $300 a month would have been an incredible weight off of my shoulders, and the sum of $14,400 over four years is trivial when I'm already taking out a quarter of a million . . . If you fall behind on anything or have an unexpected expense, like your car breaks down, it's impossible to climb out financially without relying on credit cards. Hell, paying for Step 1 was almost a month's worth of living expenses after I had already paid rent. (5+ comment).

Another commenter who had no emergency savings due to his/her family's working-class background and immediate entry into medical school (thus, no time for a job) states that "I can do a basic budget. It becomes so stressful when I got hit with a massive car repair bill and the school wouldn't increase my loan limit" (3+ comment). Another commenter states, "I wasn't prepared for how tight finances would be. My school only allowed us to take out an extra $3,000 for residency applications; most of that money was spent on the applications themselves and not to pay for travel or hotel accommodations" (20+ comment). In a final example, a commenter states that he cannot see a psychiatrist and start on medications because "my loans are already running dry and my insurance doesn't cover anything. I've already pulled out the maximum amount of loans available for this year, and

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[456] Association of American Medical Colleges, *Medical Student Education: Debt, Costs, and Loan Repayment Fact Card* (Washington, D.C.: Association of American Medical Colleges, 2017). https://members.aamc.org/iweb/upload/2017%20Debt%20Fact%20Card.pdf.

I still can't pay for half of the study materials required for board exams. Money is a constant worry" (3+ comment).

The expansion of American higher education – both at the undergraduate and graduate level – has called on students to finance their education. In a post asking, "Why has the cost of medical education gone up by so much?, " with a figure illustrating the quadrupling of educational debt over the last twenty years, commenters chime in: "the government will give out loans so the schools can charge whatever, administrators need their six-figure salary and twenty-hour work weeks paid for somehow" (105+ comment), "because people will pay it; people think that medicine is the 'greatest-of-all-time' profession and people line up to get in" (95+ comment), and "the only way to change anything is to boycott, but that wouldn't work. If anyone gave up a seat to go to medical school, billions of pre-meds would be frothing at the mouth to claw their way in" (35+ comment). In a sense, the constant inflation of educational costs and loans distributed speaks to the unbridled nature and the madness of capitalist reason as discussed in *Marx, Capital, and the Madness of Economic Reason,* David Harvey's analysis of *Das Kapital*:

> Capitalist financiers . . . channel the circulation of interest-bearing capital in ways that are often far from beneficial except to themselves. Tactics of predatory lending are, for example, widespread. This lending is not intended to promote the production of value but to entangle producers in such a web of debt obligations as eventually they have no option except to surrender their property rights to the lender.[457]

David Harvey calls this a modernized "debt peonage." When contrasted with the term "financial independence," the concept of debt peonage indicates a lack of freedom, which I have identified in my evidence as a key factor in mediating burnout.

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[457] David Harvey, *Marx, Capital, and the Madness of Economic Reason* (New York, NY: Oxford University Press, 2017), 201.

It is absurd to me that the answer from medical schools to the increasing amounts of debt that medical students shoulder is to limit the amount of loans they can request. This suggests an assumption that students are largely irresponsible with their money and living above their means - clearly, splurging on an avocado toast or a Starbucks latte every day is not the reason why students are in such incredible amounts of debt.[458] Attempts to improve one's quality of life through purchases is seen as irresponsible spending.

Financial literacy is not the problem, unbridled increases in the cost of attendance is. Part of the problem, as Ryan S. Greysen et al. identify, is that there is a lack of transparency or accountability in determining educational costs, tuition and fees because there is an "absence of data on true costs" and the "growingly complex finances of medical schools . . . Often, these increases are initiated at the level of a medical school's parent university, university system, or even state legislature."[459] Furthermore, federal initiatives that funded academic medicine, such as the Health Professions Educational Assistance Act between 1964 and 1983, "[expanded academic medicine's] role and capacity but did not enable long-term financial solutions as medical education became more complex, more technological, and more expensive to support."[460] As such, Greysen et al. call for newer studies and statistics on how much it costs to educate a medical student and asking broader questions, such as, "who should bear [the costs to educate a medical student], and how much of the burden of supporting the other missions of the medical school should fall to the student."[461]

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[458] One of my favorite tweets/memes reads, "If your financial advice starts with cutting down on Starbucks, you already think I have more money than I do."

[459] S. Ryan Greysen, Candice Chen, and Fitzhugh Mullan, "A History of Medical Student Debt: Observations and Implications for the Future of Medical Education," *Academic Medicine* 86, no. 7 (2011): 842.

[460] Ibid., 842.

[461] Ibid., 842.

If we stand by the premise that educating doctors from a diverse range of socioeconomic backgrounds benefits society, then the American government should decrease barriers to entry in the field, one of which is money. Indeed, debt burden is a deterrent for under-represented minority undergraduate students who are considering applying for medical school, and by 2004, only 10% of medical students came from families in the lowest two quintiles of household incomes. In contrast, in 1971, 27% of students came from that same socioeconomic demographic.[462] As one commenter states, "I'm currently applying to medical school and I already feel the financial pressures of being from a poor family. I've maxed out one credit card to pay for applications and I'll probably max out another one paying for interviews, travel, and hotels, even with fee assistance. Medical schools say that they love 'diverse' applicants from different backgrounds, but they don't seem to make it any easier for them" (40+ comment).

Political Pressures

As evidenced by my data, incredible amounts of student debt are not the only pressures that medical students face; students also have to contend with the pressures that trickle down from administrators at both the medical school and the hospital at which they do their rotations. In a previous paper, I argued that the neoliberal constitution of academic health science centers as corporations rather than universities commodifies education.[463] Improving markers of quality through quantitative measures, such as Step 1 scores, research funding, and patient satisfaction scores, becomes the main goal of academic health science centers. This phenomenon is occurring all across the country at all levels of

[462] Ibid., 843.

[463] Ye Kyung Song, "The Medical Student Manifesto," *Pedagogy and Theatre of the Oppressed Journal* 2, no. 7 (2017): 1–17.https://scholarworks.uni.edu/ptoj/vol2/iss1/7.

education as schools compete with each other for resources in a market limited by federal and state resources.

Schools generally compete with each other through rankings in the USNWR. Participating and submitting data to the USNWR is optional, but many schools opt to provide information so that they may be ranked. University administrators appear to be motivated by "the pursuit of excellence, a general goal which in practice means maintaining or improving the quality of the educational services they supply and the equity with which they are provided . . . it is something like 'prestige maximization.'"[464] Universities "present student quality feeds back to increase future student quality . . . with meager donative resources, a school will have difficulty being very selective with respect to student quality."[465] As universities with larger endowments and a greater ability to subsidize students' educational costs can recruit "higher quality" students (as defined by quantitative measures such as undergraduate GPA and MCAT score), "generate excess demand and then [select] the students with the characteristics they most desire from the resulting queue . . . selectivity, as measured by the ratio of applicants to admissions, average test scores, and . . . grades is one of the most significant and sought-after descriptions of a college's educational quality."[466]

To further illustrate this point, in a USNWR advice column targeted toward pre-medical students, medical school administrators actually advise applicants to look at match lists and compare board scores in order to pick a school that will optimize chances of

[464] Winston, "Subsidies, Hierarchy, and Peers," 16.
[465] Ibid., 25.
[466] Ibid., 23.

landing in a "top-choice residency."[467] Medical schools with larger endowments and more training opportunities will attract "higher-caliber" applicants that are likely to continue scoring in the top percentiles on standardized exams. Schools with small endowments must rely on strategies that augment demand, such as increased out-of-class time to learn the material on their own and subsidies for private test-preparation resources, such as UWorld or Pathoma.

Despite the pervasive reliance on these medical school rankings, the utility and reliability of the USNWR is debatable. For example, one study found that there was a greater amount of variability in Primary Care Medical School scores for schools below the top twenty than could be reasonably explained by actual differences in training quality.[468] Furthermore, the ranking system, which is seen to be objective, overshadows the unique mission of each school and diminishes the institution's ability to meet the needs of the community in which it is situated.[469] The focus on Step 1 scores as the "great equalizer" in residency applications implies that there is a distrust in the quality of medical education provided. Instead of utilizing Step 1 scores as a Pass/Fail tool, it is currently being inappropriately used as a way to rank residency applicants; the over-emphasis on teaching to Step 1 is egregious as the score has limited utility in predicting success in either clinical

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[467] Delece Smith-Barrow, "Consider Residency Placement When Choosing a Medical School." https://www.usnews.com/education/best-graduate-schools/top-medical-schools/articles/2016–02–18/consider-residency-placement-when-choosing-a-medical-school.; Ilana Kowarski, "10 Med Schools That Lead to Top-Choice Residencies." https://www.usnews.com/education/best-graduate-schools/top-medical-schools/articles/2016–02–18/consider-residency-placement-when-choosing-a-medical-school

[468] Daniel J. Tancredi, Klea D. Bertakis, and Anthony Jerant, "Short-Term Stability and Spread of the U.S. News & World Report Primary Care Medical School Rankings," *Academic Medicine* 88, no. 8 (2013): 1107–15.

[469] Darrell G. Kirch and John E. Prescott, "From Rankings to Mission," *Academic Medicine* 88, no. 8 (2013): 1064–66.

practice or research.[470] The limited utility of Step 1 is compounded when the exam's Standard Error of Measurement and Standard Error of Difference is taken into account.

Learning how to practice medicine ethically, in a way that satisfies the existential concerns of trainees, is de-prioritized so that students may be taught to the test.[471] Schools proudly boast their students' average Step 1 score during medical student interviews and residency match results, hoping to attract students that will aspire to score and rank higher than their peers.[472] Furthermore, the importance of Step 1 is messaged continuously from pre-med to graduation, as the National Resident Matching Program's yearly survey to residency program directors reveals the top cited factor in selecting applicants to interview as the applicant's Step 1/COMLEX Level 1 score (94%); other top factors include quality of the letters of recommendation (86%), Dean's letter (81%), Step 2/COMLEX Level 2 score (80%), and 5) personal statement (78%).[473] Not only do residency programs cite board exam scores as the top factor in selecting applicants to interview, many of these interview invitations are extended well before the release of other factors, such as the Dean's letter/Medical Student Performance Evaluation. It is designed to be a threshold test - evaluated on a Pass/Fail system - but is currently utilized by residency program directors

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[470] Peter Gilatto, I. Michael Leitman, and David Muller, "Scylla and Charybdis: The MCAT, USMLE, and Degrees of Freedom in Undergraduate Medical Education," *Academic Medicine* 91, no. 11 (2016): 1498–1500.; Charles G. Prober, et al., "A Plea to Reassess the Role of United States Medical Licensing Examination Step 1 Scores in Residency Selection," *Academic Medicine* 91, no. 1 (2016): 12–15

[471] Arno K. Kumagai, "Beyond 'Dr. Feel-Good': A Role for the Humanities in Medical Education," *Academic Medicine* 92, no. 12 (2017): 1659–60.

[472] I saw this happen in numerous medical school interviews. For the most part, the school's average Step 1 score was higher than the national average and it was mentioned as a selling point. At one school that I interviewed at, their Step 1 score was below the national average. At this interview, the administrator acknowledged that the Step 1 score was low, but that "Your Step 1 score is dictated by your own efforts - how people in classes before you did doesn't doom you to this score."

[473] National Resident Matching Program, *Data Release and Research Committee: Results of the 2018 NRMP Program Director Survey* (Washington, D.C.: National Resident Matching Program, 2018). http://www.nrmp.org/wp-content/uploads/2018/07/NRMP-2018-Program-Director-Survey-for-WWW.pdf.

as a screening and ranking tool. It disadvantages students that were accepted with a holistic admissions process who may have not been the best test-takers but showed a commitment to service, represented a traditionally marginalized group, or had exceptional communication skills.

There is also a disconnect between the material that educators want to teach versus what is on the board exam. Medical educators stress the importance of scoring well on Step 1 but also design a curriculum that does not mirror the content tested, resulting in the situation where "students largely dismiss irrelevant content in the [school's] curriculum that they believe is not included on the Step 1 exam due to their focused attention on this exam . . . students are required to learn and memorize vast, even overwhelming, amounts of information and are wary of any content that they perceive as not included on the Step 1 exam or as irrelevant to their preparation for it."[474] As my data reveals, preparing oneself to matching into the residency of choice - Step 1 and clerkship grades - has a profound impact on mental health, as students study to the point of exhaustion and burnout.

A significant cause of burnout in medical students is how incredibly competitive residency applications have become; students try and maximize every quantifiable variable within their application, a process that lasts from orientation to graduation in which every milestone is high stakes.[475] Part of the problem with residency applications is that medical

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[474]Kevin F. Moynahan, "The Current Use of United States Medical Licensing Examination Step 1 Scores: Holistic Admission and Student Well-Being Are in the Balance," *Academic Medicine* 93, no. 7 (2018): 963–64.

[475] The National Resident Matching Program was established in the 1950s in response to a dysfunctional residency selection process in the early 1940s, as the number of available positions exceeded the candidate pool. In order to ensure that these positions were filled, hospitals would only allow 24-48 hours for candidates to respond. The "Match" uses an algorithm designed by Drs. Alvin E. Roth and Lloyd S. Shapley, who won the Sveriges Risbank Price in Economic Sciences in Memory of Alfred Nobel in 2012. The algorithm "matches" students to programs at the same time, theoretically allowing both programs and students to fully consider and weigh their options. The algorithm essentially takes the all of the applicants and programs rank lists and finds the "best-fit" solution mathematically. All participating students and

student enrollment has increased by nearly 30% since 2002 but the number of residency training positions have not increased due to the limits on the number of residents that would be funded through Medicare in the Balanced Budget Act of 1997.[476] According to the data from the National Resident Matching Program, there were 43,909 applicants (including international and foreign graduates) for 33,167 residency spots.[477] The match percentage for Post Graduate Year-1 (intern year, which includes transition year programs) is 94.3% for fourth-year students that applied while enrolled in a U.S. medical school.[478] However, in 2018, 48.5% of U.S. seniors matched to their first-choice program, which is the second-lowest on record, 15% matched to their second choice, 9.7% matched to their third choice, and 6.3% matched at their fourth choice.[479]

Students go through extraordinary lengths to ensure that they are not part of the ~5% that do not match, as failure to match is seen as a red flag on subsequent residency applications. Students also want to match to a program that they fit best with, based on factors such as geographic location, program reputation, quality of the education and

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institutions perform all of the steps of the process in the same fashion, at the same time. In July, students and residency programs create a profile in the Electronic Residency Application System. Students submit applications to programs in September, and candidates are interviewed until December. Interview spots fill quickly and many students create a separate email inbox (with notifications) so they do not miss an opportunity. In January, students rank the programs they interviewed at, while residency programs finalize the number of positions they will fill for the next academic year. Programs also rank students. In March, students "match" to one program, to which they are contractually obligated to go to. On Monday of Match week, students who learn if they have matched. If they have not matched, they are eligible to enter the Supplemental Offer and Acceptance Program, in which applicants "scramble" to find an open position, which may not be in the specialty of their choice. American Academy of Family Physicians, "The Match: Getting Into a Residency Program." https://www.aafp.org/medical-school-residency/residency/match.html.

[476] The Balanced Budget Act of 1997 limits the amount of Medicare reimbursement for residency training to based on calculations from the hospital's 1996 cost report. AAMC News, "GME Funding and Its Role in Addressing the Physician Shortage." https://news.aamc.org/for-the-media/article/gme-funding-doctor-shortage/.

[477] National Resident Matching Program, *Results and Data: 2018 Main Residency Match* (Washington, D.C.: National Resident Matching Program, 2018), v. http://www.nrmp.org/wp-content/uploads/2018/04/Main-Match-Result-and-Data-2018.pdf.

[478] Ibid., 19.

[479] Ibid., 39.

training, and personality and culture of the program. Unfortunately, the lack of competition amongst hospitals and training programs disadvantages students and can lock them into training in an "undesired specialty, in an undesired city and in an undesired situation split from their families."[480] It also places applicants at a disadvantage as the residency application system no longer operates on a free-market basis: when left to chance, "employers that would like to depress wages and markets can happily keep ticking on." Since 1952, residency programs no longer have to compete with each other to attract the best candidates, and applicants cannot evaluate offers or use them as leverage.[481] Furthermore, in 2004, the NRMP was granted immunity from antitrust violation investigations, which further advantages residency programs. What is particularly egregious is the disparity in resident salaries: while a regional discrepancy in resident salaries is expected, salaries vary amongst different specialties and by gender. For example, on average, Allergy and Immunology residents earn $68,000 a year, while Family Medicine residents earn $55,900. Male residents earned $59,600 a year compared to women, who earned $58,700 a year.

Based on the statistics, the concern for most medical students is not whether they will find an intern-year position, but rather, if they will match to the specialty of their choice. The 2015 National Resident Matching Program Applicant Survey Report states that on average, U.S. allopathic seniors who matched applied to 30 programs, received 16

[480]Avik Roy, "How a Nobel Economist Ruined the Residency Matching System for Newly Minted M.D.'s." https://www.forbes.com/sites/theapothecary/2014/04/15/how-a-nobel-economist-ruined-the-residency-matching-system-for-newly-minted-m-d-s/.

[481] DiplodocusCoffeeSpot, "Why the National Resident Matching Program is Absolutely Awful." https://medium.com/@diplodocuscafe/why-the-national-residents-matching-program-is-absolutely-awful-e04bb5e5bfc1.

interview invitations, attended 12 interviews, and ranked 12 programs.[482] These averages range widely depending on the specialty. For example, U.S. allopathic seniors that matched to Family Medicine applied to 20 programs, received 15 interview invitations, attended 11, and ranked 11 programs.[483] The most commonly cited ranking strategy by far was ranking the programs in order of their preferences. On the other hand, U.S. allopathic seniors that matched Orthopedic Surgery applied to 70 programs, received 15 interview invitations, attended 12 interviews, and ranked 12 programs. Students also cited ranking programs in order of their preferences, but also equally stated their strategy as ranking all programs at which they were interviewed.[484] Orthopedic surgery applicants are only an example - the number of applications sent out is similar in Plastic Surgery, Radiation Oncology, and Otolaryngology, to name a few. This indicates a desire to become a certain subspecialist no matter what; this desire is reflected in the choices that students make post-match. Most U.S. seniors were likely to participate in Supplemental Offer and Acceptance Program (SOAP) to find a position in their preferred specialty. They were less likely to participate in SOAP for a preliminary position and then re-enter the Match the following year.[485]

The increasing competitiveness of residency applications was noted by Nicole M. Benson et al.'s survey on 1367 fourth-year medical students. Compared to surveys conducted in previous years, the fourth-year respondents "seemed more driven by residency selection and preparation . . . by 2014, there were as many as nine applicants for each residency position, and failure to match in the NRMP was associated with dire

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[482] National Resident Matching Program, *National Resident Matching Program Applicant Survey Report* (Washington, D.C.: National Resident Matching Program, 2015), 9.http://www.nrmp.org/wp-content/uploads/2015/09/Applicant-Survey-Report-2015.pdf.
[483] Ibid., 52.
[484] Ibid., 99-100.
[485] Ibid., 10.

consequences including failure to obtain any residency at all."[486] In order to match favorably, students utilize their fourth year to their maximize their likelihood to do so. For the more competitive specialties, medical students are" virtually [mandated] away or 'audition' electives"[487] to both prepare themselves for residency and also present themselves as higher quality applicants. Furthermore, students often took risks to invest a significant amount of money in applying for residency, which involves the cost of taking away or audition electives and traveling for interviews; the majority of students (65.7%) reported spending between $1000 to $5000 during residency application interviews. Approximately 35% of students could not complete away electives because they could not afford to relocate for a month, and approximately 15% of students utilized a residency relocation loan to finish their fourth year and move for residency.[488] Step 2 also adds to the financial burden experienced in fourth year - the two-part Step 2 Clinical Knowledge and Clinical Skills costs $610 and $1285 respectively, with Clinical Skills often requiring travel to one of five Clinical Skills Evaluation Center (Atlanta, Chicago, Houston, Los Angeles, and Philadelphia).[489]

The decision to pursue a lucrative specialty does not occur in a vacuum. This is not to say that students are greedy because they are motivated by money in a pejorative sense. Rather, applying to a lucrative specialty is a reflection of the economic reality that the

[486] Nicole M. Benson, Timothy R. Stickle, and William V. Raszka, "Going 'Forth' from Medical School: Fourth-Year Medical Students' Perspectives on the Fourth Year of Medical School," *Academic Medicine* 90, no. 10 (2015): 1391.

[487] Ibid., 1386.

[488] Ibid., 1391.

[489] There was a movement to end the Clinical Skills portion of Step 2 in 2016 which has lost momentum in recent years. While the NBME has compiled a list of publications which justifies requiring the exam, many believe that Step 2 CS has limited utility in safeguarding patient care and that it only adds an unnecessary financial and educational hurdle for already time- and money-strapped students. Deland Weyrauch, "What the USMLE Step 2 CS Protects." http://in-training.org/step-2-cs-protects-11845

modern medical student faces - a modest mortgage's worth of educational debt, with very little potential to pay it back if one drops out of medical school to pursue a more fulfilling/less draining career. Indeed, a James Rohlfing et al.'s study utilized a calculation of relative debt (educational debt in relation to cost of attendance) to assess whether higher amounts of debt contributed to specialty choice and burnout. Utilizing a multivariate logistic regression of 1846 medical student responses, Rohlfing et al. reports that students with higher debt relative to their peers at their institution reported feeling callous toward others more often (an aspect of depersonalization), "were more likely to choose a specialty with a higher average annual income, were less likely to plan to practice in underserved locations, and were less likely to choose primary care specialties."[490] Furthermore, increased relative debt was associated with increased likelihood of delayed life events, such as having children, buying a house, and also feeling worried about their financial burden. Based on the findings of a previous study by Colin P. West et al. on Internal Medicine residents which reported that higher amounts of debt are associated with a lower quality of life and burnout, the authors hypothesize that the sacrifices in major life decisions that medical students make due to financial constraints may increase the likelihood of frustration with their future career and experiencing burnout.[491]

Julie P. Philips et al. provide additional insight into how second-year medical students perceive educational debt, identifying themes about how debt influences future career planning in student essays. One of the significant themes Philips et al. identifies is that students felt isolated because those outside of medical education did not understand

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[490] James Rohlfing, et al., "Medical Student Debt and Major Life Choices Other Than Specialty," *Medical Education Online* 19, no. 1 (2014): 1.

[491] Colin P. West, Tait D. Shanafelt, and Joseph C. Kolars, "Quality of Life, Burnout, Educational Debt, and Medical Knowledge Among Internal Medicine Residents," *JAMA* 306, no. 9 (2011): 952–60.

how significant their debt is, financially and emotionally. The rising cost of medical education was also seen as a lack of social investment, and in some cases, as exploitation by the university system. Feeling financially exploited resulted in medical students feeling cynical and less altruistic. Furthermore, financial insecurity from medical education costs reinforces a "sense of entitlement" - students believed that they needed a certain amount of money to repay their debt and also live a certain lifestyle. Interestingly, half of student essays accepted their debt as part of the process and believed that they would be able to pay them back. The other half of student essays report feeling disempowered because of their debt as they considered higher paying specialties because of their debt.[492] These two themes - acceptance and disempowerment - compete with each other, and the authors did not collect data on demographic factors or debt (neither absolute nor relative) to elucidate why the students' experiences differed so much. While medical students tend to be from a higher socioeconomic status, indicated by the fact that 75% of students enter medical school with no undergraduate educational debt, the pressures of taking on a significant amount of debt does take an emotional toll. It is also important to remember that 25% of students are not as financially privileged.

While a good number of physicians are from privileged backgrounds, what we sometimes forget to realize is that due to the increasing diversification of the medical school applicant pool, both in demographics and socioeconomic status, those in medicine do not all share the same level of privilege, freedoms or ability to resist becoming part of the exploited working class. Furthermore, although the demographics of medical school

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[492]Julie P. Philips, et al., "Educational Debt in the Context of Career Planning: A Qualitative Exploration of Medical Student Perceptions," *Teaching and Learning in Medicine* 28, no. 3 (2016): 243–51.

are becoming more diverse, this does not translate to diversity in specialties. For example, Linos et al. report a lack of diversity in Dermatology, one of the most competitive and least diverse specialties, and hypothesize that the proportion of leaders of color within other subspecialties may be even lower.[493] Lester et al. report the severity of the lack of diversity; while the general U.S. population is 12.8% Black and 16.3% Hispanic, each group is less than 5% of dermatologists.[494] Both low-income and minority students have several concerns which contribute to this disparity; this was evaluated using a Likert scale assessing the factor's importance, on which they scored higher. Concerns included Step 1 scores, clinical grades, and the risk of not matching. The importance of these factors was influenced by the existing lack of diversity in the field, raising concerns of implicit bias in the selection process, and socioeconomic factors (this is possibly because as students who come from lower income families are less willing to take the risk of not matching, and thus, being able to pay back their loans).

Privilege, in its many flavors, gives the person who yields it more choices available to them, but it does not necessarily mean that they have realized their freedom to actively choose and weigh what they want to do/not do within the framework of who they conceive themselves to be. The solutions proposed by Lester et al. address privilege: residency programs should make an effort to be more inclusive, minority and low-income students should be actively recruited for mentorship and research opportunities, and the cost of

[493] Eleni Linos, Bruce Wintroub, and Kanade Shinkai, "Diversity in the Dermatology Workforce: 2017 Status Update," *Cutis* 100, no. 6 (2017): 352–53.

[494] Yssra S. Soliman, Alexandra K. Rzepecki, and Anthony K. Guzman, "Understanding Perceived Barriers of Minority Medical Students Pursuing a Career in Dermatology," *JAMA Dermatology* Online First (2019).

‘visiting electives, ’ which are almost required for competitive subspecialties, should be reduced by the provision of stipends and grants.

One major barrier to adequately addressing burnout that has not been mentioned in the data is outsiders’ perceptions of doctors as being in an elite tier of society and enjoying an extreme amount of privilege. ZDoggMD summarizes it best in a video in his Incident Report series, entitled “Doctors who can’t hack it: Are burnt-out MDs really just quitters?”:

> You doctors are rich, you have everything, you have societal prestige, you have so much time and money training. But not only that, Medicare dollars - government dollars - that went into supporting your residency were part of the public’s contribution to your training, and now you’re whining that it’s hard and you want to go and never see patients again.[495]

I will admit that it is hard to feel sympathetic for people who make six-figure salaries when the median household income in the United States is around $40,000. Furthermore, there is a perception that physicians are somehow immune to the disappearance of the middle class, even though Karl Marx and Freidrich Engels include professionals into the proletariat as professionals are increasingly managed by capitalists that pressure physicians and administrators with the goal of lower costs and increasing profits. Along this line of argument, Maslach and Leiter allude to the growing trend of burnout is a result of people become increasingly removed from the existential meaning of their work and the commodification of their labor. This is only possible through the process of medical education; medical students are socialized to obey the hierarchy through several rituals and games of social interaction as part of their formation as professionals.

PROFESSIONALIZATION

[495]ZDoggMD, *Doctors Who Can’t Hack It*, Incident Report (2017), https://www.youtube.com/watch?v=E9hLP9M57nw.

Learning the norms and practices of a profession through the rite of passage that is medical school is how lay individuals become shaped and molded into medical professionals.[496] Charles Bosk's *Forgive and Remember*, attending physicians legitimate their power during rounds through the privileging of clinical expertise over scientific evidence. "By virtue of his clinical experience, he knows when scientific findings are not appropriate for charting a course of action. He knows the rules and their exceptions. The subordinate is learning the rules; he does not yet have enough experience to recognize the exceptions."[497]

While anyone could read and learn the book knowledge of medicine, only those in medical school can gather the clinical knowledge and expertise that sets them apart. Only in medical school do people learn the art of the confessional – the medical interview – that allows physicians to scientifically inventory then interpret for subjectification. According to Eliot Freidson, part of the process of professionalization is creating a sense of legitimacy by having specialized, privileged knowledge by creating a distance between themselves and the layman.[498] This is evidenced by the attitude on /r/medicalschool that pre-clinical students are unqualified to provide opinions on clinical experiences, as the students in clinic have created a greater distance between themselves and the layman than the pre-clinical students have.

For Freidson, professional authority – what sets a profession apart from an occupation – comes from knowledge and expertise, as evidenced by his observation of

[496] Ye Kyung Song, "Rituals in Medicine: The Morbidity and Mortality Conference," *Journal of Ritual Studies* 31, no. 1 (2018): 1–10.

[497] Charles L. Bosk, *Forgive and Remember, 2nd Edition* (Chicago, IL: University of Chicago Press, 2003), 83.

[498] Eliot Freidson, *Profession of Medicine: A Study of the Sociology of Applied Knowledge* (Chicago, UL: The University of Chicago Press, 1988).

medical students. However, the knowledge that is valued is clinical experience, which refers to actual experience in dealing with patients and disease. Mere "book" or scientific knowledge is not enough, and

> the students discounted most of their basic science work because it failed to provide the clinical experience they thought useful to their future practice. Training that provided them with the opportunity to gain clinical experience directly, or vicariously through their instructors, was valued greatly . . . jobs like catheterization, lumbar puncture, and pelvic examinations were doled out so slowly that they looked attractive, and the first opportunity to do them was welcomed eagerly.[499]

The practice of medicine became defined and circumscribed as the realm of physicians who have completed their medical school and residency training and have learned to embody the practices involved. This required legitimization through accrediting bodies and from the lay public. Professional authority from within is also exercised when "the strong personal preferences of superiors are translated into absolute rules of conduct for subordinates."[500] Being a professional is not only having the clinical knowledge and experience necessary, but also being able to navigate interpersonal challenges and rules of interaction.

These rules of interaction are discussed in Jack Haas and William Shaffir's work, "Ritual Evaluation of Competence" (1982), which illustrates the endurance of the hidden curriculum in the professionalization of medical students. Professionalization

> includes several dimensions: developing and identifying with and committing oneself to the profession and a professional career; developing greater loyalty to colleagues than to clients; acquiring a certain detachment and routinization toward one's work; gaining formal knowledge and skills in order to make competent

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[499] Ibid., 167.
[500] Bosk, *Forgive and Remember*, 85.

> formal judgments; and developing a *pretense* of competence even though one may be privately uncertain.[501]

The often conflicting and competing expectations from superordinates result in students adopting "a cloak of competence." This cloak uses interactional skills to mask the student's emerging confidence and knowledge and is a way to deal with the ambiguities of medical education. Haas and Shaffir argue that donning this cloak happens through the various rites of passage within medical education, and that it cannot "be assumed easily, so it is not surprising that anxiety, trauma, and uncertainty are significant characteristics of the ritual ordeal of professional socialization."[502]

Haas and Shaffir's study of McMaster's problem-based curriculum reveals certain themes that reveal the source of anxiety and uncertainty that endure even today: the volume of information needed to learn, much of which is imperfect and in flux, having an incredible amount of responsibility, duty, and intimacy required in patient care, and adjusting to the new types of interactions with being a medical student. In particular, Haas and Shaffir note one source difficulty of adjusting into the new role of being a medical student:

> Evaluation is specifically interactional . . . each must simultaneously avoid being perceived as threat by other students, gain the approval of both peers and superiors, and attempt to distinguish himself/herself with tutors and clinical preceptors. The result is subtle competitiveness based on interactional competencies.[503]

The final grade received for a course or elective is a culmination of all the everyday interactions as interpreted by the grade-giver; this includes the ones with the preceptor and

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[501] Jack Haas and William Shaffir, "Ritual Evaluation of Competence: The Hidden Curriculum of Professionalization in an Innovative Medical School Program," *Work and Occupations* 9, no. 2 (0131–54 1982): 132.

[502] Ibid., 136.

[503] Ibid., 144.

other superiors, but also the interpretation of the interactions that interactions that the student has with peers and other members of the team.

The pressures of "presenting the self" to get good grades has emotional and existential consequences, which is demonstrated in both Haas and Shaffir's and my work.[504] A student in Haas and Shaffir's study states, "evaluation depends partly on what you know. But it really depends on how good a performer you are." As shown in Chapter 4, Theme 2, the users on /r/medicalschool report feeling frustrated with this "subjective" aspect of the learning environment and grading schema. They also echo the stressors that Haas and Shaffir's students had: As one student explains, "We are constantly subject to the scrutiny of others and constantly engaged in addressing others who are evaluating us."[505] The students also mentioned "becoming objects of display and discussion" as a stressor.[506]

Despite the emphasis on interactions and grades within the hidden curriculum, students in this and my study reveal that they view "becoming a good doctor" and being practically competent as separate from obtaining good grades and evaluations. For example, recall the user that believes that despite four years of medical education and significant debt, his education taught him nothing practical as he is unable to do "simple" tasks such as phlebotomy. Other users also noted that they could be knowledgeable but other students who were better at interactions and self-making received higher scores.

The students are aware that interactional skills and practical knowledge are unrelated, but they still care – if they did not, they would not post on an anonymous forum

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[504] Haas and Shaffir's interpretation of the ritual evaluation as well as self-presentation of medical students is largely based upon Erving Goffman's work that analyzes interactions within the frameworks of performance, ritual, and game theory. For an overview of Goffman's theories on social interactions, please see Michael Hviid Jacobsen and Søren Kristiansen, "Goffman's Sociology of Everyday Life Interaction," in *The Social Thought of Erving Goffman* (Thousand Oaks, CA: SAGE Publications, 2015), 67–84.

[505] Ibid., 145.

[506] Ibid.

in order to seek support and validation. Indeed, Haas and Shaffir note that the awareness that practical competence is separate from the subjective grading system does not "detract from these ratings' symbolic value in corroborating the neophytes' success in moving toward full acceptance of the profession."[507] These symbols "convince legitimating audiences of their successful adoption of the professional role,"[508] which objectifies and reduces students down to their grades, number of publications, and standardized test scores.

CONCLUSION

In conclusion, the data show that medical student burnout is not due to unresolved existential discomforts – an inability to come to terms with patients' death and suffering – as described by Barnard as I originally hypothesized. Rather, medical student burnout is a result of an Existential void, in which students question the purpose of their training because of the incongruency between the values and moral norms professed and those that are practiced. This ethical discomfort does not arise from ethical dilemmas, but within the students' everyday lives and interactions with others. Having to choose how to present oneself and interact with peers and superiors is a part of choosing actions within the ethical affordances that one sees as available.

Tensions can arise when it seems as if the choice that one wants to make seems impossible or unavailable. For pre-clinical medical students, the value tensions arise from the hidden curriculum: the implicit message that test scores matter more than espousing the values of a virtuous physician are at odds with why many choose medicine as a career. For clinical students, the value tensions arise from subjective grading that is largely

[507] Ibid., 148-149.

[508] Ibid., 149. Legitimating audiences, for example, would be residency programs who use these symbols to rank students against each other.

dependent on the students' ability to adapt to their new role and required interactions, and the mistreatment by superordinates in an often-toxic learning environment. While students are called to show empathy and respect for patients as persons, they are not extended the same by their superordinates.

Finally, being under constant scrutiny and objectification while receiving little meaning from their work takes an emotional toll. As mentioned within the literature review, Philips and Dalgarno's study and M.L. Jenning's review of burnout through the lens of the medical humanities points to how professionalization can alienate trainees from themselves and their patients. Despite knowing that they needed (and wanted) to show compassion for themselves and others, the hidden curriculum and modeling by attending physicians showed them that they had to give up that part of themselves if they wanted to be successful professionals, as measured by grades, evaluations, and prestige of subsequent training programs.

Regardless of training year, all medical students suffer from being objectified by an "objective" system of medical school. This objectification continues as residents and attendings are reduced down to the number of patients they see and how much revenue they bring to their institution, which can obliterate the meaning and purpose of their work. Feeling trapped and powerless because of their economic situation only compounds their burnout experience.

Chapter 6: Conclusion and Potentialities

"I'm convinced that if we are to get on the right side of the world revolution, we as a nation must undergo a radical revolution of values. We must rapidly begin the shift from a thing-oriented society to a person-oriented society. When machines and computers, profit motives and property rights are considered more important than people, the giant triplets of racism, militarism and economic exploitation are incapable of being conquered."

- Dr. Martin Luther King, Jr.

Introduction

In this dissertation, I have explored the expression of medical student burnout online and the dominant discourses within this space. I have situated these expressions within an expanded framework of ethics and living an ethical life, linking burnout to the literature on existentialism and the need to fill an existential void. The pursuit of meaning and freedom to choose is often frustrated by the rituals of medical education that create a discrepancy between learning how to be practically competent with being interactionally competent for higher marks on evaluations.

The commentary and literature on medical ethics and professionalism call for physicians and physicians-in-training to care for patients as persons that are seeking existential meaning, to build interpersonal bonds and act with the patients' best interests in mind, and to profess medicine as a profession, imploring that physicians uphold a sense of duty to their patients by exercising their moral agency. Within these frameworks, ethics is limited to the confines of dilemmas, values imbued with the dominant Western culture that are not wholly reflective of the range of cultures present, and a lack of attention to the social, political, and economic conditions that shape how people believe in their level of

autonomy to make choices. When burnout is examined as a set of everyday, interpersonal ethical choices, I argue that burnout is fundamentally due to a value mismatch between the learning environment and idealized values - however students would define it for themselves.

The other factors that Maslach and Leiter define – workload, control, reward, community, fairness – fall under the umbrella of values because values outline how these factors operate in real life. These factors are significantly influenced by the political and economic pressures that are placed on both physicians and physicians-in-training. The silencing of personal values by physicians and physicians-in-training due to the hierarchical power structure creates a learning environment that is conducive to burnout. In this chapter, I summarize the research findings, implications for medical humanities education, and recommendations for action.

SUMMARY OF FINDINGS AND ANALYSIS

Based on an analysis of data gathered from posts related to burnout and the discussions they generated, spanning from December 2011 to July 2018, I identified a number of themes related to how medical students conceptualize and experience burnout. As I did not follow specific individuals, my themes are largely drawn from popular sentiments in the discourse surrounding burnout. I coded over three hundred posts and comments inductively and also utilized my personal experiences to guide the development of themes. Because I did not interact with other users by commenting or posting, the effect that I had on my field site was minimal. I chose a field site that protected users through anonymity, which allowed me to see their candid discussions about stigmatized mental states, such as burnout, depression, and suicidality.

In summary, medical students face a number of stressors, mostly resulting from increasing demands on clinical knowledge and time. The learning environment is not conducive to moral growth or self-actualization, as students have difficulties with meeting basic needs, such as sleep, eating healthfully, exercise, or even obtaining medical care. Furthermore, medical students are in a vulnerable position due to their position in the hierarchy of academic medicine and are subject to disinterest/lack of incorporation into the team and outright abuse. Medical students expressed feelings that they were getting in the way (and treated as burdens), not truly part of the healthcare team, had difficulties finding mentors, and that their personal values were at odds with the decisions that the attending made regarding patient care.

Narratives speaking to the malignant learning environment, the financial and academic pressures, and a sense of alienation centered around the lack of meaning in their lives. Many of the reasons given for burnout were existential in nature, and largely concerns that how they were currently living their life was not how they wanted to live. These feelings of alienation from their studies and other people are compounded by the financial circumstances that many medical students find themselves - an incredible amount of debt, and a perceived need to land a competitive specialty in order to pay those debts off. The opportunities to pursue lucrative specialties are not evenly distributed, as noted by low-income and minority students who do not have equal access to mentoring and research experiences. This issue is beginning to be addressed by medical schools who have established special programs, such as visiting electives, for minority students; however, as the current statistics show, significant work is needed if the racial and income disparity gap is to be closed.

Students find themselves being "stuck" in medical school because they have incurred a significant amount of debt in order to receive an education which they perceive as inadequate toward reaching their goals, which include matching into their dream specialty. The specialties that offer the greatest work-to-income ratio are competitive to match into as students choose these lucrative specialties in fear of being able to pay back their debt without being unduly burdened financially. Students place their lives on hold due to the financial pressures, watching their age-matched peers reach life milestones before them, such as buying a house or raising children.

The stressors related to academic achievement are not self-imposed and are implicitly encouraged by the institutions themselves. Lectures from administrators on the importance of Step 1 scores and clerkship grades make it all too clear that their scores matter more than their evaluations or their development as professionals that embody their ideal values. Students also expressed concerns about the level of support from their administration in meeting what is expected of them academically; a major reason was having to study for two separate curricula. The amount of biomedical knowledge required to learn for Step 1 and 2 has increased, even within the last seven years that I have been in medical school, and curricular changes cannot keep pace with the expansion of *First Aid for the USMLE Step 1*. In the third and fourth years of medical school, clerkship grades are largely determined by subjective evaluations from supervising attending physicians and residents, with Honors reserved for a set number of students. Given that there is a notorious lack of inter-rater reliability and lack of consistent hours between even attendings on the same rotation, the relationship between effort and grades is often unclear and appears unfair.

The disconnect between practical competence and grades as well as the grueling demands of medical education create an existential void, as students question why they choose to undergo this ritualized process of becoming medical professionals. For many users, they choose to focus on delayed gratification, whether that is believing that their situation will improve once they are an attending or planning to leave medicine once they have made enough money to do what they truly want. The existential void, however, will not be filled by pursuing subjective aims, such as income or higher grades, but comes from choosing to pursue meaning and realizing that they are free to choose to leave - even if the consequences are difficult to deal with.

PEDAGOGICAL UNDERPINNINGS OF MEDICAL EDUCATION

As Christina Maslach states, in essence, "burnout is the index of the dislocation between what people are and what they have to do. It represents an erosion in values, dignity, spirit, and will - an erosion of the human soul."[509] This erosion of values, dignity, and will reflects the difficulties in trainees becoming fully self-transcendent professionals who practice medicine virtuously, as they imagine it.

Based on this understanding, resilience training and wellness workshops, which focus on individuals and imply a sort of moral failing, are not enough; instead, employers and medical schools should focus on sustainable workloads, giving employees choice and control on how to do their job, recognize effort, cultivate supportive work communities, establish policies and enforce them equally, and express clear values that drive meaningful work. These principles, while intended for a working environment, can and should also be incorporated into the learning environment. Given how much the learning environment and

[509] Maslach and Leiter, *The Truth About Burnout*, Location 218.

work expectations contribute to medical student burnout, an examination of the goals of medical education is warranted. As many of the comments in /r/medicalschool and qualitative studies point out, there is often a disconnect in how professionalism is taught and modeled. Furthermore, as schools prioritize studying for standardized exams, there can also a disconnect between what is taught and what is tested, resulting in students studying material from two curricula.

Many in medical education criticize the priorities implicitly and explicitly messaged by the curriculum. The hidden curriculum in medical education, as defined by Frederic W. Hafferty, is "a set of influences that function at the level of organizational structure and culture,"[510] while the informal curriculum is "an unscripted, predominantly ad hoc, and highly interpersonal form of teaching and learning that takes place among and between faculty and students."[511] In other words, Hafferty calls for an in-depth examination of both biomedicine's "customs, rituals, and taken-for-granted aspects of what goes on in the life-space,"[512] as well as the *products* that are prioritized to be created: "courses, entire curricula, organizational policies, or buildings."[513] He challenges medical educators to think about what courses are electives, which ones get the bulk of attention and resources, and what those choices implicitly signal about the institution's values and priorities.

At the heart of the efforts for medical school curricular reform is answering the questions, "What are we intending for physicians in training to learn, why, and to what end?" In *The Denial of Death,* Becker argues that in the current "age of reason" and shifting

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[510] Frederic W. Hafferty, "Beyond Curriculum Reform: Confronting Medicine's Hidden Curriculum," *Academic Medicine* 73, no. 4 (1998): 404.

[511] Ibid.

[512] Ibid.

[513] Ibid.

of the “chosen hero system” from religion to science, humans lack “illusions” that give people a way to achieve their own immortality project by making them the heroes of their own life story, with a purpose.[514] As a solution, he proposes that new illusions should be created or that humans embrace the innate motivation of pursuing an immortality project. Neil Postman discusses the need to redefine the value and meaning of education. The meaning of education is created through narratives that “give point to our labors, exalt our history, elucidate the present, and give direction to our future.”[515] While Neil Postman does not explicitly mention the pursuit of an immortality project as resolving the anxieties surrounding death, he does propose ways of creating meaning, at least within the realm of education.

Postman argues that some of the great narratives that are currently infused in education are “inadequate to provide a profound reason either for living or for learning.”[516] However, there are alternative narratives that enhance learning and life by providing people with “a sense of personal identity, a sense of community life, a basis for moral conduct, explanations of that which cannot be known.”[517] Education must have a purpose, a meaning, and a narrative to guide them. In the context of my study, the current narratives that he denounces as insufficient in creating meaning and purpose is Economic Utility, Consumership, and Technology.

The narrative of Economic Utility promises students that if they do well in school, they will have a well-paying job at the end of it: “its driving idea is that the purpose of

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[514] Ernest Becker, *The Denial of Death* (New York, NY: Free Press, 1973).

[515] Neil Postman, *The End of Education: Redefining the Value of School* (New York, NY: Vintage Books, 1996), 5.

[516] Ibid., 4.

[517] Ibid., 5.

schooling is to prepare children for competent entry into the economic life of a community. It follow from this that any school activity not designed to further this end is seen as a frill or an ornament - which is to say, a waste of valuable time."[518] Economic Utility fails because it overpromises on jobs and future success, and it also "diminishes the world that it mocks one's humanity."[519] Closely associated with the narrative of Economic Utility is Consumership, which can be summarized as "you *are* what you accumulate,"[520] and that the meaning of life is to buy things and have money. The narrative of Technology posits that technology is good and should be used to accumulate more capital - "good" people "alter their lifestyles, their schedules, their habits, and their relationships to accommodate [technology]"[521] because it is awe-inducing and works in mysterious ways. In the case of medical education, a reliance on the narrative of Technology has resulted in the proliferation of private test-prep courses that students can learn from at their convenience. However, for Postman, an over-reliance on technology to teach information fails to teach students the traditional task of how to behave within groups, as "the idea of a school is that individuals must learn in a setting in which individual needs are subordinated to group interests . . . the classroom is intended to tame the ego, to connect the individual with others, to demonstrate the value and necessity of group cohesion."[522]

Postman tries to separate the "existence of shared narratives and the capacity of such narratives to provide an inspired reason for schooling" from details from managing schools, such as technology, the prevalence of standardized testing, quality of teaching, and

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[518] Ibid., 25.
[519] Ibid., 29.
[520] Ibid., 31.
[521] Ibid., 35.
[522] Ibid., 42.

class size. However, as the data I collected and as the literature on the hidden and implicit curriculum suggests, the shared narratives play a significant role in how schools are managed. For example, in the spirit of Technology, students are also given the option to stream lectures or watch test-prep materials at home, at their convenience, which Postman would argue as diminishing students' ability to function within groups. Technology also drives educators to invent new methods of teaching, rather than providing reasons for learning. When applied to medical education, educators are driven to adjust the curriculum so that students have the highest standardized exam scores, rather than trying to remind students *why* they are working so hard - putting the focus back on patient care.

In essence, the narrative of Economic Utility is that education is for producing workers that are ready to participate in the economy. Because residency applications rely so heavily on quantitative metrics, such as standardized exam scores and grades, both the school and students share a purpose in testing well. As such, activities designed to form and shape future physicians into their professional selves are seen as unnecessary. In my personal experience with the Humanities, Ethics, and Professionalism course, I am always thankful when a student is willing to engage in the discussion on a meaningful level because a good majority of them do not, choosing to browse Facebook or shop online instead. Even during clinical rotations, users on /r/medicalschool students want to go home so that they can study for Step 2 or their shelf exam. Furthermore, when applied toward medical education's obsession with objective metrics, promises students that those who score higher will be compensated in proportion by being admitted into lucrative, higher-paying specialties. What this narrative leaves out is the reality that there will be people who don't match to their desired specialty regardless of how much effort they put in, simply

because there are not enough open jobs. As shown in my data, focusing on getting good grades or scores was associated with burnout, while reframing the purpose of their medical education as providing the best care for their patient brought them back from burnout by giving their time on the wards meaning.

The narrative of Consumership in medical education reveals itself when users on /r/medicalschool talk about quitting medicine and utilizing their degree in non-traditional ways or retiring after accumulating enough "fuck you" money. Accumulating enough wealth, however, is neither preventative nor curative for burnout, as evidenced by the statistics on the prevalence of burnout in dermatology, one of the "lifestyle" specialties that has traditionally been seen to offer higher pay for reasonable hours. Despite no substantial variation in the prevalence of burnout in the general U.S. working population when comparing 2011 to 2014 (28.4% versus 28.6%), the prevalence of burnout increased from 31.8% in 2011 to 56.5% in dermatology. Across all specialties, the rate of burnout was higher in 2014 compared to 2011 (54.4% versus 45.5%).[523]

Coincidentally, this rise in burnout corresponded with the increased implementation of Electronic Medical Records (EMR), which some physicians would argue as detrimental to practicing ideal patient-centered care. While a systematic study reports that EMRs do not negatively impact patient satisfaction or patient-doctor communication according to patient perceptions, physicians strongly believe that the current utilization of EMR, having to fill out every single check box for billing purposes, hurts the patient-physician

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[523] Tait D. Shanafelt, et al., "Changes in Burnout and Satisfaction with Work-Life Balance in Physicians and the General US Working Population Between 2011 and 2014," *Mayo Clinic Proceedings* 90, no. 12 (2015): 1600–1613.

relationship.[524] As physicians report that they are becoming increasingly burned out is due to a lack of control over their patients' care and how they practice, the narrative of Consumership is not sufficient in creating meaning and is a false god for medical students who delay gratification and sacrifice their well-being in pursuit of it.[525]

The narratives of Technology, Economic Utility, and Consumership are not sufficient in creating meaning during medical school, and these narratives are imbued within the curriculum and the learning environment. The difference in burnout and mental illness in medical students versus their age-matched cohorts of the general population suggests the importance of changing the learning environment – evaluations and grades, the quality of educators and the structure of rotations and classes , the financial cost, to name a few factors – if we are to adequately address the systemic problem of medical student burnout.

While medical education itself requires restructuring because of its overreliance on the narratives of Technology, Economic Utility, and Consumership, curricular changes by themselves will not do enough as students have been receiving this messaging throughout their entire lives. In the introduction, I discussed Dean Muller's proposed paradigm shift and the changes that occurred following Kathryn Stascavage's suicide: "[minimizing] the importance of MCAT scores and grade point averages in admissions, [pulling] out of school ranking systems that are neither valid nor holistic, stop pretending that high scores on standardized exams can be equated with clinical or scientific excellence, and [taking] other

[524] Maria Alcocer Alkureishi, et al., "Impact of Electronic Medical Record Use on the Patient-Doctor Relationship and Communication: A Systematic Review," *Journal of General Internal Medicine* 31, no. 5 (2016): 548–60.

[525] Andrea Murina, "Attention, Please! Why Dermatologists Need to Confront Burnout." http://practicaldermatology.com/2018/01/attention-please-why-dermatologists-need-to-confront-burnout.

bold steps to relieve the pressure that we know is contributing at least to distress, if not to mental illness."[526] Based on my data, Dean Muller's intuition that burnout and suicide are related to the toxic culture of high achievement and performance is supported. What is remarkable is how ingrained this toxic culture is within medical students: according to a commenter that attended Mount Sinai at the time of Kathryn's death, Mount Sinai did try to pull out of the USNWR rankings. After a series of meetings with stakeholders – including students – the decision to withdraw from the rankings was put to a vote, and the student body voted overwhelmingly against it.[527] There is undeniably a sense of prestige and social capital with attending a highly ranked school – and matching to a competitive residency specialty/program – that the students themselves do not want to forfeit.

PROPOSED SOLUTIONS FOR BURNOUT

Changes at the Medical School Level

MEDICAL HUMANITIES AND ETHICS EDUCATION

Curricular interventions to improve empathy or mitigate its decline in medical students have been tested at single institutions and shown to improve empathy scores immediately post-intervention: patient narrative and creative arts interventions, reflective writings, communication and interpersonal skills training, and experiential learning interventions in which students underwent a simulation of patients' symptoms.[528] Another proposed curricular intervention to increase empathy and decrease burnout is increasing

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[526] Ibid., 1102.

[527]/u/robotmagician, "Dean of Icahn SOM on Recent Student Suicide (NEJM)." https://www.reddit.com/r/medicalschool/comments/60zbly/dean_of_icahn_som_on_recent_student_suicide_nejm/dfb4tx0.

[528] Samantha A. Batt-Rawden, et al., "Teaching Empathy to Medical Students: An Updated, Systematic Review," *Academic Medicine* 88, no. 8 (2013): 1171–77.

the integration and inclusion of medical humanities curricula by providing a space for reflection and critical thinking.[529]

For example, the teaching of the medical humanities and bioethics has not been uniformly prioritized at medical schools across the nation despite the required standards for maintaining accreditation as set forth by the Liaison Committee on Medical Education (LCME) in "Structures and Functions of a Medical School."[530] The summary report, "ASBH Task Force on Ethics and Humanities Education in Undergraduate Medical Programs," identifies recommended core content as well as relevant LCME standards that medical humanities and ethics educators should teach to.

The 2016-2017 LCME standards identified by the ASBH as relevant to the production of humanistic physicians are the following:

> ED-19. There must be specific instruction in communication skills as they relate to physician responsibilities, including communication with patients, families, colleagues, and other health professionals.
> ED-20. The curriculum must prepare students for their role in addressing the medical consequences of common societal problems, for example, providing instruction in the diagnosis, prevention, appropriate reporting, and treatment of violence and abuse.
> ED-21. The faculty and students must demonstrate an understanding of the manner in which people of diverse cultures and belief systems perceive health and illness and respond to various symptoms, diseases, and treatment.
> ED-22. Medical students must learn to recognize and appropriately address gender and cultural biases in themselves and others, and in the process of health care delivery.
> ED-23. A medical school must teach medical ethics and human values, and require its students to exhibit scrupulous ethical principles in caring for patients, and in relating to patients' families and to others involved in patient care.[531]

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[529] Alan Bleakley, *Medical Humanities and Medical Education: How the Medical Humanities Can Shape Better Doctors* (New York, NY: Routledge, 2015).

[530] Liaison Committee on Medical Education, *Structures and Functions of a Medical School: Standards for Accreditation of Medical Education Programs Leading to the MD Degree* (Chicago, IL: Liaison Committee on Medical Education, 2018). http://lcme.org/wp-content/uploads/filebase/standards/2019–20_Functions-and-Structure_2018–03–20.docx.

[531] Catherine Belling, et al., *ASBH Task Force on Ethics and Humanities Education in Undergraduate Medical Programs* (Glenview, IL: American Society for Bioethics and Humanities,

What is striking is the minor role that the medical humanities and bioethics play in most medical schools' curricula despite the ASBH's identification of almost every single standard as one that the fields of medical humanities and bioethics could contribute to. These standards, when mapped to the new 2017-2018 LCME standards, encompass almost every aspect of the medical school curriculum, with the exception of biomedical science - organ systems, symptoms, signs, differential diagnosis, and treatment planning. Yet, even this supposedly "neutral" biomedicine is steeped within topics that the ASBH task force identifies as its own: different patients, depending on their cultural legacies, report symptoms differently. Differential diagnoses are influenced by the patient's characteristics, such as race, gender, and age. From the perspective of a WASP-y bioethics, treatment planning occurs at the intersection of patient preferences and what is medically indicated.

Each medical school, depending on the faculty available and the perspectives of the curriculum deans, implements these requirements differently. Some schools need further development of their ethics and humanities curriculum to meet the LCME standards, some have an integrated curriculum where the majority of topics are covered through formal and informal teaching, and others have a long-standing curriculum where humanities and ethics professors collaborate with clinical faculty to teach the topics in depth, through small group discussions and reflective writing exercises. Even at the University of Texas Medical Branch, which has a long-standing history of teaching medical humanities and ethics to

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2009), 2–4. http://asbh.org/uploads/publications/Report%20on%20Ethics%20%20Humanities %20in%20Undergraduate%20Medical%20Programs.pdf.
The standards have been updated since the publication of the ASBH report, and can now be found under the new LCME standards, 7.1 (Biomedical, Behavioral, Social Sciences), 7.2c (Impact of Behavioral and Social Factors, 7.3 (Scientific Method/Clinical/Translational Research, 7.4 (Critical Judgment/Problem-Solving Skills), 7.5 (Societal Problems), 7.6 (Cultural Competence and Health Care Disparities), 7.7 (Medical Ethics, 7.8 (Communication Skills), and 7.9 (Interprofessional Collaborative Skills).

medical students, the structure of the medical humanities curriculum changed with the replacement of traditional didactic lectures with the small-group, faculty-facilitated problem-based learning curriculum.

The course, "The Values and Ethics of Medicine" was dissolved, and medical humanities and ethics education was integrated into the curriculum under the auspices of the Practice of Medicine (POM) course, which first and second year medical students are required to take. The formerly fourteen-week long ethics and medical humanities course was condensed down into six weeks in the new "Humanities, Ethics, and Professionalism" (HEP) course for second year students which consisted of IMH faculty facilitated small group discussions. First year students were introduced to the medical humanities and ethics when IMH faculty occasionally facilitated in place of clinical faculty during POM-1. According to Anne Hudson Jones and Ronald A. Carson, "this change has considerably narrowed the role of humanities disciplines such as literature and history in the first year of medical education at UTMB."[532] Since the 2013-2014 academic year when I took HEP, this curriculum has been further modified, with students meeting with the IMH faculty more sporadically. UTMB is only an example, as the precarious positioning of the medical humanities is not unique to UTMB.[533]

As stated in the literature review, some scholars believe that the objectification of students and diminishment of their personal subjectivity is the underlying cause for medical students' mental illnesses.[534] Some in medical education believe that the medical

[532] Ibid.

[533] Lester D. Friedman, "The Precarious Position of the Medical Humanities in the Medical School Curriculum," *Academic Medicine* 77, no. 4 (2002): 320–22.

[534] Cribb and Bignold, "Towards the Reflexive Medical School: The Hidden Curriculum and Medical Education Research," 200.

humanities, deployed in a fashion where students are encouraged to be more in touch with their emotions and vulnerabilities, is the panacea for mechanistic, impersonal medicine. The purported benefits, as Alan Petersen et al. summarize, include "the promotion of a 'patient-centred approach to medical care'; 'counteracting professional burnout'; and 'quipping doctors to meet moral challenges not 'covered' by biomedicine.' In other words, the medical humanities are conventionally seen to redress a *deficit* in medicine: "to act as a counterbalance to the relentless reductionism of the biomedical sciences."[535]

For example, Danielle Ofri writes that the medical humanities teach students to "tolerate ambiguity and uncertainty," and that reflection and contemplation are skills that "are crucial to thoughtful decision making and personal wellness. Beyond that, the humanities add a dose of joy and beauty to a training process that is notoriously frugal in these departments."[536] In other words, the medical humanities curriculum would prepare students for the unavoidable objectification that they experience in medical school; they would retain a respect for patients as persons because they would be able to retain a sense of self as a person. Their identity would not be based on what specialty they pursue, how many Honors they got, or their Step 1 scores.

Others believe that burnout is a result of a lack of vulnerability or inability to face existential anxiety due to the lack of medical humanities programming in the curriculum. Nicole Piemonte argues that "incorporating the medical humanities into medical education in an intentional, integrated, and sustained way is what will bring meditative thinking back to medicine and students back to themselves and others. The medical humanities, with their

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[535] Alan Petersen, et al., "The Medical Humanities Today: Humane Health Care or Tool of Governance?" *Journal of Medical Humanities* 29, no. 1 (2008): 2.

[536] Danielle Ofri, "Medical Humanities: The Rx for Uncertainty?" *Academic Medicine* 92, no. 12 (2017): 1657.

emphasis on teaching by indirection, pedagogies of suffering, critical reflection, and cultivation of the moral imagination, are precisely what is needed to jostle medicine and medical education out of their narrow epistemological frameworks."[537]

Piemonte argues that because "empathy erosion" exists, the opposite, ethical character formation, can occur. Indeed, Hundert argues that altruism and integrity can be reinforced throughout medical education, as "the continued plasticity of core values into young adult life and the profound capacity of the brain [results in] change in response to environmental stimuli even into adult life."[538] For Piemonte, ethical character formations requires a re-examination of the "formative process of medical training and to work toward creating a pedagogical culture that fosters more expansive notions of care, awakens students to the reality of shared human suffering, and encourages reflection and authentic engagement with others."[539] This would involve a more cohesive integration of the medical humanities curriculum into the medical curriculum, avoiding the current situation where "the medical humanist "[parachutes] in" for abbreviated didactic lessons taught in the fashion of the traditional curriculum."[540]

Additionally, in Piemonte's re-imagining of the medical curriculum, mentors would model reflection and "thinking meditatively," as well as explicitly encouraging active reflection in their students, asking them directly "both in the classroom and on the wards – to consider what it means to help others and care well for them."[541] As I and others see it, the purpose of medical humanities education is to help students find meaning in their lives,

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[537] Piemonte, *Afflicted*, 128–29.

[538] Hundert, Hafferty, and Christakis, "Characteristics of the Informal Curriculum and Trainees' Ethical Choices," 624.

[539] Piemonte, *Afflicted,* 127.

[540] Ibid., 160.

[541] Ibid., 161.

to get them to self-reflect and think about how to find existential meaning. In other words, the purpose of medical humanities education is not to give students definitions and answers to the test, or even to fix a moral deficit. However, as previously stated, this is only one piece of the puzzle for teaching medical students how to deal with the process of professionalization, which requires a better theoretical understanding of how professionalism works and how it is shaping and molding their identity and values, as well as shedding light on the historical, social, political, and economic forces that affect healthcare and its various enterprises.

The solutions posed by Ofri and Piemonte are partial solutions as they do not address the underlying root cause: the macro- and micro-economics of learning and practicing medicine. I do not think that the increase in burnout across a number of fields is rooted in a fear of witnessing death, dying, or suffering and an inability to make sense or find meaning in life. Based on data from /r/medicalschool, burnout is because of the detachment from work with existential meaning and purpose, or a disconnect between espoused and practiced values. This disconnect is primarily driven due by incredible amounts of pressure to compete with others as the best possible worker for hire when applying for residency positions. Focusing on performing well on standardized exams or subjective evaluations pulled students away from why they entered medicine in the first place and left them disillusioned about their future career. Nietzsche's aphorism, "he who has a *why* to live can bear with almost any *how*," applies here to the lived experiences of the users on /r/medicalschool.

I do not think uncritically increasing student exposure to the medical humanities because it helps students and faculty get in touch with their humanistic side is the answer.

As Arno Kumagai states, medical humanities should aim beyond merely aesthetics; it should also have theoretical rigor by:

> "Disrupting taken-for-granted beliefs and assumptions; introducing a pause in perceiving, thinking, and acting; encouraging engagement with complexity and ambiguity; seeing past the surface to historical and societal influences and causes; and encouraging an awareness of the multiple, unique voices and perspectives of patients."[542]

When the medical humanities are only aesthetic and advertised as merely a way of helping students and faculty self-reflect and get in touch with their humanistic side, the medical humanities appear to be a "feel-good" supplement to the practice of medicine.

I also agree with Jeffrey Bishop when he argues that uncritically utilizing the medical humanities as an instrument to fix perceived deficits in medicine only compensates for the mechanistic thinking/objectification present in medicine.[543] In other words, the medical humanities as a curricular intervention will not fix mechanistic medicine, and continuing to use the medical humanities in this way only perpetuates the objectification in medicine that we, as medical humanists, rally against. When deployed in this manner, medical humanities education loses its significance and becomes instruction, which is void of student reflection and introspection. Education needs to provide students with a sense of purpose and meaning, rather than utilizing the banking model and focusing on filling the students up with decontextualized ethical knowledge so that they can score points on the ethics section of standardized exams.

Many in medical education have and do operate under the assumption that medical education and medical students can be fixed: "a dose of the humanities would . . . remedy

[542] Arno K. Kumagai, "Beyond 'Dr. Feel-Good': A Role for the Humanities in Medical Education," *Academic Medicine* 92, no. 12 (2017): 1659.

[543] Jeffrey P. Bishop, "Rejecting Medical Humanism: Medical Humanities and the Metaphysics of Medicine," *Journal of Medical Humanities* 29, no. 1 (2007): 15–25.

the deficits of the collective patient, [the medical students],"[544] who contributed to the perpetuation of a "mechanistic medicine" that valued molecules over patients. This view of students only objectifies students further, as they become vessels that are expected to learn the values of WASP-y bioethics and humanities. As medical students are adults with their own cultural legacies,[545] moral values and foundations, [546] and personal experiences that shape their identities, it is debatable as to how much the medical humanities can "change or expand their moral bearings,"[547] or if it even should. Piemonte's utilization of "empathy erosion" as evidence that medical students are not fully realized moral beings may stir feelings of defensiveness and outrage. However, drawing upon the work of Hafferty and Franks, Jennings also argues that the "mature, integrated professional identity" comes from the full integration of ethical principles into the medical students' personhood.[548] It is worth questioning at every step of the incorporation of the medical humanities and ethics education what and whose ethical principles we are asking medical students to incorporate.

MINDFULNESS AND MEDITATION

A curricular intervention for addressing burnout which is growing in popularity focuses on cultivating mindfulness through reflection both alone and within small groups.

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[544] Daniel M. Fox, "Who We Are: The Political Origins of the Medical Humanities," *Theoretical Medicine* 6, no. 3 (1985): 334.
[545] For more information on cultural legacies, Malcolm Gladwell's *Outliers* (2008) discusses in-depth how "parentage and patronage" contribute to how people make sense of their world and act in accordance.
[546] Moral tastes refers to Jonathan Haidt's central thesis in his book, *The Righteous Mind: Why Good People Are Divided on Politics and Religion* (2012). In it, he claims that people are not limited to harms-based morals, and have moral 'flavors' that appeal to them based on their experiences and cultural legacy. He hypothesizes that the different flavors are comprised of the following moral foundations: care/harm, fairness/cheating, loyalty, betrayal, authority/subversion, sanctity/degradation, and liberty/oppression.
[547] Piemonte, *Afflicted*, 1.
[548] Jennings, "Medical Student Burnout," 262.

Mindfulness, as defined by Kirk Brown and Richard Ryan, is an state of being which has roots in Buddhist philosophy: "the state of being attentive to and aware of what is taking place in the present."[549] It is not reflexive thought – internal emotions, thoughts, feelings or contents – but rather, is hypothesized to disengage individuals from automatic thoughts, behaviors, and habits resulting from the inward focused processes of consciousness. Within the context of the practice of medicine, the goal of mindfulness is to "become more aware of one's own mental processes, listen more attentively, become flexible, and recognize bias and judgements, and thereby act with principles and compassion."[550] Mindfulness and meditation share some overlap with the purpose of medical humanities education, however, it presents an alternative philosophical framework.

Zahra Daya and Jasmine Hearn conducted a systematic review in which they assessed the impact of twelve mindfulness interventions on medical student stress, depression, fatigue, and/or burnout; these interventions were mostly 8-11 weeks long and varied in the types of modalities used, including yoga, deep breathing, journal writing, and didactic lectures on stress management and mindful communication.[551] The review gives mixed support to the efficacy of short term mindfulness interventions – 57 percent of studies evaluating stress as an outcome, 67 percent of studies evaluating depression, and 33.3 percent of studies evaluating burnout reported a significant decrease.

Excluded from Daya and Hearn's review was the formal study of the mindfulness-based stress management course, Stress Management and Resilience Training (SMART),

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[549] Kirk W. Brown and Richard M. Ryan, "The Benefits of Being Present: Mindfulness and Its Role in Psychological Well-Being," *Journal of Personality and Social Psychology* 84, no. 4 (2003): 822.

[550] Ronald M. Epstein, "Mindful Practice," *JAMA* 282, no. 9 (1999): 835.

[551] Zahra Daya and Jasmine H. Hearn, "A Systematic Review of Their Impact on Medical Student Stress, Depression, Fatigue and Burnout," *Medical Teacher* 40, no. 2 (2018): 146–53.

offered at the Mayo School of Medicine in 2014 and 2015. Learners were trained to "focus their attention in the moment"[552] and focus externally on the events going on around them. They were also "instructed in the value and practice of gratitude, compassion, acceptance, meaning, and forgiveness, and encouraged to practice between sessions."[553] All first-year students were required to participate in SMART but participation in the study was voluntary; the surveys included the Maslach Burnout Inventory, Medical Outcomes Study Short Form, Perceived Stress Scale, Connor Davidson Resilience Scale, Happiness and Gratitude Scale, and the Interpersonal Reactivity Index, respectively quantifying burnout, quality of life, stress, resilience, happiness, and empathy. Statistical analysis was used to assess whether there was a significant difference in these measures between baseline and post-curricular intervention.

The results are striking: "the required longitudinal mindfulness-based stress management course did not lead to measurable improvement in student resilience and [clearly did not] blunt the distress precipitated by the first year of medical school,"[554] as mental quality of life and happiness scores decreased and stressed increased with significance. The prevalence of burnout also trended upward but did not reach statistical significance. Even when compared to cohorts from other years that did not participate in SMART, the researchers found that the curriculum "did not convincingly attenuate the negative effect of stress on first-year medical students' mental health."[555] The Mayo study, in contrast with others that have demonstrated reduced burnout and stress as well as

[552] Liselotte N. Dyrbye, et al., "The Impact of a Required Longitudinal Stress Management and Resilience Training Course for First-Year Medical Students," *Journal of General Internal Medicine* 32, no. 12 (2017): 1310.
[553] Ibid.
[554] Ibid., 1312.
[555] Ibid., 1313.

improved mood and empathy, assessed a required curriculum, rather than volunteers/students enrolling in an elective.

To present another example, the Physician Healer Track is an optional a four-year integrated curriculum at the University of Texas Medical Branch that focuses on "self-awareness, reflection, community building and explicit training in coping with the depersonalization and emotional exhaustion prevalent in the medical school experience"[556] in monthly small groups and immersion courses, with the goal of training stress management skills, resilience, and wellness. The track currently enrolls at capacity (25% of each class) and there has been zero attrition from the track, despite the track's significant time commitment and elective status. The directors of the track report success: "90% of the students report a positive impact on their personal development, level of empathy, professional development, satisfaction in becoming a physician, self-care, self-compassion, stress-management, and self-confidence."[557] The faculty that also teach and facilitate have reported a reduction in their personal burnout as they go through the course with the students. These metrics have not been rigorously or formally assessed. It may be that students who elect to undergo a "reflective" curriculum are more protected from burnout than students who are required to do so. However, it seems unlikely that co-opted Buddhist philosophy that focuses on feeling gratitude and being 'present' actually alleviates burnout. When turned to ends that Buddhists and other religions identify, mindfulness training may show some benefit. As my study has shown, much of burnout results from understanding one's place in medical education but not being able to do

[556] Cara Geary, Travis Billingsley, and Era Buck, "Continued Growth of UTMB's The Physician Healer Track," University of Texas System: Beyond Resiliency Training (M.D. Anderson, 2017), 1.
[557] Ibid.

anything about it. Actual Buddhist concepts – holding onto desire (of good grades and lucrative specialties) leads to suffering, expressing compassion for others in both thought and action, and examining what prevents one from living the way one wants to live life – would help resolve the existential discomforts that medical students experience.

As burnout tends to be chronic, a more productive method that is worth investing in may be to create solutions that prevent the onset of burnout. Glenn W. Lambie describes a structured group supervision activity based upon a "humanistic existential theoretical model of burnout."[558] He reports:

> "When [participants were] asked whether they were putting the majority of their energies and time into the most important component of their lives, they all said 'no.' This discussion launched a dialogue among the supervises on how they were trying to achieve balance in their lives, with each of them sharing and supporting the other group members."[559]

After becoming aware of their lack of "life congruence," all participants stated that they were taking steps to "[be] true to themselves; however, they noted that it was hard work."[560]

Hundert also suggests formal ethics teaching infused throughout the whole curriculum, as well as developing faculty that teach to the scientific knowledge and ethics and professionalism to avoid "separating out the ethics and social medicine teaching . . . [as] such separation also unintentionally promotes the wrong impression: 'sometimes you're doing medicine' and 'other times you're doing ethics.'"[561]

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[558] Glenn W. Lambie, "Burnout Prevention: A Humanistic Perspective and Structured Group Supervision Activity," *Journal of Humanistic Counseling, Education and Development* 45, no. 1 (2006): 32.

[559] Ibid., 41.

[560] Ibid.

[561] Hundert, Hafferty, and Christakis, "Characteristics of the Informal Curriculum and Trainees' Ethical Choices," 628.

INSTITUTIONAL CULTURE CHANGES

In line with Hundert's suggestion of preventing the separation of ethics from clinical practice, the Indiana University School of Medicine (IUSM) began a Relationship-Centered Care Initiative to improve the informal curriculum and the overall learning environment have been attempted. The authors sought to change the informal curriculum to be more congruent with the formal curriculum, which emphasizes the values of care, respect, and collaboration:

> "We hope ultimately to promote mindfulness on the part of every faculty member, resident, and staff member about the values we exhibit and thereby teach in our everyday interactions. We also hope to foster a widespread practice of reflecting on and talking about interactions as they are taking place, for this is what best enables us to continually learn, adjust, repair mistakes (which are inevitable), and harness diversity. To help our students learn and change their behavior, we have committed ourselves to our own continuous learning and behavior change."[562]\

The authors conducted 80 interviews with students, residents, and attendings, which were then analyzed for themes. The themes were overwhelmingly positive, as interviewers reported feeling "collegiality of kindred spirits," "wide spectrum of people and clinical experience," "collaborative, nonhierarchical academic community," "encouragement for learning and personal growth," and "commitment to caring for the people of Indiana and for the underserved."[563] The results were presented at an Open Forum in which individual stories and the general themes were presented.

While there were no dissenting opinions mentioned in this paper, the authors note that bringing these positive stories to the attention of the school's community resulted in "the relational patterns and values in these stories [being] carried forward and amplified in

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[562]Anthony L. Suchman, et al., "Toward an Informal Curriculum That Teaches Professionalism: Transforming the Social Environment of a Medical School," *Journal of General Internal Medicine* 19, no. 5p2 (2004): 501.

[563] Ibid., 502.

ensuing interactions"[564] as people began to see the environment at IUSM in a more positive light. The authors claim that "as IUSM's organizational identity changes in their eyes, they begin to interact differently, which might then constitute further evidence of the new organizational identity and call forth even more of the new behaviors, thus creating the potential for a virtuous, self-reinforcing cycle."[565]

IUSM's Relationship-Centered Care Initiative is not limited to medical students or individualized interventions; it aimed to transform the organization through Appreciative Inquiry, a process that identifies what the organization is doing well and how to replicate those results. The changes seen at IUSM occurred at multiple levels: students published a volume of professionalism narratives that were given to first-year students at their white coat ceremony, the admissions committee redesigned their admissions process to select for students with a "strong relational orientation," the Deans met with external consultants to assess how their actions affected organizational culture, devising "relationship-centered approaches" that were in line with IUSM's mission, and medical school leaders met with external consultants to "to reflect on the relational aspects and consequences of their meeting practices and committee behavior."[566] These resulted in new meeting formats and practices so that the events are more relational and collaborative, new institutional practices and programs, as well as increased communication about culture. What is striking about IUSM's approach was that people volunteered to participate, the initiative was non-prescriptive, and that large-scale organizational changes resulted from individuals from

[564] Ibid.
[565] Ibid.
[566] Ann H. Cottingham, et al., "Enhancing the Informal Curriculum of a Medical School: A Case Study in Organizational Culture Change," *Journal of General Internal Medicine* 23, no. 6 (2008): 717.

different levels focusing on improving everyday behaviors and interactions, in line with what Keane would describe as within the realm of ethical behavior.

Indeed, at the University of Washington School of Medicine (UWSOM), the initiation of small-group based medical student mentorship by faculty-clinicians revealed an "ecology of professionalism," "characterized by institutional interdependence, in which addressing professionalism at one level of an institution influences or opens up the need to address it at other levels;"[567] UWSOM's professionalism curriculum interventions, like those of many other schools, were made less effective when students witnessed unprofessional behavior from residents and attendings during their clinical training.

Prior to the revamping of the curriculum, UWSOM's small-group based professionalism curriculum was criticized for being a "collection of excessive directives, lectures, rules, and moral pronouncements that they found repetitive and patronizing."[568] The faculty then realized that teaching professionalism "skills" and behaviors, or a "rule-based" approach to professionalism had to be secondary to clinical experiences, in which trainees "experience professionalism as contemporary narratives, either observed through role-model physicians or indirectly through stories and film,"[569] as Jack Coulehan has noted.[570] When the authors asked medical students how to improve the professionalism curriculum, students wanted to see the practice of ethics in action: "just watching [the mentor] work with patients [at the bedside]," "cases from our mentors - real-life situations where they were stuck or challenged," and "[throwing] us into the situation. Challenge us:

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[567] Erika A. Goldstein, et al., "Professionalism in Medical Education: An Institutional Challenge," *Academic Medicine* 81, no. 10 (2006): 871.

[568] Ibid., 873.

[569] Ibid.

[570] Jack Coulehan, "Today's Professionalism: Engaging the Mind but not the Heart," *Academic Medicine* 80, no. 10 (2005): 892–98.

‘What would you do?’ then take a step back and learn.”[571] One of the changes implemented after student feedback was the creation of sixty vignettes from faculty-clinicians based on their experiences, addressing issues of ethics, professionalism, cultural differences, and communication (which I would argue are all issues of ethics). When the student advisory committee was asked to select a few as required reading, they responded that all of the cases should be.

Student responses to the revamped UWSOM professionalism curriculum and the overwhelming popularity of UTMB’s Physician Healer Track indicates that at the very least, pre-clinical medical students want to learn the practice of ethics to prevent the erosion of ethics and “of the soul” during their medical training. It would also appear that a successful implementation of curricula designed to address issues of burnout and professional formation need to be learner driven, as evidenced by the results from the SMART program at the Mayo School of Medicine. A potential reason for the significant difference between the Mayo curriculum and UTMB curriculum is the presence of small groups and reflection - this suggests that successful implementation of a curricular intervention for medical students needs to be less prescriptive and mandatory, and more reflection and discussion focused. Additional rigorous research needs to be conducted in order to evaluate whether the implementation of mindfulness-based curricula and culture changes for each institution is effective for the long term in reducing or preventing medical students from experiencing burnout.

It may also be beneficial to have an anonymous forum like Reddit for employees and students from one institution to connect, ask questions, and build a sense of community.

[571] Goldstein, et al., “Professionalism in Medical Education: An Institutional Challenge,” 873.

Reddit and its medicine related subreddits would not be a suitable site as they contain a significant amount of content for users to sift through, some of which is not safe to view at work. For example, Blind, another social media platform, is a publicly accessible forum in which users can create and respond to text posts and "like" posts and comments.[572]

As an anonymous social media platform that creates a community for each company, Blind could provide deep insights into the current organizational culture, how people feel about their workplace, and " have a pulse on employee sentiment that is both real-time and authentic . . . Blind understands more about your employees than anything in your [Human Resources Department] stack."[573] Like Reddit, it is also anonymous and publicly accessible. Signing up to post and interact with the site requires a verified email; because their verification infrastructure is independent of user account and activity information, user privacy is also assured. Blind aims to "empower employees by giving an equitable voice to everyone . . .to flatten corporate hierarchy and remove professional barriers in order to initiate open conversations and create transparency."[574]

John Chen writes that Blind's model shows promise:

> "At the heart of Blind's magic is something universal to every person who has ever been employed — the duality between our personal selves and our "work" selves, and the human drive to be both intimate and in control of our relationships. There is no place more difficult to navigate this duality than the workplace, where we want to feel loved and understood, but also respected."[575]

While Blind is not currently open to educational institutions, an alternative solution would be to re-create Blind's model on a new platform/website. Creating a local community

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[572] Unfortunately, as there are only "Like" buttons and no "Dislike" buttons, all opinions and replies have the same level of visibility. While this allows for dissenting opinions to be read and represented, this mechanism also risks the perpetuation of the toxic work culture.

[573] Ibid.

[574]Blind. https://www.teamblind.com/about.

[575]John Chen, "Blind Loyalty: How a Social Network is Redefining the Future of Corporate Culture." https://techcrunch.com/2018/08/11/blind-loyalty/.

would shed light to how the overarching themes seen in /r/medicalschool affects a single institution. This is important as each medical school has a different set and balance of economic, financial, and political pressures and circumstances that affect how much medical students are affected by the structuring of their institution.

In theory, these proposed and currently implemented interventions are steps in the right direction but not sufficient on their own. If mindfulness training is properly grounded in Buddhist theory and the social, economic, and political realities of medical education, it may help students find meaning in their lives, identify what kind of life they want to live and the barriers preventing them from doing so, and empower them to make the changes required for them to lead their imagined ethical life. As Maslach has noted, the work environment and culture are one of the largest drivers of burnout. If these institutional changes were to be permanent, it would alleviate some of the stressors on attending physicians, which may make them more amenable to teaching students. However, this would not reduce any of the pressures identified by the users on /r/medicalschool: high stakes testing, subjective evaluations, excessively long hours during clinical rotations with little to show for it, abuse from superiors, lack of support from administrators, and the incredible amount of debt.

While this suggested solution is likely to be met with skepticism, the data collected from /r/medicalschool indicate that students want to be taught to the boards, and they know that they will do this best by studying at their own pace and time, utilizing the resources of their choice, such as question banks and quality lecture videos, made by clinicians who understand how to teach general concepts that are essential for both doing well on the boards and mastering clinical knowledge.

Many medical schools have moved away from a pedagogy of didactic, mandatory lectures, which Molly Cooke et al. suggest is due to the "growing awareness that for many students other modes of instruction are more appealing and more effective . . . schools are beginning to use technologies such as audience response systems, podcasts, and web-based learning communities to make lectures more interactive and accessible both within and beyond the classroom."[576] This mandatory lecture time has been replaced with other pedagogies, such as small group Problem Based Learning and web-based modules. These technologies allow students to "cover the content at their own pace and explore in greater depth according to their interests and needs. Some studies indicate that students can master the same amount of content in a third less time using computer-assisted learning than in lectures."[577]

The medical school's lectures are seen by /r/medicalschool and IRL students too specific, ungeneralizable, and full of minutiae, which is perceived as a barrier to higher board scores. Students in /r/medicalschool and IRL turn to outside resources in order to teach themselves the material in a more efficient way, focusing on high-yield physiological and pharmacological concepts that can be applied broadly to understand why and how different pathologies occur.

What Cooke is describing is a pedagogy of autodidactism, otherwise known as self-education or self-determined learning. Some /r/medicalschool users prefer to learn all the material at home, at their own pace, and selecting resources that best fit how they learn. These resources are published and owned by clinicians who understand what the boards

[576] Cooke, Irby, and O'Brien, *Educating Physicians: A Call for Reform of Medical School and Residency*, 92.

[577] Ibid., 94.

are testing for, and how to select the best answer for a question. Institutions can reduce the amount of stress that students face by decreasing the number of mandatory lectures, allowing students to learn the way they excel with, and also giving them access to these highly rated resources, such as the UWorld question banks, Pathoma for pathology, Boards and Beyond lectures for Step 1, and OnlineMedEd for Step 2.[578] A library of discount codes could allow students to choose the resources that they find to be the most helpful way of providing students with the resources they want and need to succeed by the metrics of the medical school. In my imagined ideal curriculum, students would be assigned to master competencies and knowledge specific to an organ system, which they would then recap in discussion-based small groups, like Problem Based Learning groups.

I circle back to the role of the medical humanities in helping students better understand their interconnectedness to others and the human condition, with the goal of empowering them at the very least to get through their training while retaining mental wellness. This involves being exposed to narratives about how other people find meaning and how others make decisions – dimensions that affect their care. These narratives can take the form of literature, anthropological or sociological studies, and visual media, such as documentaries or even memes.

From my experiences in the medical humanities and ethics classes, first- and second-year students have a general grasp on the definitions of autonomy, beneficence, non-maleficence, justice, and informed consent. While it is important to know what these terms mean, it is more important to understand how to apply these concepts to real life cases. From a practical perspective, students want to learn how to answer these questions

[578] I mention these particular resources because I learned best from these, rather than reading the books on my own. Others study well using only flash cards or by reading preparatory books.

for Step 1; the first step should be teaching them how to answer these questions while walking them through the reasoning process. After teaching them how to answer the question, then the discussion becomes more interesting, as the facilitator could discuss the context of the case. For example, in the case of informed consent and unethical medical experimentation, it is important to discuss the specifics of the violations of the Black men of Tuskegee, the Black women who J. Marion Sims experimented on to perfect his vesicovaginal repair, mentally challenged people who were forcibly sterilized in the 1920s, and the list continues. It is also important to go beyond the fact that these ethical violations occurred, examining the social, political, cultural, and historical context of the day. Medicine has a long history of discrimination and bias toward people of color and people with disabilities. These biases profoundly affect the quality of care people receive.

Secondly, they should be learning how to interact with patients from physicians who are good role models who remain true to their values in practice or understand how their efforts to be "good" clinicians are frustrated. This would involve watching example videos of physicians interacting with their patients, with each other (e.g. conflicting medical opinions or addressing others' medical errors), and with students, within small group settings where students can discuss with a facilitator what they liked and did not like about the interpersonal interaction. Again, frank discussions need to occur about why the patient or physician chose to behave in the manner they did, and the videos have to be *believable* in order for students to place themselves in that situation and learn from the experience.

Finally, the assigned readings need to be updated in order to better understand how the human condition is affected by the social, economic, and political forces of our time.

When I was reading for the medical humanities and ethics courses in 2015 (and some classes that I facilitate now), I find that the material is outdated or simply does not address the context in which medical professionals practice; it is far too idealistic. It simply does not address the changes that medicine has undergone: the corporatization of the academic health science center, the pervasiveness neoliberal logics in institutions and individuals, or even the changing demographics of medical students and physicians.

The ways of practicing self-care and maintaining a "work-life balance" has shifted over the ages. More students from lower socioeconomic status households are entering medical school, incurring significant amounts of debt to finance their education. More women are entering medical school; as more families are double-income households, women are expected to be good wives *and* good physicians. Physicians can no longer just throw themselves into their work and expect their partner to take care of all their domestic affairs, and as such, the ideals and norms of the professions must change. For example, the argument that women "take up" spots that should go to men because they leave the workforce early to start families or "only work part-time" is deeply rooted in sexist ideals and norms. In another era, preserving a "work-life" balance and practicing self-care may have been more manageable as physicians were mostly male and had stay-at-home wives, however, this is no longer the case.

Because of these considerable economic, political, and social underpinnings, the mandatory wellness lectures can come off as tone-deaf and ineffectual, as evidenced by my data on users from both /r/medicalschool and /r/medicine. These required lectures take trainees and physicians away from working – if they were not interrupted, they could go home and spend that hour practicing "self-care." Additionally, the idea of "self-care" and

being taught the importance of mental wellness is seen to be condescending. Medical students, as well as residents and attendings, are aware of what "self-care" is, however, they are unable to consistently perform these tasks because they do not have enough time. It is striking that users on /r/medicalschool identified the following as self-care – eating healthfully, sleeping well, exercising, and showering regularly. While these activities are identified in the literature as maintaining a state of health and are counted as negative indicators of depression according to the DSM-V, it alarms me that so many people are having trouble meeting their own basic needs, using Maslach's hierarchy of needs. As Brianna Wiest, a journalist on emotional intelligence writes,

> A world in which self-care has to be such a trendy topic is a world that is sick. Self-care should not be something we resort to because we are absolutely exhausted that we need some reprieve from our own relentless internal pressure . . . it means being the hero of your life, not the victim. It means rewiring what you have until your everyday life isn't something you need therapy to recover from. It is no longer choosing a life that looks good over a life that feels good. It is giving the hell up on some goals so you can care about others.[579]

Weist's commentary conjures up the concept that humans do not have a predetermined purpose, and as such, everyone feels the tension of creating meaning or purpose in their life. This ambiguity is part of the human condition: how do you create meaning in a life while staying true to the facts and reality of your situation, such as the very real economic, political, and historical hindrances that many people face? To end her essay, she states that self-care is "becoming the person you know you want and are meant to be. Someone who knows that salt baths and chocolate cake are ways to enjoy life – not escape from it."[580]

[579] Brianna Wiest, "This is What 'Self-Care' REALLY Means, Because It's not All Salt Baths and Chocolate Cake." https://thoughtcatalog.com/brianna-wiest/2017/11/this-is-what-self-care-really-means-because-its-not-all-salt-baths-and-chocolate-cake/.

[580] Ibid.

Large Scale Social, Political, and Economic Changes

The financial and political pressures that administrators and teaching physicians feel affect the students' learning environment. As such, there are several methods for action. To address workload, the Harvard burnout report suggests collaborating with technology companies to better streamline electronic health record recording systems. They suggest standardizing APIs (application programming interfaces) so that third parties can create applications that can connect and work with all electronic health records systems. The creation of third-party software would allow for each individual clinical setting to tailor the user interface so that it is intuitive to input data and its inputs are customized to the population that the clinic sees. As mentioned previously, hiring scribes to chart notes during the clinical encounter is a potential solution that warrants consideration, as it improved the quality of patient care, did not diminish the

Additional research on the real costs of educating medical students needs to be conducted. Many clinicians feel pressured to see as many patients as possible and see medical students as a hindrance to their clinical productivity. Teaching is also not incentivized as the RVUs assigned are not commensurate with the amount of work and time required to adequately mentor and teach students. These two factors strongly influence the quality of the learning environment, and pressures on the attendings could be alleviated in multiple ways. Possible solutions forward would be to revise the RVU schedule, as well as hiring medical scribes to maintain productivity. One study in an academic urology practice reported increased efficiency as measured by number of patients seen, return visits, procedures performed and RVUs, work satisfaction, and no decrease in patient satisfaction when utilizing scribes within clinic sessions. The return-to-investment ratio was greater

than 6:1, and clinical encounter notes were closed 8.9 days earlier than average.[581] Further studies in other academic settings need to be conducted, but the utilization of medical scribes seems to be an actionable and promising way forward in reducing the amount of pressure on attendings who teach.

The stigmatization of mental illness plays a significant role in trainees and physicians in seeking help. Taking stigmatization of mental illness into account, the Harvard burnout report suggests rewording the questions on medical licensure or renewal applications so that they focus more on whether the physician is currently impaired or not, rather than if they have ever had a history of mental illness.582 The report also suggests expanding the physician health programs to help physicians and trainees find clearly defined and actionable ways of seeking confidential psychiatric care.

Interestingly, while many posts and comments described the structural issues that facilitated burnout conditions, the least commonly described method of alleviating burnout was advocacy and activism. In a post asking "Are there any safe spaces for medical students who want to talk about difficult issues?"(15+ post, 78% upvoted), the poster mentions that her attending has several private Facebook groups that address issues such as motherhood in medicine, medical culture, and burnout; she also states a desire to find similar communities that are interested in creating cultural change. Commenters suggest engaging with /r/medicalschool more: "I treat this like a poor man's group therapy chat" (15+ comment), and "Just post here, other students at school are impossible to talk to when they

[581] Benjamin J. McCormick, et al., "Implementation of Medical Scribes in an Academic Urology Practice: An Analysis of Productivity, Revenue, and Satisfaction," *World Journal of Urology* 36, no. 10 (2018): 1691–97.

[582] The report also suggests allowing physicians to not report their mental health status if they are monitored and follow the recommendations of the state physician health board. While a good idea in theory, the monitoring conducted by the state physician health board is conducted at significant cost to the physician – both in time and money.

brag about not studying at all for important exams" (1+ comment). Indeed, other users view /r/medicalschool is a potential space for social change: "I don't post here to make myself feel better, I post so that we can articulate our issues better and contribute to the vocabulary that we use to discuss these problems. We're interested in changing the abusive culture of medicine and improving the treatment of all trainees" (1+ comment).

Forms of social media, such as Facebook and Twitter, have been credited with the rise of movements such as Democratic Socialism within the last few years. These online spaces of connection create an alternative public sphere: "it provides a space for incubating new kinds of political thinking, and new forms of political identity, that would be inadmissible in more established channels."[583] It connects like-minded people. This effect is particularly amplified on /r/medicalschool, as comments and posts below a karma threshold are minimized from the feed altogether, reducing the likelihood that other users will engage with it as well. On Facebook or Twitter, unpopular sentiments receive the opposite treatment – as commenters debate (and others counter-debate), this results in more replies, likes, and thus, higher visibility due to the platform's ranking/content display algorithm.

While social media platforms, including Reddit, do have the tendency to create a strong tendency to gravitate towards groupthink and the creation of an insular bubble, these alternative spaces "provide an emerging movement with a degree of unity, a sense of collective identity, that helps it cohere and consolidate itself in its fragile early phases."[584] Once the movement is cohesive, a collective of people can theoretically be mobilized to

[583] Ben Tarnoff, "How Social Media Saved Socialism." https://www.theguardian.com/media/2017/jul/12/social-media-socialism-jeremy-corbyn-bernie-sanders.

[584] Ibid.

create real-life change.[585] For example, #BlackLivesMatter as a movement is a collective of several groups and organizations, such as Black Youth Project 100, Millennial Activists United, and Color of Change. As a movement, the leadership is decentralized and has largely been mediated through social media.[586] Not only does this movement bring people with similar experiences together, allowing others to witness, but it also has had a real impact. One of the results of the movement is the release of a report by the U.S. Department of Justice which detailed widespread police corruption in Ferguson, confirming that police were indeed targeting Black people to fine and arrest.[587]

The hashtag has also recruited allies in academia – Roger G. Dunham and Nick Petersen published "Making Black Lives Matter: Evidence-based policies to reduce bias in the use of deadly force," and Sirry Alang et al. link the racial disparity in police brutality to the racial disparity in health outcomes for Black people.[588] Alang et al. state the causes of poor health outcomes as such:

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[585] In *Democracy and Other Neoliberal Fantasies*, Jodi Dean argues that the Internet and other forms of networked media enable communicative capitalism. "Communicative changes, rather than being fundamental to democratic politics . . . are the basic elements of capital production." Jodi Dean, *Democracy and Other Neoliberal Fantasies: Communicative Capitalism and Left Politics* (Durham, NC: Duke University Press, 2009), 56.
In other words, the communications on politics on spaces such as Reddit have no use value as they do not lead to actual political action – it only communicates feelings and the only thing that matters is circulation. In communicative capitalism, the actual content, the audience, and the responses are irrelevant. Dean argues that this results in 'slacktivism' – activism that asks people to share and become aware of the problem, without using that same speech as a political tool to influence and shape the social, political, and economic forces that created the problem. However, viewing online engagement as 'slacktivism' is reductionistic, as it is possible for individuals to both be online, sharing posts during their down time at home and also writing to their politicians, participating in protests, and engaging their neighbors in civic discourse.

[586] According to Rachel Einwohner, a sociologist studying protest and resistance dynamics, social media is viewed by Black and Hispanic people as having the potential to create political change, more so than White people: "Traditionally, people of color in our society have felt that our political institutions do not represent them . . . when we have social media, people can have a voice."

[587] Jamilah King, "How Black Lives Matter Has Changed U.S. Politics." https://newint.org/features/2018/03/01/black-lives-matter-changed-politics.

[588] Roger G. Dunham and Nick Petersen, "Making Black Lives Matter: Evidence-Based Policies for Reducing Police Bias in the Use of Deadly Force," *Criminology & Public Policy* 16, no. 1 (2017): 341–48.

> "(1) Fatal injuries that increase population-specific mortality rates; (2) adverse physiological responses that increase morbidity; (3) racist public reactions that cause stress; (4) arrests, incarcerations, and legal, medical, and funeral bills that cause financial strain; and (5) integrated oppressive structures that cause systematic disempowerment."[589]

It may be that because of the movement's visibility and the public's widespread uptake of its message that these academics are willing to candidly acknowledge the ugly truth of racial injustice and then recommend that "to reduce racial health inequities, public health scholars must rigorously explore the relationship between police brutality and health, and advocate policies that address racist oppression."[590]

Political actions need to occur to help relieve some of the pressures that medical professionals face in their everyday practice. This involves unionizing, lobbying, and other forms of collective action. /r/medicalschool may be in the beginning stages of cohesion as users begin to realize its potentiality and band together to address economic oppression. It remains to be seen if /r/medicalschool will reach this potential. Through the free and synergistic interactions with other users on /r/medicalschool, an optionally anonymous space, users were able to find meaning and find motivation to change the culture of medicine and their learning environment. As the community was able to identify common grievances, collective, political action seemed more attractive and appropriate to the individuals participating on the site.[591]

For example, in a recent post, a user suggested that the subreddit could also be used to join forces in order to address issues such as burnout and the spike in suicides amongst

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[589] Sirry Alang, et al., "Police Brutality and Black Health: Setting the Agenda for Public Health Scholars," *American Journal of Public Health* 107, no. 5 (2017): 662.

[590] Ibid.

[591] Yuan Hsiao, "Understanding Digital Natives in Contentious Politics: Explaining the Effect of Social Media on Protest Participation Through Psychological Incentives," *New Media & Society* 20, no. 9 (2018): 3457–78.

trainees and physicians. Commenters agreed, acknowledging the subreddit's wide reach and the ability to make a significant impact if discrete, changeable policies were proposed. Alex Pattakos, the founder of the Global Meaning Institute, states:

> I have found that when you get enough people interacting freely and synergistically, and when these people are informed about the realities of their industry or profession and their own culture, they begin to tap into a kind of collective conscience and awareness of the need to add value, to really leave a legacy, and they set up value guidelines to fulfill that legacy.[592]

Top issues that commenters suggested addressing were the required disclosure of mental illness to state boards (and the resulting enrollment in physician health programs that add to financial and time stressors), excessive workloads on residents, and the rising tuition and fees for medical school – the same issues that I identified within my data as contributing to burnout.

It can be argued that the development of /r/medicalschool into a community of change was facilitated by the lifted meme ban in early 2018, and /r/medicalschool serves as an example of how memes unlock the technical and communicative potentialities of the web. Compared to the "Victorian" text posts and personal anecdotes predominantly shared prior to 2018, memes do not require as much time to read and process. Users can simply up- or downvote and continue scrolling; this practice results in memes netting higher upvotes and thus, higher visibility. Additionally, users can engage and disengage with /r/medicalschool quickly as users do not need to pause to log in. While there is no data to support this claim, I hypothesize that this ability to quickly dis/engage results in users accessing /r/medicalschool in short but frequent bursts, increasing the amount of time spent

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[592] Alex Pattakos and Elaine Dundon, *Prisoners of Our Thoughts: Viktor Frankl's Principles for Discovering Meaning in Life and Work [Kindle Edition]* (Oakland, CA: Berrett-Koehler Publishers, 2017), Loc 192.

on the site overall. Memetic images and videos allowed for more engagement with the /r/medicalschool community and thus, more calibration with its messages.

The ease of creating and sharing memes gave rise in this and other communities to "a participatory environment in which such personal contributions have become highly valued cultural pillars."[593] In the case of /r/medicalschool, creating original content for submission for the sake of obtaining more karma required users to "acknowledge the textual category in which s/he operates, and must also publicly signify this acknowledgement by adhering to specific generic rules,"[594] such as modifying the stereotypical caption to suit the intended portrayal of the situation.

Creating memes, Limor Shifman argues, is intrinsically reflexive, as it requires performance that draws upon understandings of "structures and themes, but also expectations and intended audiences."[595] It is this reflexivity that creates a ready audience; even though users tend to express themselves by creating memes that fit the mold of a few generic formulations, "following [these] shared pathways for meme production is vital for creating a sense of community in a fragmented world."[596] The argument that the creation of memes is reflexive in nature is further bolstered by the fact that users care about the number of up/downvotes that content they submit receives. While people may create memes in order to simply express themselves, users who want to receive the most "fake internet points" create content that appeals to the community as a whole - their intended audience. This means perpetuating dominant narratives, structures, and themes, as well as

[593] Limor Shifman, "The Cultural Logic of Photo-Based Meme Genres," *Journal of Visual Culture* 13, no. 3 (2014): 354–55.
[594] Ibid., 355.
[595] Ibid., 342.
[596] Ibid.

attitudes - in a sense, the culture of that Internet microcosm. The creation of memetic artifacts through participatory interaction can shape political discourse and serve as visual political frames, at both the individual and social level, which was indeed seen on /r/medicalschool.[597]

As /r/medicalschool is a part of Reddit, a site utilized by predominantly young, White, college-educated males, the political leanings of the site at large are reflected in the visual and textual political frames utilized during the few discussions of how to change the structure of medicine. Numerous threads on /r/TheoryOfReddit, a subreddit dedicated to "mild navel-gazing" ask, "*Why* is Reddit so liberal?," rather than "*Is* Reddit liberal?"[598] One user points to the significance of the 2016 election and Donald Trump's subsequent actions as a factor in creating a sharp political divide on Reddit; during and after the election, conservatives siloed off into subreddits where they could express their political opinions without being downvoted, such as /r/The_Donald and /r/conservative.[599]

When utilizing Reddit as a news aggregator, it seems as if America is currently in the middle of a historic moment with democratic socialism gaining prominence, which addresses the issues of racial, economic, gender equity, including the aforementioned issues with the distribution of healthcare and educational debt. Bernie Sanders brought socialism back into the spotlight with his 2016 Presidential campaign, running on a platform that at its core, believes that all human beings have a social right to high quality education, healthcare, housing, income, and job opportunities. Democratic socialism has

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[597] Jens Seiffert-Brockmann, Trevor Diehl, and Leonhard Dobusch, "Memes as Games: The Evolution of a Digital Discourse Online," *New Media & Society* 20, no. 8 (2017): 2862–79.

[598] https://www.reddit.com/r/TheoryOfReddit/search?q=liberal&restrict_sr=1.

[599] /u/battlefieldguy145. https://www.reddit.com/r/TheoryOfReddit/comments/9km1cy/ive_been_gone_since_the_middle_of_2016_when_the/.

continued to gain traction, both online and offline. [600] A number of politicians endorsed by the Democratic Socialists of America have won primaries and 61% of Democrats under the age of thirty-four view socialism positively.[601] Redditors heavily upvote posts calling for more democratization and increased representation for the working class; Alexandria Ocasio-Cortez's tweets are often shared as she articulates clearly how economically oppressed average working people are. The increased support for Democratic Socialism online and offline is not surprising, as Millennials find themselves at the losing end of a age disparity in wealth: the Great Recession of 2008 hit those born in the 1980s the hardest, resulting in Millennials accumulating 34% less wealth than expected, and the rise in college tuition and fees (81% increase between 2001 and 2009) and resulting increase in student debt decreased homeownership.[602]

Dovetailing with the socialization of healthcare is a change in the organizational structure of academic medicine: when everyone is insured under a single payer system and hospitals only have to worry about reimbursement from one payer, the complex financial web that pushes physicians to produce in pursuit of an unknowable financial end dissolves. Increased government funding of higher education may disentangle the complicated financial relationship between the teaching hospital and the medical school, which allow both to pursue their missions and goals without pitting them against each other (patient

[600] Bernie Sanders identifies as a democratic socialist, while others characterize him as a socialist Democrat. Social Democrats advocate for increased government-regulation within a capitalist society, while democratic socialists want to ultimately abolish capitalism. The in-fighting and debating over political labels amongst those left of the 'centrist' line is beyond the scope of this dissertation, however, the connection between the two labels is that currently, inequalities exist and everyone has the right to be truly free, which entails economic security.

[601]Michelle Goldberg, "The Millennial Socialists Are Coming." https://www.nytimes.com/2018/06/30/opinion/democratic-socialists-progressive-democratic-party-trump.html.

[602]Hunter Schwarz, "Millennials Are Much More Open to Socialism." https://www.cnn.com/2018/06/28/politics/democratic-socialism-millennial-politics/index.html.

care and student education respectively). Furthermore, funding higher education will alleviate students' debt burden and allow them to pursue primary care specialties.[603] This, and de-emphasizing the importance of standardized exams, will alleviate many of the pressures that culminate in medical student burnout.

CONCLUSION

In conclusion, the data show that medical student burnout is not due to unresolved existential discomforts - an inability to come to terms with patients' death and suffering - as described by Barnard as I hypothesized. Rather, the reframing of medical student burnout as an existential crisis, in which students question the purpose of their training because of the incongruency between the values and moral norms professed and those that are practiced. Barnard calls this ethical discomfort. This ethical discomfort does not arise from ethical dilemmas, but within the students' everyday lives and interactions with others. For pre-clinical medical students, the value tensions arise from the hidden curriculum: the implicit message that test scores matter more than espousing the values of a virtuous physician are at odds with why many choose medicine as a career. For clinical students, the value tensions arise from the mistreatment by superordinates and a toxic learning environment: while students are called to show empathy and respect for patients as persons, they are not extended the same by their superordinates. Regardless of training year, all medical students suffer from being objectified by an "objective" system of medical school. This objectification continues as residents and attendings are reduced down to the number

[603] The long-term solution is not providing more federal subsidized loans as students are still responsible for the principal and some of the interest and will still feel the financial pressures that cause them to delay life events and to pursue more lucrative specialties. Furthermore, institutions of higher education need to be held accountable for the rising cost in tuition and fees, as there is currently a lack of transparency/democracy as to where the money goes.

of patients they see and how much revenue they bring to their institution, which can obliterate the meaning and purpose of their work. Feeling trapped and powerless because of their economic situation only compounds their burnout experience.

As the Harvard T.H. Chan School of Public Health report on burnout states, “self-care” and “wellness programs” are “makeshift solutions” which divert institutional resources from other actions and changes that would address the root causes of burnout: too much work, too much pressure to succeed, lack of meaning, feeling a lack of agency and power, and finally, barriers to seeking help due to the stigmatization of any form of mental illness.[604] Based upon my research, an appropriate way forward would focus on reducing student stress by de-emphasizing the importance of scores and grades, alleviating financial pressures and student loan debt burden, and identifying mentors that can help students in their path towards meaning-making. The role of the medical humanities within the medical education landscape. Collective political action, such as unionization and advocating for universal health care, also needs to occur if we are to change the political and economic circumstances that constrain ethical practice. Utilizing the medical humanities as a humanizing tool only contributes to the value conflict felt by students: while the medical humanities tells students to not objectify their patients, it does not help students humanize themselves. The current paradigm for much of medical humanities education utilizes a narrowly defined language of ethics. Virtue ethics, ethics of care, and the principles of autonomy, beneficence, non-maleficence, and justice respectively address the first-, second-, and third-person conceptions of medical ethics, but it is not a holistic language of ethics. It seems unjust to expect people to live up to the set expectations of

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[604] Jha et al., *A Crisis in Health Care: A Call to Action on Physician Burnout,* 13.

proper physician professionalism without providing them the means to do so. It sets people up to fail instead of empowering them to exercise their autonomy and freedom to the fullest. Based on these findings, it would seem that the actionable interventions proposed by Dean Muller at Mount Sinai, such as reconfiguring grading systems to be less competitive, de-emphasizing the importance of Step 1 and other standardized exams, pulling out of the U.S. News and World Report Rankings, as well as providing more mental and physical health resources to students would be the appropriate interventions, but this intervention requires buy-in from stakeholders, such as the medical students themselves.

Until there is a change in how medicine operates - both culturally and financially, individuals have little choice but to rely on individualized interventions to get through each day. As noted in Lambie's study, finding meaning and creating a congruency between values and practice is hard work, which trainees often do not have the emotional energy for. One of my good friends, a surgery resident told me, "There's no time to process the death and dying during residency, just do that later" (PGY-4, 1) Another friend, an anesthesiology resident who is the mother of two, relayed to me that some days, she doesn't even see her children, and that "she goes to bed without even washing her hair" (PGY-2, 1). There is no time or space provided to practice self-compassion in a clinical setting; those in medicine and allied health who wish to do so must carve out those opportunities for themselves and have the support of their colleagues and supervisors. Residents have even less time and emotional bandwidth to process stressful and traumatic experiences during their training due to their increased level of clinical responsibility.

Individual interventions such as "self-care" and "mindfulness meditation" will only give them the emotional bandwidth but not necessarily the time required to generate the

waves of systems-level changes that academic medicine sorely needs. The system will not change until medical students as a whole act differently, collectively. This requires that medical students have a full understanding of their position and situation - which they do, based on my findings - and action based on this knowledge.

The objectification of medical students is not an “ethical dilemma” in the conventional sense, but stakeholders in medical education - students included - need to recognize that burnout in medicine is an ethical problem: how do you live the “good life” when the overarching structures limit your choices to ones that are at tension with your values and search for meaning? Empowerment in its various forms is the way forward, and it’s time to cash in that karma to advocate for real societal, cultural, and economic change.

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Vita

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